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ARTIFICIAL INTELLIGENCE: HOW AI IS UNDERSTOOD IN THE LIGHT OF DEMOCRACY AND HUMAN RIGHTS.

A comparative case study of Sweden, France and the European Commission

Sebastian Delic

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Supervisor:	Amy Alexander, Assistant Professor, Dept. of Political Science University of Gothenburg
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Abstract

In recent years, artificial intelligence has become increasingly discussed and it is predicted to have a major impact on our societies in the future, having positive effects but could potentially be negative for democracy. In this paper, I investigate how artificial intelligence will affect human rights and democracy, where I critically evaluate the framing of problems, solutions and regulatory work of three cases. Based on the previous literature in this research field, I created a theoretical framework to conduct a comparative case study between European Commission and two countries that are on the frontier of recognizing the challenges of AI, namely: Sweden and France. The results demonstrate that there are several issues that are understood as crucial but some issues are prioritized such as: privacy. There are also several differences between the three cases in terms of problems, solutions and regulation, but their approaches are somewhat similar. Sweden´s approach is investing in the transformation of the society by suggesting more research and collaboration in AI, although being positive towards regulation in some areas. France has a more regulation-heavy approach by suggesting restrictions of AI in privacy, warfare and on the labor market at some extent. The European commission focuses more on transparency in AI processes to make it more humane. The common denominator is that they all neglect the challenge of election interference and freedom of speech online since it is barely discussed, which the literature identifies as major challenges that AI will pose.

Keywords: artificial intelligence, democracy, human rights, regulation, Sweden, France, the European Commission

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List of abbreviations

AI – Artificial Intelligence
AI HLEG – Artificial Intelligence High Level Expert Group
AGI – Artificial General Intelligence/strong AI
AWS – Autonomous Weapon Systems
DL – Deep Learning
EU – European Union
GDPR – General Data Protection Regulation
HR – Human Rights
IEEE - Institute of Electrical and Electronics Engineers
ML – Machine Learning
MP – Member of Parliament
R&D – Research and Development
RQ – Research Question
SDG – Sustainable Development Goals
UN – United Nations

Introduction

Problem statement

Digitalization is a growing global phenomenon. There have been three types of industrial revolutions; mechanization, mass production, computer and automation. According to some, we are now entering the fourth industrial revolution, which is called cyber physical systems and builds upon the third industrial revolution of computer and automation. However, the fourth industrial revolution is characterized by more intelligent and advanced machines and technologies, where artificial intelligence (AI) is a central part of this revolution (Klaus Schwab, 2016).

AI is loosely defined as the ability to perform tasks that are normally required by human intelligence, the ability to choose, learn, plan intelligently, communicate and make decisions. There is however a distinction between Artificial General Intelligence (AGI)/ "strong AI" (AI that matches or exceeds human intelligence) and "weak AI" (AI that is focused on one narrow task, assisting humans) (Wirtz et al, 2019: 4). Most of the technology that is already used is considered to be "weak AI", e.g. in self-driving cars, drones, health care, language translation, micro targeting ads and much more. Predictions of when we will use "strong AI" to a larger extent ranges from the year 2029 to 2050, so there is not really a consensus on when it will arrive (Everitt, 2018).

There are great benefits that AI can produce for societies in enhancing efficiency, security and lowering the rate of making mistakes (Future of Life). This is argued to be the fourth industrial revolution because of the profound impact it might have on social structures and the economic systems in the world. Large corporations such as; Google, Facebook and Amazon are investing heavily in this technology and states have started to do the same (Mercer and Macauley, 2018; Mitrou, 2019). However, there are many challenges that the use of AI will cause, ranging from lack of privacy and accountability to autonomous weapons and foreign election involvement. This has been illustrated by previous research where scholars address problems that might affect our democratic principles such as: individual rights, equality and privacy. One example of how AI already has affected democracies can be found in the US presidential election of 2016. AI-technology was used to send directed and false political ads to voters by using the voters´ personal data, which essentially affected the outcome of the election (Polonski, 2017).

United Nations (UN) Secretary-General Antonio Guterres has raised another issue related to AI. He urged a ban on autonomous weapon systems, because it will ultimately give machines the decision of taking human lives without any human involvement in the decision. This is problematic from a human rights point of view according to him (Bugge, 2018). Co-founder of the "future of life institute", Max Tegmark, has also been vocal about autonomous weapons specifically and the need to address these issues on a global and national level (High, 2019).

Governments' lack of knowledge on AI and the lack of regulation are brought up by the scholars in this field as a major concern, which is why I want to investigate two different countries on how they perceive problems and the solutions that they believe will solve those issues (Seamans, 2018). Therefore, in this Master´s thesis I will do a comparative case study by analyzing how European countries frame and understand democratic and ethical issues related to the use of artificial intelligence in society. I will also analyze the European Union's

(EU) framing of AI to add a supranational understanding of the issues. I will conduct this study by analyzing Sweden, France and the EU as the cases, along with their government agencies and bodies responsible for the issues. By doing this research using countries, the EU and AI as units of analysis, I want to create small steps towards a better understanding of AI from a political science perspective because of the lack of research in this field of study.

Many countries have released AI strategies to promote the development and use of AI, as well as address the benefits and challenges that it might pose (Dutton, 2018). This thesis might be a basis for how European countries may act and participate to shape the global governance on AI in terms of many different ethical and human rights issues that could potentially arise from AI. This thesis also identifies the most important issues raised by the literature on AI and Human rights by creating a theoretical framework, which can be applied to other cases as well.

Based on the previous research I expect that the countries and the EU will focus more on privacy-related issues and less on freedom and potential risks with AI on equality, freedom of speech and Autonomous Weapon Systems (AWS). This is because privacy issues have already been seen in society and can be related to "weak AI", while "strong AI" has not been implemented largely yet.

I will do a qualitative textual analysis by revising reports and national strategies conducted by the countries, the Commission and their agencies. I will analyze similarities, differences and main priorities between the countries and the Commission in terms of regulation, view of ethics, human rights, democracy and other issues more specifically stated from a theoretical framework, which I will use when analyzing the texts.

Research questions and research aim

The existing research has not focused extensively on analyzing how countries understand AI-related issues with a human rights and democratic lens, which is why I aim to explore this. By having a few research questions, I will be able to answer them both specifically in the discussion and more broadly in the conclusion. The questions that are going to guide me through the analysis are the following:

RQ1: How is Artificial intelligence framed and understood by the different countries and the European commission from a human rights and democratic perspective?

RQ2: What are the similarities and differences between the different countries and the European Commission?

RQ3: What is the role of regulation of Artificial intelligence in these countries and what role does the European Commission take here?

The aim of the thesis is to explore how the countries understand AI from a human rights and democratic perspective and see how it differs or resembles key points raised in the literature in the field. It is also to understand what role the EU takes on AI, whether it is an advisory or a regulatory approach. This helps fill the gap of research both generally on AI in relation to human rights and democracy, but also more specifically by reviewing the cases and comparing them.

Relevance of study

The thesis is filling a research gap in the literature by analyzing different states and the European Commissions´ viewpoints on AI in relation to democracy and human rights. I intend to make sense of states´ and a supranational union´s understanding and framing of AI from a human rights and democratic perspective by using a theoretical framework based on assumptions in the previous literature, which could be useful for future research.

I contribute to expanding the knowledge of AI in relation to human rights and democracy by comparing specific cases and their take on these issues. I also compare it to what academia has pointed out as the main concerns of AI. This is relevant for the academic world and policy-makers on a national and global level, because it will probably affect decisions that these countries will make on AI-related policies. This is relevant in this field of study as a guideline for how countries might act in the future in terms of their policies for AI in many different fields. By reviewing two different countries and the EU, I will be able to identify different patterns that might be useful when analyzing different countries' take on AI. It might also be interesting for illuminating which role the EU will take in dealing with AI, whether they leave it to the countries to decide or take a more active role in regulating it.

It is also relevant for the countries themselves and policy-makers, because I am going to analyze their understanding of AI and democracy with a theoretical framework that I have taken from previous research. This might be a good critique and could present possibilities of improvement for them. Because of the lack of AI regulation, this thesis might provide ideas for policy-makers of how to handle AI-related issues and what policies to develop.
This is based on what academics, the two countries and the Commission propose as problems and solutions, and the evaluation that I provide by comparing them in the discussion section of the thesis.

The thesis also contributes to a better understanding of regulation. Many academics, corporate leaders and other stakeholders have been calling for the regulation of AI. The first regulation came in 2018 by the EU (GDPR), protecting people´s data from being used without consent, which is relevant since AI depends on collecting data. This underscores that AI regulation is a highly relevant and relatively new area of regulation, which makes a deeper look into the reactions to the challenges by two European countries on the frontier of developing policy and EU itself especially interesting.

Outline of the thesis

In this thesis, I will start by presenting the topic and making sense of the concepts and developments that are important for understanding AI. Afterwards, I will describe the rise of AI and the implications that AI might have for human rights and democracy, which I have taken from the literature on the subject.

Then, I will present some theoretical views on how human rights theory and democracy can play a role as guidelines for the usage of AI in combination with assumptions based on the literature. This will form a theoretical model which I will use as a guide when analyzing the empirical material in the results and thereafter the discussion. In the discussion, I will compare and analyze the results between the countries in relation to the theoretical framework.

I will end with a conclusion that summarizes the thesis, answers my research questions directly, discusses the implications of the findings and offers suggestions for what future research could focus on in terms of AI and human rights/democracy.

Literature review

Defining AI

The topic of Artificial intelligence and automation has dominated the debate on new technological changes in recent years. Not until recently have we been able to see the effects that it might have on our societies and the challenges it might press on democracies all over the world.

There is no clear definition of AI. However, most scholars define it as the ability to perform tasks that are normally required by human intelligence; the ability to choose, learn, plan intelligently, communicate and make decisions (Almeida, 2017; Mitrou, 2019). AI attempts to replicate human intelligence by using human problem solving abilities and reasoning in order to achieve better and more efficient solutions. There is a distinction between "strong AI" or AGI (AI that matches or exceeds human intelligence) and "weak AI" (AI that is focused on one narrow task, assisting humans). Most of the AI used today is considered "weak AI", but there is still uncertainty when "strong AI" might be used more frequently (Wirtz et al, 2019: 4; Access now, 2018; Mitrou, 2019).

It can also be seen as an umbrella concept, consisting of a set techniques using machines trying to resemble human cognition. Scholars today generally focus on Machine Learning (ML), which refers to the ability of a system to improve its performance over time. Deep learning (DL) within ML occurs through using enormous datasets by extracting features and patterns from it (Calo, 2017: 404). This technology can be used from translating languages to diagnosing dangerous moles and driving cars. ML and DL are both subfields within artificial intelligence, which are the most relevant to this study. This is because these are the technologies that might affect our societies the most, due to the high level of sophistication of these tools. (Calo, 2017: 405; Risse, 2018).

AI has existed since the 1950s but it has not been possible to use its potential until the rise of the world wide web with the accessibility of large data sets. The recent rise of AI could also be contributed to faster and better computers and much more data available through, e.g. social media and Google. It has then been possible to develop AI to perform tasks such as: problem solving, planning, knowledge acquisition, learning, have improvement over time, speaking, developing vision and action processing (Tecuci, 2011; Calo, 2017: 405; Cath, et al, 2017).

Artificial intelligence is dependent on collecting data because of the knowledge that it can attain from such collection; this entails collecting data from individuals using Facebook, Google and other applications. This is done by using their personal data to direct ads and recommendations based on their preferences and tastes by different companies on these platforms (Almeida, 2017). The recent increase in the use of AI in detecting diseases, translation of languages and assisting in self driving cars can be attributed to both more efficient computers but also more data available today than before. These enormous data sets that are analyzed are usually referred to as "Big Data" and are essential to AI (Calo, 2017: 405). AI is dependent on "algorithms", which is a set of rules or step by step instructions to be

followed by computers in data processing, calculations and other mathematical operations (Techopedia´s definition).

The rise of AI and current impact

AI has in recent years gained traction in the media and society as a whole.
Large tech companies such as Google, Facebook, Amazon and others are investing heavily in the technology. They have launched products with AI technology, such as; Google´s Alpha go, Apple´s Siri and Amazon Echo (Wirtz et al, 2019). The financial sector is using AI and are already replacing some financial analysists, where Goldman Sachs are in the forefront of this development (Berisha, 2017).

Governments have also started to give AI more attention, where many countries have made a national strategy for AI and are investing in this technology. China has been very eager to become a leader in this field. They have invested 147 billion USD in becoming the global leader of AI by the year 2030. The US has spent 1,2 billion USD on research and development in the field of AI, while Europe has spent around 700 million USD in AI-related technologies (Wirtz et al, 2019: 1).

The term Artificial Intelligence and the mentions of it by some governments (US, Canada & UK) has been analyzed in a report. The results have indicated a large increase after 2016, where it has spiked. In the US, it barley reached 15 mentions between 1995 and 2015, while in 2018 it reached over 70 mentions. In the UK, it was barley 15 mentions until 2016, but in 2018 it reached over 250 mentions and similarly in Canada where there was a large increase in 2017. (AI index report, 2018: 44). Singapore is an example of a data controlled society today, which was intended to protect them from terrorism initially. However, now it affects their economic and immigration policy as well (Helbing, 2017).

The economist has created an automation readiness index, consisting of 25 countries. The top three are South Korea, Germany and Singapore, which have the best capabilities to deal with AI in terms of policy and strategy. The report analyzes education, innovation and the labor market in terms of policies and strategies. The authors are critical of governments around the world because there is still little policy that addresses the challenges of AI in place today and it is caused by a lack of knowledge about the impact of AI on society (The economist: whitepaper). There is a report by Oxford Insights and the International Development Research Centre ranking countries by “government AI readiness”, where Sweden is ranked 6 and France is ranked 8. This shows that it is not necessarily the size of the economy that is most important for level of AI advancement (AI readiness index).

Nick Bostrom, a prominent philosopher in the field of AI, did a survey among AI experts in different science fields (mainly computer science, mathematics and psychology). This survey demonstrated an estimation that AI systems will probably reach overall human ability by the years of 2040-2050 (over 50% thought this) and that the probability that the development turns bad or extremely bad for humanity is 31%. The possible risk that they refer to is levels of existential risks against humanity that AI might cause. However, this is just a survey among AI experts and might be just their opinions, but there are still reasons to worry about these results and investigate the truth to it (Müller and Bostrom, 2014).

Because of this potential impact on our societies, it has led to questions of concern of ethics, human rights and democracy in relation to AI. Intellectual property rights, privacy and competition are a few that might be affected by the rise of AI (Almeida, 2017: 11).

AI, democracy and human rights

In general

Some companies have been trying to lay out a foundation of ethics themselves. However, Nemitz and other scholars argue that countries should be the ones laying the foundation of ethics instead, because companies may have conflicting interests against society´s best interests, since their main goal is profit. This should be based on human rights and democratic principles, according to them (Nemitz, 2018; Floridi, 2018; Marda, 2018). There is also a need for regulators to be knowledgeable in this field and have the right expertise available in order to make the right decisions. This exchange between democratic legitimacy and expertise can be achieved according to Calo by close cooperation between politicians and scientists (Calo, 2017: 34).

The democratic problems that arise from AI usage are many. Nemitz argues that the main problem is that our democracies are in the hands of the "frightful five" (Google, Facebook, Apple, Amazon and Microsoft). They are setting the agenda and controlling the infrastructures, e.g. the internet being the main source of getting political information for people today. These companies also store huge amounts of personal data, which is used for profit, election campaigns and surveillance, among other things. This is problematic according to Nemitz, because there is a concentration of power and a complete lack of regulation and transparency in this area (Nemitz, 2018). Floridi argues that the legislation is insufficient in the EU (Floridi, 2018) and Marda also recognizes this in the case of India (Marda, 2018).

Previous research considers transparency and accountability important for AI to be implemented in society. Mitrou explains that the use of people´s personal data for processing is problematic for the basic rights of a democracy, whether it is for collection of mobile phone location or the use of social media data for credit scoring. This might also affect the trust and could potentially become a backlash for the development of AI. There is also a danger of trusting AI too much, because it might lead to bad outcomes and then an overreaction by society of banning AI (Mitrou, 2019; Charisi et al, 2017:15-16). Marda also argues for the importance of transparency for the use of AI, which should apply in the public sector as well as they play a larger part in assisting decision makers. The process should be open for analysis and flexible for improvement over time (Marda, 2018; Charisi et al, 2017:15-16).

Manheim and Kaplan discuss the problems that AI poses to privacy, which can be related to the human rights declaration. Lack of informational privacy poses a democratic threat in the sense that it limits our capacity to form our own ideas, to think and to make mistakes without the observation or interference of others. It threatens people´s autonomy and their right not to be surveilled. Data is essential for AI to work, the information that is required from people´s data ranges from political preferences and health data to social media likes and purchasing habits (Manheim and Kaplan, 2018: 7; Mitrou, 2019; Marda, 2018). The main issue according to Mitrou is if individuals are able to take back control over their data and if there should be limits to what AI systems can suggest to people using their data (Mitrou, 2019).

In addition to issues related to privacy, AI in the use of weaponry is also problematic from a human rights and democratic perspective. Autonomous weapon systems (AWS) incorporating strong AI is considered to be a threat to international human rights law, because it threatens the human dignity during armed conflict. The issue is if machines should be able to decide themselves when to act or even pick a target by their own. The final decision on lethal force should be taken by a human being in charge, which is ingrained in the international human rights law (Petman, 2017: 50; Aasaro, 2012: 689).

According to Petman, states have been avoiding addressing the legality of using autonomous weapon systems in warfare and it will be hard to create a legal framework without all high-tech military states involved (Petman, 2017: 56). The use of AWS can still not be utilized without human control. However, it will not take a great deal of time until it will be possible, therefore it is suggested that human control should stay in the process at several levels. Other suggestions are legal frameworks for the use of it, inspections and code of conduct or simply banning it completely (Petman, 2017). Others argue for the international community to take action and completely ban AWS (Aasaro, 2012: 689; Sparrow, 2016).

Finally, other rights might be affected by AI as well such as: labor rights. However, it is still unclear how AI will affect the labor market from both a theoretical and empirical perspective. From a theoretical point, innovation can both replace jobs and create new ones. On an empirical level, Bessen (2018) argues that if productivity increases in markets where there is a large demand, AI should be positive for employment, while others are unsure (Furman, 2019).

Elections

There have been problems with AI in elections, which is something that poses a threat to free elections in countries. This has been seen in both the US and UK, where people have been subject to false and directed political messages (Berisha, 2017). The 2016 US presidential election is one case that stands out, where Russia is claimed to have interfered by some. Russia´s interference was very dependent on AI and posted thousands of tweets and pieces of news which has been aimed to shape the political narrative with fake information. Cambridge analytica was hired by the Donald Trump campaign and they used 87 million Facebook accounts from Americans without their consent by promoting Trump and discouraging Clinton supporters from voting, according to Manheim and Kaplan. This is a problem for transparency and the election law according to them, because of the lack of transparency in social media campaigning. Social media campaigning is unreported and often untraceable, which makes illegal interference go unregulated and undetected according to them (Manheim and Kaplan, 2018: 31; Berisha, 2017).

AI has also been used in the EU referendum campaign in the UK in 2017 and in the general election in the UK in 2017, according to Bartlett. The vote-leave campaign was running 1 billion targeted ads on Facebook, sending multiple different versions and getting them tested. The labor party targeted potential voters with political messages in the General election, even targeted locally (Bartlett, et al, 2018). The Labor and the Conservative parties in the UK are using Facebook ads extensively, because they have the largest budgets.
There is a lack of transparency about Facebook campaigning since they do not have to present campaign funding online yet. Personal targeting is also being criticized in terms of election fairness, because of the increased importance of paying large sums for appearing in voter´s feeds. It is not an even playing field, which could make elections perceived as unfair and unregulated. The use of personal data in political campaigns by parties is also an issue that is

addressed here, where the authors suggest that the Electoral Commission should re-examine existing regulation on this and perhaps also regarding campaign funding (Dommett & Temple, 2017: 192-195).

AI governance

The governance of AI and how to deal with the issues and utilize the benefits is being developed and discussed around the world, where action has been taken in some cases in regulating AI.

One case study is analyzing New Zealand's handling of AI, where they argue that New Zealand is not sufficiently articulating the risks of AI. There is a lack of dialogue in relation to freedom, autonomous weapons and other potential risks, which needs to be addressed according to the authors. They argue that this is an issue that needs to be viewed on a larger scale and that there is a need for a more extensive plan in order to deal with the risks of AI, as well as more international collaboration. So this is both a national and global issue (Boyd & Wilson, 2017).

Some scholars argue that the problems of ethics and democracy in relation to AI is a global issue and must be governed on a global level. The AI community has been calling for policy action because there is a legal vacuum in most of the areas affected by AI.
They throw caution over national strategies on AI because there is a danger for laws to become symbolic rather than legitimate and institutionalized. There is also a problem according to them, that many countries will have different conflicting approaches and will make it harder for transnational regulation, which they propose (Erdelyi & Goldsmith, 2018).

There has been action taken related to the use of AI by some actors, one of them is the European Union. The first legislation effecting the use of AI called GDPR, was passed in the European parliament and has been in action since 25th of May 2018. The law regulates the use of personal data where the subject has to give consent for, e.g. a company for it to be able to use the data, which aims at respecting the importance of individual rights and privacy in democracy. AI is dependent on collecting data and extracting it to see patterns, which is why it is relevant here since it limits that ability. Nemitz argues that this disproves the idea that laws and regulation do not have the capability to keep up with technology (Nemitz, 2018).

Policy challenges for AI

Some scholars define the challenges with AI in two broad parts: one related to data governance where factors such as consent, ownership and privacy have to be taken into account. On the other hand, more complex challenges with AI being a self-learning and autonomous entity is being defined as a major challenge for the governance. They argue that the main challenge is to preserve human self-determination because of possible AI influence over our decisions, which could be detrimental for us as humans (Taddeo & Floridi, 2018).

Wirtz et al. discuss the policy challenges for the use of AI in the public sector and the application that AI has in the public sector. They identify a number of different challenges based on previous research and debates regarding the subject, which are mostly related to ethics when using AI and ways to improve the understanding of AI in the public sector. One important aspect is responsibility and accountability in relation to decisions that are made by AI, which is essential in democracies and important for defining who is in charge of these

decisions. One example of this dilemma is if an autonomous car kills a pedestrian in an accident, which has happened in California. This raises questions of who is legally responsible for the death of the person and what decisions the car should take, if left with the choice of killing the pedestrian or crashing with the person in it (Wirtz et al, 2019).

Privacy and safety is another challenge for policy-makers when dealing with AI because e.g. AI-systems are vulnerable to cyber-attacks where personal data can be collected, which poses a threat to people´s privacy (Calo, 2017; Erdelyi & Goldsmith, 2018). The governance of AI is also a problematic aspect that will pose a challenge for states because they cannot control the decisions made by AI-systems. In this particular subject, there are many proponents for global norms and regulation for the governance of AI by incorporating principles of democracy and human rights as well. This is however a large challenge due to cultural differences and differences in legal systems (Erdelyi & Goldsmith, 2018; Petman, 2017; Latanero, 2018).

In addition to the large challenges with privacy and security, there is a lack of government expertise in AI and countries along with its agencies are ill-prepared to deliver policies to solve these problems. There is also a lack of research funding in the topic of AI. This lack of expertise is present in government agencies and can lead to hurtful policies if not addressed properly. The suggestion to solve the problem is that there should be a centralized commission that could be formed with leading scientists to act as advisors (Brundage & Bryson, 2016). The technological developments are quicker than the development of policies and legislation to cope with the problems that technology creates, which is considered a major challenge (Mitrou, 2019).

There is also a need for having transparency in AI application for people to have confidence in the new technology. People need to get a basic understanding of what the system is doing and why. The process needs to be traceable to be able to identify errors. The law needs to be clear and transparent when an error occurs. These conditions are especially important in disruptive technologies such as: autonomous vehicles, which people probably are more skeptical towards. (Bryson & Winfield, 2017: 118; Charisi, et al).

Research gap

By looking at the literature, I can see that there is a great deal of possibility for future research in the field of political science and artificial intelligence. There is a need to get a common definition of AI. There are many questions that I get from reviewing the literature and it seems that both states and scholars are lagging behind in knowledge of the fast growing AI technology. Companies are already utilizing these technologies, which is why there is a need to figure out what effect it might have on our societies now.

There is also a gap in the research on policy evaluation in relation to AI, however this might be because the policies addressing issues with AI are still very few. In general, there is somewhat of a lack of research in political science regarding AI, as it has been more researched in other fields related to the development of AI technology. However, as AI is starting to affect societies all over the world, there is a need for more research on the topic, especially with a focus on ethical issues and not just challenges in terms of the economic impacts it might cause.

There is still discussion on how AI will affect our societies in various ways such as; economic impact, privacy-related issues, AWS, accountability, etc. However, there are barely any qualitative or quantitative studies looking at specific cases or a comparative study looking at different countries regarding AI, which is a large gap.

The research on human rights and democracy in relation to AI is still insufficient, there are general discussions on human rights and democracy in relation to AI but there is very little research analyzing countries´ actual viewpoints on these issues, except for the New Zealand case. The idea is to fill this gap by applying a human rights perspective based on previous research in the field to two countries and the European Commission in order to categorize the viewpoints and find conclusions.

Theoretical framework

Human rights and democracy in the digital era

International human rights can help guide us through the governance of AI from a normative and legal perspective, according to Latanero. Doing so requires preserving human dignity for people around the world with "the guiding principles of business and human rights" as a starting point. The author also argues for "hard" laws, technical standards and social norms as important to establish in this field (Latanero, 2018: 4-5).

There are certain issues that could be a guideline from both a human rights perspective and a democratic perspective based on the problems that have been discussed in the literature review, which I present here.

Human rights perspective

Privacy

There is clearly a tension between human rights, democratic values and the privacy of people online. It has been illustrated that there is a risk of algorithmic surveillance if one uses AI without regards to privacy rights of individuals. It has also been illustrated that it is possible to predict people´s sexual orientation when using people´s data, which could be used by various actors to discriminate and repress, but could be even more detrimental in authoritarian regimes where there are no rights for LGBT-people (Latanero, 2018: 13).

AI developers should treat privacy as a human right rather than an ethical preference to signal good morals:

"If AI developers treat privacy as a fundamental human right rather than an ethical preference, the privacy considerations that already exist in industry norms and technical standards would be stronger. The right to privacy is found in Article 12 of the Universal Declaration, Article 17 of the ICCPR, and in a number of other human rights documents, national constitutions, and national laws." (Latanero, 2018: 14).

This illustrates that privacy is a part of human rights and according to Latanero could have a role of guiding AI developers and countries through the governance of AI. It can help them to identify risks, analyze them and respond correctly with the help of the principles and laws of international human rights.

Equality and nondiscrimination

One important issue that has been raised from the usage of ML specifically is that when using a large amount of data, the system learns to detect patterns which are helpful for decision making and also produces a selection bias. This selection bias not only provides wrong information at times but also can escalate to starting to discriminate against people, which is something to reflect upon both in terms of human rights and ethics (Latanero, 2018: 8).

This has been demonstrated in facial recognition systems who cannot "see" people with darker skin, which could create biases against people with darker skin. Therefore, the guiding principles should be that when creating AI-applications, companies should have non-discriminatory practices in mind and prioritize these. So, in this case, human rights theory provides a basis for those working with AI to understand why it should be prioritized from technical standards to policies (Latanero, 2018: 9).

It is important to understand the potential effects that AI could cause of abuse, unintended consequences and biases. The author does not settle with only a legal framework but a more accountable approach which includes special UN investigators and civil society following up on AI-issues (Latanero, 2018).

Political participation

There is an issue with disinformation that is relevant in the light of democracy because it undermines the possibility of being an informed citizen in a democratic election. This is because voters today are involuntarily being fed with disinformation when using different platforms online. Today, bots are mostly getting removed because they violate the terms of the platform, rather than getting removed because of violating users´ right to political participation (Latanero, 2018: 12). In this case, bots are automatic accounts on social media controlled by a computer, which can execute commands and reply to messages with little or no human intervention (Techopedia).

There is an important right that is being attacked by this, which is the right to self-determination. This right needs to be respected and cannot be compromised by ill-willing actors who are using AI systems and bots to spread disinformation. (Latanero, 2018: 13)

Freedom of expression

Some social media platforms have been using algorithms shaping the newsfeed of their users based on the users' expressions, which causes the world to appear in a certain way and is problematic for freedom of speech. It can lead to people that only get their own or similar opinions confirmed and are not exposed to other world views, which could polarize the society. Freedom of expression is a fundamental right and can be found in Article 19 in the Universal Declaration of human rights (Latanero, 2018: 14).

It can also lead to a censoring of minority opinions in these platforms by the use of content moderation systems. This is, of course, relevant because some social media platforms have become the major outlet of discussion for people around the world (Latanero, 2018: 14). As social media platforms become increasingly important platforms of free speech, it is

important to have a guideline for companies and countries when regulating these, where human rights should be put in center of this decision making and debate:

"A rights-based frame offers language to analyze the balance between the right to the freedom of expression with rights and freedoms such as political participation, information, assembly, association, privacy, and security." (Latanero, 2018: 15).

Democratic perspective

In a democracy, there must be free choice of deciding who to vote for, which AI can affect as I have demonstrated in the literature review with personalized ads containing false information. This disables a person to participate in the democratic process by undercutting the possibility of making an informed decision on who to vote for in a democratic election (Helbing, 2017: 12). Manipulative technologies can restrict the freedom of choice, according to Helbing, which is illustrated by this quote:

"However, the right of individual self-development can only be exercised by those who have control over their lives, which presupposes informational self-determination. This is about nothing less than our most important constitutional rights." (Helbing, 2017: 9).

Another democratic issue that might be compromised is accountability and responsibility, which is one of the fundamental values of democracy. There are laws regulating who is accountable for decisions made in society and people are responsible for making decisions, which could be changed if machines are making decisions instead. From a democratic stance, people should be in charge of making decisions in a world with AI, because we cannot hold machines accountable for the decisions (Waldron, 2014: 12).

Democracy is based on politicians making decisions and being accountable for them, either by being punished if breaking the law or not being re-elected if the voters do not think that the politicians made satisfactory decisions. This democratic process could be undermined by "strong AI", where machines are taking over the decision making process in society too much (Helbing, 2017: 11).

Labor rights are also rights that will be affected by AI, although this is not a clear cut part of the main democratic rights, it should be addressed as well. Some believe that trade unions will still be an important actor to defend the employee´s rights in the future by working for increased digital competence and better working conditions. The freelancers (short contracts/part time) might be affected most by lower social security with the AI development, which are people working in online platforms in the gig economy or sharing platforms, such as: Uber and Airbnb. The idea is also that there should be created a new type of employee representation, which has to be introduced by the law-makers. One example is from Spain where freelancers are working for a company group but are treated as employees due to their participation in the national social security system (Wisskirchen, 2018).

Artificial intelligence is probably the most significant area in disruptive technological changes. One study argues that it is hard for policy-makers to keep up with the technology as they need to create a regulatory framework that both secures the safety of users and the general public, but also has to satisfy the need for commercial use of a new technology (Fenwick: 567). Fenwick also discusses when to adopt a new regulation while keeping a balance between not repressing the development and the point when regulation is too late and

will not address the issue. In addition, Fenwick discusses the possibility of updating regulatory guidance and regulation to address the issue caused by AI. However, changing or updating regulations is usually time consuming in democracies with hearings and feedback procedures. It could lead to that they are still dealing with the regulatory issues of one product, while a new one with problematic aspects has already entered the market (Fenwick et al, 2016: 572).

It is good to have cooperation between politicians that are making decisions regarding regulation and experts that provide the knowledge to them. However, some issues might not be so clear, which creates a situation where politicians only have the possibility to react based on uncertain facts. The author believes that law-making and regulatory design has to become more modern by having a more responsive, proactive and dynamic design. This can be achieved by: a data driven regulatory intervention, a principle-based approach and the minimum regulatory "sandbox". In short, this means using data about new technologies to identify what it is, but also when and how to regulate it. One strategy could be to engage more in regulatory experiments and compare different ones to determine what works best. This also includes sandbox experiments, which is a software testing environment enabling independent evaluation, where companies can try out their products and services without affecting consumers (Fenwick et al, 2016: 588-593).

Assumptions from the previous literature & the theoretical framework

The assumptions that are made from the previous literature mostly deal with the problems of ethical dilemmas that AI creates in relation to democracy without hindering the potential positive effects that AI can create. There are several parts of society that the authors assume will be affected, some are already taking place.

Based on the previous research, I expect that the countries will focus more on privacy and less on freedom and potential risks. One might also expect this given that the EU already has implemented the legislation GDPR, which addresses privacy because it is an issue that has already affected people in real life, while other risks such as threats to freedom and AWS have yet to surface or be used. The issue of privacy online has become a well-discussed issue, as it might have affected people and their democratic rights to form their own opinions before voting in recent elections, e.g. US election 2016 and Brexit election. This might also be a reason to expect a larger focus on privacy.

The explanation might be because AWS is dependent on Strong AI, which has not been implemented in society at a large scale. While narrow/weak AI has been implemented in society as I have illustrated in the literature review, which requires policy-makers to prioritize taking action on specific issues related to Weak AI first.

I have summarized the most important aspects that the literature and the theoretical framework has identified as the main democratic, human rights and ethical problems with AI, which is presented in Table 2. I see three categories for possible analysis: the factors that need to be addressed, how they are perceived as problems and possible solutions for tackling the problems. This theoretical framework will be used when analyzing how my three cases frame and understand AI in relation to democratic and human rights' issues.

Table 2: Assumptions

Factor	Perceived problem	Solution
Privacy	AI uses data from people´s private accounts	Regulate the users rights
Security	Election interference through AI-technology and cyber-attacks	More transparency regarding party´s political campaigning Safety certification Create a regulatory framework that makes it safe for the general public and user of AI applications
Labor rights	AI replacing jobs	Global or national issue/regulation
Accountability & Responsibility	Who is accountable when AI makes a mistake Lack of trust could lead to stopping the development of AI	The process of AI development/usage should be open for analysis and improvement Transparency in the law, process and towards the user of an AI application
AI expertise in government	Lack of expertise, hence bad policies Slow regulation	Recruit from academic field, more money to research Centralized commission with leading scientists
National vs global issue	More a global issue, national legislation will not have an effect	Mostly suggesting global regulation
Equality	Possibility of discrimination by algorithms	Monitor by the UN Nondiscriminatory practices prioritized in companies making AI-applications

Warfare	Terrorist threat and machine decides who it kills without human involvement	Ban AWS or have human control over the decisions of lethal force
Freedom of expression/political participation	Manipulation of information, custom made newsfeed and social media companies as the main platform for freedom of speech	Guideline for companies who own social media platforms in line with freedom of speech

Methodology

Design of the research

This is a qualitative case study which focuses on how artificial intelligence is framed and understood in the light of democratic, human rights and ethical issues by governments in Europe. This research will have both inductive and deductive traits. However, the focus will be more on the inductive side because this thesis aims to provide the answer along the way instead of testing a hypothesis. However, I intend to provide some theoretical assumptions that will be tested when looking at the cases based on what previous research has identified as problems and solutions in relation to AI (Bryman, 2012: 24-26). Thus, I am mostly using an exploratory design in this research, however, I use some assumptions from the literature of what issues the countries will have more focus on and also what they will have less focus on. This provides an additional element of testing a presumption to the exploratory research design.

Because I have a pre-set framework based on the literature and a theoretical assumption, I would argue that I can have an objective approach when analyzing the content. One can always argue that I have chosen specific scholars and theories based on my preferences, but in this study I have chosen the issues that have been discussed with AI in relation to democracy and human rights regardless of who has discussed it and how it has been framed. By testing a framework in my analysis, it can be illustrated how I conduct the analysis and compare the countries specifically, which gives the study an objective element. This study is also replicable, either by using my theoretical framework in other contexts or creating a similar framework as mine but with other issues or other scholars (Bryman, 2012: 177).

This is a comparative case study, where I will analyze two European countries, which are: Sweden and France. By comparing two different countries and a supranational union using the same framework, I will be able to identify similarities, differences and traits that characterize the different cases. This makes it easier to answer my research questions and the ability to see common traits and conflicting ideas about the subject instead of analyzing one case. The idea of contrasting cases is that differences become clearer when analyzing the cases, however in this case, I consider it to be hard to analyze completely opposing cases because some countries have not even addressed these AI issues (Bryman, 2012: 72). I will also put the countries´ understanding and discussions regarding the different questions in relation to the theoretical assumption from the literature, in order to see how countries and scholars differ in their views.

Case selection

I chose to have Sweden and France as my cases because both countries have been vocal about the importance of developing AI and keeping up with the competitors. Sweden is a country with a very high digital maturity (ranked third out of 63 countries), which gives the country large potential of being competitive in AI (IMD, 2018). Sweden is also a country that prides itself as a moral authority in the world, particularly in the area of human rights, which is why it is interesting to analyze the ethical and democratic considerations that Sweden has regarding AI. The reasoning behind the comparison between the two countries is that they both have high ambitions on setting the agenda in AI and they have very different societal and political systems. Sweden is a parliamentary monarchy with a population of almost 10 million people, while France is a semi-presidential republic with 66 million people. These are huge differences in both how the democracy is organized as well as the size of the country and ability to affect the world.

France and its leader Macron have been vocal about the importance of keeping up with the development of AI and have been investing heavily in this technology. He has established an ambition to become a world leader in the field, which makes it an interesting case to analyze further regarding the ambitions and the democratic-related issues that they identify. France is also one of the largest economies and a powerful actor in the EU and the world, which also makes it an interesting case because they have a great deal of power to influence regulatory strategy throughout Europe in the future (Techstartups, 2019). France has a great deal of power internationally, being one of the permanent members of the UN Security Council and being one of the ten largest economies in the world. They are also referred to as one of the "big four" or "G4" countries along with Italy, Germany and the UK, which are the major powers in Europe (Kirchner et al, 2007). France is ranked 8th in the AI readiness index, which shows that they have a good potential and large ambitions, which has been shown above. This position as a power player, gives them great possibility in shaping the international agenda on privacy, security, warfare and other issues related to AI (AI readiness index, 2019).

While Sweden is a smaller country with large potential in AI (6th in AI readiness index), it is also interesting when dealing with human rights and ethics in AI to analyze this case. This is because of Sweden´s ambition to be a moral power and human rights leader in the world (AI readiness index). Sweden is considered a leader in human rights issues on the international arena from equality at home to promoting HR and giving international aid to countries abroad. This ambition of being a humanitarian superpower has been developed from Dag Hammarskjöld being the second Secretary-General of the UN and the Swedish Prime Minister Olof Palme engaging in HR to today (Trädgårdh, 2018: 85-88).

This makes it interesting to analyze these cases given that they are somewhat contrasting given their status in Europe but are both cases on the frontier of recognizing and reacting to AI challenges. In this case, this choice of cases is also based on there being sufficient material on the subject for the purposes of analysis and comparison, since all countries do not prioritize AI. I will also compare these two national cases with a supranational case, which is the European Commission. The reasoning behind this is to find out what role the EU has in shaping the agenda on AI and how it might differ/relate to the countries I analyze. Is the commission shaping the regulation of AI in its member countries or just acting as an advisor? Putting it in comparison with my national cases will give a broader picture of how AI is understood and managed on different levels. This is relevant because the EU has already

acted as a regulator on AI-issues, which can be seen in the GDPR-legislation, regulating people´s privacy online.

Empirical material

The empirical material of this thesis consists of text analysis, where I will mainly use two reports made by the government agencies in each country in order to establish how they frame the subject. These reports were made on the order from the government in Sweden and France, and they were finalized and published in 2018.

Sweden has an official national strategy which is not very extensive, which is why I will use the report from the innovation agency Vinnova as well. The Vinnova report is about artificial intelligence in Swedish businesses and the society in general, which was ordered by the Swedish government. Because this report was requested by the Swedish government it could point to the direction in which the Swedish government may act in the future and could therefore be considered to be useful to analyze. In the national approach, they also cite the Vinnova report, which indicates that they are following the information and guidelines that they have laid out there. In France, Macron appointed the Fields medal winning mathematician and MP Cederic Villani to lead the national AI-strategy report for France, which is an extensive report covering many different fields which will be affected by AI. Other reports might address some of these issues related to AI, however I have limited time and cannot read countless of government agency reports searching for AI-related problems. Therefore, I use the countries and the commission´s main reports on AI, which should be guiding for what they prioritize and not in AI-related issues on democracy.

I will not use all pages in these reports but only the sections which are relevant to my theoretical framework and the questions that I want to answer in this thesis concerning ethical issues with AI. The reports have a lot of information regarding the development of AI and less about the ethics, which is a limitation in the sense that it is time consuming to go through the texts. Another limitation might be that this cannot be generalized to other cases, because it is specifically two countries´ and the Commissions´ reports, which I am analyzing. However, the analysis could still give us some rough insight into how other European countries will proceed in the face of challenges given that these countries are both members of the EU. But also EUs own evaluation of how they perceive AI.

The reports are written in English, which makes it easier for me to analyze because of not having to translate. Official government documents represent the official position of the countries, which I use in both cases. However, because Sweden's national strategy is less extensive than France's, I use the report made by Vinnova, which could be seen as representing possible directions that the Swedish government will take. For the supranational case of the EU, I will use their official approach to AI and also their advising expert group´s guideline of AI to get even more depth into their views. The AI High Level Expert Group´s (AI HLEG) guidelines could be directing us to which approach the European Commission will take in future decisions on AI.

Validity, reliability and generalizability

Official governmental documents and government agency documents are generally trustable and reliable in terms of the neutrality and empirical evidence in democracies. Sweden is considered a "full democracy" and France is considered to be a "flawed democracy" by the

economists´ democracy index of 2018. Even though France is considered to be a "flawed democracy", they are very high on the list, almost reaching the requirements of a "full democracy". This means that both countries' governmental documents could be trusted, because they are both advanced democracies (Economists' democracy index, 2018). The EU document is generally also trustable as well.

The validity of the study regards whether I am actually measuring what I want to measure. In this case, the goal is to identify opinions of the different countries regarding AI, which I argue is achieved (Bryman, 2012: 47). When looking at reliability, I argue that this study is quite repeatable. I have created a theoretical framework that could be tested on other country´s strategies on AI. Because I have used problems, solutions and what has been done regarding AI, it is easy to identify how countries frame the issue. (Bryman, 2012: 47-48).

However, there might be a problematic aspect with regards to the generalizability in this study because I am only reviewing two advanced democratic countries in Europe. At best, the results will generalize to similarly situated advanced countries in Western Europe. However, it is more representative by including the European Commission as a case, since they consist of politicians from different EU countries. Causality is not really relevant in this study. This is because I am exploring how these countries and the Commission frame the challenges posed by AI to human rights and democracy, in order to uncover framing and regulatory solutions as well as neglect of key challenges addressed in the literature (Bryman, 2012: 48).

Reports

Sweden

- Government offices of Sweden. (2018). "National Approach to Artificial Intelligence". In total: 11 pages

- Vinnova. (2018). "Artificial Intelligence in Swedish business and society". In total: 150 pages

France

- Villani, Cedric, et al. (2018). "For a meaningful Artificial Intelligence: Towards a French and European strategy". AI for Humanity. In total: 147 pages

European Commission

- European Commission. (2018). "Artificial Intelligence for Europe". In total: 19 pages

- European Commission, High-Level Expert Group on Artificial Intelligence. (2019). "Ethics Guideline for Trustworthy AI". In total: 35 pages

Results

In this part, I will review the different standpoints of Sweden, France and the European Commission regarding AI by using the theoretical framework that I have created based on the previous literature in the subject of AI and human rights. I will go through the empirical evidence to answer my research questions and follow up with a discussion of the results, where the findings are analyzed further and present a summary of challenges acknowledged and neglected by the cases.

Sweden

The Swedish national strategy illustrates that Sweden clearly views AI as a natural part of the digital development and an important issue to address. It is expressed through the high ambition that is stated in the beginning of the report, where the goal of Sweden is to become the world leader in taking advantage of the opportunities that AI presents. The belief is that if Sweden can utilize AI in the right way, it will be beneficial for the country´s competitiveness and increased welfare. In Table 3, I will summarize the problems, solutions and what has been done in terms of regulations in Sweden.

The Vinnova report and the National Strategy report

Privacy

The Vinnova report digs more deeply into the issues regarding the ethical practices that will be necessary along with the use of AI. The report discusses data access, which touches upon several issues, among them: privacy. They stress the importance of regulatory developments and rules regarding data. They exemplify the use of patient's data in health care services as extra important for the public to have trust in increased data access, because AI in the health care could create great benefits, but it requires a lot of data:

"The patient's privacy must be maintained for this sensitive data. Public confidence in increased data access and developed data connections lies in people's control over their own data" (Vinnova, 2018: 40).

This is around the time of the start of the implementation of the EU law GDPR, which requires companies to get consent from the user to use their data. However, they are discussing the possible implications of this law, where they argue that it might limit the possibility of storing data (Vinnova, 2018: 42).

They consider the GDPR law as an important regulatory development because it protects the fundamental rights and also freedom for citizens. Vinnova also stresses the importance of actors implementing and interpreting GDPR, because it will have significance for the utilizing potential for AI and dealing with the risks (Vinnova, 2018: 76). They call for a balance between basic ethical HR values and data access in order to be able to utilize benefits of AI, when it comes to legislation. This also requires more competence in the area.

There are however other privacy laws that are already covering some of these issues, such as; recording video in city environments and in the defense-related automotive industry, most data are classified (Vinnova, 2018: 42).

Security

Vinnova recognizes that there are risks with the development of AI around the world, where a crucial one is the security of the state, in terms of: threats, election interference and attacks. They frame the risk of data theft and attacks as especially concerning, which autonomous systems will be extra vulnerable to. This is explained to be the case because of the pace of the development of AI systems and the difficulty of keeping up, in terms of the security for protecting against these systems. They suggest that there should be a more transparent management of algorithms and data processing (Vinnova, 2018: 53).

In addition to the security issues mentioned, there are three issues that they specifically identify: digital, physical and political security. AI can be exploited in an attempt to damage individuals, businesses and society in general and they consider it as a difficult task to predict the negative consequences that AI might cause:

"While AI can be used for value creation, efficiency and addressing societal challenges, AI can also be exploited to damage businesses, individuals and society at large. There are significant risks of data being deliberately manipulated so that wrong conclusions are drawn. It is very difficult to predict how different negative uses of AI may manifest themselves." (Vinnova, 2018: 74).

This could potentially lead to people not feeling comfortable using AI applications because of the possibility of it undermining the individuals' democratic rights (Vinnova, 2018: 53). Therefore, they believe that it is important that public authorities and people in charge of regulation being a part of the innovation processes and strengthen their knowledge significantly. They also argue that it is important for policymakers to cooperate closely with researchers to deal with the potential risks (Vinnova, 2018: 75).

Labor rights

Increased AI applications will both affect jobs in the public and the private sector according to the report. They cite a study showing that 46% of all work tasks will be automated which will affect 2.1 million people in Sweden. The main areas that will be affected by automation is mentioned to be: mining, manufacturing, transport and warehouse services (Vinnova, 2018: 73).

Although they recognize that jobs will disappear because of AI, they also state that jobs will be created by AI and that the net effects of the labor dynamics caused by AI are still uncertain. However, they believe that more simple jobs will be in the danger zone to a larger degree than more qualified jobs. This requires innovation leadership, ability to upgrade competence and market adjustments in general according to the report (Vinnova, 2018: 7). There will be a big challenge for workers to adapt to this change and it will most likely meet resistance, which is why legislation must deal with this, according to Vinnova (Vinnova, 2018: 44).

Vinnova sees great potential within the energy sector, the automotive industry and the construction sector to utilize AI, where companies are recommended to hire AI-expertise to upgrade knowledge fast. This could potentially increase efficiency in companies greatly, however the access to AI-specialists will be crucial. This might lead to large organizational changes which affects employees. It is important for companies to be conduct research within AI in cooperation with industry research institutes and academia, to be able to educate existing staff (Vinnova, 2018: 42-44).

Accountability and responsibility

As I have illustrated in the theoretical framework and the previous literature, there is a divide on whether the ethical issues of AI should be handled on a national or global scale. With this in regard, when reading the national strategy, it can be interpreted that Sweden wants to prioritize the national approach and then promote it internationally, which is illustrated by this quote:

"Sweden can take the lead in ethical, safe, secure and sustainable use of AI by actively working on this issue nationally and promoting it internationally. "(National approach, 2018: 8).

They also emphasize the importance of the use of AI algorithms to be transparent. But also dealing with ethical issues that AI could potentially create, such as moral dilemmas when autonomous vehicles are forced to make decisions (National Approach, 2018).

The issue of who is responsible for AIs' action and the view of accountability is not extensively discussed in the Vinnova report. They mention that there is a lack of regulation regarding certain AI-applications such as human and vehicle movements and the use of drones for transportation of goods. This could be interpreted as being related to accountability based on the trolley problem mentioned in the literature review. The report mentions that:

"A lack of control, overview and transparency prevents clarity regarding accountability as well as the capacity for system troubleshooting" (Vinnova, 2018: 49).

This demonstrates that they are recognizing the problems that a lack of a regulatory framework could cause when dealing with AI-related issues. They urge for more discussion regarding this issue and state that the discussion is limited today regarding ethics and security. It is important that there is accountability and responsibility within the AI application, which could otherwise lead to people not trusting it and feel that it threatens their democratic rights (Vinnova, 2018: 53).

AI expertise in government

There is a global lack of expertise in AI, which also includes Sweden and this will be a major challenge according to the report. The scarcity of expertise of AI in companies can be seen as a serious threat, because companies become too dependent on consultants, which reduces innovation and opportunities for solutions. There is also a lack of research within the academic field of AI in Sweden according to the report, although there is some but it is mostly conducted in KTH, which is the technological and engineering based university in Stockholm. They call for more cooperation between academia and business in order to have a more AI based education (Vinnova, 2018: 12, 48).

The framework that I use is dealing with AI expertise in governments, which in this case demonstrates that government agencies in Sweden are lagging behind. Vinnova reports that 53 percent of respondents in a survey with government agencies, reply that they have not begun their work with AI on a strategic level. Only 6% of the respondents are currently implementing projects with AI technology. There is only a reflection of what this means for realizing the full potential of AI and business opportunities in the report, but not a reflection on how a lack of expertise might affect the policies that the government might have towards AI. Instead, there is simply a call for a national strategy and orders from the government (Vinnova, 2018: 62).

The report also claims that Sweden has a good basis for AI-capabilities because of the degree of digitalization in society in general. They believe that government agencies need to increase their level of expertise in AI significantly by cooperating more closely with Research and Development (R&D) and innovation processes where AI applications are being developed (Vinnova, 2018: 76).

National vs global issue

Revising at the national approach, the report also highlights the importance of taking part of the European debate on AI because many of the regulations and guidelines come from the EU and also at an international level:

"Regulatory frameworks at European and international level, for example cross-border data transfer rules, are also important. The EU's General Data Protection Regulation (GDPR), which applies from 25 May 2018, provides strong privacy protection in personal data processing and for this reason is an important part of the AI framework." (National Approach,2018: 10).

The report also states that Sweden is a small player in the world, which limits the country´s possibility to affect regulations regarding AI. This could imply that they view the regulation of AI as having a larger effect on a global scale compared to on a national level. Vinnova therefore recommends that Sweden searches for cooperation internationally, since most of the developments are occurring there.

This includes both at a governmental level and other parties. This could include going into bilateral or multilateral agreements with different countries within AI and seeking partnerships with international organizations as well. They also call for the Swedish public sector to collaborate more with Swedish AI companies and the major players in AI internationally, such as; USA and China (Vinnova, 2018: 69).

Equality

Threats occur to democratic values through disinformation, cyber-attacks and manipulated data. Biased or manipulated data might produce discrimination, distrust and lack of transparency (National approach, 2018). The Vinnova report does not have a more extensive discussion regarding equality and the potential threat of discriminatory AI-systems.

Warfare

The discussion that Vinnova sheds a light on is mainly regarding defending against attacks on sensitive information and systems within national security. Otherwise, neither report on the national approach addresses the issues related to warfare.

Freedom of expression/political participation

Vinnova discusses that the major platform companies have an increasingly important role on the market which will affect many businesses and society at large, but they do not discuss it in relation to freedom of speech. They also mentioned the danger of data being deliberately manipulated which could damage society and businesses seriously (Vinnova, 2018: 35, 74).

Table 3: Sweden

Factor	Perceived problem	Solution	What has been done
Privacy	Threat to privacy	Regulatory development (e.g. GDPR) that does not limit the use of data	GDPR, privacy laws on recording video, automotive industry has classified data.

Security	Threat to individual's democratic rights, businesses and society in general	Transparent management of algorithms. Policymaker in close collaboration with researchers and be a part of the innovation process.	Not discussed
Labor rights	46% of work tasks automated in the future	More jobs created by AI, competence and possibility to upgrade knowledge	Not discussed
Accountability & Responsibility	Lack of regulation	More discussion and international regulation	Not discussed
AI expertise in government	Lack of expertise in academia and government, might reduce innovation possibility	More cooperation between academia and private sector. Government cooperate with AI R&D and companies making applications	Not discussed
National vs global issue	Should AI be dealt with on a national or global level?	Working on it nationally, promote internationally but also positive towards EU and international legislation. Positive towards bilateral and multilateral cooperation within AI.	GDPR, EU law
Equality	Biased or manipulated data might produce discrimination	Not discussed	Not discussed
Warfare	Not discussed	Not discussed	Not discussed
Freedom of expression/political participation	Tech companies have increasing importance in society. Data manipulation is dangerous for society.	Not discussed	Not discussed

France

France has appointed the mathematician Cedric Villani to conduct their national strategy along with leading scientists in the subject, where they have produced a large report on many issues and benefits that might result from AI. In Table 4, I will summarize the problems, solutions and what has been done in terms of regulation in the country.

The Villani report

Privacy

This report stresses the importance of having European regulation of data and not letting the large tech giants lead the control of the data, which could end up in free trade agreements as the tech giants want to. This could lead to a setback for the possibility of EU to maneuver the data. They see the GDPR as a possible solution to the issue along with national legislation, because it has a firmer footing (Villani, 2018: 31-32).

The report also mentions the French Data Protection Act which is a modified law that was passed in 2018 with the aim to harmonize it along with GDPR. However, the report discussed the limitations within this law, which is that it only reaches personal data within its scope. The use of algorithms and the issues that comes with algorithms might be a blind spot in the law, according to Villani. They mention one example:

"This holds good in a large proportion of cases: personal offers, recommended contents, etc. but, in practice, many purposes escape this legislation, despite the fact that these may have a significant impact on groups of individuals, and therefore on single individuals. For example, it has demonstrated that the statistical aggregates that prompt sending a greater number of police patrols or Amazon couriers to certain areas may have discriminatory consequences for certain sections of the population, due to a mechanism which reproduces social phenomena." (Villani, 2018: 121).

This then demonstrates that citizens might be protected on an individual micro level against the use of their personal data but not in a macro level, where information can be acquired without consent (Villani, 2018: 121).

Security

Although AI produces possibilities, it also produces new threats. They understand the importance of AI and that there are several threats that comes along with it as well, such as; manipulation of data, arbitrary skewing and attacks. They discuss examples such as driverless cars:

"The existence of means used to skew its perception of the surroundings (deliberately causing poor interpretation of a stop sign, for example) could cause severe incidents. "(Villani, 2018: 58).

Other problems might arise as well such as: arbitrary skewing of algorithm results that is caused by manipulation of input data and attacks on AI systems with weaknesses. France considers it important to have experts as a support when reviewing possible solutions for these problems. They want more research and monitoring on safety and security issues posed

by AI systems, which they suggest should be allocated to the "National Cybersecurity Agency" in France (Villani, 2018: 59).

Labor rights

There is divided opinion on how many jobs in France that will be affected by AI ranging from 10% to 40%, either way, it will affect society greatly and there is a need to deal with this issue by collective planning. They recognize that it might lead to higher unemployment and inequality during a transition period, which they refer to as a common situation historically when economic transitions have occurred (Villani, 2018: 81).

AI and automation will mainly have an impact on low-skilled workers, although high-skilled workers will be affected as well. This means people working in industries; mechanics, unskilled workers but also cashiers, drivers and cleaning staff. There is a danger that people working with AI machines lose the ability of personal initiative and thinking, relying solely on machines taking decisions. Therefore, they frame this issue as a necessity of human skills to complement artificial intelligence on a large scale. The automation is positive as well because it reduces the workload on simple tasks and enables humans to be able to focus on our expertise:

"For the automation of tasks and occupations could represent a historic opportunity for de-automating human work: it enables us to hone our uniquely human skills (creativity, manual dexterity, abstract thinking, problem-solving). We must turn artificial intelligence to our advantage to develop the abilities of each and every one of us: the opportunity is there for the taking." (Villani, 2018: 85).

There is a need for massive transitions from people who already are on the labor market and people that will be working soon. The labor conditions are too inflexible and they believe that there needs to be legislation to change this (Villani, 2018: 93). There is a need for a discussion regarding what AI should and should not do in the labor market, because they cannot rely on microeconomic choices of businesses on this particular issue, according to the report. They believe that these issues could be brought forward through compulsory collective bargaining, which must be held every three years with companies over 300 employees in France. This could have a positive effect:

"The contents of such negotiations could be revised to factor in the introduction of new technology and the digital transformation of companies, in terms of adapting skills and of complementarity between humans and machines" (Villani, 2018: 93).

Accountability and responsibility

A core problem that might arise from "strong AI" is that decisions will be taken without human involvement; which France cannot allow for certain decisions to be taken without an explanation. They do not want AI systems to replace decision making over certain issues, e.g. lethal force, where they see AI as a complementary because it helps people making decisions (Villani, 2018: 126).

The solution to the problem can be illustrated by this quote:

"In the first place, there needs to be greater transparency and auditability concerning autonomous systems. On the one hand we can achieve that by developing our capacities to

observe, understand and audit their performance and, on the other, through massive investment in research into their accountability." (Villani, 2018: 113-114).

In addition to this they suggest that the protection of our rights and freedom needs to be modified to deal with the potential threats that AI might cause. The legislation today is not sufficient because it focuses on individuals solely, which is not consistent with the logic of these AI systems. There is therefore a need to create collective rights concerning data (Villani, 2018: 114).

They also want to ensure that companies who are using AI systems still remain legally responsible for the actions taken by their AI machines. They also want to create a group of public experts with the task of auditing algorithms and databases (Villani, 2018: 117).

AI expertise in government

The government bodies will have different development curves in their knowledge of AI and they will need to acquire human and financial resources to keep up and be able to provide favorable policies. They believe that the State should be a driving force in realizing the potential of AI and including it in their policies (Villani, 2018: 20).

They suggest that there should be a "reserve to AI", which could be formed as a voluntary group of citizens (entrepreneurs, researchers, non-profit actors) as a solution to the lack of knowledge. This could help build the AI expertise of the government, bringing in knowledge from the outside. They could function as advisors to the government's policy suggestion, where they could give their evaluations of it (Villani, 2018: 56).

National vs global issue

The report presents an ambition that France should participate and lead the discussion of AI in the international context. Firstly, it could mean putting forward the idea of how AI is going to affect the UN SDGs. (Villani, 2018: 103).

They are however positive towards national legislation as well as legislation on the EU level. They have adopted the French data protection act in 1978 and updated it in 2018 to address issues related to AI. They believe that the European legislative framework needs to promote new uses for data as well (Villani, 2018: 29). This ambition of cooperation with EU is illustrated by this comment:

"We are convinced that France and Europe as a whole must act synergistically, with confidence and determination, to become part of the emerging AI revolution." (Villani, foreword).

Generally, they revise the issue from a European perspective against US and Asia. However, they also believe that some issues should be dealt with on an international level, such as AWS. This is subject to international and humanitarian laws but also needs to be debated regarding definitions and regulations but also promoted with good practices internationally. (Villani, 2018: 126).

Equality

They recognize that algorithms reporting information might provide biases, where they provide examples of Google algorithms that were more likely to target women with low-income jobs in their advertising. Another example is that the algorithms recommend higher

surveillance in poorer Afro-American neighborhoods, which could create racial biases. They fear that this potential discrimination risk is going to create a distrust in AI in the general public, which could potentially hinder the development and implementation of AI in society and all the benefits that it might bring (Villani, 2018: 116).

Discrimination is prohibited by the law in France and in the universal declaration of human rights as well. The algorithms that might produce discriminative results use data to personalize and assist people in making decisions and the fear that this report is concerned with is that inequalities and prejudices might be reproduced by the algorithms. Because AI operates in our personal space with our data, it should be expected that they operate within the boundaries of the law. The report suggests that legislation and ethics should control the use of AI systems in our societies. It requires development of procedures and tools to audit the AI systems based on the country´s ethical and legal framework.
(Villani, 2018: 116).

Warfare

This report refers to AWS as LAWS (Lethal Autonomous Weapon Systems), which they consider to be one of the greatest concerns regarding the developments in AI. France has been involved with this issue since 2013 when they initiated the discussion in the UN Convention on Certain Conventional Weapons (Villani, 2018: 125).

AWS has not actually been used yet and there is a problem of definition of what is AWS and what is not, which is problematic when creating a framework for it. There should be a balance of the concept according to the report, which does not hinder the development and does not cover the relevant systems (Villani, 2018: 125). They state that from a French point of view, it is possible to be a driving force behind regulations or provide good practices, without falling behind in the competition of development of AI and AWS. They want to establish a scale of autonomy from landmines to automatic anti-missile defense systems, because it becomes easier to identify which weapons will be affected by AI developments and not (Villani, 2018: 126).

France considers mankind of being ultimately responsible for the use of lethal force and they consider the role of the AI developments within military force as assisting those who take decisions of lethal force rather than replacing them. They emphasize that all weapon systems are bound to follow international and humanitarian laws on weapons and that France should develop a proposal to improve the transparency in relation to AWS (Villani, 2018: 126).

France has existing laws today controlling the use of military equipment. It covers both external and internal processes of military equipment, which is, e.g. impact of export of weapons and practices in France with regards to HR. There is also an issue brought up by the report which is interesting; it is that building blocks required for building weapons is no longer supplied by states but private actors for civil applications, which they consider to be problematic (Villani, 2018: 127).

Freedom of expression/political participation

The Villani report discusses market dominance of the major tech companies in the world and that Europe should become more competitive in this field, but they do not mention it in relation to freedom of speech. They also mention that algorithms shape our newsfeeds in everyday life, however they do not problematize it (Villani, 2018: 22, 113).

Table 4: France

Factor	Perceived problem	Solution	What has been done
Privacy	European´s right to personal data is threatened	GDPR and national legislation	GDPR and French data protection act
Security	Arbitrary skewing, manipulation of data and cyber attacks	More research and monitoring by Cybersecurity Agency	Not discussed
Labor rights	Labor market will change and France will be affected largely	Ban Strong AI in workforce and have collective bargaining to address the issues	Not discussed
Accountability & Responsibility	Who is accountable for AI taking decisions	Mankind should be responsible for the use of lethal force More transparency and auditability AI companies responsible for decisions their systems take	French data protection act & GDPR has established the principles
AI expertise in government	Lack of knowledge of AI in government	Expert board and high officer for AI	Not discussed
National vs global issue	Should AI be dealt with on a national or global level?	In AWS: promote good practices and legislation internationally by France. In general EU and France should regulate	French data protection act and GDPR, EU law
Equality	Discrimination, reproduce prejudice and lower trust for AI	Monitoring the use of AI in compliance with French law and ethics.	Not discussed
Warfare	Dangerous to leave lethal force in the hands of machines	Create a scale of autonomy in AWS. Regulate internationally	Initiative to a discussion forum created by France in 2013 It has laws today controlling the use of military equipment

Freedom of expression/political participation	Market dominance of major tech companies a problem	Not discussed	Not discussed

The European commission

The European commission has appointed an expert group to deal with the ethics of AI, which has resulted in a report that I use in my analysis. They also made a report themselves, analyzing the AI potential for Europe. In table 5, I am going to summarize the understanding of problems, solutions and regulation of AI.

AI for Europe and Ethics guideline for trustworthy AI

Privacy
The privacy of individuals needs to be protected during the whole process, from creating the AI-system to when it is in full functioning. The users need to know before using a product, how the data is being used. The report states that this is important because AI-systems have the capability of interfering not only in people's preferences, but also in their views on religion, gender, sexual orientation and politics. Therefore, the report states:

"To allow individuals to trust the data gathering process, it must be ensured that data collected about them will not be used to unlawfully or unfairly discriminate against them." (AI HLEG, 2019: 17).

When a company handles individual´s data, there should be data protocols governing data access, according to the expert group. This should imply that it is regulated who has the authority to access data and in which context it is allowed (AI HLEG, 2019).
The Commission discusses the legislation GDPR as a step towards better data protection within the union. They describe the legislation as protecting the individual´s right to their own data:

"It contains provisions on decision-making based solely on automated processing, including profiling. In such cases, data subjects have the right to be provided with meaningful information about the logic involved in the decision. The General Data Protection Regulation also gives individuals the right not to be subject solely to automated decision-making, except in certain situations." (Communication for AI, 2018: 15).

They are going to closely monitor the law in the context of AI and advise national data protection authorities to do it as well (Communication for AI, 2018).

Security
The report by the expert group discusses the importance of having secure software systems that are not vulnerable to attacks, such as: hacking. The attacks could target both the data and the infrastructure in general. If the data is changed, it could lead the systems to make other decisions based on false data or just breaking down the system, which is very problematic (AI HLEG, 2019: 16).

A lack of security in processes can also lead to making wrong decisions or even physical harm. A secure AI system should be prepared to be exposed to attacks and malicious attempts to distort the data. It should also be prepared to shut down and restart when exposed to an attack, in order for the system to be considered safe (AI HLEG, 2019: 21).

Labor rights
The European Commission recommends all governments to prioritize a modernization of the education systems to deal with the transformation of the labor market caused by AI and they need to become more proactive in reskilling workers. They believe that this responsibility lies with the member states:

"New technological, economic and environmental changes mean that society needs to become more proactive. Governments, industry leaders, educational institutions and unions face a responsibility to bring the citizens into the new digital era ensuring they have the right skills to fill the future jobs." (AI HLEG, 2019: 33).

The commission wants to focus specifically on putting forward solutions for the jobs that are going to be replaced the most by AI. They also want to ensure social protection for these workers in accordance with their own European pillar of Social rights (Communication for AI, 2018: 12).

Accountability and responsibility
The Commission´s report pinpoints the importance of people understanding AI systems and the implication it has for trust. The Commission has presented several proposals to strengthen trust among people and businesses, such as: the ePrivacy Regulation and the Cybersecurity act. They argue that this is important to implement as soon as possible to ensure the legal environment´s reliability and protection of basic rights (Communication for AI, 2018).

The expert group has a clear view of how to make the use of data and AI-system more transparent. The report argues that there should be more traceability of algorithms and the people collecting data, which will create more transparency. The report also argues that it would be easier to identify faults made by AI and therefore easier to stop future mistakes as well (AI HLEG, 2019: 18).

Explainability is another concept they present as important to address the issues. An explanation to the decision-process is proposed to be mandatory when AI is having an effect on people´s lives. The report also suggests that humans need to be aware if they are interacting with a human or an AI system online and people should not be forced to interact with AI systems, and human interaction should therefore be provided instead (AI HLEG, 2019: 18).

AI expertise in Government
The commission has not discussed the implications or level of AI expertise in Government. However, they do discuss that government needs to be more reactive to the technological change in terms of the labor market and making AI more transparent.

National vs global issue
The European commission are calling for a transformation of the education systems in member states to adapt to AI and are highlighting that the member states themselves are responsible for operationalizing this (Communication for AI, 2018).

However, the expert group views problems related to AI as a global issue, because the use and impact of AI does not stop at borders. This is why they recommend the countries and other stakeholders to develop a global framework, to create an international agreement on the issues (AI HLEG, 2019: 5).

Equality
In the report, the expert group acknowledges the existence of possible discriminatory practices that AI systems could engage in. This potential bias output could hurt vulnerable groups such as: workers, women, ethnic minorities and other groups and exclude them from society (AI HLEG, 2019: 11). This can occur when using datasets by AI-systems for training and operation, which can suffer from historic biases (AI HLEG, 2019: 18).

Therefore, they condemn it and state that AI systems should be as inclusive as possible by representing different populations (AI HLEG, 2019: 11). They encourage hiring from diverse backgrounds and cultures because they argue that it broadens the opinions. They suggest that discrimination can be prevented by oversight processes by analyzing the systems actions (AI HLEG, 2019: 18).

Warfare
The expert group acknowledges that countries around the world are developing AWS from more simple technology assisting people in warfare to more advanced, where no human is required to take decisions in war. The report is concerned that it might lead to an arms race at no comparable proportion, where human control is lost:

Currently, an unknown number of countries and industries are researching and developing lethal autonomous weapon systems, ranging from missiles capable of selective targeting to learning machines with cognitive skills to decide whom, when and where to fight without human intervention. This raises fundamental ethical concerns, such as the fact that it could lead to an uncontrollable arms race on a historically unprecedented level, and create military contexts in which human control is almost entirely relinquished and the risks of malfunction are not addressed. (AI HLEG, 2019: 34)

The report describes that the European parliament has called for a development of a common legal framework addressing this issue. This should also be connected to international human rights law. The expert group is also backing this resolution (AI HLEG, 2019: 34).

Freedom of expression/political participation
The report by the expert group addresses the issue of freedom of speech and that AI-systems cannot undermine democratic rights. This includes the freedom of choice, which cannot be compromised by the use of AI (AI HLEG, 2019: 12)

Table 5: European Commission

Factor	Perceived problem	Solution	What has been done
Privacy	Interference with people´s preferences and individual´s right to their own data	Regulating the governance of data access and regulating the use without consent	GDPR

Security	Cyber-attacks on data and infrastructure	More secure AI-systems and possibility to shut down and restart it	Not discussed
Labor rights	AI will affect jobs	Social protection of workers, modernize education on a national level and reskilling of workers.	Not discussed
Accountability & Responsibility	Lack of trust is bad for development of AI	More transparency in AI systems and the decisions making process	Proposals: Cybersecurity act and ePrivacy regulation
AI expertise in government	Not discussed	Not discussed	Not discussed
National vs global issue	Should AI be dealt with on a national or global level?	Transformation of education system = national level Mostly a global issue, AI systems does not have borders National authorities should monitor that GDPR is followed, as well as EU themselves.	Not discussed
Equality	Discrimination and biases	Represent different populations, hire from different backgrounds and monitor the processes.	Not discussed
Warfare	Could lead to an arms race	Develop a global framework	EU resolution
Freedom of expression/political participation	AI systems cannot undermine individual's rights and freedom of choice.	Not discussed	Not discussed

Discussion of results

Comparison of Sweden, France and the European Commission

Privacy

The discussion on privacy from both countries and the Commission is in line with the theoretical framework regarding privacy. They all frame the issue as a necessity to regulate the use of data because it is important to protect the individual's rights and freedoms. However, they discuss that a law cannot be too protective because it can limit the amount of data accessible, which affects the ability to utilize the technology. This is not discussed extensively in the theoretical framework.

A difference between the countries, which I could pinpoint is that France has regulated data privacy on a national level as well. This has been executed where they modified their data protection law to the current AI landscape in 2018, which Sweden has not done. So it seems like France is taking the route of a more regulation heavy strategy regarding privacy than Sweden is, which makes them seem more proactive rather than passive. It certainly makes France appear more proactive and responsive to the technological disruptions when updating regulations, however as discussed in the theory, the question is if these regulations will have a real effect.

The European Commission views the rights of individual's privacy similarly to Sweden and France. They understand it as AI needing more transparency of the process: who can access data and in which context but also companies having data protocols. The Commission has taken regulatory action here by putting forward the GDPR legislation, which aims at protection of people's privacy and they advise the national authorities of countries to monitor the law. This makes the EU both act as a regulator and advisor in the context of AI.

Security

The discussion of election interference is lacking in the Vinnova report and the Villani report compared to the concerns of the literature, which considers this as a major issue related to AI developments. It threatens the democratic fundamentals of free and fair elections in a country and solutions should be discussed based on previous literature.

There is however a discussion in both countries regarding the issues of data manipulation and cyber-attacks. The solutions that the countries propose seem to be quite similar although France wants to allocate responsibility to a specific government agency. Sweden wants to increase the knowledge and participation in innovation processes of policy-makers, while France wants to give a monitoring and research responsibility to a government agency. This can be related to the discussion in the theoretical framework where countries are eager to recruit expertise to policy-making, which could both be considered satisfactory but also problematic. This might give these experts too much power to affect the decisions that democratically elected politicians will make.

The European Commission has taken an advisory role in security issues, discussing the need to having better security in AI-systems both for the sake of data security and the infrastructure in general. So both the countries and the Commission are all taking the route of solving the problems with more investments in research on the topic and security systems.

Labor rights

Both countries address this issue quite extensively, which might be because of both countries' history of having strong labor movements. Sweden and France recognize that AI will affect the labor market immensely in the coming years, however they have a different approach towards the issue.

France is more focused on what AI should and should not do on the labor market, while Sweden is more focused on how to readjust their labor force to a new landscape. France emphasizes the danger of handing over all tasks of thinking and reasoning to AI machines because it might lead to people losing their ability to take initiatives and think. They believe that these issues for labor rights should be brought up in collective bargaining in companies, which is something that Sweden does not address. However, Sweden and the Commission seems to be more focused on transforming and reskilling the labor force, which France does not acknowledge to a large extent. This could harm their labor market if they do not plan to reskill their workers. However, they are investing in adapting education and research in AI and mentions that a need for transition of individual skills is necessary.

The European commission considers the issue of labor transformation caused by AI as a responsibility of the member states themselves and advises them to modernize their education system directed towards the areas that is affected the most by AI. They also argue that social protection under the EU pillars are important to protect, which could be seen as steps towards a more regulatory approach by the commission.

Accountability and responsibility

Regulation is more pronounced in the French report as they take a stronger stance against "strong AI" explaining that some decisions cannot be made without any explaination, making them seem more responsible. However, this could be stopping the potential benefits that can be utilized from "strong AI", which is discussed in the theory that regulation has to be careful not to hinder the development.

Sweden stresses the importance of having transparency and accountability in the use of AI and recognizes that there is a lack of regulation and a need of more discussions. This illustrates that they are reviewing possible alternatives for making the usage of AI more transparent. This could be seen as being unresponsive to changes but it could also be seen as Sweden being careful to put forward legislation before they have the facts, which is discussed by Fenwick et al in the theoretical framework.

As the literature discusses, the lack of trust in AI could potentially lead to a backlash for the development of the technology and realizing the benefits of it, which the Commission also mentions. They propose more explainability and transparency in the process and have put forward the proposals ePrivacy Regulation and the Cybersecurity act to create more trust. In this particular issue, EU seems to be taking a role as a regulator in this issue, because it will apply to all member states.

AI expertise in government

Both countries have a similar approach as Fenwick is discussing. They want to approach the issue with the help of experts in close cooperation with the government in regulatory issues regarding AI. France suggests a High Officer responsible for AI and a "reserve for AI", a group of entrepreneurs and experts in AI, advising the government. France is very keen to

appoint experts to deal with the issues, as it is described in the theoretical framework that it is common to do that when governing new technologies.

Sweden wants to increase their level of expertise in AI significantly by cooperating more closely with R&D and innovation processes where AI applications are being developed. Government agencies should also work more closely with R&D and innovation processes where AI applications are developed. It could be seen as Sweden having a more integrating approach as government agencies should participate in innovation processes, while France wants to have a more advisory approach with experts.

Therefore, as the literature suggests, it might be problematic to have a centralized commission dealing with AI issues, because it will affect the whole society. Thus, the Swedish government might have a more developed approach here, trying to participate in the process themselves on all levels. The Commission does not have a discussion regarding this particular issue.

National vs Global issue

Sweden wants to focus on the national approach firstly and promote it internationally, which is similar to France´s approach. France is also for an international legislation on AWS, but recognizes the difficulty of such a process. They are also highlighting the importance of cooperation within the EU in AI matters and regulating it on a EU and international level, which Sweden also does.

France also believes that the legislation today is not sufficient, and they discuss that it should be regulated from a collective rights standpoint rather than an individual one, which is not discussed at all in the literature. They are also suggesting that national authorities should monitor GDPR on a national level, giving some responsibility nationally for dealing with AI. The Commission is also advising this.

The Commission views certain issues as a state matter such as the modernization of the education system, while other issues should be regulated on a EU level, e.g. privacy or should be dealt with by creating a global framework e.g. AWS. This is similar to the approach that France takes, however, they have also regulated privacy issues on a state level as well.

Equality

France stresses the importance of dealing with issues of discrimination and reproduction of prejudices, which could affect the general trust in AI technology. This could then hinder the developments and implementation of AI in society, which is not desirable.
Discrimination is prohibited by French law and they believe that AI should act within the boundaries of the law which could be achieved by developing procedures of monitoring. They do not specify further regarding this and it might be difficult to implement this but I would argue that it is a better solution than what the theoretical framework suggests, which is that UN should monitor it.

The Commission also recognizes the problems of AI systems producing biases and discriminatory practices. They call for more transparency in this process as well by analyzing the systems actions, but also advise companies to hire from different backgrounds to deal with the problem.

Sweden only recognizes the problem that biased or manipulated data might produce discrimination in the national approach, but does not have further discussion regarding it and does not mention it in the Vinnova report. The lack of discussion regarding this subject is problematic in the sense that equality is essential in democracies and it might be threatened. So France has approached this issue more sufficiently compared to Sweden, who barely mentions it, which is worth noting.

Warfare

In this part, there is a large difference between the countries' focus on this issue. Sweden has almost no discussion regarding this, while France has a fairly developed and thought-out discussion in comparison to the theoretical framework. There might be several reasons for this, but it is most likely because France has a larger impact on the security and warfare debate globally than Sweden, being a permanent member of the security council of the UN. Therefore, it might be more relevant for France to address these issues and provide solutions than it is for Sweden.

France's opinion regarding this is similar to the theoretical framework, because they consider that humans should always be responsible for the decision of lethal force, which is stated in theoretical framework. On the other hand, they have not expressed a will to ban it completely, which the UN secretary general has been calling for.

The concern that the Commission presents regarding AWS is that it might lead to an arms race that could be dangerous for the security around the world. They also recognize that this should be dealt with based on international human rights and on a global level.

Freedom of expression/political participation

Both Sweden and France discusses the increasing market importance of the major tech companies using AI-applications as problematic, however they do not problematize it as an issue of freedom of speech which is discussed in the theoretical framework. Otherwise, there is almost no discussion regarding other issues of freedom of expression and political participation, which is, according to the literature, something to take as a serious threat to democracy.

Summary paragraph – challenges acknowledged and neglected from a human rights/democracy perspective

The challenges to regulating AI have been identified by the two countries and the Commission. The challenge of regulating privacy is that it might limit the accessibility of data, which means that it might affect the ability of utilizing the benefits of the technology.

Because AI is expected to have a large impact on the labor market specifically, there is a challenge for countries in deciding how much they want to implement AI there. Either as a complementing or replacing jobs. The challenge is a balance act between regulating the technology at the expense of keeping up with the competition and the potential negative consequences that AI might pose on the labor force. However, they all identify somewhat that there is a need for more knowledge on AI and necessary to upgrade the skills of the labor force to deal with the increase use of AI.

Some issues might transcend national borders, which requires cooperation between countries internationally to create a common legislation. This is a huge challenge, since it is notoriously

difficult for international laws to be agreed upon. One example here is AWS, as it is a weapon which could be used in warfare, it probably requires involvement from UNs Security Council to establish a regulation.

The major challenge that the countries and the Commission acknowledge related to AI, is privacy, where all three cases are keen on solving the issue with regulation. Another issue that is also acknowledged by the countries and the Commission as a major threat is security. In this case they lean towards solving it with more investments in research on the topic and the security systems itself. The European Commission has concerns about the transparency of the process, because if not controlled it might lead to lack of privacy for individuals, which could create a lack of trust in AI generally. This could affect the development and progress of AI, which could harm the efficiency of countries and their growth. In addition to this, both France and the Commission acknowledge the danger of AI producing discrimination and biases, which also could harm the trust for AI. France and Sweden also identifies the importance of having a transparent and auditable system for AI in order to create trust.

A common denominator for France, Sweden and the Commission is that they all neglect the challenge of freedom of speech/political participation in their strategies. This issue regarding data manipulation, custom made newsfeeds and social media becoming a larger platform for freedom of speech is not discussed extensively, which is worrying. Election interference is a topic brought up as a large problem by the literature, however this has not been discussed and acknowledged as a major issue related to AI by the countries and the Commission. The discussion revolves more around security online and cyberattacks, but there is a need to address the issue of election interference because it attacks the fundamental pillars of democracy.

Answering my research questions:

RQ1: How is Artificial intelligence framed and understood by the different countries and the European commission from a human rights and democratic perspective?
Both countries and the European Commission have concerns regarding human rights and democratic issues regarding AI, as I have explained. At large, AI is understood and framed as having many potential threats to democratic and human rights such as: privacy, security, democratic accountability, discriminative AI applications, threat to labor rights and self-determination. It is also framed as democratic and human rights principles being the solution to ethical problems related to AI when creating legislation. In general, transparency is a key word in dealing with emerging technologies to create trust among citizens and for the process to be able to improved, which is highlighted by the European Commission as well. In addition to this, more knowledge in AI at large is necessary according to the cases.

RQ2: What are the similarities and differences between the different countries and the European Commission?
They both address the issues of privacy, security, labor rights, accountability and expertise in government with a somewhat similar approach. France frames the issues related to AI with a more eagerness to address it with regulation, while Sweden seems to be more focused on having more discussions and collaboration around the issues and investing in research about it. The Commission put forward the importance of transparency of the process by monitoring AI better and suggesting regulation in issues such as privacy and AWS.

France is also addressing issues that Sweden does not, which could be interpreted as France having reached a bit further in assessing the risks and possible solutions for dealing with them. France addresses solutions to eight out of the nine topics, while Sweden addresses solutions to six of them. The issues that France discusses, which Sweden does not discuss are: warfare and equality. Both countries do not address the issue of freedom of expression/political participation that AI might cause. The Commission addresses eight out of the nine issues, leaving out government expertise of AI. However, they do not propose any solutions to the issue of freedom of speech online.

The Commission have a similar view of AI in terms of HR and democracy as the countries, which is that it might interfere with individual's rights and core democratic values, which needs to be addressed. The European Commission also focuses on how to make AI systems more transparent and accountable, by having more monitoring and analysis of the process for AI, to make it more controllable.

Equality is an issue that was neglected by Sweden compared to the Commission and France, who addresses the issue with solutions. This is worrying for a country like Sweden who is considered to be a leader of human rights issues around the world. In terms of labor rights, Sweden and the Commission seems to be prioritizing the transformation of education systems and reskilling of workers, while France is more focused on discussing how to deal with AI in this area and possibly restricting it, although they are also investing in adapting to AI as well. This could potentially backlash for France, because of their workforce adapt slower to the changes in the future. Their industry could also be lagging behind if refusing to innovate with AI-solutions, which could harm their economy and ultimately losing jobs for the country.

RQ3: What is the role of regulation of Artificial intelligence in these countries and what role does the European Commission take here?
France is more eager to regulate AI on a national level than Sweden has indicated in the different reports. France has also been doing this by their data protection law, which I have discussed in the thesis. But in general, there has not been done a great deal in terms of regulation in the two countries and the Commission but regulation might not be the best alternative to tackle the problems. They are also focused on researching and collaborating regarding the issue, which could be a better alternative in contrast to regulation. This is more pronounced in Sweden and the Commission´s reports. Both countries are under the GDPR law, because they are members of EU but apart from that, many issues have not been addressed with regulation apart from privacy.

The European Commission acts both as a regulator and an advisor in AI for the member states, however it seems to be dependent on which issue we are talking about. They are advising member states to transform the education system, reskill workers and have more sound security systems to deal with threats that AI systems might pose. They have presented the regulation GDPR, the Cybersecurity act and have proposed the ePrivacy regulation, which is mostly associated with the issue of privacy.

Conclusion

To conclude this thesis, I firstly reviewed the literature on AI in relation to democracy and human rights, where I found a lack of research on this topic. Especially when comparing two countries and the European commission, and their views on this. From the literature and the

theory, I created a framework categorized by: problems and solutions. This framework was used as a tool to analyze the understanding and framing of the cases that I chose, in order to see differences and similarities between them. I found out that there were several differences and similarities on how they framed and understood AI in relation to democracy and human rights.

Sweden is addressing some issues that are discussed in the literature with suggesting direct solutions and regulations to AI-related issues such as: privacy and national vs global. They have an extensive discussion regarding the how to deal with lack of government expertise and how to adapt the workforce. However, they have not developed discussions regarding several important issues that AI will affect, such as: equality, warfare and freedom of speech, which are issues that are important to address to have a trust for AI, according to the previous literature.

France is also addressing the main issues in a similar way as Sweden does, which is that AI poses a threat to individual's privacy and that it is important to have transparency in the process when using people´s data with AI systems. Both of them are supportive of regulating these issues. The commission has similar views here and they introduced the GDPR law to deal with it. A difference is that France addresses the issues regarding, e.g. equality and warfare quite extensively, which could be explained by France having a role as a major power and prioritizing warfare questions more than Sweden. However, France does not address issues with government expertise and transformation of the labor force caused by AI as extensive as Sweden.

I would argue that the most important difference between the two countries is that France´s discussion is more centered around what AI should do and not. While Sweden discusses more on how to adapt to the changes that AI will cause. The European Commission has similar views as the two countries on most of the issues by both presenting regulation on some issues, and advising countries to adapt to AI. However, they have a discussion more centered around transparency in AI systems and that both EU and countries themselves should monitor AI processes more to deal with the issues.

The thesis is a comparative case study with mostly an exploratory design, which means that I wanted to explore how the different countries and the Commission framed this particular issue. I expected that the countries would focus more on privacy and less on freedom and potential risks. I based this presumption on previous research which identified a larger focus on privacy, while other risks such as threats to freedom and AWS has not been addressed greatly.

The results demonstrated that there was in fact a great deal of focus on privacy in both Sweden, France and the Commission, where they praised GDPR and also framed their own existing laws as targeting privacy in some ways. However, it is surprising that they have given privacy issues a lot of attention without an extensive discussion of election interference and the effect of AI on this issue. The potential risk of AWS was discussed in France and the European commission, which makes my expectation wrong there. On the other hand, in Sweden it was not discussed at all, which was according to the expectations, however notably since Sweden is seen as a human rights leader. This might be because of France´s role in the UN Security Council, where AWS probably will be addressed and therefore they have focused on this particular issue more.

However, freedom of speech and election interference was neglected by all my cases, which was according to the expectations. This is probably the most important take-away from the thesis, which shows that France, Sweden and the European commission has not addressed some of the most important challenges identified in the literature.

The thesis contributes to the research field by presenting a theoretical framework of problems and solutions, which can be applied to review different government´s views and actions regarding AI in relation to HR and democracy. I also contribute to the research by comparing three interesting cases, which sheds a light on how countries might act regarding the global governance on AI in the future. This could be interesting for policy makers because they get a clear overview of what the literature suggests as good policies, addressing AI-related issues of HR and democracy. This might be interesting when trying to create policies by reviewing what is being discussed and what has been done in other countries. In addition, it might also be a basis for how European countries and the EU specifically may act and participate in shaping the global governance on AI in terms of many different ethical issues that might be caused by AI.

Future research and limitations

The main lack of discussion that I can identify is how AI is going to affect freedom of speech, elections and what role the major tech companies should have as a platform for freedom of speech. These issues have been discussed in the literature review briefly but needs to be investigated more. The countries and the Commission do not have extensive discussions regarding this, which is something they need to address in the near future for people to trust AI systems. There needs to be more research on elections and AI, which is important because of the increasing use of it in recent elections. It might be the most important topic to in ethic-related issues with AI that needs to be researched more, because of the impact it might have on the democracy. AWS is also an issue that might be important to address from a human rights perspective as it might change the rules of warfare in the future. A focus that future research might take, is on accountability and responsibility. I believe this to be an important topic to analyze further because it is still unclear what role AI should have in society in terms of decision-making and ability to act without human involvement.

The possible limitations of this thesis is that it is difficult to establish causality and see patterns as clearly as in a quantitative design. Another limitation is that I can only collect so much data from the reports because of the nature of qualitative study design, therefore it might be more data on other problems which AI posed to HR and democracy. There is also a limitation of analyzing the data objectively and correctly because it is dependent on my interpretation, which I have tried to address by having a lot of quotes.

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