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Reconciling the tension between democracy and AI

Do Western Mediterranean Countries (WMCs) succeed in strengthening democracy through AI?

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Date: 29/06/2022
Word count: 11964

Abstract

Through a content analysis of the AI strategies of, Spain, Italy and France and their corresponding Policy Papers (PPs), this article answers the question: *"In what ways do European Governments (EGs) envision AI as a way for strengthening democracy?"* Through this, the aim is to highlight the plans and envisioning of EGs to achieve a positive impact on democracies through the use of AI. To do this, it is necessary to analyse the policies of these countries, as these are the documents in which governments set out their plans. Specifically, a content analysis of each country's PPs on AI and democracy is been carried out. Therefore, a coding scheme, based on the operationalization of the theoretical insights, has been determined and the Atlas.ti tool will be used to analyse these documents with the use of the coding scheme. The analysis concluded that, as expected, countries are using AI to strengthen democracy, but there is a big difference between Spain, Italy and France. In addition, surprisingly, countries do not include how to avoid the negative effects of AI on democracy in their AI Strategies (AISs), which requires further research.

Keywords: AI, Democracy, Mediterranean Countries, Content Analysis, AISs, Democratic Theories

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AIS	AI Strategy
EG	European Government
PP	Policy Paper
WMCs	Western Mediterranean Countries

1. Introduction

1.1. Background

Nowadays, in a globalised world with a recent emergence of new technologies, new challenges and debates are opening up for democracies that seemed consolidated. Throughout history, there have been numerous democratisation processes, but also reverse waves of democratization in countries, which, despite already living in an established democracy, reverted to totalitarian regimes (Huntington, 1991). Currently, scholars state that we are living a reverse wave and that the quality of democracy is decreasing. The emergence of AI (AI) in a context where democracy is in crisis has led many scholars to highlight the negative effects of AI on democracy, creating a tension between them. Ellul (1992) argued that these concepts are incompatible in the age we are living in, emphasising this tension. This makes it an important object of study that cannot be overlooked and, as a political phenomenon that has direct consequences on Europe, it must be analysed as such.

According to Floridi, Mittelstadt, Allo, Wachter, and Taddeo (2016), AI has an important impact on our society and opens up an ethical and political debate on whether this impact is negative or positive. In particular, Floridi et al. (2016) expose the negative ethical consequences of algorithms, such as the consequent the lack of privacy, which can result in anti-democratic threats (Zuboff, 2015) or discrimination. AI is currently used by people to exercise power and negative effects are therefore highlighted, such as structural and institutional injustice and discrimination (Rafanelli, 2022). Also highlighted, is the negative impact on human rights, democracy and the rule of law and must therefore be countered by protecting these democratic structures by increasing transparency about the use of AI by governments (Cunningham, 2002)

Having analysed the state of the art, it has been observed that there is a lack of representation of WMCs (WMCs) in the existing literature and that the majority of articles are based on the weakening of democracy through AI. There is a lack of research on the potential positive impact of AI, specifically, on the envisioning of the AISs (AISs) of European countries to reinforce the democratization process. This thesis will fill this knowledge gap by, firstly, focusing on WMCs and will analyse from a critical perspective their AISs. Specifically, through an interpretation of the AISs of the governments of Spain, Italy and France, which will focus on the different democratic aspects discussed in the theoretical framework, it will analyse the envisioning of the AISs and its strengthening effect on democracies. This will therefore fill the second aspect of the knowledge gap by showing that AI can have a positive impact on democracies. The positive impact of AI has already been shown by academia at present, however it has not yet been shown

in practice how the different countries plan to implement this. It is specifically this aspect that will be the focus of this thesis. Therefore, the interpretation of the AISs with focus on the democratic aspects is needed.

1.2. Research question

The main objective of this thesis is to analyse the positive effect of AI on democracies through analysing the visions of WMCs on how to use AI to strengthen democracies. Therefore, the answer to the research question: "*In what ways do EGs envision AI as a way for strengthening democracy?"* will lead to a greater representation of WMCs and a focus on the positive impact of AI on democracies, which is lacking in the state of the art, and will therefore fill the knowledge gap.

Therefore, it will provide answers to the following sub-questions:

Firstly, *how is democracy defined and on which aspects is it based?* In order to analyse the relationship between democracy and AI in PPs and therefore analyse the political language, it is necessary to define democracy and its aspects in order to be able to relate these aspects to AI. Considering the different definitions, it will be operationalised accordingly. Taking into account the democratic concepts based on the scientific literature, a coding scheme will be the basis of the interpretation. Therefore, key aspects defining democracy will be highlighted in order to analyse them in the PPs and relate these aspects to AI. Secondly, *what is the envisioned relationship between democracy and AI?* It is important to analyse how governments reconcile these aspects, through analysing its use of political language, specifically, a positive relationship that aims to strengthen democracy is expected. This is relevant considering that academia has focused on the negative effects and has not shown the positive ones in practice. After determining the coding scheme, the relationship between democratic concepts and AI will be sought and will conclude whether the envisioning of the governments of Spain, France and Italy is positive or negative.

After identifying the aspects of democracy, a content analysis is carried out in which these key aspects are analysed in PPs in order to observe its relation to AI and reveal important patterns and contradictions. The content analysis is needed in order to analyse the vocabulary and language patterns in the PPs to uncover problematic aspects. However, it is expected to identify how different governments positively reconcile democratic aspects with AI.

The answer to this research question has important social relevance and also for the academia, as the only system where this intellectual community can survive is in a democracy. Nowadays, we are experiencing a reverse wave of democratisation or, as Lührmann and Lindberg (2019) argue,

the third wave of autocratization. Currently, not only sudden autocratization is given, but also gradual autocratizations, what can be observed in the EU countries and specifically in the countries to be analysed in this thesis. Bicchi (2009) defines democratic backsliding as "[…] unilateral and systematic acts by a member state government that violates the laws and/or the norms of the EU" (Bicchi, 2009, p.8) and comes to the conclusion that Italy, Spain and France are suffering from this phenomenon, which is why these countries deserve special attention. Therefore, the aim of this thesis is important for society in general, but also specifically for scholars.

1.3. Research Approach

In order to answer the research question, it is necessary to interpret PPs through an analysis of the key content, which is why this is an interpretative research. Specifically, the aim of this thesis is to construct an interpretation based on the AISs of Spain, Italy and France through the analysis of the language and key content of the PPs. This aims to uncover problematic patterns, in order to identify whether the governments of these countries intend to use AI to strengthen democracy, it is necessary to investigate the documents critically. If the aspects of democracy have a positive relationship with AI, it will mean that governments do indeed envision AI as a strategy to strengthen democracy, but in order to assess this relationship, it is needed to uncover hidden structures and pinpoint contradictions in the PPs. To carry out the interpretation, firstly, the necessary documents are selected, which in this case are documents published by governments that talk about AI and have democratic values as a strong point. Secondly, a coding scheme is constructed based on the democratic aspects argued in the theoretical framework and, with it, the documents are analysed to subsequently carry out the interpretation. In order to carry out the interpretation, it is necessary to critically analyse the language, as the political language could cover hidden aspects. Therefore, the content analysis, which aims to uncover problematic patterns covered by the political language of the PPs, is needed.

2. Theoretical Framework

2.1. Introduction

Tensions between technology in general and AI in particular, and democracy are widely recognized. Yet, democracy has various meanings and comes in different types, which is to say that the relationship between AI and democracy depends on the meaning and type of democracy. Therefore, this chapter starts with the discussion of the concept of democracy and the way in which the main academics in the field describe it in order to develop the key theoretical aspects that form the basis for carrying out the analysis. Examples of existing theories of democracy with their consequent different conceptualisations will therefore help to operationalise the term democracy. The focus of this thesis is on the effect that AI has on democracy, so theories should be current. Consequently, it will not develop how the concept of democracy has evolved throughout history, but rather focus on the latest conclusions reached in the existing literature. It is important to note that the focus of this thesis is not to assess democracy as a form of government, but focuses on how AI can develop the positive aspects of this form of government and avoid the negative effects generated. This chapter then links theories of democracy and globalisation. Considering that AI has emerged due to the new context of globalisation and that it is a global political phenomenon that confronts democracy with new challenges, it is relevant for this thesis to observe how the literature describes this phenomenon, since it is necessary to understand the relationship between democracy and AI to know the context in which it is based. Finally, the tension between democracy and AI will be shown through academic articles that highlight this tension, taking into account both democratic theories and the context of globalisation. This chapter, after having introduced the key aspects and arguments, will end with the development of theoretical answers to the sub-questions in the form of hypotheses.

2.2. Theories of Democracy

After introducing the concept of democracy through two of the authors who represent the pillars of democratic theory such as Plato and Dahl, this section will describe three main democratic theories: *Liberal Democracy, Civic Republicanism* and *Critical Theory* to show the key aspects that define democracy. The concept of democracy has been discussed many times throughout history with the aim of highlighting the different aspects that constitute it. This concept first emerged in Anthient Athens, with Plato, being democracy something undesirable (Plato n.d.). Furthermore, according to Dahl (1971) and disagreeing with Plato (Plato n.d.), democracy was an unattainable system able to prevent tyranny, which protected individual interests and human rights, and he therefore coined the term polyarchy, an attainable system that resembled the ideal of democracy (Dahl, 1971). This shows that there are different ways of understanding democracy.

Although the theories of Plato or Dahl are part of the main pillars of democratic theories, this chapter will focus on the theories of *Liberal Democracy*, *Civic Republicanism* and *Critical Theory*.

On the one hand, the theory of *Liberal Democracy*, of which J.S. Mill is the main representative. This author presents the problem that in a democracy the majority and mass culture could oppress minorities, but this problem must be confronted by combining democracy with liberalism. He stresses the need to protect liberties such as freedom of conscience, thought and feeling, but he argues that it is important to set limits on what the government can legislate and stresses the distinction between private and public realms and the rule of law. In general, liberal-democratic theorists agree with Mill and stress the importance of a representative democracy. Furthermore, the role of the state should focus on protecting political and civil liberties and they emphasise pluralism, political individualism and the existence of a private sphere in which the state does not interfere (Cunningham, 2002). However, among liberal-democratic theorists there are differences on how to apply liberal-democratic principles (not on the basis of the principles per se) regarding how to preserve civil liberties and how to structure representative democracy. Fukuyama is another of the most important liberal-democratic theorists, who stresses that western liberal democracy is the final form of government, a very common belief among liberal-democracy theorists, and introduces especially the state-based liberal-democratic government. (Cunningham, 2002)

On the other hand, civic republicanism is a critique of liberal democracy, especially on the liberal dimension. One of the main authors, Michael Sandel, argues that liberal democracy threatens the sense of community. Also, he highlights that for people to be able to govern themselves they need to be able to deliberate about what is morally good, what is impossible in liberal democracy since concerns about what is morally good are delegated to private realms. In addition, Sandel emphasizes the necessity to protect objectives based on what is morally good above individual rights and, in doing so, criticizes the autonomy of liberal democracy. (Cunningham, 2002)

Furthermore, critical voices show the limitations of democracy. This is important for this thesis, considering that AI could avoid these aspects. Villa Sánchez (2019) stresses the importance of criticising democracy to identify its scope and its limits. He highlights three main limits of democracy: *representation*, *oligarchy* and *plutocracy*. The ideal of representation in the democratic system arose in Anthient Athens, where the community was much smaller than today and such representation was possible. Today, representative democracy creates two spheres: the represented and the representatives. This leads to a plutocracy (form of government in which power is held by the richest), since power is mainly held by the people at the head of governments,

who govern selfishly and without taking into account the interests of those they represent (Villa Sánchez, 2019). Therefore, representative democracy has turned into an oligarchy and plutocracy. Villa Sánchez (2019) differentiates between democracy and oligarchy, with oligarchy being the current regime into which representative democracy has descended, and stresses that in oligarchy the citizens neither want nor can be part of the government and must be content to observe and suffer the consequences of politics (e.g. corruption).

Table 1: Theories of Democracy

Theory:	*Liberal Democracy*		*Civic Republicanism*	*Critical Theory*
Author	J.S. Mill	F. Fukuyama	M. Sandel	J.A.Villa-Sánchez
Aspects Highlighted	Freedom of conscience, thought and feeling	Western Liberal Democracy: final form of government	Critique to liberal democracy	Importance of criticizing democracy
	Distinction: public and private realms			Limits of democracy: representation, oligarchy and plutocracy
	Role of state: protect political and civil liberties, does not interfere in private sphere	Connection: liberal democracy, capitalism, nation state	Importance of morally good: impossible in a liberal democracy	
	Pluralism, Political Individualism			Corruption

This section has highlighted main democratic theories (table 1). Firstly, the theory of liberal democracy, connecting the nation state and capitalism, stresses the importance of protecting political and civil liberties but always protecting the private sphere. Secondly, civic republicanism criticizes this idea and stresses the importance of the moral good, incompatible with liberal democracy. Finally, representation, oligarchy and plutocracy are presented as the main limits to any democracy. These main characteristics of a democracy will serve as a guide for this thesis.

2.3. Global AI politics

The relationship between democracy and AI depends on the meaning of democracy, but also on the context where this relationship is found. Plato's concept of democracy, in the context of ancient Athens, was not the same as the concept of democracy that exists now, in a context of globalisation. AI as a global phenomenon has emerged in a context of globalisation that affects democracy and poses new challenges to it. It is therefore important to observe how the theories of democracy respond to this new context and relate democracy, in the context of globalisation, to AI. Therefore, this section explains how the Liberal democracy and Civic republicanism theories respond to this new challenge. This will not apply to critical theory since it is already based on the context of globalisation. The theory chapter develops the key aspects of democracy that will later be used to analyse the PPs. Therefore, in addition to including the key aspects of democratic theories discussed above, it is needed to include key aspects, firstly, on the theories within the context of globalisation and, secondly, on the tension between democracy and AI. This

will ensure that the codes used in the analysis are adapted to the new context of globalisation and AI.

Firstly, liberal-democracy theory focuses primarily on the role of states and the challenges to democracy within states. For liberal-democracy theorists, the role of states in the context of globalisation is important for a structured representation and rule of law. Furthermore, constitutional protection of minority rights, representative democratic procedures and pluralism are of great importance (Cunningham, 2002). According to Zolo and Samuel Huntington, it is necessary to relax state sovereignty, but to maintain it due to the disparity of social and political values observed between nation states. However, Huntington, following a more Eurocentric line of argument, explains that Enlightenment, Christian values are preconditions for democracy and necessary in this new context of globalisation, what Zolo criticizes by arguing that it is an imposition. (Cunningham, 2002)

Secondly, civic republicanism focuses on democracy at local, national and subnational levels emphasising that, considering this new context, a core of shared norms regarding good society is necessary, especially in democratic political associations. On the one hand, Köhler highlights the values of *human rights*, *democratic participation*, and the *preservation of the world's ecological heritage* as particularly relevant in this global society. He explains that these norms and values that are necessary in order to make democracy work and believes that these values are realistic because of the global civil society that is emerging. On the other hand, Falk explains that a global civil society is possible by the unifying ideology of normative democracy and stresses the importance of not only *accountability* and *transparency*, but especially the values of nonviolence and human rights, in a similar way to Köhler. (Cunningham, 2002)

Table 2: Orientation towards Globalisation

Theory:	*Liberal Democracy*		*Civic Republicanism*	
	Focus: role of states, challenges within states		Core of shared values regarding good society needed	
	Protection of minority rights, representative democratic procedures, pluralism			
Author	S.P. Huntington	D. Zolo	M. Köhler	R. Falk
Orientation towards globalisation	Relax state sovereignty		Values: human rights, democratic participation, preservation of the world's ecological heritage	Values: accountability, transparency, nonviolence, human rights
	Enlightenment and Christian values: preconditions for democracy	Shared values: imposition of Western Enlightenment values		Eurocentric in origin, still needed

This section has shown how the democratic theories respond to the new context of globalisation highlighting the key values of these theories in the new context. Firstly, liberal democracy focuses on the role of states and attaches importance to the protection of minority rights, pluralism and representative democratic procedures. Secondly, civic republicanism stresses the importance of a core of shared values that differ depending on the author. This is relevant as it is important to focus on the characteristics of democracies in this new context of globalisation in which AI is emerging.

2.4. Tensions between AI and democracy

The democratic theories discussed, and these in the context of globalisation in which new technologies emerge, have provided the democratic aspects which will be related to AI in this section. In this way, the tension between AI and democracy will be highlighted. It is important to note that this tension will be highlighted taking into account the theories outlined above. However, it will focus especially on the theory of liberal democracy. It is also necessary to take into account the theory of civic republicanism and critical theory as they highlight the limits of the liberal democracy theory and of democracies in general. There has always been a link between democratic theory and technology and, in recent years, the promise of technology has influenced our conception of the term democracy (Borgmann, 1984). One of the most important objectives of liberal democracy has been freedom and this appear to be achievable thanks to AI, instrumentally speaking. However, Borgmann (1984) stresses the dehumanising effect that AI can have on democracy.

The tension between democracy and AI opens up a debate about the negative or positive impact of AI on democracies what has generated numerous articles by scholars explaining, on the one hand, the dangers that AI has on democracy and human rights. Cataleta (2020) explains it from an important point of view, as he talks about the problems that AI can cause from an ethical point of view. AI is often used in democracies to do a common good, such as making cities safer, however, this can also have a negative effect, as there are biases in the algorithms that could result in discrimination. Furthermore, it can violate privacy (and therefore freedom of expression), try to modify human behaviour, etc. This leads to the need for ethics of data to ensure democratic values in technological innovation, and this is what Europe is trying to do. Despite the evidence of these adverse effects, legislation often lags behind and fails to make progress in ensuring that human rights and democracy are compatible with AI. To reconcile this, it will be necessary to ensure that AI is educated to ethical standards so that intelligent systems are able to identify when they are not operating under democratic and ethical standards (Cataleta, 2020).

On the other hand, scholars have also stressed that AI can be used in a positive way to strengthen democratic systems. An example of this is what many scholars advocate as an improved democratic system: e-government. E-government is an idea that has been introduced to streamline government. This form of government can be very positive for democracies and a hybrid form is currently being discussed and developed to improve social and governmental structures in order to increase the transparency of these structures (Anttiroiko, 2003).

Given the current debate on the impact of AI on democracies and the fact that Europe is experiencing a reverse wave of democratisation, makes it an important topic of study and makes it important for Europe to have AISs that are adequate to combat the negative effects of AI and use them to make a positive impact. Considering the different aspects that define democracy, Europe could focus on these aspects in order to reinforce them through AI, always ensuring ethics and the preservation of human rights, but also focusing on the risks that AI has on democracies. As Nemitz (2018) explains, AI needs to be designed on the basis of democratic principles and human rights. Therefore, it is to be expected that the envisioning of AISs will demonstrate this as well.

Table 3: Tensions with AI

Author	A. Borgmann	M.S. Cataleta	P. Nemnitz
Tensions between democracy and AI	Dehumanising effect	Biases could result in discrimination	AI should be designed on the basis of democratic principles and AI
		Violation of privacy	
		Need for ethics of data, democratic ethical standards	

In this section it has been observed that, generally and with the exception of a few articles, there is a tension between democracy and AI in the existing literature, what is showed in table 3. Specifically, the problems that AI can generate in democracy, such as discrimination or lack of privacy, have been assessed. Furthermore, the need for AI to be designed on the basis of democratic principles has been shown.

2.5. Conclusion

In this chapter three aspects have been highlighted: Firstly, the main democratic aspects according to different democratic theories. Secondly, considering the context of globalisation, the democratic aspects each theory focuses on. Thirdly, the tension between new technologies and democracy. Taking this into account, this thesis works with the following insights: Firstly, the democratic aspects within the context of globalisation: democratic participation, preservation of the world's ecological heritage, accountability, transparency. Secondly, the main democratic aspect of liberal democracy theory: freedom. Finally, the main negative effects, discrimination

and lack of privacy. These key insights will be the focus of the analysis, which will concentrate on analysing how PPs refer to these aspects particularly relevant in the context of democratic theories, globalisation and the tension between AI and democracy. With this in mind, the following chapters will look at how AISs are used to strengthen democracies (through strengthening the key democratic aspects mentioned). Also, it will be observed how AISs are used to avoid the negative effects (privacy and discrimination) of AI on democracy.

Having constructed the theoretical framework in which the tension between AI and democracy is embedded, it is possible to develop initial hypotheses and a theoretical answer to the research question of this thesis. Countries are expected to show in their AISs how to strengthen democratic aspects and how to avoid the mentioned negative effects through AI. In other words, a positive relationship between democratic aspects and AI is expected.

3. Methods

3.1. Introduction

The aim of this thesis is to shed light on the current tension between AI and democracy by showing the envisioning of EGs on how to employ AI to strengthen democracy. This chapter therefore explains the methods used to carry out the analysis to show how the different sub-questions and the research question of this thesis will be answered. Specifically, based on the theory, a coding scheme will be developed by operationalising the different democratic aspects, through which the PPs will be analysed. This chapter is therefore mainly carried out in order to transparently show all the steps and decisions that are taken to complete the coding scheme and be able to carry out the analysis. Consequently, this chapter shows which data will be collected from which countries and how it will be analysed taking into account the theoretical expectations. Therefore, firstly, the case description will be explained, which are the AISs of Spain, Italy and France, and the reasoning behind it will be developed. Secondly, the data to be analysed will be described, which is PPs on AI of the selected countries. Finally, it will be shown how the coding scheme is developed to analyse the documents in order to be able to answer the different sub-questions and consequently to be able to answer the research question of this thesis.

3.2. Case Description

This section develops the reasons for the choice of the AISs of Spain, France and Italy. The choice of the AISs of these countries is mainly due to three reasons. Firstly, according to Freedom House (2022) they are considered free countries, what is important bearing in mind that this is a research about democratic countries. Secondly, there is a lack of representation of Mediterranean countries in the existing literature, and the aim of this thesis is also to achieve a greater representation of Mediterranean Europe in the state of the art. Given that it is been showed that there are important differences between the democracies of southern and northern Europe and that there is such a concept as Mediterranean democracy, it is important that both parts of Europe are represented in the literature. This difference is also due to the fact that some of the Mediterranean countries, such as Spain, belong to one of the last waves of democratisation and have a still young democracy (Huntington, 1991). With this in mind, the European Union has turned the Mediterranean countries into countries with democratic assistance (Bicchi, 2009) (policies to promote democracy), which shows the necessity to strengthen democracy. Finally, it is necessary to understand the original language of the documents to analyse them and with these countries the necessary language skills are given. Furthermore, it has been shown that we are currently living in a reverse wave of democratization in Europe and that, in general, a negative relationship between AI and democracies is observed in the state of the art, so it is especially interesting to

observe how the selected countries have the capacity to reconcile the tension between democracy and AI.

AISs are documents generated by the governments of countries in which they propose ways to develop AI focusing on different aspects and sectors in order to keep up with the rest of the countries. This is necessary nowadays considering the globalised context with a boom of new technologies. The selected artificial intelligence strategies have been drafted by governments specifically and in general by ministries of science and innovation to respond to the challenges presented by new technologies. Considering that one of the focus is expected to be the response to the challenge that new technologies present to democracy, it is relevant to compare the strategies. It is therefore a comparative case study of the current (2022) AISs of Spain, France and Italy and will observe to what extent they focus on democratic aspects, therefore, this thesis is based on an interpretative approach. AISs from Spain, France and Italy are expected to use AI to reinforce the democratic aspects shown above and to avoid the negative effects that AI has on democracies, thereby demonstrating the democratisation potential of AI. In this way, this thesis will be able to contribute to the state of the art ways in which democratic countries, even the most vulnerable to this reverse wave of democratisation, manage to use AI to generate a positive impact on democracies.

3.3. Method of data collection

In order to analyse the envisioning of France, Spain, and Italy, it is needed to analyse PPs related to AI and democracy. To search for PPs, this thesis relies on the OECD database, which gathers documents on AI from different countries. This thesis analyses the democratic aspects in the AISs, so documents with a focus on democracy were selected. Since PPs represent the visions and perspectives of governments, these documents will be used as the focus of the analysis to determine the governments' envisioning. Given the aspects of democracy highlighted above, a focus on these aspects in the AISs that show the intention to reinforce these aspects through AI to show a positive relationship between democracy and AI is expected. To analyse the envisioning of EGs it will be necessary to do it through a qualitative research approach, specifically, a content analysis of the following PPs. Thanks to the content analysis, the content of PPs can be critically analysed in order to unmask problematic aspects.

Firstly, the national AISs (strategies to boost the development of AI) of each country, which have been published by the governments and can be found online at the governments websites, have been selected. These summarise the strategies in the field of AI and are important for analysing the focus of each country and how this relates to democracy, as well as being the only common

document across the countries. About the national strategies, those of Italy and France were published in 2021 and that of Spain in 2018. Specifically, Spain and France's strategy will be implemented until 2030 and Italy's until 2024. The field of AI is in continuous development and, for this reason, it is of particular relevance to take into account that the documents are up to date, in order to ensure that these documents reflect current strategies and envisioning of the governments, reason why the time span of the documents is from 2018 to 2021 (appendix 1).

In addition to the national AISs, it is also relevant to focus on democracy, as it is the other relevant concept analysed. That is why from each country PPs released by the governments which could include a focus on democracy have been selected, such as the French strategy for AI and work. Specifically, the selected documents are published by the following government components: In Spain by the Ministry of Economic Affairs and General Transformation (*Ministerio de Asuntos Económicos y Transformación General*) and the Ministry of Science and Innovation (*Ministerio de Ciencia e Innovación*); in Italy by the Ministry of Technical Innovation and Digital Transition (*Ministero dell'Innovazione tecnológica e la Transizione digitale),* the Ministry of Economic Development (*Ministero dello Sviluppo Economico*) and the Ministry of University and Research (*Ministero dell'Università e della Ricerca*); and in France, the Ministry of Higher Education and Research (*Ministère de l'Enseignement supérieur et de la Recherche*), the Official Journal of the French Republic (*Journal officiel de la République Française*) and the Ministry of Labour (*Ministère du Travail*). A total of 14 documents (4 for Italy and 5 for both Spain and France), that have different status (from policy briefings to laws) have been selected with a sum of 938 pages (appendix 1).

3.4. Method of data analysis

In order to analyse the PPs, a content analysis will be developed. Content analysis is as a method to analyse the relationship between concepts and identify the key content of different documents and it is chosen as method for this thesis due to its main strength: the ability to analyse the document's content in depth. This thesis aims to analyse the envisioning of governments on how to strengthen democracy through AI. Therefore, an in-depth analysis of the content of the PPs of the selected countries is needed, since it is in the PPs of the countries that the governments' plans can be identified in written form. PPs are often not clear about their objectives and there are underlying issues that need to be thoroughly analysed in order to be identified. Therefore, content analysis is the most suitable method, as it is possible to carry out the analysis in sufficient depth. However, one of the most relevant limitations of this method is the fact that there are more documents to analyse than can be analysed due to the limited time available. This could be solved by the tool selected for this thesis: Atlas.ti, which strength is its ease of use and the number of

documents that can be analysed quickly and easily, as well as the complex relationships between concepts that can be observed. Although this tool is suitable for this thesis, it will be necessary to be very selective with the documents that are chosen as these will determine the results, so special attention will have to be paid.

Specifically, how the different aspects that define a democracy relate to AI and how the AISs avoid the negative effects of AI for democracy in the PPs will be investigated. In order to do that, a coding scheme is needed to be able to look for the concrete concepts, identified in the theory, in the PPs to be analysed.

The coding scheme is divided into three sections: Firstly, the Basic Democratic Aspects and the Complex Democratic Aspects. The items of these concepts are based on democratic theories and on these theories in the context of globalisation. This has been selected in this way in order to observe to what extent they reinforce these aspects through the AISs. It is divided between basic and complex aspects as basic aspects are common in democratic theories and complex aspects are focused on the new context of globalisation. Secondly, the negative effects of new technologies on democracy. These items have been selected in order to analyse how AISs avoid the main negative effects, which are discrimination and lack of privacy. Finally, words (codes) that could be identified with these items have been speculated and translated into the original languages of the documents (Spanish, Italian and French).

After having carried out these steps, this is the coding scheme used for the analysis (table 4):

Table 4: Coding Scheme

Key concepts	Items	Codes (ES/IT/FR)
Basic Democratic Aspects	**Freedom**	respect (respeto/rispetto/respect)
		freedom (libertad/libertà/liberté)
	Participation	inclusive (inclusivo/inclusive/inclusive)
		representation (representación/rappresentazione/)
		elections (elecciones/elezioni/élections)
Complex Democratic Aspects	**Transparency**	explicable (explicable/spiegabile/explicable)
		transparent (transparente/trasparente/transparent)
	Accountability	open government (gobierno abierto/governo aperto/gouvernement ouvert)
		responsibility (responsabilidad/responsabilità/responsabilité)
	Environmental Protection	environment (medio ambiente/ambiente/environnement)
		sustainable (sostenible/sostenibile/durable)
Negative effects of new technologies on democracy	**Discrimination**	discrimination (discriminación/discriminazione)
		gender (género/genere/genre)
		disability (discapacidad/disabilità/handicap)
		LGTBIQ+ (=)
		equality (igualdad/uguaglianza/égalité)
	Privacy	privacy (privacidad/privacy/confidentialité)
		surveillance (vigilancia/sorveglianza/surveillance)

This coding scheme will be used to observe how often the different codes appear in each country's PPs. Afterwards, this number will be divided by the number of pages of documents each country has in order to standardise the numbers and to be able to compare the countries. After having a first look at the general focus of each country, the context in which these codes appear will be analysed.

3.5. Conclusion

The analysis of the documents aims to answer the two sub-questions and, consequently, the research question of this thesis. Therefore, firstly, it will be necessary to identify the aspects that define democracy in each country and how they refer to the negative effects of AI in order to, secondly, identify the envisioned relationship between these aspects and AI. Finally, having answered these two questions, it will be possible to conclude in what ways the governments of Italy, Spain and France use AI to strengthen democracy. After having collected the data and produced the coding scheme based on the theories on democracy, the analysis will be carried out in the following steps:

First, Atlas.ti will be used to analyse the PPs with the help of the coding scheme. In this way, it will be possible to identify in the documents which democratic aspects each country focuses on. In other words, considering the codes developed, it will be observed which of the codes appear in which documents and how often they appear to see the focus of the PPs. This will allow the first sub-question to be answered. Secondly, it will be necessary to look at the context in which these codes appear, as the meaning is context dependent, and determine whether the relationship with AI is positive or negative. For this, it will be necessary to critically analyse the formulations, wording and positive/negative connotations used in the PPs. In this way, the second sub-question will be answered. Finally, looking at the results of the first and second sub-questions, the results will be compared across countries and a final conclusion will be drawn about the envisioned relationship of democracy and AI of the governments of Spain, Italy and France.

This comparison is carried out because, although they are WMCs, differences can be found between them and these have to be highlighted. In the analysis it is expected to find a positive relationship between the democratic aspects and AI, as this is what this thesis aims to highlight, i.e. the theoretical expectation is a positive relationship between AI and democracy. In addition, it is expected that the negative effects of AI and ways to counteract these negative effects will be explained.

4. Analysis

4.1. Introduction

The aim of this chapter is mainly to develop the theoretical tension explained above by presenting the analysed content of the PPs in order to answer the two sub-questions guiding this paper. This is important because, in order to determine whether the governments of Spain, Italy and France use AI to strengthen democracies, it is necessary to analyse which aspects of democracy each country focuses on and what is the envisioned relationship between these aspects and AI in the PPs analysed. The analysis has been carried out by separating the three main key democratic concepts and the results will be shown following the same logic. It will be shown how the PPs refer to, firstly, the basic democratic concepts and, secondly, to complex democratic concepts. These first two sections are important in order to analyse whether Spain, France and Italy reflect in their PPs how they want to strengthen democracy by reinforcing these democratic aspects. Not only is it important to strengthen the basic aspects of democracy, but also to prevent and deal with the negative effects of AI. Therefore, thirdly, it will be shown how PPs refer to the negative effects of AI on democracy. To show how PPs refer to these three key aspects, a table will be presented showing how often each relevant code appears and, afterwards, the context will be analysed.

Three key points are shown: that in general, AI is used to strengthen democracy, especially in Spain, that Italy shows no link between AI and democracy and that, paradoxically, no country focuses on avoiding the negative effects of new technologies.

4.2. AI as a booster for basic democratic pillars in Spain

This section analyses how AISs relate to the basic pillars of democracy, highlighting the great difference between countries. Specifically, this section shows that Spain has a strong focus on democratic aspects, especially participation, in its AISs and that, although it shows problems of inclusion in Spain, this country uses AI to solve it and to reinforce fundamental rights, which shows a positive relationship between democracy and AI, as expected. Furthermore, this section shows how France, despite having a slight focus on democracy, is a very regulation-centred democracy, which does not favour the development of AI as a source of democratic reinforcement, what was not expected. Finally, also not expected, it is noted that Italy has no focus on democratic aspects, but this is something that will be developed in the next section.

After having analysed the AISs, it has been observed that there are significant differences between the three countries, despite the fact that they are Mediterranean democratic countries. This is observed in the way the relationship between democracy and AI is presented in the content of the PPs and in the democratic aspects they emphasise in their AISs. In order to show this, the first important point to be analysed is what aspects of democracy each country focuses on. To this end, a distinction is made between basic democratic concepts, discussed in this section, and complex democratic concepts, discussed in the next section. Considering that this thesis investigates whether Spain, Italy and France use AI and reinforce democracy, it is important, firstly, to analyse whether they use them to reinforce basic aspects such as freedom and participation.

To this end, two important steps have been taken in order to reach conclusions. First, table 1 has been developed to show numerically the extent to which countries focus on basic democratic concepts. In this way, it was possible to have a first overview on the focus of each country in their PPs and how much importance they give to each aspect. Secondly, in order to carry out a more comprehensive analysis and interpretation, the context of the content was observed. The results of both steps are shown in the following. It is important to note that this section will focus particularly on France and Spain. This is because, as shown in table 1, Italy does not focus on democratic aspects. This implies, at first glance, that Italy would not be using AI to strengthen democracy, but would have a different focus than expected in its AISs. However, this country and its lack of focus on democracy will be analysed in more detail in the next section. In order to reconcile the tension between democracy and AI, AISs need to show this. In particular, there needs to be a focus on democratic aspects in the AISs. This has been observed especially in Spain and slightly in France and will be further analysed in the following and it will show, in particular, the positive relationship between AI and democracy in Spain and slightly in France and the lack of the latter in Italy.

Table 5: Basic democratic concepts

		ES		IT		FR	
Pages (P):		499		171		268	
Items	**Codes (ES/IT/FR)**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**
Freedom	respect	24	4,8	14	8,19	41	15,3
	freedom	4	0,8	0	0	0	0
Participation	inclusive	82	16,43	0	0	1	0,37
	representation	8	1,6	1	0,58	5	1,87
	elections	1	0,2	0	0	0	0

In contrast to Italy, Spain and France do focus the content of their PPs on democratic aspects, although each country has different focus (France focuses more on freedom and Spain more on participation), i.e. each country focuses on reinforcing democracy in a different way. Focusing on Spain and France, an important difference between them can be observed. On the one hand, Spain focuses more on inclusion (participation). This is the first conclusion we come to when looking at table 1, as it can be seen that Spain mentions numerous issues of inclusion, however, it is necessary to look at the context of the content. By observing this, it is shown that Spain not only explains that the democratic concepts should be reinforced, but it is explained more concretely how to carry this out in order to strengthen participation (and therefore democracy) through AI. An example of this is the following sentence from the Spanish AIS: "The use of intelligent systems would allow the transformation of Spanish education through different technologies, guaranteeing an inclusive education, renewed and adapted to the needs of students and teachers according to the preferences, knowledge and individual evolution of the student", (Ministerio de Ciencia e Innovación, 2019, p.29) where they explain how through AI it would be possible to transform education and achieve greater inclusiveness (and therefore an improvement in the democratic aspect of participation). Here it is shown that they intend to implement AI in education, which is positive because it is in the early stages of education that democratic values such as participation and inclusion are taught, and the fact of learning about new technologies together with these aspects is very positive. Spain's focus on inclusion shows Spain's inclusion problems, even though these problems are not explained in the strategies. Despite the fact that the AISs do not present AI as the cause of this lack of inclusion, it is relevant that they include this aspect in the AISs, as this shows Spain's intentions to use AI to solve problems that arise in democracy. Moreover, they show concretely how this can be done through education. This is especially relevant as by explaining in detail how to carry it out they show their real intentions to do so, something that is missing in France's AISs, as France, the few times they mention it, they do not specify how this should be implemented. This approach from Spain is not surprising and is precisely what was expected in AISs, as it shows a positive relationship between democratic aspects and AI. This is further emphasised by the fact that Spain has a repeated focus on respect. When respect is mentioned in PPs, it focuses especially on respect for fundamental rights, both individual and collective (freedom being one of them), so there is a focus on the democratic aspect of freedom, although this focus is less than in France. This can be seen for example in the following quote from the executive summary of the national AIS: "[...] to promote the deployment of AI within a framework that preserves our democratic values, and respect for the framework of individual and collective rights" (Ministerio de Asuntos Económicos y Transformación Digital, 2020b, p.5). In doing so, Spain links AI to basic democratic values and this makes it necessary for new technologies to be based on them.

On the other hand, France focuses more on freedom. In this case, this is an observation from table 1, but it is furthermore necessary to look at the context. In the case of France, although it was concluded from table 1 that the PPs emphasise the aspect of freedom, when looking at the context, it is observed that it is a respect especially for regulations/obligations, so it cannot be determined that the PPs emphasise the democratic aspect of freedom. This happens in a similar way in Italy, although in table 1 a very high number of respect is observed, this is due to the fact that in Italian "rispetto" is used both to express "respect" and to express "regarding", so that should not be taken into account and this is also the case with the representation in France, because although the table shows a focus in representation, it is not real when looking at the context. However, an important observation can be made about France's focus on freedom, even if it was not as expected. In principle, it was expected that France (as well as the rest of the countries) would focus on strengthening freedom through AI. In Spain there is a slight focus, and in Italy there is no focus at all. As mentioned above, France has a strong focus on regulations and laws and not so much on reinforcing freedom, so it is a very bureaucratised and regulation-centred democracy, which does not benefit the application of AI, which require constant change in this respect. This, again, was not expected in the AISs and does not show any positive relationship between democracy and AI, but rather a strong focus on respecting regulations and not on developing new regulations that favour the reinforcement of democracy through AI.

Having analysed the content of the PPs and, in this section, shown what the different countries focus on in their content, we can draw the first conclusions. Firstly, that Italy does not focus on democratic aspects in its PPs, and therefore does not give importance to the relationship between democracy and AI, although this aspect will be analysed more in detail in the next section. Secondly, Spain does focus their content on democratic aspects, and explain how they are to be carried out. Moreover, Spain shows a positive relationship between democracy and AI, something that is not observed in France, which focuses too much attention on regulations, which results in a lack of detail on how the potential of AI can be harnessed to strengthen democracy. Next, it will be necessary to observe whether these countries focus on the complex democratic concepts.

4.3. Lack of democratization effect of AI in Italy

Having shown how and to what extent countries strengthen the most basic democratic pillars, it is necessary to observe how they do so with the more complex ones. That is, how they reinforce the democratic pillars (transparency, accountability and environmental protection) that appear in the new context of globalisation and AI. This section re-emphasises the difference in the democratic aspects emphasised by each country and shows a very important point that has already

been observed in the previous section, namely that there is a positive relationship between democratic aspects and AI in Spain and lightly in France and a lack of it in Italy.

Specifically, it shows that Italy has no focus on democratic aspects, as it only mentions environmental protection, and uses AI as a tool for economic growth. Both France and Spain focus on these complex democratic aspects, however, France is more responsible about the actions of algorithms than Spain. Finally, it is concluded that the fact that France and Spain have so much focus on democratic aspects shows the lack of them in the democracies, however, the important thing is that they are aware of this and use AI in a positive way to counteract it.

Table 6: Complex democratic concepts

		ES		IT		FR	
Pages (P):		499		171		268	
Items	**Codes (ES/IT/FR)**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**
Transparency	explicable	3	0.6	0	0	1	0,37
	transparence	36	7,21	0	0	5	1,87
Accountability	open government	5	1	0	0	0	0
	responsibility	25	5,01	1	0,58	19	7,09
Environmental Protection	environment	29	5,81	3	1,75	0	0
	sustainable	221	44,29	4	2,34	17	6,34

Firstly, the differences observed between the countries and how they refer to the different aspects of democracy are shown again. Italy again does not have a focus on content regarding complex democratic aspects. That is, they do not use AI to reinforce them. However, contrary to the previous section, a small focus on environmental protection can be observed, although this is less than in France and Spain. Looking more specifically at the Italian documents, it is clear that the AIS does not focus on strengthening democratic aspects, but rather explains the need for investment (both investment in education and economic investment) in order for AI in Italy to continue to grow. This could be due to the fact that Italy is not yet developed in terms of AI. This is something that could be observed in the search for PPs, as in France and Spain there were numerous PPs and in Italy they were rather scarce. Furthermore, Italy shows that the main use of AI is not to strengthen democracy, but as a tool for economic growth, something that is seen in the content of the PPs, but also in the ministry by which these are published, as this is mainly the Ministry of Economic Development (*Ministero dello Sviluppo Economico*).

The fact that Italy has absolutely no focus on democratic pillars in its AISs is surprising and implies that they ignore the tension of AI and democracy. Italy, as a democratic country, aims to ensure democratic quality. Given the current context in which AI can have a negative impact on democracies, it is important that they are used to strengthen democracies and is expected in these countries. The fact that Italy ignores this tension is therefore both problematic and surprising.

Secondly, in all three countries, a strong focus on environmental protection can be observed, especially in Spain. Both Spain and France have a strong focus on environmental protection. Furthermore, both countries explain in detail why this is important and how it should be carried out, although they differ in this respect. France focuses on agriculture and sustainable food, while Spain shows the importance of an interdisciplinary approach. Although Italy does not have as much focus on this as the other two countries at first glance, it is important to analyse it. When analysing the context, it shows that one of Italy's fundamental pillars in its AI plan is sustainability. Although not often mentioned in PPs, they state that sustainability is one of the fundamental pillars and that any policy should be sustainable. However, they do not show how they do this in practice. The fact that all three countries focus on environmental protection shows that there is a lot of pressure on governments due to climate change and the urgency of this issue. Therefore, the fact that there is a focus on this aspect in the content of the PPs does not imply that they use it to reconcile AI with this democratic aspect; in fact, Italy does not do so, as it does not show how this should be done in practice and only mentions it without this being a real focus when it comes to carrying it out. However, Spain and France do show what aspects should be focused on and especially Spain focuses on an interdisciplinary approach in which AI has a main focus.

Thirdly, when looking at how they refer to content related to transparency, no focus is observed in Italy, but it is in Spain and France. In terms of how these countries refer to it, we observe that, again, Spain is more specific about how to implement this. In its AIS, it is explained that "[...] the quality of the data provided and its accessibility will be improved, fostering a culture of data orientation, using transparent and explainable algorithms [...]" (Ministerio de Asuntos Económicos y Transformación Digital, 2020a, p.58). Thus it is shown that strategies will be implemented in the interest of increasing transparency and, consequently, increasing the quality of democracy through AI. However, in France, transparency is simply explained as something necessary and a requirement that must be guaranteed and does not develop how it should be carried out. In terms of accountability, Italy again has no focus in its content. Spain and France again place equal importance on this aspect, but there are differences in how they use these terms in context. In France, when talking about accountability, the emphasis is on determining who is responsible for the actions of algorithms. However, in Spain, accountability is related to the term

transparency. That is to say, in France they give more importance to the aspect of government responsibility for the actions of algorithms and, on the other hand, in Spain they emphasise more the responsibility of governments to show how algorithms act and to be transparent about it. In other words, France takes more responsibility for the actions of the algorithms, while Spain only undertakes to show how they act, and dissociates itself from responsibility. Therefore, France, by showing itself to be more responsible, shows itself to be more positive than Spain. This strong emphasis on accountability and transparency in these two countries shows the lack of transparency and accountability that they have in reality and therefore see the need for a strong focus on strategies. However, as noted in the previous section, the fact that they use AI to reinforce these aspects shows the positive relationship between AI and democracy.

Therefore, what was observed in the previous section can be observed again. On the one hand, Italy has hardly any focus on democratic pillars, with the exception of the environmental protection focus, which is very important. On the other hand, Spain is again the country with the highest focus on democratic aspects, especially environmental protection. France has a strong focus on democratic aspects, especially accountability and shows more responsibility on the actions of algorithms. Therefore, having observed both basic and complex democratic aspects, major differences can be observed between the three countries. Firstly, it can be observed that Italy hardly focuses on strengthening democracy through AI. This can be seen from the fact that when analysing the content of the PPs, democratic concepts are hardly mentioned at all. Secondly, it can be observed that both France and Spain focus on democratic concepts in their PPs. However, two main differences can be observed between them. On the one hand, Spain develops more how the different aspects should be strengthened and what measures should be taken. Although in most cases these same aspects are also mentioned by France, the French PPs do not develop them as extensively as those of Spain. On the other hand, it can be observed that Spain's content focuses more than France's on strengthening democratic aspects and thus, democracy.

However, it shows the most important point that this thesis highlights in this section. It has been shown that, as expected, both Spain and France show a positive relationship between democracy and AI, since, as the contents analysed in the PPs show, both countries try to employ AISs to strengthen democratic aspects and, therefore, democracies. When analysing the PPs, it is not only the relationship between AI and democracy that is analysed. The different focus on democratic aspects shows a lack of democratic aspects of democracy and a need for governments to strengthen these aspects. This lack of democratic aspects could be seen in a negative way, however, if the countries naming these aspects in the PPs manage to show how they can be strengthened through AI and relate them positively to AI, they show two important aspects for this paper. On the one hand, that they are aware of the need to work on these aspects and, on the

other hand, that AI have the potential to do so. As for Italy, the fact that there is no focus on the content of the PPs implies that they do not positively relate democratic aspects to AI and focus on economic development, what is surprising and was not expected.

4.4. Lack of connection between negative effects of AI and democracy

Having analysed how PPs attempt to strengthen democracy through AI and the ways in which they do so, it is also important to analyse how Spain, Italy and France deal with the negative effects that AI have on democracies, and the results of it are shown in this section. Specifically, it is shown that, paradoxically negative effects are not a major focus of PPs, only partially in France and Spain, and there is no mention of discrimination and lack of privacy as negative effects caused by new technologies.

AI has generated challenges that can affect the democratic quality of countries, so it was expected that Spain, France, and Italy will include in their PPs on AI how to counteract these negative effects of AI, such as discrimination and lack of privacy. The most important point shown and exemplified below is the fact that, contrary to what was initially expected, only a little focus on the negative effects of AI has been found in the analysis of the selected PPs. In this case, Spain is, once again, the country that focuses most on avoiding the negative effects of AI, as both the fight against discrimination and privacy are important focuses in the content of the PPs. As for Italy and France, in this case they have a similar focus and, although not very large, it is still significant, being in Italy mainly the fight against discrimination (specifically gender discrimination) and in France the guarantee of privacy.

Table 7: Negative effects of AI on democracy

		ES		IT		FR	
Pages (P):		499		171		268	
Items	**Codes (ES/IT/FR)**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**	**N**	**(Nx100)/P**
Discrimination	discrimination	0	0	0	0	3	1,12
	gender	217	43,49	10	5,85	2	0,75
	disability	24	4,8	0	0	7	2,61
	LGTBIQ+	0	0	0	0	0	0
	equality	117	23,45	0	0	0	0
Privacy	privacy	11	2,2	1	0,58	2	0,75
	surveillance	7	1,40	0	0	27	10,07

As for the context, it is necessary to analyse it more closely. Spain puts a very strong focus on guaranteeing equality in general (especially gender equality), much more than Italy and France. This focus on gender is something that is observed in all three countries and is highlighted in

Table 1. Over the last few years there has been a strong focus in policy on ensuring equality between men and women, which has led to a focus in PPs on defending gender equality, and should therefore be critically analysed. Although the PPs do not connect and do not show the AI and the negative effects they can have on discrimination, they do employ these AISs to avoid discrimination, especially in terms of gender. Only France briefly names the negative effect that AI can have on discrimination and explains how to avoid it. In Italy, however, there is only a focus on gender in the content of the PPs, however, it does not specify how this should be carried out concretely, something that Spain does, explaining how to integrate women in science and measures to do so. In addition to this, it is observed that Spain has a greater variety in terms of how to guarantee this non-discrimination, as it is based on both gender and disability discrimination. In France, this variety is also observed, although to a lesser extent, as it focuses on both gender and disability. Therefore, in general terms, it can be observed that Spain and France do relate AI and democracy positively, as they do include these in their AISs, as expected. However, they were expected to show that these negative effects arise partly as a consequence of the misuse of AI, and this could only be observed to a very slight extent in France. Again, in Italy, only a very slight positive relationship is observed, as although they do mention discrimination, they do not explain how it should be countered by AI, which, contrary to what was expected, does not show a positive relationship between democracy and AI.

As far as privacy is concerned, Italy hardly focuses on avoiding this negative effect. On the other hand, both Spain and France do so, with France being the country that stands out in this aspect. However, looking at the context shows that they do not really put measures in place to guarantee citizens' privacy and thus avoid the negative effects of AI. On the other hand, although Spain does not explain in detail the negative effects of AI on discrimination and privacy, they do detail how to guarantee the privacy and it is an important pillar in their AIS.

Although countries have focused on strengthening democratic aspects, they have hardly focused on avoiding negative effects, which was not expected, especially France and Italy. In addition, it shows that countries do not name AI as a cause of these negative effects. It can thus be seen that countries are more interested in using AI to strengthen democracies than to avoid negative effects.

4.5. Conclusion

Three main conclusions have therefore been reached. Firstly, there are major differences between the three countries, despite being Mediterranean democratic countries, both in the democratic aspects that stand out in their PPs and in how they connect them with AI. Second, there is a

positive relationship between AI and democracy. Thirdly, countries put a greater focus on strengthening democracy through AI than on avoiding the negative effects of AI.

Having analysed the differences between the countries and their different focus, the two sub-questions raised in this thesis can be answered:

Firstly, as far as the democratic aspects are concerned, it can be observed that each country emphasises a different aspect of democracy. Italy has an important part of its content dedicated to environmental protection and does not give importance to the rest of the democratic pillars. On the one hand, France attaches greater importance to respecting freedom and therefore focuses more on strengthening democracy than on preventing the negative effects of AI itself. On the other hand, Spain focuses especially on discrimination and environmental protection. Secondly, in terms of the envisioning of countries, Spain is the only one where a clear positive relationship between AI and democracy can be observed. In the case of France this can be observed in a very slight way and in the case of Italy no such relationship can be observed. This implies that AI are being put to positive use. In other words, technologies are not being used in a neutral way, but in a positive way to strengthen democracies, although they are barely used to avoid the negative effects they cause. Therefore, it can be affirmed that the countries' envisioning is positive and therefore confirms the hypothesis of this paper. However, it is important to note that Italy hardly focuses the content of PPs on democratic concepts, so that in the case of this country there is no relevant connection between AI and democracy.

5. Conclusion

5.1. Positive relationship between democracy and AI

The aim of this thesis was to fill the knowledge gap in the state of the art by answering the question *In what ways do EGs envision AI as a strategy for strengthening democracy?* The answers and conclusions reached throughout this thesis are shown below. Firstly, answering the first sub-question, it has been shown that each country focuses on a democratic aspect when it comes to their AISs, with a great difference between them. Secondly, in response to the second sub-question, it has been shown that both in Spain and partially in France, a positive relationship between AI and democracy is observed, something that cannot be affirmed in Italy. Taking these results into account, it can be affirmed that, in general, governments are using AI in a positive way to strengthen democracies, although in a milder way than expected and with a big difference between countries. Spain stands out as the country where this phenomenon is most observed, although it is also observed in France, which confirms the hypothesis that countries use AI to strengthen democracy. Italy, however, does not show any focus on democratic aspects in its AISs, which is surprising and not to be expected.

In doing so, this thesis has delivered three key insights. Firstly, and most importantly, it has been shown that AI can indeed help to strengthen democracy and it has been shown that mainly Spain, but also France, use AISs to strengthen democracy. Secondly, that France, Spain and Italy do not focus on avoiding the negative effects of AI on democracy, such as discrimination and lack of privacy. Third, despite being three Mediterranean democratic countries, France, Spain and Italy differ markedly both in the democratic aspects they focus on and in how they envision the relationship between democracy and AI.

5.2. Filled knowledge gap

The main objective of this thesis was to fill the knowledge gap, which was based on two aspects: Firstly, the lack of representation of WMCs in the literature. By researching Spain, Italy and France and analysing their AISs a small step towards their representation in the state of the art has been achieved. Secondly, in the state of the art most of the articles were based on expressing the weakening of democracy through AI and the extent to which they can have a positive impact and strengthen democracies had not been investigated. This gap has been filled as it has been investigated in what ways Spain, Italy and France use AI to strengthen democracy and it has been shown that, for the most part, there is a positive relationship between AI and democracy and that, therefore, AI have the potential to positively affect democracies and strengthen democratic pillars. Therefore, the results of this thesis partly disagree with authors such as Borgmann or Cataleta who only highlight the negative effects on democracies, as it has been shown that the effects that new technologies have on democracies depend on how governments manage them, but that in general governments are working to help new technologies have positive effects and strengthen democracies.

Although it has been slightly observed in the state of the art how AI can have positive effects on democracies, it has not been shown that countries actively use these AI as a way to strengthen democracies. This new insight is extremely important; especially given the reverse wave of democratisation we are experiencing. Moreover, it is important because it shows the potential of AI to have a positive impact, but also that countries are aware of it and are actively using it to have a positive impact on democracies. Therefore, the results of this thesis, besides being new, are important for the state of the art and will help to change the perspective on AI and to reconcile the tension between AI and democracy. However, it has been concluded that for AI to reinforce democracy, as shown by civic republicanism (with authors such as Köhler and Falk), it is necessary for it to reinforce democratic values, such as the aspects highlighted in this thesis. Only in this way will it be possible for AI to affect democracies in a positive way.

However, there is a paradox that requires further research: On the one hand, it is noted that the state of the art has extensively researched the negative effects of AI on democracies and there was hardly any information on the positive effects. Therefore, it would have been expected that the governments of the countries, considering that they have information on the negative effects of AI on democracies, would have used AISs to avoid the negative effects that the state of the art talks so much about. This has not been observed in the results of the analysis and it is something that is surprising and would have been expected. In addition to this, it would be necessary to investigate the reason for the large difference observed between countries, mainly in the envisioning of the relationship between AI. It is observed that Spain has a greater focus than the other countries and Italy has hardly any focus on democratic aspects in its AISs. Spain's greater focus on using AI to strengthen democracy could (being this a speculative personal observation) be due to two aspects. First, Spain is a younger democracy than France and Italy and may need more democratic reinforcement than the other countries. Second, due to the recent movement of the indignados demanding real democracy in Spain, there have been strong changes and a revolution in Spanish politics, including the creation of parties such as Podemos that have caused a greater focus on reinforcing democratic values. But this is a suggestion for further research that may have this speculation as a possible starting point.

5.3. Practical implications

The answer arrived at in this thesis implies three things: First, there is a great difference between countries, both in democratic aspects and in the way they relate AI and democracy. Second, there is a generally positive relationship between AI and democracy. Third, countries focus more on strengthening democracies through AI than on avoiding the negative effects of AI on democracies. These responses therefore imply three things: First, a differentiation must be made between countries. Italy, and more specifically Italian policy makers, will have to focus on the content of AISs much more on reinforcing democracy, something that France will have to reinforce slightly, while Spain will only need to improve some aspects (especially Freedom). Secondly, policy makers in all three countries should increase their focus on avoiding the negative effects of AI on democracy, as this has been extensively studied in the literature and no solutions have been found in their AISs. Finally, it is necessary for all countries to further specify how these improvements will be carried out and how the proposed changes in their strategies will be implemented.

Appendix: Data Set

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