Media Accountability in the Algorithmic Age

Portugal and The Netherlands: Two Media Systems in Comparative Perspective

Student Name: Catarina Dias Osório
Student Number: 449110

Supervisor: Drs. Matthijs Leendertse

Master Media & Business
Erasmus School of History, Culture & Communication
Erasmus University Rotterdam

Master Thesis
June 2018

ABSTRACT

The widespread use of algorithms in several areas of society raises concerns about their impact on the lives of people (World Wide Web Foundation, 2017). Particularly in journalism algorithms are used in several ways. For instance, to distribute content on social media, to find topics to write about, and to rely on data-analytic tools (Diakopoulos & Koliska, 2016). Owing to this, some scholars have been urging for algorithmic accountability in journalism (Berners-Lee, 2018; Diakopoulos, 2015, 2017; Diakopoulos & Koliska, 2016; World Wide Web Foundation, 2017). Within the two main media systems in Europe this thesis asks how can journalists in Portugal and in The Netherlands be held accountable for publishing their content on algorithmically-controlled environments and using algorithms in their work? Based on the different expectations concerning the role of journalism in the Polarized Pluralist and Democratic Corporatist models (Hallin & Mancini, 2004) this research assesses potential solutions for algorithmic accountability within two opposing frames of accountability – the political and the professional frame. Through expert interviews, this inquiry shows different possible solutions for Portugal and The Netherlands concerning algorithmic accountability in journalism.

In relation to Portugal, the main findings show that governmental intervention should be avoided, except for the case of the use of social media. One of the solutions proposed is to monitor the content that is published on these platforms by news media companies for normative purposes. Although self-regulation is considered the most adequate path, the structure of the news media market might hinder algorithmic accountability as well as some features among the class. One of Surprisingly, one of the solutions points to the market frame, not in the scope of the research. Differently, the experts from The Netherlands give a more nuanced approach on the matter. Although self-regulation is deemed ideal, a more indirect governmental interference is considered positive to hold journalists accountable, mainly through governmental pressure and State subsidies to independent monitoring organisations. Indeed, the inputs lean to the public responsibility frame rather than the political frame, which does not comprise the focus of the research. In both countries, algorithmic transparency is considered a possible path to hold journalists accountable, but it needs

to be thoroughly assessed and implemented. The findings also indicate that algorithmic accountability is already happening in both countries, mainly through informal self-regulation mechanisms. On the whole, this thesis aims to spark the discussion not only in Portugal and in The Netherlands but also in other Polarized Pluralist and Democratic Corporatist countries concerning algorithmic accountability in journalism. Most of all, it informs further research, media policy makers, news media companies, and journalists themselves on possible paths to algorithmic accountability.

Table of Contents

5

1. Introduction

In 1997 the acclaimed scholar Denis McQuail expressed his concern about the development of electronic media and how it should be regulated based on the interests of society. According to its 'founder', Tim Berners-Lee (2018), it seems that 30 years later there is no definitive answer for such endeavour. If there ever will be. The 'technology of freedom' (Pool, 1983) - Internet – is pervaded in all layers of society and, unlike Pool's ideals, it might not be so free after all. Recent issues such as *fake news* and *filter bubbles*[1] have raised the red flag towards the impact of algorithms in news production and consumption (World Wide Web Foundation, 2017). These *black boxes,* designed by humans and constantly feed by data, suggest what to read, watch and listen based on previous user experiences. Through undisclosed mechanisms they prioritize, classify, associate and filter content that is presented to users on Internet (Diakopoulos, 2015). Newman, Fletcher, Kalogeropoulos, Levy & Nielsen (2017) findings in the Reuters Digital News Report 2017 are striking: 'more people are discovering news through algorithms than editors' (p. 15). Although Newman et al. (2017) point out that algorithms might expose audiences to more online sources, it does not necessarily imply that they offer the right kind of plurality in terms of content. For example, they stress the use of social media, algorithmically-controlled environments, as more conducive to filter bubbles and *echo chambers*[2] than search engines and aggregators. Likewise, journalists are using more and more algorithms in their routines and practices including the use of social media to publish content (Diakopoulos & Koliska, 2016). Given that news are consumed online for the most part (Newman et al., 2017), the topic deserves careful attention from researchers, journalists, politicians, news providers, audiences, and society at large.

---

[1] Filter bubble is a term coined by Eli Pariser (2011), which defines the process of reinforcing existing preferences of people, in platforms such as social media and search engines, due to the use of algorithmic filtering to personalize content.

[2] Echo chamber constitutes the phenomenon whereby people tend to interact with people who share the same norms, beliefs and interests (Sunstein, 2009). Such behaviour might reinforce existing personal beliefs and values and create more polarization and fragmentation among individuals (Webster, 2005) and, therefore, more intolerance towards different perspectives. Dubois & Blank (2018) argue that echo chambers on Internet can happen in two ways: let users make choices which reinforce existing beliefs and in the form of algorithmic filter bubbles.

In fact, the shift in focus of traditional media from offline to online has raised concerns of algorithmic accountability and algorithmic transparency. Both interrelated notions are still in their infancy (Diakopoulos & Koliska, 2016) and assess the prevalent impact of algorithms in all areas of society, including news production and consumption, and strategies to discuss, disclose and clarify their influence (Diakopoulos, 2015). As algorithms have the potential to impact how people perceive and live in the world, notably they constitute an intricate topic for governments, companies and audiences. In the two main media systems in Europe, Polarized Pluralist and Democratic Corporatist the issue of media accountability pertaining algorithms is in the very beginning. Particularly, in Portugal and in The Netherlands, there is little research on how the media can be held accountable for the use of these black boxes (Frömming, 2017). In line with the most recent research about the impact of algorithms (Napoli, 2015; Newman et al., 2017; Woolley & Guilbeault, 2017; World Wide Web Foundation, 2017) on media production and consumption, the present thesis assesses the uses of algorithms in the news media landscape, considering their implications on the role of journalism in society. How can journalists be held accountable in the face of algorithms in their practices? How can journalism maintain its credibility within the spread of fake news? How can news media counteract filter bubbles and echo chambers within algorithmic platforms and tools they use in their work?

1.1 News Media in the Algorithmic Age

The impact of the Internet on the media industry is undeniably boundless (Hayes, Singer & Ceppos, 2007; Meyer, 2006). While the traditional business models are still in need of clear-cut replacements, internet based-technologies and online platforms are changing news consumption unprecedentedly and inconsistently (Newman et al., 2017). At the same time journalism strives to find its place in an arena where social media subvert mass media logic (van Dijck & Poell, 2013). Specifically, van Dijck and Poell (2013) argue that principles such as programmability, popularity, connectivity and datafication have invaded mass media logic for the good and the bad. On the one hand, social media platforms are one of most important drivers of traffic to news websites (Napoli, 2015). On the other hand, they have been in the spotlight because of issues concerning their algorithms (Carlson, 2018; Woolley & Guilbeault, 2017). For example, why do people see different media content in their news feed even when they follow the same media outlet on Facebook? Algorithms constitute a set of principles executed by computers, and designed by humans, in order to solve a specific problem (World Wide Web Foundation, 2017). They curate and select news stories, sources and media websites based on previous audiences' choices and preferences

7

(Diakopoulos, 2015, 2017). Because they have particular predispositions they are biased to a certain extent and, hence, they can constitute a problem to plurality and diversity, one of the pillars of the normative role of journalism (McQuail, 2006). As in news consumption, algorithms are becoming a common presence in today's newsrooms (Diakopoulos & Koliska, 2016). For example, they are used in *computational journalism* to generate stories without little, if any, human intervention. Moreover, they inform journalists of which topics to choose and write about as well as help to check and validate sources and information (Thurman, Schifferes, Fletcher, Newman, Hunt & Schapals, 2016). In their study Thurman et al. (2016) argue that algorithms can be successfully used by journalists to identify trend topics, search and help with the verification of sources and content on social media. Moreover, Diakopoulos and Koliska (2016) mention that several media outlets use algorithms to perform A/B testing of digital headlines.

Very recently, some issues have raised concerns about the impact of algorithms in news consumption and production. For example, the problem of computational propaganda and fake news shows how algorithms can manipulate people's perceptions in the digital environment, whereby facts and truth go along with lies and disinformation and where few mechanisms allow people to distinguish them (Woolley & Guilbeault, 2017). Though algorithms can have a positive impact on journalists' work (Thurman et al., 2016), they also bound these professionals in their editorial decisions, by excluding or including some topics at the expense of others. At the same time, they can amplify the appeal to adapt the content to people's preferences (Napoli, 2014). As a result of this, they pose challenges to media accountability (Diakopoulos, 2015, 2017; Diakopoulos & Koliska, 2016). The recent changes in Facebook's policies – one of the most used online platforms to distribute media content (Newman et al., 2017) – indicate that third-party platforms want to avoid such responsibility and criticism (Zuckerberg, 2018). Briefly, in January 2018, Mark Zuckerberg informed Facebook users that the platform's algorithms will give less prominence to news media companies and brands in the News Feed (Sternberg, 2018; Zuckerberg, 2018). As news outlets continue to heavily rely on social media to generate traffic, who should be accountable for algorithmic-decision processes in these platforms?

Some scholars and entities have, therefore, been demanding more responsibility from journalists in the digital age and, more recently, concerning algorithms themselves (Diakopoulos, 2015, 2017; Diakopoulos & Koliska, 2016; Fengler, Eberwein & Leppik-Bork, 2011; World Wide Web Foundation, 2017). As the Internet offers endless possibilities for news media companies to engage with audiences concerning the works of media themselves (Schwanholz & Graham, 2018), it is expected that the public will play a more prominent role in holding them accountable for such

8

issues (von Krogh, 2012). As predicted by Fengler et al. (2011), such participation has originated new notions of media accountability in the digital age: algorithmic accountability and algorithmic transparency. Although both terms are interconnected, they are different in essence. While algorithmic accountability assesses mechanisms for research the impact of algorithms in society, algorithmic transparency demands the disclosure of information about the works of algorithms (Diakopoulos & Koliska, 2016). The demand for more responsibility and accountability of the media can be addressed in different ways. In general, this ability is influenced by historical and national contexts (Hallin & Mancini, 2004; McQuail, 2006).

1.2 Portugal, Polarized Pluralist / The Netherlands, Democratic Corporatist

The comparative model of media systems from Hallin and Mancini (2004) shows that the mechanisms and the power to hold media accountable have evolved in different and varied ways. For example, formal accountability mechanisms are hardly found in Polarized Pluralist countries, such as Portugal, whereas formal self-regulation instruments hold media accountable in Democratic Corporatist countries, in the case of The Netherlands (Hallin & Mancini, 2004). While there are some studies concerning media accountability mechanisms in The Netherlands - Democratic Corporatist - (Bardoel & d'Haenens, 2004; De Haan & Bardoel, 2011; Evers & Groenhart, 2011; van der Wurff & Schönbach, 2014) the same cannot be said for Portugal – Polarized Pluralist (Paulino & Oliveira, 2014). Indeed, this is pointed out by Fengler et al., 2011, who argue that little or no research exists on media accountability in Southern European countries as well as cross-country comparisons on the topic. Likewise, there is hardly any research concerning algorithmic accountability in the media (Frömming, 2017) in the most prevalent models of media systems in Europe, to which Portugal and The Netherlands belong. How can journalists be held accountable for using algorithms in two countries where there exist different expectations towards the role of news media?

1.3 Research Question(s)

When all is said and done, the present proposal poses the following research question and sub-research questions:

RQ: How can journalists in Portugal and in The Netherlands be held accountable for publishing their content on algorithmically-controlled environments and using algorithms in their work?

SQ 1: How can journalists in Portugal and in The Netherlands be held accountable by governmental institutions for publishing their content on algorithmically-controlled environments and using algorithms in their work?

SQ 2: How can journalists in Portugal and in The Netherlands be held accountable by their peers for publishing their content on algorithmically-controlled environments and using algorithms in their work?

1.4 Research Outline

The next chapters are organized as it follows: the theoretical framework assesses the main concepts of the research: media accountability, algorithmic accountability, algorithmic transparency, and the comparative framework developed by Hallin and Mancini (2004). In particular, the state of art of research is addressed in relation to these theoretical concepts. Additionally, the cases of Portugal and The Netherlands are analysed within the Polarized Pluralist and Democratic Corporatist media system, based on the dimensions of Hallin and Mancini comparative framework. Secondly, the methodology chapter describes the design implemented in the cross-country comparison, including the sampling procedures, operationalization, and data collection and analysis. Subsequently, the findings are addressed, followed by the discussion and conclusion. At last, the societal relevance, the limitations, and the recommendations for future research are further incorporated.

2. Theoretical Framework

Two main theoretical approaches form the core of the present research: media accountability and the comparative framework of media and political systems developed by Hallin and Mancini (2004). Particularly, the latter allows to position Portugal and The Netherlands' media landscape in its historical and political context, which constitutes the underlying notion of this thesis. To start, the use of some denominations must be clarified. The use of the word *news media* refers to mainstream traditional mass media where professional journalism constitutes their backbone (McQuail, 2006). By *society* it is meant a group that share similar characteristics (group of countries, nations, cities) and where social institutions such as a family, education, politics and/or media encompass and shape the group, individually and collectively (Croteau & Hoynes, 2014). Finally, by *algorithmically-controlled environments* it is meant digital platforms in which algorithms are used in the production, distribution and/or consumption of media. Examples of algorithmically-controlled environments are social media platforms or search engines.

2.1 Impact of Algorithms on Journalism

The continual and ubiquitous character of mass media in the present makes it difficult to abstract it from its role in society (Croteau & Hoynes, 2014). Undoubtedly, the news that people read on the newspaper or on the internet, watch on television (TV), and listen on the radio have a stake in their lives. As put by Croteau and Hoynes (2014), mass media are one of the primaries - if not the primary – institution of socialization, along with family and school. Such an assumption entails that they have an influence in society (Croteau & Hoynes, 2014; McQuail, 2006) and therefore must be accountable for that influence (McQuail, 2006; Newton, Hodges & Keith, 2004). The notion of accountability is particularly evident in the news media. The work of journalists is based on a role with certain rules and expectations, guided by an external ideal towards society (McQuail, 2006). McQuail (2006) describes four essential roles of journalism with normative purposes: monitorial, facilitative, collaborative and radical. In all of them, it is implied that there is someone on the other side, to whom the purpose must be served. However, such normative assumptions have been challenged by the move to the digital age, particularly in what concerns to algorithms. The use of algorithms by journalists can have several nuances. Firstly, the use of algorithmically-controlled environments to publish their content (for example, social media platforms). Secondly, the use of algorithms in news media websites (for example, data-analytic tools), indicates an increasing reliance on audiences' preferences to adapt the content (Napoli,

11

2014) or even to game the algorithms of social media platforms (Tandoc Jr & Maitra, 2017). As Bell (2015) affirms: 'the key question for news organisations, tied to the goal of big traffic, is now "what works best on Facebook?"' (para. 9).

Based on the above-mentioned, it is argued that algorithms can be considered to have a direct and indirect impact in the field of journalism nowadays. The direct impact is related to the use of algorithms by journalists themselves. In this situation, they have control over the algorithm to a large extent. The indirect impact concerns the widespread use of algorithmically-controlled environments by news media outlets to distribute their content, find topics or interact with sources. In this case, they do not have control over the algorithm. One example of this use are social media platforms, in which what is shown to each user, including user-generated content and news articles, is curated by algorithms based on previous user behaviour (Anderson & Caumont, 2014; Napoli, 2014; Newman et al., 2017). Furthermore, in these platforms algorithms signalize trends that show journalists what topics to write about, highlighting some issues at the expense of others (Diakopoulos, 2015, 2017). Adding to this, the fact that social media platforms do not rely on editorial or journalistic criteria in the content they feed to users (White, n.d.) can be considered problematic for journalists. Arguably, they can jeopardize the normative roles of the news media, particularly the plurality of views and opinions. As Napoli (2015) also underscores, news media are losing the ground as facilitators of communication. This role is more and more undertaken by social media, considered *algorithmic gatekeepers* (Napoli, 2015). By and large, such intricate context urges accountability from news media companies (Diakopoulos, 2015, 2017; Diakopoulos & Koliska, 2016; Napoli, 2014, 2015; McKelvey, 2014).

2.2 Media Accountability

An important component of media accountability is the whom, that is, who are the people that journalists should be held accountable to. In general, they are accountable to society, but McQuail (2006) divides it into 'lines of accountability' (p. 53): audiences, institutions and other advocacy groups, sources and people exposed by the news coverage, clients (advertisers or sponsors), law makers and regulators who protect the public interest. These lines of accountability can be considered problematic when applied to mechanisms of algorithmic accountability. That is, if using algorithms can be a competitive advantage for news media businesses, to what extent journalists are holding themselves more accountable to clients (and the pursuing of advertising profits) than to the other societal segments? Although it can be argued that several times media are more accountable to clients than audiences, the normative assumption here is that they should

12

be accountable to every group in a balanced manner. Furthermore, the role of accountability is denied by social media platforms. Concerning the most used social media platform for news consumption (Newman et al., 2017), Facebook, this happens in two ways. On the one hand, the platform considers that machines and algorithms can make the work of editors. On the other hand, it denies being a publisher (White, n.d.).

According to Bertrand (2000) media accountability serves four main purposes: enhance media performance, re-establish the trust and prestige of media institutions, protect freedom of speech and freedom of the press, and secure the autonomy of the profession in order to fully promote democracy and the furtherance of society. From 2016, such purposes have been harmed. The election of Donald Trump and the Brexit[3] inaugurated an era of post-truth where lies and disinformation are mistaken as facts: the cornerstone of journalism (Watts & Rothschild, 2017; White, n.d.). Also, not related with journalism but still worth mentioning, the recent case of Cambridge Analytica, in which Facebook sold data from tens of millions American users to external parties (Confessore, 2018). Democracy in the algorithmic age comes at what price? In the aftermath of Trump and Brexit, many tried to explain what happened to journalism and democracy. Some scholars and even journalists themselves blamed the news media industry for its high level of political polarization, giving voice to the elites of the big cities at the expense of citizens and locals (Watts & Rothschild, 2017; White, n.d.). Such criticism urged the media to readdress its responsibilities as the 'fourth power' (Lischka, 2017; Watts & Rothschild, 2017). For example, Lischka's (2017) account explains how *The New York Times* created delegitimizing strategies against Trump's continuous accusations of fake news towards the newspaper. According to Lischka (2017), the goal of such actions was to restore the legitimacy of journalism, indeed reasserting its responsibilities towards society.

2.2.1 Responsibility

The term *accountability* is not rarely accompanied by *responsibility*. However, they are distinct from each other. Hodges (1986) defines responsibility as a set of obligations that are assigned to the media. In contrast, accountability refers to the processes through which journalists meet such obligations (Hodges, 1986). McQuail (as cited in Fengler et al., 2011) gives a more nuanced definition of media accountability: 'voluntary and involuntary processes by which media

---

[3] United Kingdom exit from the European Union (Brexit, n.d.).

13

answer directly or indirectly to their society for the quality and/or consequences of publication' (p. 9). Generally, these obligations consist of citizens' rights (for example, respect for copyright or individuals' privacy), national security, public interest matters, and culture) (McQuail, 1997). As an illustration, media are responsible for exposing audiences to diverse forms art and culture within a country; on the other hand, they shall indiscriminately give voice to the different groups in society. According to Hodges (1986), there are four types of responsibility: assigned, contracted, self-imposed or denied. They can be materialized in regulation policies (assigned), news media products (contracted), journalistic codes of conduct (self-imposed), and when media rebut claims of bad conduct (denied). As shown earlier, the strategy used by The New York Times to undermine Trump's accusations of fake news exemplifies how the media can deny taking responsibilities in the case of a complaint. McQuail (1997) avows that all types of responsibility must be considered when assessing media accountability.

Media responsibilities can be applied via liability and answerability processes. The former involves being legally responsible for some harm; whereas answerability entails an openness and eagerness for debate and justification of media actions (McQuail, 1997). Although answerability is preferable over liability, McQuail (1997) highlights a great scope of possibilities between the two extremes, preferably leaning towards answerability. As contended by the author, the common difficulty in proving liability for harm caused by media disproves the use of such mechanisms to a great extent (McQuail, 1997). McQuail (2010) also distinguishes internal from external accountability, being the former the processes through which journalists deal with issues within the profession, and external the relationships with the overall audiences. Media accountability occurs in the form of instruments of accountability within four frames of accountability: *market*, *political*, *professional*, and *public responsibility* frame (Bardoel, 2000; 2001; McQuail, 2005).

2.3 Frames of Accountability

2.3.1 Market Frame

The market frame constitutes a mechanism of accountability, by which the interests of news media firms are expected to be in perfect symmetry with those of audiences or consumers (McQuail, 2010). From this perspective, what is expected from the news media is determined by the market rules of demand and supply. The bottom line is: if audiences consume a media product, then the product is deemed good and appropriate. Contrarily, the bad performance of news media is expected to be discarded by consumers (McQuail, 2010). According to McQuail (2010) the main focus of this frame is, therefore, the quality of content together with the technical quality of news

14

media. The evidence of these parameters is shown in accountability instruments, such as market share (sales) and market research figures, which help validate the consumers response to what is offered by news media (Bardoel, 2003; McQuail, 2010). Thus, it is expected that the market organically improves through competition, where different news media companies make sure that the interests of news media professionals and consumers are kept steady (McQuail, 2010). In fact, this assumption explains one of the main advantages of this frame: the lack of compulsory mechanisms. In this sense, the market is self-regulated and self-corrected, without the need of any control and regulation (McQuail, 2010).

This framework is inconsistent with the political frame, where laws and regulations set the boundaries of the functioning of the press (McQuail, 2010). Yet, both frames coexist in the majority of Western democracies, where news media must abide by compulsory regulation in order to protect the public interest (McQuail, 1997). In fact, the coexistence of PSB and commercial media in many Western countries proves that news media are not seen entirely as businesses (Hallin and Mancini, 2004). This dualism is particularly strong in Europe (Hallin and Mancini, 2004), even in the cases where the liberal ideology is strong (for instance, United Kingdom and Ireland) (Hallin and Mancini, 2004). As McQuail (2010) contrasts, public broadcasting does not fully rely on the market features, whereby it is said to be better positioned to fulfil the societal expectations of diversity and quality. Nonetheless, recent research shows that this is also not always the case (You, Zhang & Zhang, 2017).

Ideally, in a free market the media are guided by good practices and only the ones who correspond to societal expectations can survive. However, McQuail (2010) contends that this idealistic vision is far from being accomplished. The high level or profit-orientation in this frame comes with a few deficiencies, such as the lack of quality and a great level of attachment to owners and clients (McQuail, 2010). Given the increasing level of market pressures in the last decades, McQuail (1997) explains that it is expected that regulation and self-regulation of the news media have decreased in favour of contracted obligations and denied obligations. For example, paywalls or digital subscriptions can be considered contracted obligations between journalists and citizens, where citizens pay for information based on the promise of quality of service. Another current critique of this frame is the interference of economic factors in the news media field. For example, Witschge & Nygren (2009) acknowledge the impact of finance and business in the works of journalism in Sweden and the United Kingdom. Though this discussion is as old as journalism itself, some authors argue that the shift to the digital strengthened this argument (Harcup & O'Neill, 2016; Witschge & Nygren, 2009).

15

Wendelin, Engelmann and Neubarth (2015) also contend that the increasing audience orientation in journalism, especially on Internet, can be seen as an effect of the financial burden of news media firms. Accordingly, Wendelin et al. (2015) and Harcup and O' Neill (2016) hold that the reliance on audiences' preferences also reflects the need to target audiences to fulfill advertising interests. These market circumstances can arguably hazard the level of independence of media companies (Picard, 2004; Witschge & Nygren, 2009). Furthermore, there is the danger that monopolies, a possible feature within the market frame, can be formed at the expense of the free markets themselves, (McQuail, 1997). In this regard, Bagdikian (2004) and von Dohnanyi (2003) argue that news media concentration has a negative correlation with pluralism and diversity of content. But such reasoning should not be taken for granted (Croteau & Hoynes, 2014; van Cuilenburg, 1999). For example, Owen and Wildman (1992) study predicts that competition tends to foster more homogeneity of content than monopolistic structures or PSB. Likewise, Entman's (1989) inquiry on the monopoly of American local newspapers shows that more competition does not necessarily entail more content diversity. In fact, the aforementioned studies give little support to the idea that ownership concentration creates homogenization of content. Not to mention that media concentration tends to be low in printing press, radio and magazines, and it barely exists in websites (Albarran, 2010).

2.3.2 Political Frame

The political frame determines the policies and other legal frameworks which have an impact on the work of news organisations (McQuail, 2010). The aim of laws and regulations is twofold: on the one hand, it sets the free flow of communication in society and the public interest; on the other hand, it limits the press to harm private and public interests (McQuail, 2010). Because both premises are contradictory in nature, governmental interference must be established on the lowest standard as possible (McQuail, 1997, 2003). The ways of holding journalists accountable in this frame are expressed in formal documents and regulations, in which is explained what the media should or should not do, the limits to the freedom of the press, and the reach of future policies and regulations. In general, these formal documents relate to individuals' rights or to how the media can be regulated (with more emphasis on radio and television) and be held accountable (McQuail, 2010). Moreover, they also hold media responsible for issues such as copyright, competition laws, freedom of speech or audiences' complaints towards journalists (McQuail, 1997). Examples of instruments of accountability in this frame are governmental subsidies to the press or contracts. Therefore, the potential to impose claims constitutes one of the main advantages of the

16

political frame (McQuail, 2010). In addition to this, the laws established by governments restrict potential abuse from the political power over the media themselves (McQuail, 2010).

This frame also comes with downsides. Firstly, the loss of freedom is one of its main pitfalls, as protecting freedom of the press and holding media accountable are conflicting to a great extent. So much so that some academics and media professionals have denied any sort of control (Voltmer, 2010). Furthermore, the compulsory character of laws can result in censorship or fear of sanctions from news media professionals and organizations (McQuail, 2010). In the same way, laws are easier to apply to issues of ownership than to media content, as the latter is more subjective and can conflict with freedom of expression (McQuail, 2010). Lastly, in the face of change, laws are difficult to modify as well as unpredictable and abiding. Although they are imposed for the benefit of society as a whole, they can profit a few and be used as means of instrumentalization (McQuail, 2010). As contested by McQuail (1997), the political frame should be the ultimate solution to apply as its coercive processes are not best suited to assess media actions. More important, the author stresses that one should not overly attribute the media deregulation of the last decades as a consequence of a weak political frame, since the development of liberalism might have had a stake in this regard (McQuail, 1997).

2.3.3 Professional Frame

For the most part, journalists' professionalization is anchored on the notion of fulfilling societal needs for information, though this might not be all-important to all news media companies (McQuail, 2003). From this point of view, the concepts of self-respect and ethics among news media professionals are crucial to hold them accountable for society (McQuail, 1997). The professional frame is voluntary and comprises principles that guide journalists' behaviour, and that shall not be transgressed for commercial or personal purposes (McQuail, 1997). In general, these principles are expressed in instruments of accountability, such as codes of conduct, codes of ethics, and press councils (Bertrand, 2000). Journalists' reflection also comprises these instruments (Bardoel, 2003). In an eventual complaint against the media these principles are evoked and judged accordingly. The notion of professional responsibility in journalism was widely researched by Jean-Claude Bertrand. In 2002 this scholar created *The Accountable Journalism Project*, in order to compile news media codes of conduct and press councils worldwide (Accountable Journalism, n.d.). One of the main advantages of this frame is the voluntary character, which helps counteract the political frame. Yet, as argued by Bertrand (2000) instruments of accountability in the professional frame might not be entirely voluntary. For example, they can be established by the news media

17

industry itself to fulfil its own interests and agenda, or they can even constitute a mechanism of self-defence, keeping the news media away from more political control (McQuail, 2003). Despite its relevance (Bertrand, 2000; McQuail, 2010), the furtherance of the professional frame can, therefore, be problematic (Newton et al., 2004). For instance, the voluntary character of journalistic codes implies a commitment of media professionals to self-regulation, self-control and self-improvement (McQuail, 2010), which can be hard to track and put into practice. Besides, this commitment might not always be fulfilled by news media firms themselves, which can explain the creation of journalists' unions and associations. But, as McQuail (1997) reasons, even professional associations might not have enough power to make sure that journalists are complying with codes of conduct and ethics. Owing to this, Fengler et al. (2011) contemplates these instruments as informal institutions instead.

In the same manner, more than enquire into the nature of self-regulatory instruments of accountability, it is essential to address their impact on journalists' behaviour and decision-making processes (Boeyink, 1994). Boeyink (1994) mentions a few divergent studies concerning the real impact of these tools and journalists' attitudes towards them. Two of them indicate that codes of ethic might affect journalists' conduct. On the contrary, some could not prove their efficacy, stressing that they consist more of 'public relations tools' than instruments of responsibility (Boeyink, 1994, p. 893). Similarly, Fengler et al. (2015) and Frömming (2017) inquiries confirm the shortcoming of press councils and their inadequacy in the journalism of today. Furthermore, over the last decades, the professional responsibility has also been clashing with economic interests in the news media industry, jeopardizing journalists' independence (Bardoel & d'Haenens, 2004; McQuail, 2010; Witschge & Nygren, 2009). For example, when they avoid exposing their own unethical behaviour in order to avoid damages to the credibility and, in some cases, the profitability of a news media outlet (Eberwein & Porlezza, 2014).

2.3.4 Public Responsibility Frame

Contrary to the market frame, the public responsibility frame acknowledges news media as social institutions with purposes that go beyond profit (McQuail, 2010). The underlying idea is that freedom of the press presupposes some manifestation of the public interest, though this is not always clearly worded (McQuail, 1997). By the same token, the primary goal of a news media company should be the concern with society, some sort of social responsibility, which includes quality of information, social cohesion and preservation of national culture and democracy (McQuail, 1997). Although this frame incorporates both PSB and private media, the means of

accountability might differ (McQuail, 2010). In general, PSB is formally accountable by governments whereas the latter are committed to the notion of social responsibility in more informal ways (McQuail, 1997). In order for this frame to happen, it is also important to acknowledge audiences not only as consumers but also as citizens (Hasebrink, 1994). As audiences they want content that satisfy their individual needs and tastes; as citizens they have a stake in the media's role in matters related to pluralism and diversity, minorities, and in-depth exploration of wide phenomena in society (Hasebrink, 2012). From this perspective, if the media are failing in their commitment to the above-mentioned matters, they are to be 'judged' by public opinion and other actors of public interest, including politicians.

These dialogues are made through instruments of accountability, such as representation in controlling bodies of public service broadcasters, controlling authorities, media users' associations, NGOs, as well as occasional collective activities and informal networks (Hasebrink, 2012). Such mechanisms represent a continuous two-way flow of communication where citizens can criticize the failings of journalists towards society and journalists are able to respond to these complaints (McQuail, 2010). Because it involves the direct link between news media and society (Bardoel & d'Haenens, 2004), the public responsibility frame is considered the most applicable to attain the public interest in democratic societies (McQuail, 1997). Besides, its voluntariness protects freedom of expression (McQuail, 2010). However, this frame is also made up of downsides. Firstly, its voluntary character makes it easy for news media professionals to reject complaints against their work. In addition, despite its high relevance and interactivity, its wide spectrum of coverage makes it more complex to implement. Moreover, citizens might not be so active after all, and, might need some *apriori* discussion in order to be involved in media criticism (McQuail, 1997; Neidhardt, 1994).

Conversely, some scholars contend that audiences have in fact little stake on the works of media, but not because of their fault. Hence, they demand new mechanisms of civil society (Bardoel & d'Haenens, 2004; de Meij, 1984; Hasebrink, 2012; van der Meiden, 1980). On the whole, an enduring and active public responsibility frame, depends on factors such as the particular characteristics of a media system and the (non)active role of the public to demand media responsibility (McQuail, 1997). In this regard, Hasebrink (2012) argues that a better conceptualisation of media literacy would encourage users in holding news media accountable to citizens and the overall society. Considering all the frames, the market frame seems quite prevalent in the news media industry over the last decades. On the contrary, political intervention has weakened, as proved by deregulation measures (McQuail, 1997). Nonetheless, the issue of algorithms has been rising governmental concerns about the impact of these black boxes on

19

information consumption. Simultaneously, algorithmic tools and social media platforms permeate more and more journalistic practices and routines. Arguably, what measures journalists themselves are taking to address this concern?

2.4 The Political and the Professional Frame

Based on the above-mentioned, the research focuses on two frames of accountability: the political and the professional frame, each of them addressed on the two sub-research questions. The reason for paying particular attention to two frames instead of four is because it allows for a more thorough investigation of each, as suggested by Frömming (2017). Moreover, the choice of the two is not coincidental. In the first place, if follows the recent governmental recommendations put forward by European leaders in regard to content on social media platforms (Ong, 2018). Additionally, as the political frame is the most coercive of all frames it is the one where the most similarities between Portugal and The Netherlands are expected to occur. Oppositely, the professional frame manifests in different ways in both countries from an empirical and normative perspective. Therefore, the criterion of variation is deemed important for the comparison. Furthermore, self-regulation is considered the most applicable due to its voluntary character (McQuail, 2010) and, different from the public responsibility frame, it depends solely on the journalists themselves to occur. More important, Fengler et al. (2011) point out that little research assesses the impact of Media Accountability Instruments' (MAIs) on journalists. Above all, the research put the two 'extremes' into perspective in a cross-country comparison. The bottom line is: what existing mechanisms within these frames can plausibly hold journalists accountable in the algorithmic age?

2.5 Instruments of Media Accountability in the Digital Age

The debate about the role of mass media in society is as old as the media themselves (von Krogh, 2007). From the beginning of the 20th century, several scholars have studied the notion of social responsibility of the press: Marzolf, Christians, Siebert, Peterson and Schramm in the USA. McQuail and Bertrand are among the most influential academics in the subject in Europe. The increasing interest in accountability constitutes an overarching tendency brought by globalization and the development of the World Wide Web (von Krogh, 2007). Specifically, in the media sector the increasing marketization of the field along with some discontent towards public service broadcasting and ethical journalism created a 'new sense of urgency, for "social responsibility" in the media' (Bardoel & d'Haenens, 2004, p. 5). Academia has been eager to investigate mechanisms

20

of media accountability, though with much higher incidence in countries where the normative role of the media applies (for instance, Anglo-Saxon and Scandinavian countries) (Fengler et al., 2011). Some research focuses on instruments of accountability such as press councils[4] and codes of ethics (Hafez, 2002; Kreutler, 2007; Laitila, 1995; Puppis, 2009; Wiedemann, 1992). Other studies investigated the ombudsmen, mostly in the USA and Europe (Elia, 2007; Evers, Groenhart & van Groesen, 2010; Starck, 2010). Bertrand (2007) also compiled many MAIs in a broader and more practical manner. Fengler et al. (2011) also mention some studies which assess the influence of MAIs on media professionals and audiences (Boeyink, 1994; Fengler et al., 2015; Harro-Loit, 2015; Pritchard & Morgan, 1989; Villegas, 2015). Although the impact of media accountability is widely acknowledged, its study is not systematic enough (Fengler et al., 2011).

More recently, online forms of accountability started to be researched (Domingo & Heinonen, 2008; Eberwein, n.d.; Fengler, 2008). The Internet, including Web 2.0, (blogs, social media platforms, video sharing websites) opens a vast array of accountability instruments to debate about the works of the media. Blogs have become one of the most popular accountability instruments online for media criticism and debate (Domingo & Heinonen, 2008; Eberwein, n.d.; Fengler, 2008). In addition, users can use Facebook and Twitter to comment on the quality of news content. Commentary boxes allow for a straighter communication between journalists and audiences and online versions of ombudsmen act as mediator between the two (Fengler et al., 2011). This proximity between audiences and journalists in the digital public sphere demands new models of regulation of the media. Puppis (2007) suggests a new model of co-regulation where audiences are as equally interested in holding media accountable and transparent as journalists themselves. This is considered the most adequate model of accountability for the digital age (Fengler et al., 2011). Within co-regulation processes, the State and stakeholder groups including journalists and consumers themselves are taken into account in the development and establishment of regulatory mechanisms. Marsden (n.d.) defines it as an interplay between legislation (political frame) and self-regulation (professional frame). This model has been applied to issues related with digital media and Internet, as in the case of privacy and minors' protection. As a matter of fact, in 2004 European Commission recommended co-regulation for issues related with youngsters' protection on Internet (Marsden, n.d.).

---

[4] Press councils, codes of conduct or constructive media evaluation are also applicable to different contexts (Diakopoulos, 2017).

Nonetheless, MAIs face several challenges in the digital age. The use of third-party platforms to distribute news media content create grey areas which makes intricate to hold someone accountable for the content that is published. For example, should a press council be accountable for complaints made on Facebook about journalists' articles? Or should a press council respond to a complaint about a news video published on Twitter or YouTube? More strikingly is the study of Díaz-Campo and Segado-Boj (2015), who discovered that only 9 in 99 countries' codes of conduct added sections about digital media since 2001. Specifically concerning the use of algorithms in journalism this evidence is even scarcer (Frömming, 2017). As Fengler et al. (2011) underscore, the audiences' role in holding the media accountable in the era of Internet will give rise to new notions of media accountability. Though not demanded by audiences themselves, algorithmic accountability and algorithmic transparency constitute two new concepts on the topic.

2.6 Algorithmic Accountability and Algorithmic Transparency

'The world's most valuable resource is no longer oil, but data' (The Economist, 2017, headline). Algorithms and data surround us, impacting processes, people, and organizations throughout society, including journalism (Diakopoulos, 2015). An algorithm is a set of principles executed by computers, designed by humans, and computers, aiming to solve a particular problem (World Wide Web Foundation, 2017). This notion entails two features: firstly, the work of these black boxes is hidden from the general public; secondly, the algorithms carry some sort of bias within themselves. Both factors form the ingrained and very essence of algorithms: autonomous-decision-making (Diakopoulos, 2015). To wit, in algorithmically-controlled environments the decisions are made by computers based on rules and estimations rooted in endless data provided by users. These rules can be segmented by programmers themselves or by machine learning of data. But even in the case of human interference, the algorithm already carries biases when the programmer is acting upon a set of information (Diakopoulos, 2015).

2.6.1 The Power of Algorithms

Diakopoulos (2015) highlights four ways through which algorithms exert power in journalism. Firstly, they prioritize some news at the expense of others, through user rankings (for example *Most Popular Articles)*. The prioritization algorithm is computed according to a set of criteria chosen by human agency and/or machine learning that determines what content goes to the top positions and what content does not fulfil the criteria. Google search results and Facebook news feed are other examples of the use of prioritization, where users have their feeds

22

personalized with content curated by algorithms that better suit their interests (Eslami et al., 2015). Most of the times, it is not known what criteria lies behind these algorithms. Granados & Gupta (2013) contend that one of the reasons to not publicly reveal this information is because they constitute a competitive advantage for companies. Wendelin et al. (2015) also address another issue concerning the use of user rankings from external content providers. The incorporation of these features by news media websites can be ticklish as audiences have the option to choose from a set of stories that were previously selected by external sources. Hence, algorithms might narrow the selection of stories people encounter online. Nonetheless, opposite to Wendelin et al. (2015) argument, recent research indicates that algorithmic news recommendation can substantially generate more topic diversity than human editors (Möller, Trillinga, Helbergerb & van Es, 2018).

Related to the prioritization is the filtering action, by which the act of excluding or including content is based on a pre-set of criteria. Diakopoulos (2015) explains that instructions to filtering algorithms rely on the other three features: prioritization, classification and association. By emphasizing some content and concealing other, filtering algorithms might perpetuate the concept of filter bubbles, by exposing audiences with perspectives they might support while sparing them from different perspectives and opinions. Therefore, it is argued that this perpetuation of biases is problematic for the normative ideal of pluralism and diversity of news media content. The issue is of bigger importance on social media platforms, where not only the algorithms' criteria are not disclosed, but also news media content coexists with non-journalistic content. Arguably, the recent controversies concerning fake news and disinformation on social media demonstrate how these ecosystems are inhabited by all kinds of interests (Woolley & Guilbeault, 2017).

According to Diakopoulos (2015), algorithms also classify news based on machine-learning. These decisions involve the categorization of a unit as belonging to a class based on a number of characteristics. These decisions, which also feed filtering algorithms, are subjected to biases and mistakes. The biases are related with the criteria that programmers use to classify training data. After tagging each unit, this data is, then, used by the algorithm to learn how to classify instances based on the human criteria (Diakopoulos, 2015). Classification algorithms are susceptible to two types of mistakes: *false positives* and *false negatives*. Diakopoulos (2015) exemplifies it with the YouTube's classification algorithm. A false positive mistake happens when a video is classified as *infringing* copyright when it is *fair use*, whereas a false negative is the inverse. By tuning the algorithm is possible to diminish the number of mistakes but only for one type of error. Examples of classification problems are also speech recognition, handwriting recognition or document classification (Sifium, 2017).

Lastly, algorithms create associations between two or more things based on a set of principles that define why and how these entities should be associated with each other. Similar to the classification algorithms, they are subject to *false positive* and *false negative* mistakes. With the shift to digital age, algorithms have become more and more incorporated in journalism practices and conventions (Diakopoulos & Koliska, 2016). On the one hand, they are part of algorithmically-controlled environments utilized by journalists, yet not designed and controlled by them. For example, journalists rely on social media to distribute content, contact with sources, and spotlight trending topics (Hermida, 2010). On the other hand, algorithms can also be implemented by news media themselves in several ways.

2.6.2 The Model of Algorithmic Accountability

In general, algorithmic accountability encompasses a wide range of fields (finance, security, marketing, etc.) and demands accountability mechanisms concerning the impact of algorithms (World Wide Web Foundation, 2017). Research shows that algorithms are all but neutral. Whether incidentally or intentionally, they express biases (Friedman & Nissenbaum, 1996) and even ideologies (Mager, 2012). Algorithms suggest to consumers what to buy, eat, read, and invest. Kitchin (2017) hits the spot when expresses the following: they 'seduce, coerce, discipline, regulate and control' (p. 19). Because they exert power and authority their use requires normative considerations (Diakopoulos, 2015; Gillespie, 2014; Kitchin, 2017; McKelvey, 2014; World Wide Web Foundation, 2017). For the sake of the research, algorithmic accountability is referred as a sub-field of media accountability which demands that journalists are held accountable for the impact of algorithms on news production and consumption. Although the subject has been researched over the last decade, it was recently on the spotlight due to the recent issues of fake news and computational propaganda on social media (Watts & Rothschild, 2017; White, n.d.).

In truth, some journalists are already addressing the issue, what Diakopoulos (2015) names 'algorithmic accountability reporting' (p. 398). It is defined as the media investigation of the power of algorithms in several areas of society. In other words, it's the watchdog function of journalism in relation to algorithms. Reverse engineering techniques constitute one method of algorithmic accountability reporting. To put it simply, they consist of a deconstruction of something created by humans, which unveils how the system was designed and how it works (Diakopoulos, 2015). The method can help understand unintended consequences of the use of algorithms and has been used in a news context by journalists from *The Daily Beast*, *Pro Publica* and *The Wall Street Journal* (Diakopoulos, 2015. As an illustration, in 2012 The Wall Street Journal found out that some e-

commerce websites were practicing price discrimination, showing different prices to different people (Singer-Vine, Soltani & Valentino-Vries, 2012). In order to counteract the phenomenon of echo chambers on Facebook, the newspaper ("Blue Feed, Red Feed", n.d.) also created an infographic showing its readers how Facebook shows different political perspectives to users. In the same way, Keller (2013) from The Daily Beast researched the autocorrection mechanisms on the iPhone. Notably, the research could not find algorithmic accountability reporting for the works of the news media themselves. A model of algorithmic accountability must take into account that algorithms are created by humans with purposes and intentions behind their use. Likewise, it must consider how professionals use the outcomes of algorithms when making decisions (Diakopoulos, 2015).

Diakopoulos et al. (n.d) outline six principles for accountable algorithms: responsibility, explainability, accuracy, auditability and fairness. Briefly, responsibility relates to the creation of a role, whose person is in charge of resolving issues with algorithms. Explainability ensures that algorithmic decisions are explained to users and stakeholders in a clear-cut and comprehensible way. Thirdly, accuracy is the process of identify errors and mistakes in the algorithms and use this information to attenuate further complications. Auditability is making possible for third parties to check on the works of algorithms and disclosing information that allows criticism. Finally, through the principle of fairness algorithms should avoid discrimination of unfair treatment towards people based on their sex or race. In the same manner, Algorithm Watch, a non-profit organization based in Berlin, issued *The ADM (Algorithmic decision making) Manifesto* (Algorithm Watch, n.d.), which affirms that the algorithm 'is never neutral' and its creator 'is responsible for its results' (point one and two). Based on this, Diakopoulos et al. (n.d.) suggest the development of a *Social Impact Statement* by developers, that should be revisited at least three times during the design and development of an algorithm. Even though they might not design algorithms themselves, journalists are incorporating more and more these technologies in their practices.

2.6.3 The Uses of Algorithms in Journalism

To begin with, algorithms are used in *computational journalism,* defined by Hamilton and Turner (2009) as 'the combination of algorithms, data, and knowledge from the social sciences to supplement the accountability function of journalism' (p. 2). In a different manner, Diakopoulos & Koliska (2016) characterize it as the search, production and distribution of stories with the help of algorithms, by algorithms or even about algorithms. Graefe (2016) also refers to a sub-field of computational journalism: *automated journalism*, where stories are created by algorithms and

25

computer software without little, if any human intervention. *Associated Press* and *Reuters* do it as well as *The Los Angeles Times*, *Statsheet* and platforms, such as *Yahoo*. Yet, computational journalism and algorithms are employed in media newsrooms in a more extensive way: the use of data-driven insights and algorithmic tools. The prevalent merge of online/offline newsrooms and the use of Web metrics (click-through rate, user rankings or the number of shares and likes on social media articles) by media professionals reflect an audience orientation, whereby journalists receive real-time feedback about their users' preferences (Harcup & O'Neill, 2016). Consequently, data-driven insights might shape news editors' selection of stories in order to please audiences (Wendelin et al., 2015).

Additionally, journalists are making use of algorithmically-driven tools to find topics to write about or to check and validate sources and information (Thurman, Schifferes, Fletcher, Newman, Hunt & Schapals, 2016). In their study, Thurman et al. (2016) argue that algorithms can be successfully used by journalists to identify trend topics, search and help with the verification of sources and content on social media. Also, news bots are being applied on the creation and distribution of news content on social media and other platforms (Lokot & Diakopoulos, 2016). Lastly, Diakopoulos and Koliska (2016) mention that several news media outlets use algorithms to perform A/B testing of digital headlines. Briefly, half of the readers sees one headline; the other half sees a different headline for half an hour. Consequently, the one which attracted more readers will be used (Symonds, 2017). On balance, algorithms execute two fundamental functions in the news media industry: to predict demand through a data-driven approach (what audiences like to read or watch) and to create content (abovementioned automated journalism) (Napoli, 2014). Despite not being the one and only, transparency can be accounted for this influence.

2.6.4 Algorithmic Transparency

In general, the dissemination of information on Internet has made easier to scrutinize organizations, and therefore, to introduce transparency mechanisms (Bennis, 2013; Meijer, 2009). Accordingly, the notion of transparency has become a main ethical concern among journalists (Hayes, Singer & Ceppos, 2007; Kovach & Rosenstiel, 2014; Plaisance, 2007). In a nutshell, transparency is the process of opening up journalists' work to audiences, showing its errors and underperformances in order to build trust (Silverman, 2013). As Weinberger (2009) outlines it: 'the new objectivity' (title). Following an overall tendency for transparency along with an increasing distrust in journalism, some news media companies adopted transparency as a way to reconnect with audiences and reinforce the credibility and prestige of the class (Hayes et al., 2007). Some

scholars also see the benefits of transparency from a business perspective (Granados & Gupta, 2013; Holtz & Havens, 2008; Tapscott & Ticoll, 2003). Contrary to this, Broersma (2013) argues that transparency might, in fact, discredit journalism by showing its fails. Although the concept has been adopted as a core value in journalism in the USA (Society of Professional Journalists [SPJ], 2014) the term seems more normative than practical. For example, Chadha and Koliska (2014) found out that many news media professionals do not apply transparency mechanisms in their work.

Although disclosure mechanisms are one of many paths concerning media ethics and responsibility, Diakopoulos and Koliska (2016) argue that its prevalence in the news media industry makes it relevant to consider within the context of algorithmic accountability. Truly, the concept has been applied to the use of algorithms in news media production and consumption as a mean to increase accountability of journalists (Ward, 2014). Although the measures related with algorithms in the news industry still need more stimulus (Saurwein, Just & Latzer, 2015), there are some notable exceptions. In an article from 2017 The New York Times explains to its users how it performs A/B tests on digital headlines, reporting about a controversy involving an article on Donald Trump (Symonds, 2017). Also, the *American National Public Radio* (NPR), *BuzzFeed*, and the German *Schweizer Radio und Fernsehen* (SRF) have applied some transparency measures in their data-journalism and computationally-driven stories (Diakopoulos, 2017).

Diakopoulos and Koliska (2016) define algorithmic transparency as the process whereby journalists open up their processes and criteria in handling algorithms in order to allow the value judgment of audiences and other media stakeholders. Such disclosure allows people to discern the values, biases and ideologies of algorithms, and, consequently the hidden assumptions of a particular news media product (Diakopoulos & Koliska, 2016). These mechanisms can be particularly relevant in the case of subjective journalism (McBride & Rosenstiel, 2014). Given the complexity of algorithms themselves it is more difficult to find an optimal model of transparency (Diakopoulos, 2017). Diakopoulos (2017) proposes a transparency model, in which the disclosure of information happens across four dimensions: data, model, inference and interface. Firstly, data lays the foundations of algorithmic systems, for example machine learning, personalization or automated content. Since algorithms are designed by humans the transparency mechanisms behind data naturally need to take the human influence into account (Diakopoulos & Koliska, 2016). In this dimension, the information can be disclosed concerning data accuracy, when it is collected, what are the sources of the data or if there are missing elements. The disclosure element can be represented in text next to the data, the content itself. Secondly, modelling in algorithmic processes can also be openly explained to audiences. Briefly, modelling is the simple reconstruction of an

existent reality, generally through the use of data and algorithms of prediction, ranking, association and classification (Diakopoulos & Koliska, 2016). The features used by the algorithm can be another aspect of disclosure. As with the first dimension, the human factor impacts the final output, for example by choosing what variables are included and excluded from the model. What might constitute a problem for transparency in this regard is to know whether a decision is human – coded by the developer - or machine-learning based. Hence, Diakopoulos & Koliska (2016) propose two different routes for media companies: uncover the editorial criteria in modelling decisions or reveal the editorial criteria implemented in the code.

Thirdly, algorithms make inferences such as classifications, predictions or recommendations, which are subject to mistakes and inaccuracies. For example, Twitter has been successfully using location inference to identify 'bullies' as well as people affected by health or natural epidemics (Ajao, Hong & Liu, 2015). As Ajao, Hong and Liu (2015) explain, the algorithm has been improved to eliminate inaccuracies, for example the fact that it was possible to tweet about a particular location and not be in the location at the time. From Diakopoulos & Koliska (2016) point of view the transparency mechanisms concerning inferences can include the accuracy of the inference or the type of inference that has been made. Lastly, the interface dimension covers the direct connection with the user. An example of an output that the algorithm delivers to the user is a news article. Here, the presence of an algorithm may be transformed into something visible, an icon which can inform that the content was influenced by some algorithmic decision, for example personalization (Diakopoulos & Koliska, 2016).

Further tools of transparency could be FAQs to clarify questions related to data, model and inferences, the release of transparency reports or the creation of a new type of 'ombudsman' role to deal with issues concerning algorithms. Moreover, interactivity features could allow users to dig into layers of content to see underlying algorithmic choices, to overrule or modify the algorithm decision. For instance, in the case of an *on/off option* the user can see the different output with or without the algorithm's influence. Overall, Diakopoulos & Koliska (2016) consider that interactivity features are fundamental to disclose editorial decisions concerning the influence of algorithms on media content. The authors (Diakopoulos & Koliska, 2016) suggest a clear-cut information available to the eager users balanced in a way that does not annoy the ones indifferent to the topic.

Although Cramer et al. (2008) point out the efficacy of transparency mechanisms, their use can also have some drawbacks. Firstly, they can lessen the overall user experience (Schaffer et al., 2015). This is also confirmed by Diakopoulos & Koliska's (2016) focus groups where several participants mentioned the risk of deluging the user with more information. Furthermore, some

28

users might not be interested in the works of algorithms or lack the ability to perceive them (Diakopoulos & Koliska, 2016). By this token, Diakopoulos & Koliska (2016), argue that there is no clear evidence that audiences are demanding algorithmic transparency. Because the most appropriate format it is not known yet, this can explain the unwillingness of audiences to some extent. From a business perspective, there is also some reluctance in the implementation of algorithmic transparency (Diakopoulos & Koliska, 2016). One of the factors might be the fear that disclosure might jeopardize business models (Diakopoulos, 2015). Not to mention some legal and privacy issues that might arise (Diakopoulos, 2017). Likewise, the creation of a new role within news organizations to create information disclosures might bring additional costs to an already economically damaged industry. Referring to this, the fact that algorithmic systems are constantly evolving, information updates and revisions might be burdensome (Diakopoulos, 2017).

Another problem concerns one of the main channels for distributing news media content: social media. Differently from traditional news outlets, these platforms do not abide by journalistic norms and ethical principles (Napoli, 2015). Therefore, if only traditional media companies conform to algorithmic transparency, this would create an entangled environment, which arguably would make more harm than good. All in all, the fact that algorithmic transparency is still understudied might also account for the lack of clearance on the practical solutions to address it. Diakopoulos and Koliska (2016) argue that the focus on the user experience is desirable, but transparency in itself does not allude to the concept of media accountability. For the most part, even an optimal solution concerning algorithmic accountability and transparency might not be applicable to every news media outlet, media system or even country. If media accountability can vary from system to system, and even within a system (Hallin & Mancini, 2004; McQuail, 2006), the solutions for algorithmic accountability must, arguably, incorporate this expectation. That being so, algorithmic accountability needs to be considered in light with its various implications on journalists, audiences, businesses and regulations within a given context, particularly in Portugal and in The Netherlands. Indeed, this constitutes another fundamental notion of the research.

2.7 Media Systems: Polarized Pluralist and Democratic Corporatist

Anchored on the comparative framework of media systems from Hallin and Mancini, this thesis assesses the works of Portugal and The Netherlands concerning media accountability, particularly algorithmic accountability and algorithmic transparency. The model of media systems analyses the relationship between the media and political systems based on four dimensions: media markets, political parallelism, journalistic professionalization and State intervention (Hallin &

29

Mancini, 2004). Overall, Hallin and Mancini identify and describe three models of media systems in the Western world: Polarized Pluralist (Greece, Portugal, Spain, and France), North Central European/Democratic Corporatist (Scandinavian countries, Belgium, The Netherlands, Austria, Switzerland, and Germany). The United Kingdom, USA, Canada, and Ireland belong to the North Atlantic/Liberal Model (Hallin & Mancini, 2004). Accordingly, Portugal belongs to the Polarized Pluralist countries whereas The Netherlands pertains to the Democratic Corporatist group.

Although the framework does not aim to evaluate normative features of each media system, Hallin and Mancini (2004) mention that there is a general tendency to consider news media in the Mediterranean countries as deficient when compared to the ones in the Liberal or Democratic Corporatist countries. In total disagreement with this belief, the authors stress that the study constitutes an empirical analysis about the historical evolution of the news media in several countries against a political, social and economic backdrop (Hallin & Mancini, 2004). Normative statements aside, Portugal and The Netherlands have both distinct historical and political contexts and, therefore, dissimilar media landscapes are not surprising. A point must be made in relation to the absence of the North Atlantic/Liberal Model from the research. This is particularly related with the low State intervention in the news media which comprises this framework (with the exception of United Kingdom). Oppositely, the assumption of high State intervention in the remaining models might account for the variations and similarities on how both countries are dealing with the topic of algorithms in news media from a governmental perspective. Besides, choosing all three systems might have not allowed for a more thorough assessment of each. At last, the Polarized Pluralist and Democratic Corporatist constitute the most widespread media systems in Europe. Thus, the outcome of the research is of wider applicability.

2.7.1 Polarized Pluralist, Portugal

Along with Greece and Spain, Portugal got rid of nearly 40 years of dictatorship in 1974, a regime that hindered the development of the press. Overall, from the very beginning of journalism in the region, the news media have been considered as means of ideological and political expression (Hallin & Mancini, 2004). Portugal is no exception. Immediately after the authoritarian regime the news media market went through a process of privatization and deregulation, also referred by Traquina (1995) as 'savage deregulation' (title). Accordingly, the first dimension to be described is the structure of the media market. Despite having a wide range of printing press, especially local and regional, the country has an overall low newspaper circulation and reach (Correia & Martins, 2018; Hallin & Mancini, 2004). The fact that newspapers are read mainly by the

educated elites interested in politics is, therefore, not surprising. As in the overall media system, Correia and Martins (2018) affirm that the real mass media in Portugal might be electronic media. A recent study shows that Internet penetration in the country is high (74%), with strong emphasis on the consumption of online newspapers and magazines (Portuguese Regulatory Authority for the Media [ERC], 2016). A first critique of the model of Hallin and Mancini is the fact that only takes into account the press market, arguably not adapted to the reality of today's news consumption.

Following the overall trend, social media platforms (primarily Facebook and YouTube) constitute relevant sources of news consumption (Correia & Martins, 2018). However, the most consumed medium in the country is television, from all age groups and genders. In general, cross-media ownership is substantial, with three main groups – *Impresa*, *Media Capital* and *Global Media Group*. Additionally. The Portuguese public service broadcasting includes two television channels and eight radio stations (Correia & Martins, 2018). In 2017, the countries' top six media holdings created an online news platform to counteract Google and Facebook dominance in digital advertising, which strikingly account for almost 70% of the digital market (Tuck, 2017). The primary goal of *Nónio* is to personalise digital advertising according to audiences' preferences. In an indirect reference to transparency, it is said that the data will be managed by an independent entity and that each media outlet will only have access to its own audiences' data (Nónio, n.d.). No reference is made to media pluralism or diversity. Arguably, the purpose of Nónio seems to fall under Harcup and O'Neill's (2016) assumptions about the orientation towards audiences' preferences and profit.

Another dimension of the model is the relationship between journalism and the political system. Generally, the Portuguese media are highly politicized, yet, this lessened considerably with the privatization in the 80s (Hallin & Mancini, 2004), and the introduction of a market logic and a one-size-fits-all approach (Correia & Martins, 2018). In like manner, PSB tends to be politicized by ruling parties and, thus, politics represents a great part of the media agenda in PSB in all of the Mediterranean countries (Hallin & Mancini, 2004). Historically a majoritarian system, PSB tends to be controlled by the majoritarian political party, though with more power limitations than Greece. Furthermore, political parallelism[5] is high. Journalism has a more partial character, with more commentary, and each newspaper has a fixed partisan readership. Nevertheless, Correia & Martins (2018) state that the degree of parallelism is less evident than in Spain or Italy, particularly after the

---

[5] Political parallelism refers to the extent that the media structure mirrors that of the media (Hallin & Mancini, 2004).

consolidation of democracy.

The third dimension encompasses the level of journalistic professionalization. In general, the level of professionalization of journalists in Portugal is lower than that of the two other models. But, as explained by Hallin and Mancini (2004), professionalization in the model of media systems does not have a normative consideration. Rather, it refers to the autonomy of journalists concerning the media organization, and the adherence to journalistic norms and values. Contrary to Hallin and Mancini (2004) assumption, Santana-Pereira (2016) shows that the level of journalistic professionalization in the last years is modest (5.2) compared to the European Union average (4.9). By the way, Finland scores the highest value on the EU level. Furthermore, almost 80% of Portuguese journalists have a high level of education, of which more than 60% took an academic degree in Communication Sciences or Journalism (Correia & Martins, 2018). However, a high education level is not mandatory to be a journalist in the country.

The class has been facing some issues over the last years. Mainly, they relate to the low salaries, the low autonomy of journalists in relation to media governing bodies, and the difficulties in balancing professional and personal lives (Correia & Martins, 2018). In addition, Correia and Martins (2018) highlight the increasing widespread of trainees in media newsrooms as a recent hot topic in the last journalism congress. The difficulties in having a more effective self-regulation as well as the lack of compliance with ethical and journalistic standards were also highlighted in the event (Correia & Martins, 2018). The development of the profession in Polarized Pluralist nations is traditionally connected to politics and literary. In this sense, journalism is more likely to be seen as an elite occupation. Likewise, journalistic organizations and unions tend to be weak in comparison with the ones of the Democratic Corporatist countries. For example, there is a Commission that issues credentials to journalists, but it is not mandatory to have a credential to perform the profession (Hallin & Mancini, 2004). Around 3000 journalists who have this credential are connected to the *National Journalists Union* but there are other journalistic associations, for example cultural (*Press Club*) or a mutual association (*Press House*) (Correia & Martins, 2018). Correia and Martins (2018) describe two main accountability mechanisms concerning self-regulation: the *Ethics Committee*, within the *Commission of Journalists' Credentials*, and the *Journalists' Professional Ethical Council*, within the *Journalists Union*. The former acts as a vigilant of the professional and ethical values and has the power to penalize the ones who do not comply with the rules (Comissão da Carteira Profissional de Jornalista, 2008). As for the Journalists' Professional Ethical Council, it issues recommendations based on the Ethical Code, approved in 1993 (Sindicato dos Jornalistas, 1993). Curiously, the role of the ombudsman, which existed in some private

32

newspapers from 1997, only remains in PSB nowadays (Correia & Martins, 2018).

The fourth dimension described in the model of media systems is the level of State intervention, which is high in the Polarized Pluralist Countries (Hallin & Mancini, 2004). In line with the political framework described by McQuail (1997), the Portuguese State also holds the news media accountable, but this influence is undermined by clientelism and political polarization (Hallin & Mancini, 2004). Nowadays the Portuguese State intervenes in the media in several ways: regulation, legal framework revision, local and regional media subsidies, through ownership of public service broadcasting, and a 50% share in the main Portuguese news agency, *Agência Lusa* (Correia & Martins, 2018)*.* In 2005, after a series of liberal reforms in the sector from the 1980s onwards (for example, privatization of local radios and printing press, reorganization of the public service media model), the socialist government introduced several measures, of which the creation of a new media regulator: the *Portuguese Regulatory Authority for the Media* (ERC, in Portuguese).

ERC constitutes an administrative body, independent from the government, which stands for co-regulation and the encouragement of media self-regulation. Four out of the five board members are elected by the Portuguese Parliament (ERC, n.d.). ERC takes on the promotion of media pluralism and diversity, freedom of information, protection of citizens' and vulnerable audiences, and transparency of the media. The commission is particularly attempt to media concentration and competition, which can undermine media autonomy (Correia & Martins, 2018). But the issues related to these are handled by the *Market and Competition Authority*. Notably, a new law approved by the Portuguese Parliament aims for more transparency in the media industry, mainly concerning ownership and finance (Correia & Martins, 2018). In addition to the creation of ERC, the government put forward new legislation to diminish the economic participation of the State in the field and stricter competition laws. But the main controversial measure among journalists was the Revision of the Journalist' Statute which lessened the protection of confidential sources as well as the creation of an Ethics Committee, pertaining the Commission which issues journalists' credentials (Correia & Martins, 2018). Finally, according to the World Press Freedom Index 2017, Portugal is 18th in the ranking, performing better than in 2016 (23rd) (Reporters without Borders, n.d.a). Among other factors, the annual index takes the legislative framework of each country into account. Curiously, The Netherlands was better positioned in 2016 (2nd) than in 2017, (5th) (Reporters without Borders, n.d.b).

2.7.2 Democratic Corporatist, The Netherlands

In the 16th century, Luther's 'war of religious propaganda' (Anderson, 1983, as cited in Hallin & Mancini, 2004) shaped the emergence of the printing press in Europe. During the Reformation period in Central and Northern Europe, the media became vehicles of both resistance and activism (Hallin & Mancini, 2004). In general, Democratic Corporatist countries are characterized by a strong development of the mass press, high political parallelism, high journalistic professionalization and high State intervention in the media. Hallin & Mancini (2004) also denote three coexistences which make this model a distinctive one. Firstly, a high press circulation with a high level of political parallelism; secondly, a high level of political parallelism and a high journalistic professionalization; thirdly, a strong limitation of the State in the media which coexists with a high involvement of the State in the media market.

According to Bakker (2018), the recent statistics suggest that the Dutch news media landscape 'changed dramatically' in the last decade (p. 2). Online dominates, with the supremacy of Facebook in the distribution of media content. Internet penetration is higher than in Portugal (92% in 2015) (CBS, 2016). Likewise, in 2016, traditional TV consumption was also high (Bakker, 2018). In line with the global tendency, newspaper circulation and readership have been dropping, yet they are still fairly high. Consequently, traditional print media have shrunk in terms of sales and advertising. Similar to Portugal, Facebook and YouTube share a big piece of the advertising pie (Bakker, 2018). The 'pillarized system' still remains in the printing media. For example, among the eight largest publishers in 2017, two are Christians (Bakker, 2018). Deregulation is another prevalent factor in the Dutch news media landscape as well as foreign ownership of print and broadcasting. Commercial broadcasting is more prevalent and there are governmental limits to PSB online presence. In total dissonance with Portugal, cross-media ownership used to be highly restricted by law. Although the legislation has smoothened, this pattern is very weak in the Dutch landscape (Bakker, 2018). PSB, present in radio (Radio 1) and TV (NPO 1, 2 and 3) competes with several commercial broadcasters. In the digital landscape, paywalls are a common business model, yet it is not possible to know their real viability (Bakker, 2018). In parallel with Portugal, some native digital projects have emerged, for example, *De Correspondent* or the aggregator platform *Blendle* (Bakker, 2018).

Concerning political parallelism, Bakker (2018) denotes significant changes in this regard. Originally, the countries of the Democratic Corporatist model were characterized by 'segmented pluralism' (Lorwin, 1971, as cited in Hallin & Mancini, 2004). That is, many social groups from different areas of society (for instance, politics, religion, business and culture) have close

34

connections with mass political parties. This form of pluralism has consequently reflected on the media, for example in the organization of PSB, media regulation and in the media content itself. In this sense, particularly newspapers were aligned with several ideologies and parties, being active actors in the process of bargaining and discussion among the different societal groups (Hallin & Mancini, 2004). These bargaining processes are part of an overall culture of negotiation within the Dutch society, yet not so prevailing as in the past. The decline of political parallelism is explained by a few elements: the growth of journalists' professionalization, the less involvement of political parties in the media and the development of commercial media. Additionally, the fact that many Dutch media outlets are owned by foreign publishers might have accounted for the contraction of this dimension (Bakker, 2018). However, it remains higher than in Portugal (see Santana-Pereira, 2016, p. 788).

In general, journalistic professionalization in The Netherlands (5.7) is also higher than in Portugal (5.2) (see Santana-Pereira, 2016, p. 788). As in the Portuguese case, it is not required to be a member of an organization or have a press credential to perform the profession. In the same way, special training is not mandatory. The main journalist union is the *Nederlandse Vereniging van Journalisten* (NVJ) and is composed by 8000 members. Besides issuing the press credentials, NVJ supports training as well as legal and labour advice (Bakker, 2018). It is an active member on issues such as freedom of information, copyright, work conditions and media policies. Apart from NVJ, there is a wide range of journalistic associations in the country. Per media specialty, in different hierarchical levels, and even organizations intended to freelancers (Bakker, 2018). There are two main accountability instruments concerning self-regulation. Firstly, *Raad voor de Journalistik (*RvdJ) is a voluntary organization which deals with complaints concerning privacy, one-sided reporting or defamation. Yet, due to its voluntary character, generally it only manages complaints of members demanding that they publish the verdict in the medium itself. Though news companies can refuse to do so. Also, some news media outlets have ombudsmen to deal directly with users' complaints (Bakker, 2018).

Lastly, the State intervention in the media has lessened over the last years, along with the overall trend of deregulation. In 2017, a new law, issued by the *Autoriteit Consument en Market* (ACM), eased the restrictions to limit the market share of the printing press (Bakker, 2018). In fact, this is in total disagreement with the idea that in the Democratic Corporatist countries the media are seen as important societal institutions and not entirely profit-driven (Hallin & Mancini, 2004). In the same way, national and regional public broadcasters had to merge to face the subsidy cutbacks from the State. The main body of regulation is the *Dutch Media Authority* (*CvdM*, in Dutch). This

35

independent entity is a vigilant of the works of the media, with emphasis on PSB and commercial broadcasters and even 'on-demand service providers'. Similar to the Portuguese ERC, its aim is to 'protect the independence, the plurality, and accessibility of the audiovisual media' (Commissariaat voor de Media, n.d., para. 1).

When all is said and done, the use of Hallin and Mancini framework is not for the purpose of normativity, rather it departs from the assumption that media systems are the result of historical and structural contexts. One of the main differences between the Polarized Pluralist and the Democratic Corporatist media system lies on the notion of *public interest*, stronger in the latter. As explained by Hallin and Mancini (2004), in the political culture of the Polarized Pluralist there is no common ground of the notion of the public interest, as it varies to a great extent among the political spectrum. Contrarily, in Democratic Corporatist countries, even though the political spectrum is wider, there is more common agreement on this idea. Although the Democratic Corporatist Model seem the best fitted for the normative role of the media in society (Hallin & Mancini, 2004), both media systems have gone through several transformations in the last decades: deregulation, media convergence and digitalization. Not to mention the recent impact of algorithms in society, which have been putting news media companies and social media platforms under the spotlight of politicians and journalists. Following the urge of some scholars to address the impact of algorithms in journalism, this research focuses on the possible paths to algorithmic accountability from governments and journalists in Portugal and in The Netherlands, based on McQuail's framework. These frames are later analysed *vis-à-vis the* two dimensions of the Hallin and Mancini (2004) model: State intervention and journalistic professionalization. Accordingly, the next chapter explores the assessment and operationalization of these concepts.

3. Methodology

This chapter starts with the rationale for choosing a qualitative analysis. Secondly, it explains the type of research design and method chosen, including the sampling, operationalization and data collection procedures. Finally, the process of data analysis is described. Different from the remaining chapters, at times the *Methodology* section comprises the past tense on account of the narration of the research process.

3.1 Research Design

The present cross-country comparison is qualitative in nature. The qualitative approach is considered to be more suitable for several reasons. Firstly, it aims for a thick description about the newly topic rather than a measure or quantification of it (Brennen, 2012). As emphasized by Diakopoulos (2017), algorithmic accountability is very recent and, therefore, needs to be explored in its complex and varied implications. Secondly, it is anchored on the notion of reality as a social construction, created by people (Brennen, 2012). In this sense, the inquiry also aims for the explanatory description of the concepts and trends that are being investigated as well as how people from the news media industry perceive them differently (Hammersley, 2013). As Warren (2001) puts it, the aim of qualitative interviewing is 'to derive interpretations, not facts and laws' (p. 2). Significantly, the ethical considerations and thoughts of the respondents can only be thoroughly assessed through a qualitative method such as interviews.

Furthermore, Barton and Lazarsfeld (1969) stress on the ability of qualitative studies to bring about unexpected outcomes that might worth further assessment. Within an undeveloped topic such as algorithms this rationale seems plausibly relevant. In the same way, the thick assessment of the data in a qualitative approach can provide meaningful insights for future policy recommendations on the topic. Not to mention the fact that historical and political context plays a relevant role in both countries analysed, and arguably, a quantitative analysis cannot capture such backdrop. This assumption also relates to the comparative nature of the research.

3.1.1 Qualitative Cross-country Comparison

The inquiry constitutes a cross-country comparison between two countries belonging to two different media systems: Portugal (Polarized Pluralist) and The Netherlands (Democratic Corporatist). The reason to choose the Polarized Pluralist and Democratic Corporatist models pertains to the fact that they are the most predominant media systems in Europe (only Great

Britain and Ireland comprise the Liberal model in Europe). The scope of this research is, therefore, wide. It must be emphasized that the choice of Portugal and The Netherlands was not involuntary. Although they constitute both relatively small countries, they are historically and politically dissimilar. Thus, by comparing two nations from distinct media systems, the variations and similarities would be more evident, shaped by the different contexts. Moreover, comparison makes concepts that might need more clarification more evident in each media system (Hallin & Mancini, 2004). Particularly, within the research the media systems framework is considered the best suited as it assesses two dimensions – State intervention in the media and journalism professionalization - which are aligned with the two frames of accountability under study: the political and the professional frame.

3.1.2 Expert Interviews

The qualitative study comprises ten expert interviews. Based on Diakopoulos (2017) assumption, the main aim of the semi-structured interviews was to explore the newly phenomenon of algorithmic accountability and to obtain knowledge that would be difficult to access otherwise. The interviewees were chosen concerning their connection with the topic under study. For example, journalists who work on digital editions of mainstream media, and law, policy makers and researchers who are actively involved in media policies and media regulation matters. The method was designed and conducted solely by the researcher herself.

3.2 Sampling

The research objects were purposively sampled and constituted 10 experts from Portugal and The Netherlands, five from each country. On the one hand, media researchers, media law makers, and regulators were deemed more appropriate to explore the political frame. On the other hand, the choice of journalists as interviewees aimed at the professional frame. Within the professional frame the goal was to analyse the individuals' assessment of the theoretical concepts, detached from a pure corporate perception. For the sake of balance and fairness, the same number of interviews was made for each country. In the case of Portugal three journalists and two media law makers constituted the sample. The Netherlands accounted for two journalists, one media executive, and two researchers who are involved in media policies' recommendations in the country. On a first stage, the individuals were purposively sampled in order to select critical cases, whereby the experiences and processes under study would become more comprehensible after the inquiries (Flick, 2007). However, due to some unexpected withdrawals, the researcher opted for a

snowball sampling method (Miles & Huberman, 1994), asking previous interviewees for recommendations of prospective participants. Again it, must be stressed that the use of algorithms in journalism is very new, hence a thorough assessment of the phenomenon demands more knowledge and access to the people that effectively deal with it. The experts' profiles are briefly described below:

3.2.1 Portugal

Manuel Molinos, Skype interview, 13 April 2018

Manuel Molinos is the subdirector one of the oldest and well-known newspapers in Portugal – *Jornal de Notícias* - with a strong focus on the digital edition. He works in the newspaper since 2000, when he started as online editor-in-chief. In the past he worked in the printing press, radio, television, and public relations. He is involved with algorithms on a daily basis, mainly social media, data-analytic tools and A/B testing of digital headlines.

Rute Sousa Vasco, Skype interview, 27 April 2018

Rute Sousa Vasco is a Portuguese journalist and entrepreneur. She owns an independent media production company, called *MadreMedia.* Two of the most important projects of MadreMedia are a news media website - *SAPO24* - whose content is also featured on the most well-known Portuguese aggregator in Portugal - *SAPO* - (similar to *Yahoo*), and a TV programme about entrepreneurship and innovation. From 1989, she has been working in print, TV and online news media, as editor, business manager, and consultant. As a journalist and editor of *SAPO24*, she deals with algorithms on a daily basis, mainly tools related with data insights, trending topics and social media. She is also involved in the implementation of algorithmic widgets on the website.

Paulo Martins, Skype interview, 13 April 2018

Paulo Martins is a Portuguese journalist for the past 35 years, including 16 as a journalist in *Jornal de Notícias*. He is a lecturer and researcher on the topic of journalism ethics and deontology. Simultaneously, he is an elected member of the Commission of Journalists' Credentials, the organisation that issues press cards and act as a vigilant of the compliance with ethical principles and the code of ethics. In addition, he manages a magazine which addresses subjects concerning ethics and deontology in journalism. Since 2014, he owns a PhD in journalism ethics, specifically focused on the conflict between the right of the public to information and personality rights.

Catarina Mascarenhas, mobile phone call, 15 May 2018

Catarina Mascarenhas is a Portuguese lawyer since 1995. She currently works in *Vieira de Almeida*, a law firm based in Lisbon, where she gives advice on media regulation, media contracts and copyright matters. Notably, she is involved on the debate about whether platforms such as Google or social media should be considered (or not) traditional mass media companies. In the past she worked at the Portuguese Regulatory Authority for the Media in matters related with the right of reply and lawsuits against the press. Afterwards, she worked at a telecommunications company, where she accompanied the liberalization process of the telecommunications market. She expressed her interest in algorithms from a research perspective, as she acknowledges that from a professional point of view, the topic is not widely addressed in Portugal.

João Pedro Figueiredo, mobile phone call, 17 April 2018

João Pedro Figueiredo is a Portuguese lawyer with specialization in traditional mass media laws for the past 20 years. He currently works as an advisor and member of the Regulatory Council at the Portuguese Regulatory Authority for the Media. He participated in the creation of radio, TV and press laws as well as the Status of Journalist. He is the co-author of some books about news media legislation, and regularly participates on conferences, seminars and other public events related with the topic.

3.2.2 The Netherlands

Wieland van Dijk, face-to-face interview, 3 May

Wieland van Dijk is the online chief at *NRC Handelsblad* (NRC), one of the main newspapers in The Netherlands. He has been working as a journalist for the past 20 years, with a strong focus in online journalism. Along with the team, he focuses on the improvement of audiences' engagement and the interaction between readers and the newsroom. At the same time, he works on a strategic level, giving indications on the best practices for the website and social media. Van Dijk was also involved in the launch of digital news services in NRC. He regularly uses social media, data analytic tools, and performs A/B testing of digital headlines.

Lara Ankersmit, face-to-face interview, 18 May

Lara Ankersmit is the Head of Digital at *The Nederlandse Omroep Stichting* (NOS), one of the main broadcasting organisations in The Netherlands, which belongs to the Dutch PSB. She is responsible for all the digital products, including the websites and apps. Moreover, she also leads an innovation

40

laboratory, which develops news media products. Under her supervision, the multidisciplinary teams (designers, developers and product managers) test innovative solutions, strategies, and new channels of distribution and advertising, including the creation of algorithms. Lara worked at another Dutch media company on a similar role in the past. She has been in online publishing since 1994.

Andra Leurdijk, face-to-face interview, 16 May

Andra Leurdijk is an independent researcher and consultant at FORALLMEDIA, founded by herself. She is a specialist in media innovation and media policy, with a PhD on TV journalism and cultural diversity. She helps and advises not only media companies but also local and national governments to implement strategies concerning the digital media, innovation and consumer behaviour. Andra has been involved in some European projects concerning new media and the future of digital technologies. Additionally, she is a board member of the Dutch Journalism Fund. In the past, she worked at the Dutch Ministry of Education, Culture and Science, in the department of media policies.

Jaap van Zessen, face-to-face interview, 18 April 2018

Jaap van Zessen is the Digital Chief at *Algemeen Dagblad* (AD), based in Rotterdam, where he is responsible for optimizing the online reach of AD.nl and the regional, and local titles of the overall group. He and his team act regularly upon social media insights and big data, with the help of algorithmic tools. Previously he worked as a social media analyst at AD and a Dutch IT firm. He often gives guest lectures at colleges and universities.

Judith Möller, face-to-face interview, 25 April

Judith Möller is a post-doctoral researcher and lecturer at the University of Amsterdam. Her area of expertise concerns the role of social media on citizenship and, more recently, news consumption and gatekeeping processes through algorithmic filter systems. She is currently involved in research for Dutch media regulatory bodies concerning the use of algorithms in media consumption and distribution.

3.3 Operationalization and Data Collection

As seen in the two sub-research question(s) the inquiry focused on two frames of accountability: the political and the professional. In the same way, the research paid particular attention to two the dimensions of the Hallin and Mancini comparative framework to assess the *Conclusion and Discussion*. To recap, the main concepts informing the interviews were: media accountability, algorithmic accountability, and algorithmic transparency in relation to the political and the professional frame. The thematic mapping and the interview guide can be examined on *Appendix A*. The final operationalization of the concepts is shown below, in Table 1:

Table 1: Operationalization of concepts.

Concept	Operationalization
3.3.1 Algorithmic accountability	• Do journalists need to be held accountable for the use of algorithms in their work? (Probe question)
3.3.2 Indirect use of algorithms	• Do you and/or your organization use algorithms on a daily basis? / Are you aware that journalists use algorithms in their work? (Probe question) • If so? In what ways? (Probes: social media)
3.3.2.1 Political frame	• Should governments hold journalists accountable for the use of social media in their work? (Probe question) • If so, in what ways (Probes: laws/regulations, etc.)
3.3.2.2 Professional frame	• Should journalists hold themselves accountable for the use of social media platforms? (Probe question) • If so, in what ways? (Probes: codes of conduct, codes of ethics, commentary boxes, blogs, ombudsman, etc.)
3.3.2.3 Algorithmic transparency	• Do you think social media platforms should be more transparent? Should journalists be more transparent when they use social media? (Probe question) • If so, in what ways? (Probes: transparency reports, FAQs, disclaimer messages, signals that the article has the influence of algorithms, ombudsman, etc.)
3.3.3 Direct use of algorithms	• Do you and/or your organization use algorithms on a daily basis? / Are you

	aware that journalists use algorithms in their work? (Probe question) • If so? In what ways? (Probes: automated content, data-driven insights/analytics' tools/news bots to distribute news content/A/B testing of digital headlines)
3.3.3.1 Political frame	• Should governments hold journalists accountable for the use of algorithms in their work? (Probe question) • If so, in what ways (Probes: laws/regulations, etc.)
3.3.3.2 Professional frame	• Should journalists hold themselves accountable for the use of algorithms in their work? (Probe question) • If so, in what ways? (Probes: codes of conduct, codes of ethics, commentary boxes, blogs, ombudsman, etc.)
3.3.3.3 Algorithmic transparency	• Do you think journalists should be more transparent in their direct uses of algorithms? (Probe question) • If so, in what ways? (Probes: transparency reports, FAQs, disclaimer messages, signals that the article has the influence of algorithms, ombudsman, etc.)

The guidelines from Hermanowicz (2002) were deemed essential to conduct the interviews. For example, the use of question probes and icebreakers, attention to silences, and the effort to maintain the interview structure. Yet, it must be pointed out that in some cases it was difficult to maintain a structured questionnaire given the complexity and interconnectedness of the issue. For example, Expert 5 needed some clarification on what was meant by 'social media', if the platform itself or the news media Facebook pages. Expert 3 even objected: 'what social media, mine or yours? Because mine might not be the same as yours'. Another aspect worth mentioning was the creation of a *wrap-up* at the end of each interview in order to help with the validity and consistency of the data (see *Appendix A*).

Furthermore, the pre-interview process was essential for the success of the interviews, as emphasized by Mikecz (2012). Along with establishing rapport, the author stresses the importance of improving the researcher's knowledgeability of the subject as well as the interviewee's personal history and background (Mikecz, 2012). As also advised by Mikecz (2012), the interviews were, whenever possible, conducted face-to-face. Nonetheless, the Portuguese interviews were

conducted via Skype or mobile phone. The record devices used were a mobile phone, an audio recorder and a record software for the Skype talks. The data collection happened between 13 April and 17 May, yet the rapport process started in the beginning of March.

Some issues must be reported about the data collection process. Firstly, some interviews had to be postponed several times given the limited availability of some respondents. In addition, one of the participants did not show up for the interview on two occasions, without giving any notice on the second; and a third one stopped the contact during the rapport process. This resulted in some stress and troublesome moments to find the appropriate replacements. Finally, although some respondents gave consent to openly use their quotes, a few others were not comfortable in doing so. Hence, for the sake of coherence and respect for the respondents' will the research findings and conclusion do not disclose any identity.

3.4 Data Analysis

After conducting the interviews, the research proceeded with the transcription of the data. This stage was arguably one of the most tiresome, with an average of five hours to transcribe each interview. Five of the interviews had to be summarized as the original language was Portuguese. The data was then processed and coded using Atlas.ti software, aiming for the thematic analysis. The guidelines of Flick (2007), Braun and Clarke (2006), Boyatzis (1998) and Gibbs' (2007) were essential within this process. Overall, the coding was informed by the theoretical framework, and concept-driven in essence. Mainly, they pertained the concepts of media accountability, algorithmic accountability and algorithmic transparency in relation to the political and professional frame of McQuail (2010). In a few cases it was used in-vivo coding, whereby the concepts used by the interviewees themselves were considered appropriate to use as analytical codes. Likewise, memoing assisted in the analytical and theoretical thinking (Brennen, 2012). The formation of the themes went through an iterative process where the themes moved from descriptive to analytical concepts informed by the theoretical constructs and the research question(s). In total, 186 codes were identified in the coding process. They were subsequently grouped in seven themes and five sub-themes, as shown in Table 2 below. Remarkably, three extra themes were also found in the data (see Table 3, p. 46). The procedures above-mentioned were done for both countries separately and afterwards the comparisons were made through network analysis on Atlas.ti software. Finally, the themes were analysed vis-à-vis with the two dimensions of Hallin and Mancini's model in the *Discussion and Conclusion.*

44

Table 2: Themes and sub-themes after coding and data analysis.

3.4.1 Algorithmic accountability	Codes related to the broader discussion whether journalists should or should not be accountable for the use of algorithms, and challenges to algorithmic accountability.
3.4.1.1 Impact of algorithms on journalism	General considerations about the impact of algorithms on journalism.
3.4.1.2 Algorithmic power of social media	Codes which acknowledge the general impact of social media on information consumption.
3.4.1.3 Social media and the impact on journalism	Codes which assess the relationship between social media and journalism nowadays. Also, considers the problems and challenges of social media for journalists.
3.4.2 Indirect use of algorithms: Political frame	In which ways governments can hold journalists accountable for the indirect use of algorithms.
3.4.3 Indirect use of algorithms: Professional frame	In which ways self-regulation can hold journalists accountable for the indirect use of algorithms.
3.4.3.1 Indirect use of algorithms: General	General considerations and impressions about the indirect use of algorithms by journalists.
3.4.4 Direct use of algorithms: Political frame	In which ways governments can hold journalists accountable for the direct use of algorithms.
3.4.5 Direct use of algorithms: Professional frame	In which ways self-regulation can hold journalists accountable for the direct use of algorithms.
3.4.5.1 Direct use of algorithms: General	General considerations and impressions about the direct use of algorithms by journalists.
3.4.6 Algorithmic transparency: Indirect use	Codes related with the transparency mechanisms that could be implemented concerning the indirect use of algorithms in journalism.
3.4.7 Algorithmic transparency: Direct use	Codes related with the transparency mechanisms that could be implemented concerning the direct use of algorithms in journalism.

Table 3: Unexpected themes.

3.4.8 Direct use of algorithms: Market frame	Codes which comprise unexpected considerations and suggestions of mechanisms within the market frame in the direct use.
3.4.9 Direct/Indirect use of algorithms: Public responsibility frame	Codes which comprise unexpected considerations and suggestions of mechanisms within the public responsibility frame for both uses.
3.4.10 Audiences and the use of algorithmically-controlled environments	Codes which assess the uses that citizens make of digital media platforms and the criticism over their uses and behaviour.

4. Findings

4.1 Portugal

In general, the experts from Portugal consider that journalists should be held accountable for the use of algorithms, as any other matter related with the profession. In the same way, the results indicate that governmental interference in the issue of algorithms should be avoided in order to not harm freedom of expression. Expert 1 denotes that 'when considering the regulation of mass media, or journalism, more specifically, memories of censorship[6] come to the minds of people. They still remember the intervention on the content, so everything needs to be handle with meticulous attention'. Likewise, Expert 3 distrusts the possible intentions of governments to interfere on the issue: 'they are the people's representatives, they are there because we chose them, but I get very, honestly concerned because I start thinking about all the political motivations you might have to regulate things one way or another'. Although self-regulation is considered the most adequate path to hold journalists accountable for the use of algorithms in Portugal, the respondents address two main complications. First, the introduction of new rules and principles in the codes of conduct might harm the freedom of the press and limit journalists' work (Experts 1 and 5). Second, the high competitiveness of the Portuguese news media market might hold back unanimity within the class to address algorithmic accountability (Experts 2 and 3). Unexpectedly, one of the solutions, proposed by Expert 2, points towards the market frame. Concerning Portugal, the sub-research questions are:

SQ 1: How can journalists in Portugal be held accountable by governmental institutions for publishing their content on algorithmically-controlled environments and using algorithms in their work?

SQ 2: How can journalists in Portugal be held accountable by their peers for publishing their content on algorithmically-controlled environments and using algorithms in their work?

---

[6] Portugal was ruled by a political dictatorship for almost 40 years (1933-1974), where freedom of expression and the press were highly limited and controlled by the State (Hallin & Mancini, 2004).

4.1.1 Indirect Use of Algorithms

The results show many uses of social media by journalists: to distribute news, to contact with sources, and/or to find topics to write about. Despite a few mentions to Twitter and Instagram, Facebook is by far the most important social media platform for journalists in terms of traffic, according to Experts 2 and 3. Respondent 2 also highlights the importance of Facebook to create community and to be closer to the readers, whereas Expert 3 believes that this platform is beneficial from a branding perspective. The use of social media by journalists raised the most controversial opinions, specifically concerning the need (or not) to regulate these platforms. For example, Experts 1 and 5 consider that new legislation might not solve the possible problems raised by the use of algorithms, whereas Expert 4 admits a possible governmental intervention as a last resort, that is, if self-regulation proves to be not enough.

Differently, Expert 2 affirms that governments should acknowledge what could be done in light with the recent controversies on social media, particularly on Facebook, but it might be soon to know what could work best. Another issue is related with the difficulties in holding journalists accountable for the use of social media. Because journalists do not control the algorithm it is reasonable to not blame them for all the bad uses and repercussions of using these platforms (Experts 2, 3, and 5). Experts' 4 opinion might account for the normative considerations of journalism when he points out that 'journalists must pursue the public interest when distributing content on social media'. This rationale is aligned with one of the solutions suggested by Expert 3 to hold journalists accountable for the indirect use of algorithms: the periodical monitoring of content from traditional news media that is distributed on social media platforms. She explains that this content should be assessed by the Portuguese Regulatory Authority for The Media, in light of the journalistic news values, principles, and ethics. She argues:

> Several times the copy does not match the news, and several times the issues are related with this, aren't they? Because the copy suggests one thing and the news itself is another thing, and there are cases in which this happens a lot and you also have the news that you decide to put on social media. (Expert 3)

In this regard, Expert 4 also mentions that ERC has the authority to intervene on news media content that is published on social media platforms if they do not comply with nation security matters or if they harm children's' rights. But this monitoring is currently not taking place. In a discussion that goes beyond news production and distribution, Expert 3 also recommends that

48

ERC could co-regulate and supervise in a broader sense, along with social media themselves, these platforms as 'public spaces': 'I think governments could intervene in the same way you intervene on a public space'. For the sake of freedom of expression, regulation on advertising and users bad conduct is considered more appropriate, rather than on the content itself (Expert 3).

Concerning the professional frame, some experts mention a 'more effective regulatory framework' of ethical codes and codes of conduct concerning the use of social media as one viable mechanism of accountability. For instance, Experts 1 and 3 advocate for the extension of norms and rules to the use of social media on ethical codes based on prevailing principles. As Expert 1 instantiates:

> The journalist must think: the social media platform … has a photo, should I publish? Can I confirm that this photo corresponds to that person or that it was taken by that person? … That is, I have to make sure that the information I produce is reliable, and therefore that the information I am collecting is also reliable. This is not new!

Later, Respondent 1 argues: 'it is not possible to regulate the internet, but it is possible that the journalist knows how to position him/herself on the internet'. Indeed, Expert 3 confirms that this reflective thinking is already in place when performing her work as an online editor: '[using social media as a source of news] if I don't know who the source is, if I don't trust it, why should I give this information to people?'. In the same way, Expert 5 refers to news articles distributed on social media by news media companies informing audiences about the implications of using social media, resembling algorithmic accountability reporting. 'Some news media outlets that use a certain tool explain how things happen, how do I know, as they did with the new GDPR regulations. … I think people can clearly understand what is at stake'. Hence, this can plausibly constitute a mechanism of accountability of using social media platforms.

4.1.2 Direct Use of Algorithms

With reference to the direct use of algorithms, the results demonstrate the prevalence of data-analytic tools and A/B testing of digital headlines (Experts 2, 3, and 5). Notably, Expert 2 reveals that the company he works for is currently building its own algorithm. In contrast with the majority, Expert 4 is not aware of any of these uses, specifically concerning PSB. In general, it is acknowledged that there should be more self-regulation concerning the matter, in line with the professional frame. Again, the idea of a political frame is deemed unseemly for the majority of

49

experts (1, 2, 3, and 5). 'If governments intervene in this question it might happen the same as in France[7]', points out Expert 5. Although Expert 4 mentions that there is space for ERC to regulate some matters related with online journalism, he does not touch upon the specific solutions for the use of algorithms. Likewise, Expert 2 concurs with some form of regulation from a legal point of view (ERC, for example) rather than a purely governmental intervention. Yet, no concrete solution is advanced.

Within the professional frame, several potential solutions of holding journalists accountable for the direct uses of algorithms arise from the data. The most touched upon by all experts (except Expert 4) is the notion of editorial and human decisions as foremost when dealing with algorithms. This is related with the idea that algorithms are a tool as any tool used by journalists which do not replace the profession. Rather are used as 'a mean to publish the best information, the more relevant information', adds Expert 2. As illustrated by Expert 5, 'there is a difference between what people see, and they can see several times an image of a cat clapping hands … if the image of a cat clapping hands is newsworthy must be evaluated by the professional' [not by the algorithm]. In this sense, Expert 2 explains that 'internal self-regulation' functions as a mechanism of informal self-regulation, already existent in his newsroom:

> The decisions we make based on these data-analytic tools are editorial decisions ... That is, just because a journalist saw that this news is exploding doesn't mean that he will write about it. Why? Because we have this notion and therefore we try to play our role as journalists and filter out information according to the newspaper matrix and editorial line.

This rationale is also valid for decisions concerning the order of the news articles on the websites. For instance, the input given by an algorithm in relation to a news article (in terms of clicks) is seen as a mere suggestion: 'when an algorithm suggests that this news article might be worth to put on the top positions, but you can choose not to do it … because there could be a bunch of reasons why you chose not to do it', reasons Expert 2. More important, Expert 3 makes the point of never letting the algorithm decide on the order of the news on a website, as algorithms still lack the ability to

---

[7] In the beginning of 2018, French President, Emmanuel Macron, was in the spotlight after ordering a law to withdraw fake news disseminated on political campaigns ("French opposition, Twitter users slam Macron's anti-fake-news plans", 2018).

discern and make sound judgments on sensitive matters. 'I would never let a machine do this, even if the machine had a set of requirements given by us', she emphasizes.

Experts also consider the possibility of holding journalists accountable for the use of algorithms through journalistic ethical codes. Participant 3 proposes that ethical codes could have a chapter dedicated to the use of digital tools, including data-analytic tools or even social media and their use as sources of information. In the same way, Experts 2 and 5 advance the reinforcement of existing journalistic principles in ethical codes. For example, principles such as newsworthiness, confirmation of sources or impartiality still hold valid when using social media or any other tool, as in any context journalists might encounter (Experts 1 and 5). Yet, any adjustment to the codes must be soft. As Expert 1 argues:

> I don't believe that more detailed codes are more effective. Just look at the English code which at a certain point even says where is the public space … and English press is not necessarily more respectful of ethical rules.

Owing to this, there is no need to create new ethical principles related with algorithms (Expert 2), let alone new instruments to incorporate the criticism of the use of algorithms by journalists (Experts 1 and 5). Incidentally, Expert 2 questions if this criticism would be valid as it is presumed that people would have knowledge about the tools used by journalists.

In truth, even from a self-regulatory standpoint algorithmic accountability in Portugal poses two main challenges. At first, Expert 1 underlines the 'reluctance' and 'arrogance' of some news media professionals to receive criticism, which can hold off algorithmic accountability. Additionally, despite being a more viable solution over regulation, self-regulatory measures (such as extending the codes of conduct to the use of digital tools) might also jeopardize freedom of expression. 'In the name and for the sake of moralization, there is always a risk of limiting freedom of expression', contends Expert 5. Thirdly, the high degree of competition within the Portuguese news media market can hinder formal self-regulation measures, such as adjustments to the ethical code (Expert 3). In particular, this factor adds to the argument of Hallin & Mancini (2004) about the low professionalization of journalism in the Polarized Pluralist countries, which might be related to the weak power of self-regulatory entities. Truly, Expert 1 makes this argument clearer when he points out the lack of ethical culture within the Portuguese newsrooms. Regardless of who should hold journalists accountable or whatever the uses of algorithms, accountability can also take form in transparency measures, as also analysed by the Portuguese experts.

51

4.1.3 Algorithmic Transparency

Concerning the indirect use of algorithms, the need for more transparency is one of the main concerns expressed by the interviewees. Experts 1, 2, and 3 relate to the issue of American elections and Cambridge Analytica to justify urgent transparency measures on social media platforms. Nonetheless, transparency raises some questions. To begin with, Expert 2 considers that 'is almost impossible if not impossible' because it has implications on the business structure of these companies. Additionally, the humongous amount of information circulating continuously on these platforms makes transparency counterproductive (Expert 1). More important, by using a platform in which the algorithm is not controlled, transparency for journalists is also challenging. Yet, not impossible. As mentioned by Expert 3, the fact that these professionals inform their audiences about the use of social media as sources when writing an article can be intended as a mechanism of transparency. Nonetheless, the majority of the mechanisms suggested can only be done by the platforms themselves. For instance, Respondent 4 mentions the access to the source code. In a different manner, Expert 3 holds that social media should be 'obliged' to publish disclaimer messages or tutorials from time to time concerning advertising. As she exemplifies:

> Imagine I'm looking for a car. And there have been shown to me a bunch of ads, they could say "be careful, we have been showing you a bunch of ads because we have spotted that you're looking for cars. If you do not wish to see more of these click here". (Expert 3)

Moreover, social media platforms could make the articles' date more visible in order for people to not share outdated news. For instance, a disclaimer saying 'hey, this news article has six months or more than three months', illustrates Expert 3. As she reckons:

> When you find an outdated news article on social media this might have happened in two ways: number one, because someone shared it via social media, didn't check the date and shared it that way; or worst-case scenario she went to the news website but it's less probable… a news article with two years? What are the chances that this news article is on the front page of a news website? None, very tiny, only in a case of a technical mistake … This has nothing to do with the journalist or the news website … So, do you have to credit something? Yes, but the platforms. (Expert 3)

Similarly, Expert 5 proposes a clear distinction between journalistic content and non-journalistic content, referring to information that might mislead users.

> Maybe one way of regulating this is using a disclaimer when the page appears, saying "this is not a news website", allowing users to understand that these are not written according to journalistic principles or by traditional news media outlets. (Expert 5)

With reference to the direct use of algorithms, transparency measures are also deemed beneficial by all the experts, though its effectiveness and usefulness are somewhat questioned. For example, Experts 2 and 5 mention disclaimer messages on *Terms and Conditions'* pages on news websites informing about the use of algorithmic tools. Expert 5 alludes to algorithmic accountability reporting when she suggests that journalists could inform more about how algorithms impact news production. In a different manner, Expert 2 points out that 'internal transparency' about the use of algorithms is a concern within his company: 'In the newsroom we have a digital dashboard in the wall which shows everyone the reach of our news. Completely transparent'. Even when assessing transparency about the use of data-analytic tools or A/B testing of digital headlines, some experts profess possible issues related with freedom of the press and the irrelevance or usefulness from a user perspective. Expert 5 stresses that when journalists have the right to protect the sources for example, being transparent can jeopardize the core of their work: 'This is to kill the freedom of the press … The core question of journalism, all of this is based on sources'. By the same token, she emphasizes that just because an algorithm helps the journalist spot topics to write about does not mean that he/she has to be transparent about it. 'Does the reader need to know this? When I read a printed newspaper do I also know this? (silence, suggesting a 'no') Because I trust in journalism', she underlines.

Differently, Experts 2 and 3 foresee transparency as irrelevant to the users. 'Saying to the reader that you improved this news article or that you gave emphasis to this new article just because the algorithm suggested might not be relevant', thinks Expert 2. Likewise, explaining to the reader that the headlines of the news website are the result of a recommendation of an algorithm might not be necessary, as he points out that editorial criteria are always paramount on every decision. For Expert 3 the concern about transparency relates to the lack of interest or attention from users. She holds:

There are a lot of things that are already explained, that are written, and still people don't notice … This isn't their current concern, it's your concern, if you want to know where does this news article come from, because you have a special interest or because this spotted your attention. It makes sense, but if it has a mainstream impact … I don't think so.

All in all, the findings indicate possible paths for algorithmic transparency among journalists, with some of them already in place. In truth, transparency about the indirect use of algorithms – social media – is challenging as only the platforms themselves can effectively implement most of the solutions discussed by the respondents. Notwithstanding, news media professionals have some control over the algorithms they implement or use on their own news media production and distribution channels. Hence, in these cases the willingness to implement transparency is only up to these professionals. When contemplated, the bottom line is: to what extent these mechanisms are effective and useful from an audience standpoint?

4.2 The Netherlands

The findings concerning The Netherlands suggest a more nuanced approach to algorithmic accountability in journalism, particularly within the political frame. Even when asked if journalists should be held accountable for the use of algorithms the experts' answers differ from those of Portugal to some extent. Experts 7, 8, and 9 agree that journalists should be held accountable for the use of algorithms, with 8 and 9 adding that they are responsible for everything related with their profession. Expert 6 considers that they should be held accountable if they are doing something wrong or unethical. In a different way, Expert 7 considers that it might be soon to give a definitive answer to this question. '… There should be a conversation about what are we doing here and what is good journalism with these tools', she argues. In general, self-regulation is mentioned as more appropriate than governmental interference, yet some suggestions lean towards an indirect governmental interference on the uses of algorithms by journalists, in both uses. Accordingly, the possible hazard to freedom of expression is mentioned as the main reason to not let governments intervene directly on the topic:

… Then governments would try to influence news that are negative for instance on the current government in their country and I think that's even… probably at least as possibly even more dangerous than when leaving it open to the market. (Expert 9)

54

As in the case of Portugal, unexpected insights from Experts 7, 9, and 10 are prone to a frame which was not considered for the research. Yet, this time they are aligned with the public responsibility frame. To recap, the sub-research questions for the Netherlands are:

SQ 1: How can journalists in The Netherlands be held accountable by governmental institutions for publishing their content on algorithmically-controlled environments and using algorithms in their work?
SQ 2: How can journalists in The Netherlands be held accountable by their peers for publishing their content on algorithmically-controlled environments and using algorithms in their work?

4.2.1 Indirect Use of Algorithms

The experts mention some uses of social media by journalists: contact with sources and readers, spot new topics to write about, and benchmark (to see how the competitors are performing on these platforms). Yet, the most prominent use concerns the distribution of news as denoted by Experts 6, 8, and 10, who currently work at Dutch news media companies. When questioned about the need (or not) to regulate social media platforms, the respondents' opinions vary. Experts 8, 9, and 10 contend that self-regulation is desirable and ideal, but it might not be enough. Although Expert 7 considers that it is too soon to give an ultimate answer to 'a million-dollar question', she admits regulating these platforms as media companies, with very limited regulation to not harm freedom of expression. She holds that this 'independent regulator, paid through taxes but not part of the government itself', could monitor the activities in the platform at the 'output level'[8]. In a slightly different approach, Expert 9 contends that a co-regulation model comprising self-regulation from social media platforms and consumer organizations, where the latter could monitor the works of the platforms. Indeed, this outcome is more aligned with the public responsibility frame.

Furthermore, Expert 9 stresses the importance of governmental pressure to hold social media accountable and demand transparency, 'like we had the hearings in the US and British parliament'. Again, this solution gives support to the public responsibility frame. In addition, Expert 9 proposes governmental subsidies to enhance media literacy, another way of holding journalists accountable for the use of algorithms (Expert 9). In relation to the political frame there are no

---

[8] Output consists of the content that is presented to the user.

direct solutions concerning the use that journalists do in or with social media, but some of them could be beneficial for their responsibility and accountability. For example, Expert 10 considers that obliging social media platforms to fact check all the information could be an appropriate regulatory measure. Additionally, governments could give recommendations on the level of optimization of algorithms on these platforms as well as on news media websites. As Expert 10 envisions:

> So, if you as a government say: "I want this much diversity as possible and I want to make, the same as with the platforms". If the platforms optimize their algorithm for to say it easy, for profit, what is then our mission, or what is our … what do we need to do from that government, as the government decides that journalists' organizations have to do this dot dot dot *opdracht* [mission in Dutch] ….

Within the professional frame, the interviewees point out varied ways to hold journalists accountable for the use of these platforms. Similar to the Portuguese insights, Expert 6 suggests the application of the existing journalistic principles and rules to the uses of social media. 'Accurate news, yeah, but that's the same as in the newspapers, is the same online and is also on social [media]. We have to write what is true, what the situation is, we may not lie', he explains. In this regard, Expert 10 refers to the already existing codes of conduct of several news media organizations which include rules for the use of social media and the positioning of these companies in these platforms. Likewise, Expert 6 reveals that his organization does not create stories exclusively for social media, which can also be seen as a way of holding themselves accountable the use of these platforms. By the way, he sees a possible peer criticism concerning the use of these platforms as positive and desirable. Experts 6 and 8 also stress that journalists themselves must hold these platforms accountable by writing more about their workings and flaws, implying the notion of algorithmic accountability reporting. 'We're supposed to hold any power accountable', expresses Expert 8. Arguably, given the significant importance of these platforms for journalists, this can be interpreted as a self-regulation mechanism of news media themselves. Lastly, Expert 10 regrets the absence of codes of ethics for the developers of algorithms. As she conveys:

> … It might be a nineteen-year-old student or twenty-three-year-old dropout, anyone … There is no ethical code for developers or for companies who produce algorithms or there are also no ethical rules for companies who use algorithms from someone else. (Expert 10)

This could plausibly constitute an instrument of accountability for both social media platforms and news media companies who implement algorithms in their own websites. Who should, then, be in charge of these codes? This question might worth further analysis.

4.2.2 Direct Use of Algorithms

The most reported direct uses of algorithms by journalists are data-analytic tools and A/B testing of digital headlines. Experts 6 and 10 also add that their organizations are currently working on the development of an algorithm. More than support for self-regulation, some experts advocate for governmental intervention on the topic, though in an indirect way. Noteworthily, only Expert 7 considers that self-regulation is the most appropriate measure straightway. 'I mean, that's how journalism has historically regulated itself in the free and democratic society and I think, for the most part, that's worked pretty well', he manifests. Within the political frame, a similar solution to the indirect use arises. Expert 9 suggests the monitoring of the actual journalistic practices including algorithms, from an entity not too closed to the government, on a European level. As she envisions:

> They could develop a framework and then individual news organizations could apply that to themselves and publish it. And then of course it would be interesting if once in a while there was some research seeing to what extent they live up to their codes of conduct, you know, what the experiences are. I think those kinds of things would be good. (Expert 9)

Moreover, Expert 6 implies that governmental entities should hold news media accountable by implementing media literacy programmes. 'The government needs to say, "ok be aware that all the media you read have algorithms, or be aware of that" of course', he states. In the same way as in the indirect use, Expert 10 affirms that governments could give recommendations to journalists on the levels of optimization of algorithms, based on the distinction between commercial media and public service broadcasting. 'Commercial media is a bit of both, probably profit plus time on site', she reasons.

The professional frame comprises a fairly higher amount of mechanisms than the political, which some of them are already in place by journalists. For example, Experts 6 and 9 mention a balance between editorial criteria and algorithmic decision on the selection of news in the homepage, in order to counteract the appeal of content based on people's preferences. As Expert 6 tells:

57

The editor-in-chief is saying, "well from article number 6 to 20 there needs to be at least one article about politics, one article about economy... And one about sports". So, that's the kind of rules we have and the newsroom or the people, the editors are saying "ok we think that this is the most important article at this moment", so we put that article between 6 and 20 and we just add other stories in between. So, we are the algorithm actually at this time, manually (…) We don't want people to get in a filter bubble we want to inform the people and if you want to inform you need to inform them right and not only show them columns about things they like but also other things. It's balancing of course.

Adding to this, Expert 9 mentions the likely flexibility of these criteria, depending on the news media brand:

Maybe for some media they might rely more on the algorithms and others more on the editorial choice… So, I think that combination is probably good, in the sense that you will also be offered content that you are not yet familiar but other people think it's worthwhile, people you might trust. (Expert 9)

Likewise, Expert 8 refers to editorial choices as the foremost factor when dealing with data tools: 'they do inform our decisions, but we have a final, there's a final human decision as to what we do and do not publish.' Expert 10 describes this process within the company as 'editorial analytics', in which real-time user data about the online content 'helps the editor understand what's going on and what could be the best'. Nonetheless, she underlines that the *key performance indicators* (KPIs)[9] are not to do as many pageviews as possible, which can be seen as a mechanism of accountability. Furthermore, the fact that all areas of a news website are manually managed can be seen as a mechanism of accountability (Expert 6). Still in the professional frame, Expert 9 recommends a code of conduct for journalists, developed by the journalism union, acknowledging the use of algorithms. Opposite to this, Expert 6 considers that the existing codes could simply

---

[9] Key performance indicators are metrics established by companies in order to improve the businesses' performances. Examples of KPIs within the news media industry are clicks, pageviews, engaged time, reach, social share, etc. (Cherubini & Nielsen, 2016).

adapt to the use of these technologies. Another mechanism mentioned by Expert 8 concerns the creation of blogs to inform audiences about the use of algorithms, which has already happened: 'our editor-in-chief published on his blog a few times about how we use metrics to improve our journalism', he tells. In this sense, Experts 6, 7, 8, and 9 consider that the existing instruments to criticize the work of journalists can incorporate the assessment concerning algorithms, such as tweets, online comments, complaints to the ombudsman or letters to the editor. Finally, it can be emphasized a reflexive attitude adopted by some experts. Several times the experts mention the need to reflect on the choices made under the influence of algorithms (Experts 6, 8, and 10). 'What we publish we need to be critic on', affirms Expert 6. Relating to the 'editorial analytics' dashboard, Expert 10 also uncovers: 'we thought of all those things that could go wrong, and because of that we said, "this information for editors is not a KPI or pushing as many pageviews as possible"'. Identical to the Portuguese journalists, these reflections can be seen as an *internal self-regulation* mechanism.

4.2.3 Algorithmic Transparency

For the most part, the findings indicate two kinds of transparency measures about the indirect use of algorithms. On the one hand the ones that can be applied by social media themselves; on the other hand, the measures taken by journalists themselves. According to all experts, transparency is reckoned as beneficial and positive. In the case of the indirect use, the willingness to transparency should come from social media themselves (all experts), yet governments should also require it to some extent (Expert 9). Experts acknowledge the recent transparency visuals and compliance with the new GDPR regulations from Facebook and Google as more 'sophisticated', 'useful and pleasant'. Nonetheless, they underline transparency on the content as a future area of improvement on social media platforms. For instance, Expert 9 would be interested in knowing more about her own preferences on the platform and even on any other news provider, together with the content they prioritize. This disclosure would even allow monitoring from external entities. As Expert 9 anticipates: 'it would also become easier for independent researchers to know what's going on and then those researchers could put problems on the agenda'. By the same token, Expert 8 considers appropriate to explain how the algorithm affects the content people see and how can users influence the algorithm. However, there is not a clear explanation about what could be done. More important, Respondent 8 highlights the need for more transparency from social media in relation to news publishers. He, then, argues:

59

They should at least be transparent about how their algorithms work, perhaps not in minor detail but at least in general. And allow us to criticize those algorithms, those decisions, and allow us to decide for ourselves whether we want to play along or not and create our own strategy'. (Expert 8)

The only significant transparency mechanism for using these platforms by journalists is given by Expert 6, when he mentions the existence of certain rules in the newsroom, such as informing the audiences about the use of social media as sources. Truly, another resemblance between Portugal and The Netherlands.

Actually, I guess we're doing that already maybe sometimes. Because we say: "hey this was going viral on social and here are some tweets about it" and then we write it. Hum so you give the source, you give Twitter or Facebook and you say: "oh this was going viral because it was in the trending topics, top 10 in Holland". (Expert 6)

Nevertheless, the implementation of transparency on the use of social media is problematic. The plausible harm to the core business of these companies (Expert 9) and the complexity of the information communicated to the end user (Experts 7 and 10) are among the main reasons. As Expert 7 describes:

The real reason why I'm being recommended a certain item I wouldn't understand it because there are so many factors that play a role here and then if you dumb it down and tell me "you are seeing this news item because you also liked this one" then you're leaving out a whole lot of complexity. So, you are dumbing it down to a point that it's not truth anymore.

Another challenge to transparency comprises the ongoing improvement and ubiquitousness of algorithms. 'There are developers working on those algorithms twenty-four seven all over the world, so if we know today how the algorithm works, tomorrow it can be changed', problematizes Expert 10. Finally, people with dubious intentions can take advantage of transparency disclosures and might try to 'game' the algorithm (Expert 10). By and large, the majority of these measures concern social media themselves. By and large, transparency from journalists seems bounded to a certain extent by the rules, processes, and willingness of these platforms.

Unlike this fate, transparency can more easily be implemented on the direct use of algorithms by journalists. The experts suggest a wide variety of measures. In the first place, Expert 7 proposes an interface which would allow the user to have some control over how the selection happens in a clear-cut manner. In the same way, Experts 6 and 10 believe that news media websites could add disclaimer messages when they personalize a homepage, based on users' behaviour. As Expert 6 exemplifies: 'If you personalize it, automate it then you need to say because you say "Ajax, from Amsterdam, the football club. Because you say you like it you see this article"'. Adding to this, Expert 9 points out the willingness to know users' preferences: 'I would be interested to know what Facebook thinks that I … what my preferences are or what any other news provider thinks that I like', she underlines. Furthermore, Experts 7 and 8 add that an information link on an automated area of the website (for example *Most popular or Related articles*) sections would be more appropriate to explain the presence of an algorithm than to have this explanation on the *Terms and Conditions* 'that no one reads anyway' (Expert 8).

Similar to the indirect use, algorithmic accountability reporting reappears with Experts 6, 7, 9, and 10 mentioning the need for transparency in the use of algorithms by news media professionals. Indeed, Expert 8 indicates that this already happened in the company where the editor-in-chief published on his blog about how they use metrics to improve journalism. Referring to the A/B testing of digital headlines, Expert 9 also argues that 'different ways of framing a subject makes people more aware of some level of arbitrariness or prejudice'. And, if explained from time to time it is more unlikely to overwhelm users (Expert 9). Overall, transparency is deemed beneficial, yet it must be carefully assessed and implemented from a user perspective. According to Expert 7 it both improves literacy and can constitute a competitive advantage for news media companies:

> If you have a good algorithm that actually says like "well I'm showing this article because I want to surprise you and I think you are someone who wants to be surprised once in a while" then it can be a business advantage. (Expert 7)

Nonetheless, if not thorough assessed, transparency can do more harm than good. As Expert 7 spots:

> If you explain this to the end user, why you share certain things, it has to be a very dumb down version of what really happened. And I really don't think, making everything in

between transparent would be helpful in any way to the end user … The recommendation engine is so ingrained into the overall system that it's very hard to make sense just of this piece and you cannot share this piece, this is the secret, this is the whole company, you can't share it.

On balance, in both countries the professional frame seems a more adequate response to algorithmic accountability in journalism, yet according to the experts such frame might not be sufficient. In the case of Portugal, governmental intervention is only considered adequate on social media, from a monitoring and normative perspective. Nonetheless, the Portuguese experts point out that accountability measures related with algorithms might be difficult to implement, mainly because of the structure of the news media market and the lack of ethical culture among journalists. Surprisingly, one solution points to the market frame, which was does not constitute the scope of the research. Although transparency is considered an adequate path, the experts question its effectiveness as well as the audiences' interest and literacy. In the Netherlands, the insights indicate a higher prevalence of the political frame, though in an indirect way, along with the emergence of the public responsibility frame, the latter not in the scope of the research. Even, in the case of the direct use of algorithms, an indirect governmental intervention (through subsidies and monitoring) interweaves with the public responsibility frame. Anchored on the model of media systems, the differences and similarities between Portugal and The Netherlands are taken further in the last chapter of the thesis.

5. Discussion and Conclusion

RQ: How can journalists in Portugal and in The Netherlands be held accountable for publishing their content on algorithmically-controlled environments and using algorithms in their work?

In the final analysis, journalists in Portugal and in The Netherlands can be held accountable for the use of algorithms in different ways. On the whole self-regulation in Portugal is considered the most adequate path for holding journalists accountable for publishing content on social media and using algorithms in their work. Furthermore, governmental intervention is rejected, except for the news distribution on social media platforms. Differently, the findings for The Netherlands indicate that both self-regulation and governmental intervention, the latter in an indirect way, are deemed necessary to hold journalists accountable for publishing content on algorithmically-controlled environments and using algorithms in their work. Notably, the findings point towards a blend between the political and the public responsibility frame, for example through political pressure and State subsidies to independent monitoring entities and consumer organizations.

Concerning Portugal, the experts underline the need to hold journalists accountable by self-regulation, mainly through future improvements in the codes of conduct as well as informal mechanisms such internal self-regulation on decision-making processes and internal rules (for example, the supremacy of editorial and human criteria when choosing what topics to write about or to highlight in the news media websites). As shown by the findings, algorithmic accountability is already in place through these informal mechanisms. Furthermore, this internal self-regulation is regularly extended to the uses of social media by journalists (Experts 2 and 3). On the whole, governmental interference on the matter is highly rejected, except in the case of social media, if self-regulation within the platforms is deemed not enough. But such insight has little to do with the use of social media to distribute content by news media companies. In a unique insight, Expert 3 mentions the monitoring of the news media content on social media by ERC, for normative purposes, as a plausible path to hold journalists accountable for using these platforms.

For the most part, the Portuguese experts mention that it is difficult to hold journalists accountable for the use of social media to distribute content because they do not control the algorithm. However, the solution exposed by Expert 3 seems plausible for normative considerations on the content that news media present to audiences and in which ways. Likewise, regulating online journalism in the future is a possibility, but it is not mentioned on what terms and if this

63

include the use of social media by journalists. The notion of algorithms as tools which support the profession, but do not replace it, is prevalent. Nonetheless, more could be done to improve the formal self-regulation mechanisms, particularly the codes of conduct (Experts 1, 2, 3, and 5). According to the overall opinion, these instruments should be more adapted to the digital era, including the uses of social media and algorithms themselves, based on the existing journalistic principles. But as highlighted by Expert 5, freedom of the press shall not be jeopardized 'for the sake of moralization'. Moreover, instruments of self-regulation such as letters to the editor or commentary boxes can incorporate the criticism of audiences to the uses of algorithms. As Expert 5 argues: 'a question concerning the algorithm has to do with the editorial line, with the way a news article is made, published. It is no different'.

An unexpected mechanism which does not encompass both frames under study is proposed by Expert 2: the existence of an organism which could certify the tools that are used by journalists. As he advances:

> It should be worth thinking about the certification of certain algorithmic tools in which we could know that they are built upon principles that we consider valid … We use these tools, they give us results, but we don't know the code and therefore, I think this entity shouldn't be even national. (Expert 2)

In fact, this suggestion is aligned with the market frame of McQuail (2010). That is, if an external entity could certify the tools journalists use, then naturally the companies who would properly employ algorithms would prevail at the expense of the ones who would not. But, as Expert 10 from the Netherlands asks 'what is good journalism with algorithms'? Arguably, this question still needs an answer. Besides, one cannot be sure that the market will always discard the bad performance, as McQuail (1997) reasons. In addition, transparency is highly regarded as positive in both uses, yet more urgent on social media. But, as mentioned by all the interviewees, it faces some challenges. On the one hand, it needs to be thoroughly implemented in order to not overwhelm audiences. On the other hand, the lack of media literacy and disinterest from audiences, spotted by Experts 1, 3, and 5, can turn transparency into a pointless mechanism of accountability.

The experts from The Netherlands give a more nuanced approach to algorithmic accountability in journalism. Strikingly, the inputs suggest a blend between the political frame and the public responsibility frame, aiming to improve media literacy and consumers' empowerment on online news media consumption (Experts 7 and 9). Although self-regulation is appointed as the

64

ideal path, overall the indirect governmental interference is considered positive to hold journalists accountable for the use of algorithms in both uses. More precisely, for both indirect and direct uses, the governmental intervention is deemed appropriate through pressure and State subsidies to monitoring entities. Additionally, the demand for more governmental pressure for accountability, mainly in the case of social media, gives support to the public responsibility frame (Expert 9). Notably, this frame did not comprise the focus of the inquiry. Expert 9 gives the example of the American and British governments concerning the recent controversies on social media platforms. Likewise, Experts 8 and 9 agree on an independent regulator or consumer's organizations subsidized by the State to monitor social media and news media companies on the 'output level'. The main argument is the need for user empowerment in relation to algorithms and more control on the content that audiences encounter online. Likewise, media literacy should be another area of focus of these instruments. In a notable remark, Expert 10 claims the need for more guidance from governments on the optimization of algorithms on both social media and news media. She contends that the problem of algorithms is related with fake news and propaganda to a great extent, which are not a journalism problem. 'What is then the problem?', she questions.

> Algorithms on news sites could also be a problem, but the good thing about these news algorithms is that every story which is pushed up that's a true story ... If we get a mission to do something we don't do today, we need to know from that big government or whoever. (Expert 10)

As in the case of Portugal, several mechanisms of self-regulation are already in place in Dutch newsrooms: the existence of internal self-regulation in decision-making processes, and rules, such as a balance between editorial criteria and algorithmic input when choosing what topics to write about or to highlight on news media websites. This reflexive thinking is explicit in the words of Expert 6: 'that's the ethical thing news sites need to be aware of, "why are we writing about it? Because it's a good story or are we writing it because they have 200 likes?"'. In this way, 'editorial analytics' are mentioned as inputs which inform the decisions of journalists, rather than a 'final saying' (Experts 6, 8, and 10). Moreover, the fact that the number of pageviews are not KPIs for editors can be seen as a mechanism of accountability. In the same way as Portugal, codes of conduct are deemed as areas of action, though it is generally acknowledged that there is no need to create specific rules and codes concerning the use of algorithms. Unlike this idea, Expert 9 considers that Dutch journalists' union could develop a code of conduct specifically about algorithms. But, as

pointed out by Expert 10, this might not solve the problem of using social media or other non-journalistic platforms to distribute news media content. As she acknowledges, there are no codes of ethics for developers of algorithms at all. That is, even if journalists abide by their norms and principles, much of the content that circulates within the platforms is beyond journalists' control. To what extent in these platforms algorithms are designed to separate reliable sources from untrustworthy ones? What biases they carry when they filter the content for the user? Given the actual willingness from social media companies to be more transparent and accountable, these could arguably be one area of action. Likewise, transparency is considered beneficial and urgent by all experts in The Netherlands, especially in the case of social media platforms. As with Portugal, algorithmic accountability reporting is already in place, for example in the use of blogs to inform users about the use of algorithms in newsrooms (Expert 8). Again, transparency needs to be carefully designed and evaluated from a user perspective. If well implemented, it 'would enable a public debate on whether we think the choices made in the algorithm are healthy choices', affirms Expert 8.

5.1 Portugal and The Netherlands: Two Media Systems in Comparative Perspective

The findings can be assessed in light with the model of media systems from Hallin and Mancini (2004). First, the State intervention and the political frame. In general, the vehement rejection of governmental interference from Portugal in the issue of algorithms can be a sign of the memory of the dictatorship which censored the work of the media and jeopardized the overall advancement of society (Hallin & Mancini, 2004). In fact, this is pointed out by Expert 1 when questioned about the reason to reject governmental interference. Likewise, the suspicion towards a possible political advantage taken out from regulation about algorithms is another concern expressed by Expert 3. This notion of instrumentalization of the media is pointed out by Hallin and Mancini (2004) as one of the factors which undermine State intervention in the countries within the Polarized Pluralist model. Even though not prominent in the Democratic Corporatist countries, Expert 9 from the Netherlands also alludes to it when asked why governmental interference would not be appropriate: 'possibly even more dangerous than when leaving it open to the market'.

As also explained by Hallin and Mancini (2004), media in both Polarized Pluralist and Democratic Corporatist countries are seen as institutions which must preserve the public interest, one of the primordial roles of journalism in society (McQuail, 1997). However, different historical and political contexts might play a role in this regard. That is, in the Polarized Pluralist countries the media are in the stage and participate in the bargaining processes between the political elites, but

66

this discussion is not guided by the notion of public interest, although it is claimed that in fact it exists (Hallin & Mancini, 2004). Oppositely, in the Democratic Corporatist, the media tend to mirror the ideology of social partnership, whereby the they also bargain and participate within the political processes. However, they act as facilitators of the debate between the different interests within society. Even beyond politics (Hallin & Mancini, 2004). In fact, this factor can explain why the interference of State tends to be seen as positive in The Netherlands. That is, the involvement of the State as fundamental to preserve the public interest can explain the support for State subsidies to both independent media regulators or consumer associations to monitor news media activities and their uses of algorithms. Not to mention, the call for more guidance from governments or media regulators (Expert 10).

In the same way, the idea that the State should demand accountability from the media as a societal actor is strikingly prominent in The Netherlands. This is aligned with the third coexistence in the Democratic Corporatist model: strong limits of the power of the State along with high State involvement in the media. By and large, this is where actually Portugal and The Netherlands diverge to a great extent. For example, despite not being the focus of the research, a notable absence from the discussion in Portugal is the role of public service broadcasting within the issue. Differently, Expert 9 (from The Netherlands) argues that a strong public broadcaster which can provide independent news can also function as a 'counterbalance' to the high dependency on non-news media platforms to distribute news content. Moreover, when referring to a possible optimization of algorithms on news media websites, Expert 10 makes a distinction between what could be required from both commercial and PSB news media. For example, she refers to a mix of profit plus time spent reading an article for commercial media, suggesting that PSB could have different rules. Expert 6 and 9 also make this distinction. Nevertheless, a counterargument can be made here. That is, taking into account normative considerations, to what extent having different expectations from PSB and commercial media is more conducive to media accountability?

Other than governmental interference, the influence of economic power in journalism is implied (in some cases explicitly mentioned) by experts from both countries. As Expert 1 from Portugal highlights: 'journalists fear the intervention of the State, but they forget that often times there is intervention from companies, economy and other powers apart from politics'. Likewise, Expert 7 from The Netherlands mentions the dependency of Facebook to distribute news media content as a consequence of 'a massive problem selling offline news'. This is acknowledged by Hallin and Mancini (2004) as 'probably the most significant form of instrumentalization' of the media (p. 114), though no dimension in the model takes this factor into account. This absence from

67

the framework of media systems is, therefore, one critique of it.

The professionalization of journalism in Portugal and in The Netherlands might also account for the different opinions about how journalists can deal with the topic of algorithms. In both countries the fact that self-regulation is seen as positive can plausibly indicate how journalists themselves are willing to autonomously deal with the issue of algorithmic accountability. Not to mention that some mechanisms are already in place by Portuguese and Dutch journalists themselves. Even so, some dissimilarities in the findings can account for the different level of journalistic professionalization in both countries. As Hallin and Mancini (2004) describe, the level of professionalization in Polarized Pluralist countries is lower than in Democratic Corporatist nations, mainly because of a weaker influence of journalistic organizations and unions and the absence of formal accountability instruments. Although not mentioned in a straightforward way, some thoughts shared by the Portuguese respondents can conform to this belief. Firstly, the fact that the Portuguese media landscape is very competitive can hold off an agreement among its class on what could be done to address the topic (Experts 2 and 3). Secondly, the lack of assimilation of ethical culture in Portuguese newsrooms, spotted by Expert 1, can be an indicator of a weak professionalization of the class itself. This idea reappears further when Expert 2 comments about the utility of the ethical codes: '[ethical codes] are not prepared for this neither other things'. Not to mention the low participation in the last referendum to update the Portuguese ethical code, in November 2017. In truth, the low participation was bemoaned by the Journalists' Union itself (Agência Lusa, 2017).

As also argued by Hallin and Mancini (2004) the legitimization of journalism as a profession in the Polarized Pluralist countries can be more of an indication of the 'closeness of journalism to the State than its development as an autonomous profession' (p. 112). Arguably, the findings more strongly confirm this tendency for Portugal, than the argument of a stronger professionalization within the Democratic Corporatist countries. For the most part, the indication of a higher professionalization of Dutch journalists is not clearly demonstrated in the data. For example, when asked on what could be done from the formal accountability systems, institutions such as *Nederlandse Vereniging van Journalisten or Raad voor Journalistiek* - two formal self-regulatory mechanisms - are not mentioned as a possible path for accountability, with the exception of Expert 9. Therefore, it is not possible to know to what extent there is a culture of assimilation of ethical principles in the Dutch landscape or even to what extent these instruments have a hold over the journalistic class. Normative considerations aside, the solutions pointed out by the Dutch experts are more aligned with the notion of journalism as an integral part of civil society, linking various

68

interests, groups, and political parties within a culture of negotiation and discussion. Arguably, 'demanding' a mission from governments (Expert 10) concerning the issue indicates a willingness to cooperate, mirroring the overall democratic corporatist culture. As a last remark, it is not meant that more regulation for the media is needed. The fact of the matter is that self-regulation on the issue might not be enough condition, as the findings also suggest for both countries. All in all, McQuail's (2010) argument that the frames of accountability can coexist and overlap might, therefore, be worth bear in mind when addressing concrete measures related with the impact of algorithms in journalism.

5.2 Algorithmic Accountability

Overall, the research indicates an actual concern about the uses of algorithms in journalism in Portugal and in The Netherlands. In both countries, the underlying notion is that algorithms are tools which help the profession (as any other tool or technology), and, therefore, news media professionals need to be held accountable for their use. Likewise, they mention audiences as the fundamental line of accountability. The main issues related with algorithms in journalism are the problems for media diversity, media pluralism, and filter bubbles (Experts 3, 4, 5, 6, 7, 8, 9, and 10), and the appeal of algorithms to rely on peoples' preferences (Experts 1, 2, 6, 8, and 10). Also, Experts 3 and 8 highlight that algorithms can take human decision and power, which can be problematic.

Moreover, the research also shows that algorithmic accountability is already in place by some news media companies in both countries, mainly through informal self-regulation mechanisms, such as internal self-regulation in decision-making processes and transparency measures, for instance, in the use of social media as sources. Although algorithms in journalism are seen as inevitable in the upcoming years, their use is not widely acknowledged yet. Besides the newness of the topic and the scarce research which is only taking off, the experts underline that holding journalists accountable for the use of algorithms can be challenging. This idea is more common among Portuguese experts. Firstly, the class is still old-fashioned (Expert 2). Secondly, the news media market is highly competitive which makes it difficult to implement accountability mechanisms (Experts 2 and 3). In the same way, digital media in Portugal still comprises a 'niche group, which has a more extensive knowledge of certain data-analytic tools than the majority of journalists' (Expert 2). Moreover, the influence of economic power might jeopardize algorithmic accountability (Expert 1). Not to mention the lack of assimilation of ethical culture in newsrooms (Expert 1). Another reason pointed out by Experts 2 and 6, from both countries, is the fear-driven
69

culture towards technology which makes it difficult to use algorithms for the common good.

Another aspect worth mentioning is the possible reluctance of journalists to receive criticism from audiences (Experts 1, 7 and 6), which can arguably hold off algorithmic accountability in journalism. This factor finds resemblance with Eberwein & Porlezza (2014) reasoning about the reluctance of journalists in exposing their own faults. More relevant to the discussion is the fact that there is no ethics of algorithms in a broader sense, which can hazard algorithmic accountability in journalism. This argument is related to the model of algorithmic accountability from Diakopoulos (2015), which application to journalism can be intricate. In first place, because there might be no willingness to create a specific role to deal with issues with algorithms, as shown in the data (responsibility). Furthermore, transparency needs to be thoroughly assessed from a business and user perspective (explainability).

Concerning the auditability principle, allowing third parties to check on the works of algorithms might also be problematic for journalists. To put it simply, how can we demand algorithmic accountability from journalists when often times they do not control the algorithms they use to distribute content, not even the ones they themselves use directly, such as data-analytic tools? Finally, the last principle seems the least complicated in terms of solutions. In truth, the path proposed by Diakopoulos (2015) for the fairness principle resembles that of Expert 10, a code of ethics for developers of algorithms. Because one solution might not take all the factors into account, the notion of a co-shared accountability (Experts 3, 5, 7, and 9) by users, social media platforms, news media companies and society at large could plausibly be a starting point. Specifically, audiences are not always critical or literate enough to demand accountability, as also stressed by all participants. Therefore, following McQuail's (2010) reasoning the most appropriate frame to attain the public interest – the public responsibility frame - is perhaps the less efficient.

In a different manner, the findings give strength to the argument of McQuail (2010) that governmental interference in journalism should be kept on a minimum level to not harm freedom of expression and freedom of the press. Similarly, the experts from The Netherlands express this concern as a challenge for regulation (Experts 6, 7, 8, and 9). Lastly, often times some experts (1, 3, 5, and 6) make the case for a stronger responsabilization of journalists instead of algorithms themselves, as 'it is not possible to hold machines accountable' (Expert 3). In reality, when journalists use data-driven tools or when they willingly distribute content on platforms controlled by algorithms to what extent the excessive blame on the algorithm is plausible given that they point out they rely on editorial criteria to do so? As Expert 1 sums it up: 'the problem is not on technology, rather on the compliance with rules that have always existed and are more challenging
70

nowadays'. Above all, accountability must go hand in hand with ethics and, for the most part, both 'still' endure as human features.

5.3 Impact of Algorithms on Journalism

According to the findings, the impact of algorithms on journalism is still understudied (Experts 2, 4, 9, 7, and 8) and needs more empirical research on its real impacts and implications. Despite the issues surrounding these technologies, algorithms can be used for the public good. Expert 7 argues that their proper use can constitute a business advantage for news media companies. She comes up with the notion of 'responsible algorithmic recommendation' which allows users to be 'the person they want to be'. As she envisions:

> … being transparent, explaining "we think this helps your news experience and this will broaden your horizon, this will make you more informed. Hey, we've seen you have been reading articles with really short sentences, maybe you want to go one step up, maybe you can already deal with this article that gives you a little bit more depth". (Expert 7)

For the most part, algorithms are helpful tools for journalists. They help 'filter' what is happening in the world (Expert 3), they free journalists from routine tasks to focus on more investigative approaches, and they make new media production more effective (Experts 2, 3, 5, 6, 7, 8, and 10). But if overused, algorithms can in fact have negative implications, as also highlighted by the majority of the experts. Mainly, the appeal to adapt the content to people's preferences (Experts 1, 3, 6, 7, 8, 9, and 10), and the problem of over relying on algorithmic decisions and tools (Experts 2, 3, and 9). Another complication is the loss of power of journalists in gatekeeping processes (Experts 7 and 9). 'Algorithms basically decide who gets to see what kind of message, that is a gatekeeping process that is outside of the newsrooms', explains Expert 7. In a similar way, Expert 4 underlines the negative impact of non-journalistic content on journalism within algorithmically-controlled environments. 'A great amount of news which appear on internet are created outside the traditional news media companies and they have a great reach due to the use of algorithms', he reasons. Here, the negative impact is twofold: they unfairly compete with news media for

advertising profits and harm the credibility of journalism by engaging on *clickbait*[10].

The high reliance on third-party platforms by news media companies to distribute content is another worry raised by the experts (Experts 2, 7, 8, and 9). Similar to the distribution, Expert 6 stresses the heavy reliance on social media to know what content to write about and even for benchmarking. As he manifests:

> I hate that everyone is looking at Facebook analysis tool. … We're all writing about the same things because we see "hey this article is going well at RTL, if you write a story about it it's also going well". (Experts 6)

In addition, respondents from both countries acknowledge some concerns about filter bubbles (particularly in personalization of homepages and in social media uses) in journalists' decision-making processes (Experts 3, 4, 6, 7, 8, 9, and 10). In total opposition, Experts 2 and 5 (from Portugal) point out that the use of social media to distribute content is not a concern in this regard: 'if you in fact want this info to reach a certain audience that you prioritize then you can also segment the post', explains Expert 2. In an unexpected argument, Expert 5 also gives food for thought:

> What is the difference between relying on the trending topics' list on Twitter and the use of trending lists made by journalists several years ago in which they set the trends and the topics which everybody followed?

5.3.1 Social Media and the Impact on Journalism

The great impact of social media on newsrooms is notably one of the main conclusions of the research. Social media are used for several purposes, such as engage with audiences, communicate with sources or find topics to write about. But, the heavy reliance on Facebook as a distribution channel for news (Experts 2, 3, 6, 8, and 10) is all the more remarkable. 'I mean Facebook could stop distributing our stories tomorrow! We would have a large… we would have a big problem', admits Expert 8. Even so, some experts (3, 7, and 9) question the overall benefit of

---

[10] Clickbait is content which aims is to encourage users to click on a link from a webpage. It is associated with misleading, deception and sensationalism. Therefore, low quality news (Chen, Conroy & Rubin, 2015).

these platforms for news media companies, for example the fact that audiences might not notice the news brand when they consume information on social media (Experts 7 and 9). Not to mention a plausible general decrease on the quality of content in order to please advertisers (Expert 10). Referring to a news media outlet which recently left Facebook, Expert 3 quote captures the overall sentiment of the journalists who participated in the research: 'none of us has the courage to say "hum, I don't want to be there, I don't need this for nothing", because it's still very risky, but you will start having these kinds of strategies'.

In parallel, Experts 7, 9, and 10 acknowledge the current 'massive' pressure to find new ways of distributing content. Incidentally, a recent report from Reuters Institute highlights that the use of social media for news consumption dropped in 2017, after several years of growth (Newman, Fletcher, Kalogeropoulos, Levi & Nielsen, 2018). Newman et al. (2018) attribute this to the recent changes on Facebook's algorithm. To what extent this is bad news for journalism, it will remain to be seen in the years to come. By and large, this current dependence on social media platforms can be seen as a loss of power for journalists, which is evident in the following statement by Expert 8:

> They frustrate us a lot because, as I just explained we need them, they are part of what we do, it's how you reach new audiences these days, and on the other hand we don't have much control over them. Obviously, we decide what to post and what no to post but we have very little say in what gets promoted.

In this sense, a more cooperation between both 'worlds' could help promote quality journalism (Expert 10). Yet, how can social media help advance quality journalism if they do not thoroughly address clickbait, fake news and disinformation? This point reasons with the argument of Expert 5 to not label social media platforms as 'media companies': 'if social media have to abide by the same rules as the traditional news media, this is to put everything on the same boat, this is not even fair for journalists'. Be that as it may, the quote of Expert 8 (above) indicates that to some degree journalists might not be willing to give away a big deal of traffic for more credibility and trustworthiness.

5.3.2 Algorithmic Power of Social Media

Among the experts, it is consensual that social media should be held accountable for the overall impact in society. Despite their self-accountability, society in general, including governments, journalists, and audiences should have a stake in the issue. In this sense, the scope of

73

influence of these platforms extends way beyond news media companies. As Expert 1 puts it: 'If Facebook can control the American elections or the Brexit or whatever this is way worse than whatever they can do to bother journalism'. Owing to this, the idea that these platforms should be regulated in some form as 'public spaces' seems reasonable. Nonetheless, this was recently rejected by the Facebook founder after the Cambridge Analytica controversy (Blumenthal, 2018). More than social media platforms, experts allude to the dominance of Google and Facebook. 'These two companies in the Western world shape our vision of the world', claims Expert 3. Because little is known about how their algorithms are designed and for what purposes, they raise concerns over the real intentions of these platforms. 'What is the aim? If I buy? Or to obtain certain goals?', doubts Expert 5. Owing to this, Expert 4 claims that algorithms in these environments 'must incorporate public interest principles that must be preserved', which makes it legitimate to regulate them to some extent. Expert 3 is more cautious:

> The impact they have on our social lives and democracy makes it legitimate that people who are not the owners of this company can intervene and have an opinion or can limit what this company does, but the first premise is: 'that is something that we don't referend. You can't referend social media, they are private businesses. (Expert 3)

Although in principle algorithms are not designed for bad purposes (Experts 7 and 10), the fact that 'everyone can buy a presence in the platform' (Expert 10) opens the door to fakes news and propaganda. But, again, should only algorithms themselves be blamed for these misuses? According to Expert 10, the bottom line for these platforms is, then, to address this issue:

> Facebook and Google have to find a way how to separate the advertisers with goals of buy, selling you another bottle of water or a new telephone or whatever from propagandists who want to get in your mind with ideas, holds Expert 10.

Despite the criticism, these platforms are advantageous for news consumption (Experts 3, 4, 5, 9, and 10). The curation of information can be 'useful in helping people making their choices' (Expert 4), and the fact that users can customize the people and pages they want to follow is considered a plus (Expert 3). Indeed, audiences' behaviour on these platforms makes for the last theme of the research.

5.3.3 Audiences and the Use of Algorithmically-controlled Environments

The final theme emerging from the research is the assessment of audiences' behaviour in algorithmically-controlled environments. Here, the similarities among both countries are still evident, though with some nuances. While in Portugal the criticism over audiences' behaviour is sharper, experts in The Netherlands put more emphasis on the need of empowering audiences. Experts 1, 3, 4, and 5 (from Portugal) point out the lack of self-accountability from some users on social media. 'People write horrible things about each other, write things about people they don't even know as if it is true, and they are not accountable for that', expresses Expert 3. Later on, she regrets that often times audiences 'more easily and dreadfully comment a content they didn't read than they open the content to read and comment it afterwards'. Owing to this, she considers social media platforms an extension of the public space, where rules of conduct and good behaviour should prevail. 'I do not go to a retail space and start defaming people out loud …. This happens on social media!', Expert 3 conveys.

In the same line of critique, Expert 4 contends that these platforms, as they live on today, can subvert the public space, where there exists 'falsities, injuries and calumnies'. In an explicit mention to media literacy, Experts 1 and 5 regret that some people are not able to make the distinction between journalistic content and non-journalistic content online and, therefore, the excessive blame on the algorithm is unjustified to some extent. 'I think audiences should be, in fact, more demanding, rejecting what is not appropriate. And here we shouldn't lay the blame on the algorithm, right?', underlines Expert 1.

Additionally, Experts 3 and 6 criticize the lack of interest of audiences for issues such as online privacy and the recent controversies on Facebook. The overall opinion among Dutch experts is that media literacy on the topic of algorithms should constitute a project from society at large. The involvement of governments, audiences, journalists, and monitoring entities is deemed important to not leave the more illiterate unharmed in the face of fake news, propaganda, and clickbait (Experts 7, 9 and 10). Moreover, consumer associations should raise awareness of the pervasiveness of algorithms in society, aiming to 'empower consumers' (Expert 9). On the whole, a more informed and emancipated society can reasonably better hold social media, journalists or whatever uses of algorithms might have an impact on their lives. But as foreseen by McQuail (2005), the most voluntary and democratic frame is, perhaps, the most challenging to put into practice.

5.4 Societal Relevance

Overall, this research contributes to the ongoing and intricate debate of the role of journalism in the digital age. Anchored on the theoretical framework of media accountability and the model of media systems, this thesis furthers the newly and urgent discussion concerning algorithms and their impact on news production and consumption. In line with the recent governmental awakening for the issue of algorithms, the research spotlights the importance of regulation of data and the use of algorithms and its broader implications in society well-being and prosperity (World Wide Web Foundation, 2017). Significantly, it advances in what ways journalists can be held accountable for their use in two countries belonging to the most representative media systems in Europe: Polarized Pluralist and Democratic Corporatist. Owing to this, the inquiry informs journalists, media policy makers and governments from Portugal and The Netherlands in what can be done in practical terms to assess algorithmic accountability. More important, the scope of these insights goes beyond both countries to infuse news media professionals and law and policy makers in other Polarized Pluralist and Democratic Corporatist nations on possible paths for algorithmic accountability. Finally, it must be stressed that the cross-country comparison it is not made for the sake of normativity. In reality, the bottom line for both countries (or other countries in both media systems) is to shine a light on what could be a starting point to address algorithmic accountability in journalism, based on the premise that historical and political context impact what is expected from journalism in a broader sense. Despite several similarities between Portugal and The Netherlands, it is not surprising that the solutions to address these expectations are somewhat dissimilar.

5.5 Limitations

Some limitations concerning the research must be assessed. Firstly, the fact that the inquiry only focused on two frames of accountability can constitute both a limitation and an advantage. On the one hand, possible insights from the other two existent frames were left out; on the other hand, the two frames – political and professional – could be explored more in-depth and thoroughly. Unexpectedly, despite being left out, the market and the public responsibility frame appear in the findings. Likewise, another limitation concerns the analysis of two media systems instead of three. Thirdly, the urge for algorithmic accountability in journalism expressed by the respondents might be related to the recent controversies on the topic. In fact, the link to the recent events on Facebook (Cambridge Analytica, Brexit, 2016 American elections) was made by the majority of the experts. By and large, if all the controversies concerning algorithms and the use of

76

social media had not happened while the research was being developed one cannot be sure if the urgency for algorithmic accountability would have been so prominent.

Additionally, some limitations concerning the methodology must be highlighted. Differently from Portugal, it was not possible to interview Dutch media lawyers and regulators, and representatives of formal accountability mechanisms, such as the Raad voor de Journalistik and the Commissariaat voor de Media. Moreover, within the interviews, often times it was troublesome to assess why the use of algorithms have implications on journalists' work. If it is because the algorithm selects the information, or it recommends it, or because it has an impact on the decisions that journalists' make, meaning what stories to write about, what stories to highlight on news media webpages, etc. Let alone what is exactly the use of algorithms in journalism. As an illustration, after mentioning a bunch of data-analytic tools, Expert 6 expressed: 'I don't know if that's the tools you mean by algorithms'.

A further issue concerns the operationalization of the indirect use of algorithms. One of the difficulties within the interviews was to make sense of what exact solutions the experts were referring to, whether social media or journalists themselves. Likewise, often times there was not a clear distinction between what could be done to (self)regulate social media and what could be done to (self)regulate the uses that journalists do of social media. Even the use of social media by journalists has variations. To wit, when considering their accountability, the use of social media to spot trending topics might differ from the distribution. If on the former the outcome of this action depends solely on the journalists' action and decision, in the distribution journalists cannot be sure of who and how many people are actually seeing the content. Perhaps the complexity and entanglement of both 'worlds' nowadays account for these difficulties. When all is said and done, the ultimate point of the thesis assesses several recommendations for future research.

5.6 Recommendations

On the whole, because the topic of algorithms is still very new, the research raises more questions than the ones it answers. By and large, the results show that algorithmic accountability is already in place, but future studies could assess to what extent the patterns found out for Portugal and The Netherlands hold valid for other countries within the Polarized Pluralist and Democratic Corporatist media systems. Likewise, further research could analyse possible solutions of algorithmic accountability within the frames that did not comprise the scope of this thesis: the market frame and the public responsibility frame. Moreover, it is relevant to assess how algorithmic accountability is being addressed in countries belonging to the Liberal Model of Hallin and Mancini

(2004), absent from the research. Another recommendation concerns the uses of algorithms on journalism. As expressed in the *Limitations,* it is still difficult to know exactly in what ways algorithms impact journalists' work. Notably, academic studies are still scarce in this regard (Diakopoulos, 2015). For example, when considering the direct use, particularly data-analytic tools, journalists are not always in control of these algorithms, as underscored by Experts 2 and 10. Consequently, this might have implications on their accountability. Further research could, then, develop a more thoroughly typology about the uses and impacts of algorithms on the profession. Moreover, as suggested by Expert 10, academic studies could assess what constitutes good journalistic practices with the use of these tools. Even in a broader sense, who are the people who design algorithms and which purposes? Following Expert 10 recommendation, could a code of ethics for people who design algorithms be a reasonable solution?

As also mentioned by the respondents from both countries, the use of algorithms in the Portuguese and Dutch newsrooms is not a wide phenomenon. Therefore, it might be worth investigating which outlets and news media sectors are using algorithms, and in what ways. Moreover, are there any differences between the different media sectors, as implied by Expert 2? Additionally, the majority of the participants in the research are journalists with mid/high management roles. To what extent their opinions are effectively taken into account within major strategic decisions in news media companies? Indeed, further research should address the processes and routines of algorithmic accountability in newsrooms from a structure-agency perspective. In a different manner, the findings could not pinpoint the expectation concerning the power of formal self-accountability instruments in The Netherlands. Further research could, then, explore this matter in relation to algorithms in journalism.

Despite being considered the most plausible path for accountability, algorithmic transparency is considered a challenge for news media businesses and, consequently, for users. As some experts problematize, how can audiences demand algorithmic accountability or understand transparency mechanisms when they might lack the knowledge to do so? Perhaps, a possible topic to explore is audiences' opinions, attitudes and behaviours towards algorithms. Lastly, the concern about media diversity and filter bubbles is evident, but as stressed by Expert 6 there is a sameness of content within news media outlets resulting from the reliance on Facebook trending topics. Arguably, to what extent news media websites themselves are living up to the normative ideals of media diversity and pluralism? Notably, the fear towards algorithms might be offsetting a far-reaching phenomenon. As Expert 6 spotlights, to what extent newsrooms composed mainly by male and white people can best fulfil media diversity and pluralism? Hence, further research could

78

investigate cultural and gender diversity within media newsrooms, and consequently, to what extent they have an impact on the topics journalists choose to write. All things considered, algorithmic accountability should be a concern for the overall society, including journalists. Certainly, the answer to *in what ways people who use algorithms can be held accountable* for their great impact still holds an effective answer. Yet, as the findings of this research suggest, algorithms shall not be the only ones to blame.

References

Accountable Journalism. (n.d.). *About.* Retrieved from https://accountablejournalism.org/about

Agência Lusa. (2017, November 6). Código Deontológico dos Jornalistas será alterado, apesar de baixa participação em referendo [Journalists' Ethical Code will be modified, though low participation on the referendum is bemoaned]. *Público.* Retrieved from https://www.publico.pt/2017/11/06/sociedade/noticia/codigo-deontologico-dos-jornalistas-sera-alterado-apesar-de-baixa-participacao-em-referendo-1791506

Ajao, O., Hong, J., & Liu, W. (2015). A survey of location inference techniques on Twitter. *Journal of Information Science, 41*(6), 855-864. DOI: 10.1177/0165551510000000

Albarran, A. (2010). *The Media Economy*. New York, NY: Routledge.

Algorithm Watch. (n.d.). The ADM manifesto. Retrieved from https://algorithmwatch.org/en/the-adm-manifesto/

Anderson, M., & Caumont, A. (2014, September 24). *How social media is reshaping news.* Retrieved from http://www.pewresearch.org/fact-tank/2014/09/24/how-social-media-is-reshaping-news/

Bagdikian, B. (2004). *The New Media Monopoly*. Boston, MA: Beacon Press.

Bakker, P. (2018). Netherlands – Media Landscape. Retrieved from https://medialandscapes.org/country/netherlands

Bardoel, J.L.H. (2000). Responsibility beyond Rethoric. Public Broadcasters between Citizens and the State. Paper presented at the Conference Communication beyond 2000, Technology, Industry and the Citizen in the Age of Globalization' of the International Association of Mass Communications Research (IAMCR), Singapore, 17–20 July.

Bardoel, J. (2001). Open Media, Open Society. Rise and Fall of the Dutch Broadcast Model: A Case Study. In Y. Zassoursky & E. Vartanova (Eds.), *Media for the Open Society* (pp. 98-101)*.* Moscow: IKAR.

Bardoel, J. (2003). Macht zonder verantwoordelijkheid? Media, mediabeleid en de kwaliteit van de openbare informatievoorziening [Power without responsibility? Media, media policy and the quality of public communication]: Inaugural speech. University of Nijmegen.

Bardoel, J., & d'Haenens, L. (2004). Media responsibility and accountability. New conceptualizations and practices. *Communications, 29*(1), 5–25. DOI:10.1515/comm.2004.007

Barton, A. & Lazarsfeld, P. (1969). Some functions of qualitative analysis. In G. J. McCall & J. L. Simmons (Eds.), *Issues in Participant Observation, A Text and Reader* (pp. 163–195). MA:

Reading, Mass., Addison-Wesley Publishing Company.

Bell, E. (2015, May 17). UsVsTh3m's demise shows challenge of making news for Facebook. *The Guardian.* Retrieved from https://www.theguardian.com/media/media-blog/2015/may/17/facebook-news-digital-skills-automation

Bennis, W. (2013). Leadership in a digital world: embracing transparency and adaptive capacity. *MIS Quarterly, 37*(2), 635-636.

Berners-Lee, T. (2018, March 12). The web can be weaponised – and we can't count on big tech to stop it. *The Guardian*. Retrieved from https://www.theguardian.com/commentisfree/2018/mar/12/tim-berners-lee-web-weapon-regulation-open-letter

Bertrand, C. J. (2000). Media ethics and accountability *systems*. New Jersey, NJ: Transaction Publishers.

Bertrand, C.J. (2007). *Media Accountability Systems*. Retrieved from http://www.osce.org/serbia/24858

Blue Feed, Red Feed. (n.d.). *The Wall Street Journal*. Retrieved from http://graphics.wsj.com/blue-feed-red-feed/#/president-trump

Blumenthal, P. (2018, April 10). Mark Zuckerberg Doesn't Really Want Facebook to be Regulated. The Huffington Post. Retrieved from https://www.huffingtonpost.com/entry/mark-zuckerberg-facebook-testimony_us_5acd4c5ee4b0259339de6322

Boeyink, D. E. (1994). How effective are codes of ethics? A look at three newsrooms. *Journalism Quarterly, 71*(4), 893-904.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development.* Thousand Oaks, CA: SAGE Publications, Inc.

Braun V. & Clarke V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.

Brennen, B. (2012). *Qualitative Research Methods for Media Studies*. New York, London: Routledge.

Brexit. (n.d.). In *Cambridge Dictionary*. Retrieved from https://dictionary.cambridge.org/dictionary/english/brexit

Broersma, M. J. (2013). A Refractured Paradigm. In C. Peters & M. J. Broersma (Eds.), *Rethinking journalism: Trust and participation in a transformed news landscape* (pp. 28-44). New York, NY: Routledge.

Carlson, M. (2018). Facebook in the News: Social media, journalism, and public responsibility following the 2016 Trending Topics controversy. *Digital Journalism, 6*(1), 4-20.

81

https://doi.org/10.1080/21670811.2017.1298044

CBS. (2016). Acht procent van de Nederlanders nooit op Internet [Eight percent of the Dutch are not on Internet]. Retrieved from https://www.cbs.nl/nl-nl/nieuws/2016/22/acht-procent-van-de-nederlanders-nooit-op-internet

Chadha, K., & Koliska, M. (2015). Newsrooms and transparency in the digital age. *Journalism Practice, 9*(2), 215-229.

Chen, Y., Conroy, N. J., & Rubin, V. L. (2015). Misleading online content: Recognizing clickbait as false news. *Proceedings of the 2015 ACM: Workshop on Multimodal Deception Detection* (pp. 15-19). New York, NY: ACM. DOI: 10.1145/2823465.2823467

Cherubini, F., & Nielsen, R. K. (2016). Editorial analytics: How news media are developing and using audience data and metrics. Digital News Project 2016. Retrieved from Reuters Institute for the Study of Journalism website: http://www.digitalnewsreport.org/publications/2016/editorial-analytics-2016/#4-metrics-metrics-everywhere

Comissão da Carteira Profissional de Jornalista. (2008, September 17). Aviso n.º 23504/2008. Anexo: Estatuto Disciplinar dos Jornalistas [Notice. Appendix: Journalists' Disciplinary Statute]. Retrieved from http://www.ccpj.pt/legisdata/RegulamentoDisciplinarJornalistas.htm

Commissariaat voor de Media (n.d.). *English.* Retrieved from https://www.cvdm.nl/english/

Confessore, N. (2018, April 4). Cambridge Analytica and Facebook: The Scandal and the Fallout So Far. *The New York Times*. Retrieved from https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html

Correia, F., & Martins, C. (2018). Portugal – Media Landscape. Retrieved from https://medialandscapes.org/country/portugal

Cramer, H., Evers, V., Ramlal, S., Van Someren, M., Rutledge, L., Stash, N., ... Wielinga, B. (2008). The effects of transparency on trust in and acceptance of a content-based art recommender. *User Modeling and User-Adapted Interaction, 18*(5), 455. https://doi.org/10.1007/s11257-008-9051-3

Croteau, D., & Hoynes, W. (2014). *Media, Society: Industries, Images and Audiences* (5th ed.). London: SAGE.

De Haan, Y., & Bardoel, J. (2011). From trust to accountability: Negotiating media performance in the Netherlands, 1987—2007. *European Journal of Communication*, *26*(3), 230-246. DOI:

82

10.1177/0267323111413113

De Meij, J. (1984). *Van zender naar ontvanger. Enkele opmerkingen over de plaats van het publiek in het kader van de uitingsvrijheid [From Sender to Receiver. Some Remarks about the Place of the Audience from the Perspective of Freedom of Expression].* The Hague: VUGA.

Diakopoulos, N. (2015). Algorithmic Accountability, *Digital Journalism*, *(3)*3, 398-415, DOI: 10.1080/21670811.2014.976411

Diakopoulos N. (2017) Enabling Accountability of Algorithmic Media: Transparency as a Constructive and Critical Lens. In: Cerquitelli T., Quercia D., & Pasquale F. (Eds.) *Transparent Data Mining for Big and Small Data. Studies in Big Data*, vol 32 (pp. 25-43). Cham: Springer. DOI: 10.1007/978-3-319-54024-5

Diakopoulos, N., Friedler, S., Arenas, M., Barocas, S., Hay, M., Howe, B., . . . Zevenbergen, B. (n.d.). Principles for accountable algorithms and a social impact statement for algorithms. Retrieved from https://www.fatml.org/resources/principles-for-accountable-algorithms

Diakopoulos, N., & Koliska, M. (2016). Algorithmic transparency in the news media. *Digital Journalism*, *5*(7), 809-828. DOI: 10.1080/21670811.2016.1208053

Díaz-Campo, J., & Segado-Boj, F. (2015). Journalism ethics in a digital environment: How journalistic codes of ethics have been adapted to the Internet and ICTs in countries around the world. *Telematics and Informatics, 32*(4), 735-744.

Domingo, D., & Heinonen, A. (2008). Weblogs and journalism. *Nordicom Review, 29*(1), 3-15. https://doi.org/10.1515/nor-2017-0159

Dubois, E., & Blank, G. (2018). The echo chamber is overstated: the moderating effect of political interest and diverse media. *Information, Communication & Society, 21*(5), 729-745. DOI: 10.1080/1369118X.2018.1428656

Eberwein, T. (n.d.). Raus aus der Selbstbeobachtungsfalle! Zum medienkritischen Potenzial der Blogosphäre [Out from the trap of self-observation! On the media-critical potential of the blogosphere]. *Neue Gegenwart,* 56. Retrieved from http://www.neuegegenwart.de/ausgabe56/medienjournalismus.htm

Eberwein, T., & Porlezza, C. (2014). The missing link: Online media accountability practices and their implications for European media policy. *Journal of Information Policy, 4*, 421-443.

Elia, C. (2007). Vierzig Jahre Presseombudsmann: Wer sind die Leserschaftsanwälte und wie kommunizieren sie? Eine vergleichende Analyse [Forty years of newspaper ombudsman: Who are the readers' advocates and how do they communicate? A comparative analysis]. In *Zeitschrift für Kommunikationsökologie und Medienethik,1,* 100–105.

Entman, R. (1989). *Democracy Without Citizens.* New York, NY: Oxford University Press.

ERC. (2016). *As novas dinâmicas do consumo audiovisual em Portugal* [Report on media
consumption in Portugal]. Lisbon, LIS: ERC-Entidade Reguladora para a Comunicação Social.

ERC. (n.d.). About the Portuguese Regulatory Authority for The Media – ERC. Retrieved from
http://www.erc.pt/pt/fs/erc-in-english

Eslami, M., Rickman, A., Vaccaro, K., Aleyasen, A., Vuong, A., Karahalios, K., ... & Sandvig, C. (2015).
I always assumed that I wasn't really that close to [her]: Reasoning about Invisible
Algorithms in News Feeds. In Proceedings of the 33rd Annual ACM Conference: *Human
Factors in Computing Systems* (pp. 153-162). New York, NY: ACM.

Evers, H., Groenhart, H., & van Groesen, J. (2010). *The News Ombudsman. Watchdog or decoy?.*
Diemen: AMB.

Evers, H., & Groenhart, H. (2011). The Netherlands: Bits of Accountability in a Sea of Press Freedom.
In T. Eberwein, S. Fengler, E. Lauk & T. Leppik-Bork (Eds.), *Mapping media accountability in
Europe and beyond* (pp. 114-130)*.* Köln: Herbert von Halem Verlag.

Fengler, S. (2008). Media Journalism… and the Power of Blogging Citizens. In T. von Krogh (Ed.),
Media accountability Today… and tomorrow. Updating the concept in theory and practice
(61-67). Göteborg: Nordicom.

Fengler, S., Eberwein, T., & Leppik-Bork, T. (2011). Mapping media accountability in Europe and
beyond. In T. Eberwein, S. Fengler, E. Lauk & T. Leppik-Bork (Eds.), *Mapping media
accountability in Europe and beyond* (pp. 7-21). Köln: Herbert von Halem Verlag.

Fengler, S., Eberwein, T., Alsius, S., Baisnée, O., Bichler, K., Dobek-Ostrowska, B., ... & Heikkilä, H.
(2015). How effective is media self-regulation? Results from a comparative survey of
European journalists. *European journal of communication*, *30*(3), 249-266. DOI:
10.1177/0267323114561009

Flick, U. (2007). *Designing Qualitative Research*. London: Sage.
http://dx.doi.org/10.4135/9781849208826

French opposition, Twitter users slam Macron's anti-fake-news plans. (2018, January 5). *Reuters.*
Retrieved from https://www.reuters.com/article/us-france-macron-fakenews/french-
opposition-twitter-users-slam-macrons-anti-fake-news-plans-idUSKBN1EU161

Friedman, B., & Nissenbaum, H. (1996). Bias in computer systems. *ACM Transactions on
Information Systems, 14*(3), 330-347. DOI: 10.1145/230538.230561

Frömming, J.S. (2017, October 23). *Challenges of a platform press: Algorithmic accountability and
transparency in news media. Media & Business* (Master's thesis). Retrieved from

http://hdl.handle.net/2105/40469

Gibbs, G. R. (2007). Thematic coding and categorizing. In G. R. Gibbs (Ed.), *Analyzing qualitative data* (pp. 38-55). London, England: SAGE Publications Ltd. http://dx.doi.org/10.4135/9781849208574.n4

Gillespie, T. (2014). The relevance of algorithms. *Media technologies: Essays on communication, materiality, and society*, *167*.

Graefe, A. (2016). Guide to Automated Journalism. *Columbia University Academic Commons.* https://doi.org/10.7916/D80G3XDJ

Granados, N., & Gupta, A. (2013). Transparency strategy: Competing with information in a digital world. *MIS Quarterly: Management Information Systems, 37*(2), 637-641.

Hafez, K. (2002). Journalism ethics revisited: A comparison of ethics codes in Europe, North Africa in the Middle East and Muslim Asia. *Political Communication, 19,* 225–250.

Hallin, D. C., & Mancini, P. (2004). *Comparing media systems: Three models of media and politics.* Cambridge, Ca: Cambridge University Press.

Hammersley, M. (2013). Methodological philosophies. In *What is Qualitative Research?* (The 'What is?' Research Methods Series, pp. 21-46). London: Bloomsbury Academic.

Hamilton, J. T., & Turner, F. (2009, October). *Accountability Through Algorithm: developing the Field of Computational Journalism.* Retrieved from http://dewitt.sanford.duke.edu/images/uploads/About_3_Research_B_cj_1_finalreport.pdf.

Hasebrink, U. (1994). Country report Germany. In J. Mitchell, J.G. Blumler, P. Mounier, & A. Bundschuh (Eds.), *Television and the Viewer Interest. Explorations in the Responsiveness of European Broadcasters* (pp. 25-46). London/Paris/Rome: John Libbey.

Hasebrink, U. (2012). The role of the audience within media governance. The neglected dimension of media literacy. *Medijske studije*, *3*(6), 58-73.

Hayes, A. S., Singer, J. B., & Ceppos, J. (2007). Shifting roles, enduring values: The credible journalist in a digital age. *Journal of Mass Media Ethics, 22*(4), 262-279.

Hermida, A. (2010). Twittering the news: The emergence of ambient journalism. *Journalism practice, 4*(3), 297-308. https://doi.org/10.1080/17512781003640703

Hodges, L. W. (1986). Defining press responsibility: A functional approach. In D. Elliot (Ed.), *Responsible journalism* (13-31). Beverly Hills, CA: SAGE.

Holtz, S., & Havens, J. C. (2008). *Tactical transparency: How leaders can leverage social media to maximize value and build their brand*. San Francisco, CA: Jossey-Bass.

Keller, M. (2013, July 16). The Apple 'Kill List': What Your iPhone Doesn't Want You to Type. *The*

85

Daily Beast. Retrieved from https://www.thedailybeast.com/the-apple-kill-list-what-your-iphone-doesnt-want-you-to-type

Kitchin, R. (2017). Thinking critically about and researching algorithms. *Information, Communication & Society, 20*(1), 14-29. DOI: 10.1080/1369118X.2016.1154087

Kovach, B., & Rosenstiel, T. (2014). T*he elements of journalism: What newspeople should know and the public should expect (3rd* ed.). New York, NY: Three Rivers Press.

Kreutler, M. (2007). *Ein Code of Ethics für das FEJS. Eine vergleichende Untersuchung journalistischer Ethikkodizes aus 44 europäischen Ländern und Ausarbeitung eines Code of Ethics für das Forum for European Journalism Students* [A Code of Ethics for the FEjs. Comparative analysis of journalistic codes of ethics in 44 European countries and elaboration of a Code of Ethics for the Forum for European Journalism Students]. (Unpublished research paper). Technische Universität Dortmund: Dortmund.

Lange, B.P., & Woldt, R. (1995). The Results and Main Conclusions of the International Comparison. In J. Dries R. Woldt (Eds.), *The Role of Public Service Broadcasting in the Information Society* (pp. 463–503). Düsseldorf: European Institute for the Media.

Laitila, T. (1995). Journalistic codes of ethics. *European Journal of Communication*, 10, 527–544.

Lischka, J. A. (2017). A Badge of Honor? How The New York Times discredits President Trump's fake news accusations. *Journalism Studies*, 1-18. DOI: 10.1080/1461670X.2017.1375385

Lokot, T., & Diakopoulos, N. (2016). News Bots: Automating news and information dissemination on Twitter. *Digital Journalism, 4*(6), 682-699. https://doi.org/10.1080/21670811.2015.1081822

McBride, K., & Rosenstiel, T. (2014). *The new ethics of journalism: Principles for the 21st century*. Thousand Oaks, CA: CQ Press.

Mager, A. (2012). Algorithmic ideology: How capitalist society shapes search engines. *Information, Communication & Society, 15*(5), 769-787. https://doi.org/10.1080/1369118X.2012.676056

Marsden, C. T. (n.d.). Co- and Self-regulation in European Media and Internet Sectors: The Results of Oxford University's Study. In *Self-regulation, Co-regulation, State Regulation* (pp. 76-100). Retrieved from https://www.osce.org/fom/13844?download=true

McKelvey, F. R. (2014). Algorithmic media need algorithmic methods: Why publics matter. *Canadian Journal of Communication, 39*(4), 597-613 https://doi.org/10.22230/cjc.2014v39n4a2746

McQuail, D. (1992). *Media performance: Mass communication and the public interest*. London: SAGE.

McQuail, D. (1997). Accountability of media to society: Principles and means. *European Journal of Communication, 12*(4), 511-529. DOI:10.1177/0267323197012004004

McQuail, D. (2005). Publication in a free society: the problem of accountability. *Comunicação e Sociedade*, 7, 235-252. http://dx.doi.org/10.17231/comsoc.7(2005).1220

McQuail, D. (2006). Media roles in society. In N. Carpentier, P. Pruulmann-Vengerfeldt, K. Nordenstreng, M. Hartmann, P. Vihalemm & B. Cammaerts (Eds.), *Researching media, democracy and participation (*pp. 47-58).

McQuail, D. (2010). *McQuail's Mass Communication Theory* (6ᵗʰ ed.). London: SAGE Publications.

Meijer, A. (2009). Understanding modern transparency. *International Review of Administrative Sciences, 75*(2), 255-269. https://doi.org/10.1177/0020852309104175

Meyer, P. (2006). *The vanishing newspaper: Saving journalism in the information age*. Columbia, SC: University of Missouri Press.

Mikecz, R. (2012). Interviewing elites: Addressing methodological issues. *Qualitative inquiry, 18*(6), 482-493. DOI: 10.1177/1077800412442818

Möller, J., Trilling, D., Helberger, N., & van Es, B. (2018). Do not blame it on the algorithm: An empirical assessment of multiple recommender systems and their impact on content diversity. *Information, Communication & Society*, *21*(7), 959-977. https://doi.org/10.1080/1369118X.2018.1444076

Napoli, P. M. (2014). On automation in media industries: Integrating algorithmic media production into media industries scholarship. *Media Industries Journal, 1*(1), 33-38.

Napoli, P. M. (2015). Social media and the public interest: Governance of news platforms in the realm of individual and algorithmic gatekeepers. *Telecommunications Policy*, *39*(9), 751-760. https://doi.org/10.1016/j.telpol.2014.12.003

Neidhardt, F. (1994). Öffentlichkeit, öffentliche Meinung, soziale Bewegungen. Opladen: Westdeutscher verlag.

Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D. A. L., & Nielsen, R. K. (2017). *Reuters Institute Digital News Report 2017*. Retrieved from http://www.digitalnewsreport.org/survey/2017/overview-key-findings-2017/

Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D. A. L., & Nielsen, R. K. (2018). *Reuters Institute Digital News Report 2018*. Retrieved from http://www.digitalnewsreport.org/survey/2018/overview-key-findings-2018/

Newton, L. H., Hodges, L., & Keith, S. (2004). Accountability in the Professions: Accountability in Journalism. *Journal of Mass Media Ethics*, *19*(3/4), 166-190. DOI:10.1207/s15327728jmme1903&4_3

Nónio. (n.d.). *Perguntas e Respostas* [Questions and Answers]. Retrieved from
87

https://nonio.net/perguntas-e-respostas/

Ong, T. (2018, March 1). The European Commission wants Facebook, Google to remove terrorist content within an hour after being flagged**.** *The Verge.* Retrieved from https://www.theverge.com/2018/3/1/17066362/european-commission-eu-tech-illegal-terrorist-content-google-youtube-facebook

Owen, B.M., & Wildman, S.S. (1992). Traditional Models of Program Choice. In B.M. Owen & S.S. Wildman (Eds.), *Video Economics* (pp. 64-100). Cambridge, MA: Harvard University Press.

Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you.* London: Viking.

Paulino, F. O., & Oliveira, M. (2014). Ombudsmen in the Brazilian and Portuguese media: a reflection on the activities developed between 1989 and 2013. *Brazilian Journalism Research*, *10*(1), 58-75.

Picard, R. G. (2004). Environmental and market changes driving strategic planning in media firms. In Picard, R.G. (Ed.), *Strategic responses to media market changes - JIBS Research Report Series No. 2004-2* (pp. 1-17). Jönköping: Jönköping University.

Plaisance, P. L. (2007). Transparency: An assessment of the Kantian roots of a key element in media ethics practice. *Journal of Mass Media Ethics, 22*(2-3), 187-207. https://doi.org/10.1080/08900520701315855

Pool, I. D. S. (1983). *Technologies of Freedom*. Massachusetts, MA: Harvard University Press.

Pritchard, D., & Morgan, M. P. (1989). Impact of Ethics Codes on Judgements by Journalists: A Natural Experiment. *Journalism Quarterly*, *66*, 934-941.

Puppis, M. (2007). Media governance as a horizontal extension of media regulation: The importance of self-and co-regulation. *Communications, 32*(3), 330-336.

Puppis, M. (2009). Media Regulation in Small States. *International Communication Gazette, 71*(1-2), 7-17. https://doi.org/10.1177/1748048508097927

Reporters Without Borders. (n.d.a). *Portugal.* Retrieved from https://rsf.org/en/portugal

Reporters Without Borders. (n.d.b). *Netherlands.* Retrieved from https://rsf.org/en/netherlands

Santana-Pereira, J. (2016). The Portuguese media system and the normative roles of the media: a comparative view. *Análise Social*, 780-801.

Saurwein, F., Just, N., & Latzer, M. (2015). Governance of algorithms: options and limitations. *Info, 17*(6), 35-49. https://doi.org/10.1108/info-05-2015-0025

Schaffer, J., Giridhar, P., Jones, D., Höllerer, T., Abdelzaher, T., & O'Donovan, J. (2015). Proceedings of the 20th International Conference on Intelligent User Interfaces: Getting the message?: A study of explanation interfaces for microblog data analysis (pp. 345-356). New York, NY:

ACM. DOI: 10.1145/2678025.2701406

Schwanholz, J., & Graham T. (2018). Digital Transformation: New Opportunities and Challenges for Democracy?. In J. Schwanholz, T. Graham & P.T. Stoll (Eds.) *Managing Democracy in the Digital Age* (pp. 1-7). Springer

Sindicato dos Jornalistas. (1993, May 4). Código Deontológico dos Jornalistas, 1993. Retrieved from http://www.jornalistas.eu/?n=24

Sifium. (2017, February 28). Types of classification algorithms in Machine Learning. *Medium*. Retrieved from https://medium.com/@sifium/machine-learning-types-of-classification-9497bd4f2e14

Silverman, C. (2013). Corrections and Ethics. In K. McBride & T. Rosenstiel (Eds.), *The New Ethics of Journalism – Principles for the 21st Century* (pp. 151-161). Thousand Oaks, CA: Sage.

Singer-Vine, J., Soltani, A., & Valentino-DeVries, J. (2012, December 23). How the Journal Tested Prices and Deals Online. *The Wall Street Journal.* Retrieved from https://blogs.wsj.com/digits/2012/12/23/how-the-journal-tested-prices-and-deals-online/

Society of Professional Journalists. (2014). Code of Ethics. Retrieved from https://www.spj.org/pdf/spj-code-of-ethics.pdf

Starck, K. (2010). The News Ombudsman: Viable or Vanishing?. In T. Eberwein & D. Müller (Eds.) *Journalismus und Öffentlichkeit. VS Verlag für Sozialwissenschaften [Journalism and public. VS publishing house for social sciences]* (pp. 109-118). https://doi.org/10.1007/978-3-531-92006-1_8

Sternberg, J. (2018, January 12). On Facebook's nuclear bomb. *Adweek*. Retrieved from http://www.adweek.com/digital/on-facebooks-nuclear-bomb/

Sunstein, C. (2009). *Republic. Com 2.0.* New York, NY: Princeton UP.

Symonds, A. (2017, March 23). When a Headline Makes Headlines of Its Own. *The New York Times*. Retrieved from https://www.nytimes.com/2017/03/23/insider/headline-trump-time-interview.html

Tandoc Jr, E. C., & Maitra, J. (2017). News organizations' use of Native Videos on Facebook: Tweaking the journalistic field one algorithm change at a time. *New Media & Society*, *20*(5), 1679-1696. https://doi.org/10.1177/1461444817702398

Tapscott, D., & Ticoll, D. (2003). *The naked corporation*. New York, NY: The Free Press.

The world's most valuable resource is no longer oil, but data (2017, May 6), *The Economist*. Retrieved from https://www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource

Thurman, N., Schifferes, S., Fletcher, R., Newman, N., Hunt, S., & Schapals, A. K. (2016). Giving computers a nose for news: Exploring the limits of story detection and verification. *Digital Journalism, 4*(7), 838-848. https://doi.org/10.1080/21670811.2017.1298044

Traquina, N. (1995). Portuguese television: the politics of savage deregulation. *Media, Culture & Society, 17*(2), 223-238. https://doi.org/10.1177/016344395017002004

Tuck, C. (2017, March 15). What UK publishers can learn from Portugal in the fight against Google and Facebook. *Campaign*. Retrieved from https://www.campaignlive.co.uk/article/uk-publishers-learn-portugal-fight-against-google-facebook/1427425#O3DaAo3xZcWdgOf7.99

Van Cuilenburg, J. (1999). On competition, access and diversity in media, old and new: Some remarks for communications policy in the information age. *New media & society, 1*(2), 183-207. https://doi.org/10.1177/14614449922225555

Van Dijck, J., & Poell, T. (2013). Understanding social media logic. *Media and Communication, 1*(1), 2-14.

Van der Meiden, A. (1980). Publiek en media: de onmacht van de mondigheid' [Audience and Media: The Incapacity of the Maturity]. In A. van der Meiden (Ed.) *Media en maatschappelijke verantwoordelijkheid [Media and Social Responsibility]* (pp. 17-30). Amsterdam: Free University of Amsterdam.

Van der Wurff, R., & Schönbach, K. (2014). Audience Expectations of Media Accountability in the Netherlands. *Journalism Studies, 15*(2), 121-137. DOI: 10.1080/1461670X.2013.801679

Voltmer, K. (2010). The media, government accountability, and citizen engagement. *Public Sentinel: News Media & Governance Reform. Washington, DC: The World Bank*, 137-159.

Von Dohnanyi, J. (2003). *The Impact of Media Concentration on Professional Journalism*. Retrieved from http://www.osce.org/fom/13870?download=true

Von Krogh, T. (2007). Introduction. Media Accountability. A 60-year-old Compromise that Still Holds Promise for the Future. In T. von Krogh (Ed.), *Media Accountability Today... and Tomorrow Updating the Concept in Theory and Practice* (pp. 9-28). Göteborg: Livréna AB.

Von Krogh, T. (2012). Changing political attitudes towards media accountability in Sweden. *Central European Journal of Communication, 5*(2), 204-223.

Ward, S. J. (2014). The magical concept of transparency. In L. Zion & D. Craig (Eds.), *Ethics for digital journalists: Emerging best practices* (pp. 45-58). New York, NY: Routledge.

Warren, C. A. B. (2001). Qualitative interviewing. In J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 83–102). Thousand Oaks, CA: Sage. http://dx.doi.org.eur.idm.oclc.org/10.4135/9781412973588.n7

Watts, D. J., & Rothschild, D. M. (2017, December 5). *Don't blame the election of fake news. Blame it on the media*. Retrieved from https://www.cjr.org/analysis/fake-news-media-election-trump.php#

Webster, J. G. (2005). Beneath the veneer of fragmentation: Television audience polarization in a multichannel world. *Journal of Communication, 55*(2), 366–382. https://doi.org/10.1111/j.1460-2466.2005.tb02677.x

Weinberger, D. (2009, July 19). Transparency is the New Objectivity [Web log comment]. Retrieved from http://www.hyperorg.com/blogger/2009/07/19/transparency-is-the-new-objectivity/

Wendelin, M., Engelmann, I., & Neubarth, J. (2015). User Rankings and Journalistic News Selection: Comparing news values and topics. *Journalism Studies*, *18*(2), 135-153. DOI: 10.1080/1461670X.2015.1040892

White, A. (n.d.). *Fake News: Facebook and Matters of Fact in the Post-Truth Era.* Retrieved from http://ethicaljournalismnetwork.org/resources/publications/ethics-in-the-news/fake-news

Wiedemann, V (1992). *Freiwillige Selbstkontrolle der Presse [Voluntary self-control of the press].* Gütersloh: Verlag Bertelsmann-Stiftung.

Witschge, T., & Nygren, G. (2009). Journalistic Work: a profession under pressure?. *Journal of Media Business Studies, 6*(1), 37-59. DOI: 10.1080/16522354.2009.11073478

Woolley, S.C., & Guilbeault, D.R. (2017, June 19). *Computational Propaganda Research Project. Computational Propaganda in the United States of America: Manufacturing Consensus Online. Working Paper N. 2015.5.* Retrieved from http://comprop.oii.ox.ac.uk/wp-content/uploads/sites/89/2017/06/Comprop-USA.pdf

World Wide Web Foundation. (2017, July). Algorithmic Accountability: Applying the concept to different country contexts. Retrieved from http://webfoundation.org/docs/2017/07/Algorithms_Report_WF.pdf

You, J., Zhang, B., & Zhang, L. (2017). Who Captures the Power of the Pen?. *The Review of Financial Studies, 31*(1), 43-96. https://doi.org/10.1093/rfs/hhx055

Zuckerberg, M. (2018, January 12). One of our big focus areas for 2018 is making sure the time we all spend on Facebook is time well spent [Facebook post]. Retrieved from https://www.facebook.com/zuck/posts/10104413015393571

Appendix A

Operationalization and Interview guide (Theoretically-driven operationalization)

Theoretical mapping (Portugal/The Netherlands):

Indirect uses: Social media

1. **Algorithmic Accountability** (Probes: journalists should be held accountable for the use of algorithms)

2. **Political frame** (Probes: instruments of media accountability must be provided by laws/regulation)

3. **Professional frame** (Probes: instruments of media accountability must be created by journalists themselves)

4. **Algorithmic Transparency** (probes: journalists need to be more transparent in relation to the use of algorithms)

Direct uses: Data-analytic tools, automated content, news bots for distribution of content, A/B testing of digital headlines

1. **Algorithmic Accountability** (Probes: journalists should be held accountable for the use of algorithms)

2. **Political frame** (Probes: instruments of media accountability must be provided by laws/regulation)

3. **Professional frame** (Probes: instruments of media accountability must be created by journalists themselves)

4. **Algorithmic Transparency** (probes: journalists need to be more transparent in relation to the use of algorithms)

Interview guide

Good morning! First of all, thank you so much for participating in this research about the impact of algorithms in journalism. Can I ask you first to shortly introduce yourself? So, your name, in which company do you work, your job role, what are your main tasks, your area of expertise etc.

(Introduction/General)

Journalists are more and more using new technologies in journalism, including the use of algorithms…

- **Do you and/or your organization use algorithms on a daily basis? / Are you aware that journalists use algorithms in their work?**
- **If so? In what ways? (Probe question: social media, data-driven insights – analytics' tools/news bots to distribute news content/A/B testing of digital headlines) (Probe question)**
- Do you consider that algorithms are impacting journalism in Portugal/The Netherlands?
- Do you think journalists should have ethical concerns concerning the use of algorithms?
- Why?

(Indirect use: social media)

- Are you familiar with social media in a professional setting? What do you think about them?
- What do you think about the use of these platforms to distribute content?
- Do you know that they use algorithms?
- Does their use raise ethical questions?
- If so, do you think they should be regulated?
- Who should hold them accountable? (Probes: frames of accountability)
- Do audiences should have ways of criticizing the work of journalists in relation to the use of their use of these platforms?
- **Should governments hold journalists accountable for the use of social media in their work? (Probe question)**
- **If so, in what ways (Probes: laws/regulation)**
- **Should journalists hold themselves accountable for the use of these platforms? (Probe question)**
- **If so, in what ways? (Probes: press councils, codes of conduct, codes of ethics, commentary boxes, blogs, ombudsman, etc.)**
- **Do you think that these platforms and journalists should be more transparent concerning algorithms? (Probe question)**
- **If so, in what ways? (Probes: transparency reports, FAQs, disclaimer messages, signals that the article had the influence of algorithms in its production, ombudsman)**
- In general, who should dictate the rules on social media?

(Direct use: automated journalism/Data-driven insights – analytics' tools/news bots to distribute news content/A/B testing of digital headlines)

- **Do you also use algorithms in your company's website? / Are you aware that journalists use algorithms in their own websites? (Probe question)**
- **In what ways? (Probes: automated journalism/data-driven insights - analytics tools/news bots to distribute news content/A/B testing of digital headlines)**
- Do you think these uses raise ethical questions concerning the role of journalism in society?
- If so, do you think they should be regulated?
- Who should hold them accountable? (Probes: frames of accountability)
- Do audiences should have ways of criticizing the use of algorithms in journalism?
- **Should governments hold journalists accountable for the use of algorithmic tools in their work? (Probe question)**
- **If so, in what ways (Probes: laws/regulation)**
- **Should journalists hold themselves accountable for the use of algorithms directly in their work? (Probe question)**
- **If so, in what ways? (Probes: press councils, codes of conduct, codes of ethics, commentary boxes, blogs, ombudsman, etc.)**
- **Do you think journalists should be more transparent in their direct use of algorithms in their own websites? (Probe question)**
- **If so, in what ways? (Probes: transparency reports, FAQs, disclaimer messages, signals that the article had the influence of algorithms in its production, ombudsman)**

To wrap up….

- **Do journalists need to be hold accountable for the use of algorithms in their work? (Probe question)**
- How do you feel if journalists are being held accountable for the use of algorithms?
- For whom journalists should be held accountable for the use of algorithms? (Probe)
- Would you say that algorithms have a big impact in the journalistic landscape in Portugal/The Netherlands?
- Is there something you want to add?

94

Appendix B

Memo

The most prominent codes on the preliminary coding:

Algorithms as tools that support the work of journalists
This code explains the assumption that algorithms and algorithmic tools are a tool as every technological tool, which helps the work of journalists.

Algorithms should be a tool which helps the work, must not replace the profession
This code explains the assumption that algorithms and algorithmic tools are a tool as every technological tool, which helps the work of journalists. In this way, it considers that journalists should not rely solely on the tool, they have to always abide by journalistic principles.

Journalists already explain to audiences the implications of using social media to consume information (existing self-regulation of using algorithmic controlled environments)
Traditional media companies already explain to audiences how social media work, how the information they share is processed, the questions about privacy issues.

Benefits of using algorithms in journalism
Considers the expressed benefits of using algorithms in journalism. For example, fast, efficient, more direct to the target audience, improve the work of journalists, the case of Panama Papers, allows to save time and money when testing headlines.

Distinction between traditional news media content and non-traditional news media content on social media as (self-regulation on social media?)
Avows for a clear separation between content that is produced by news media organizations and non-news media organizations in social media platforms. This separation could be expressed in disclaimer messages such as "This is not a news media website".

Disclaimer messages as transparency mechanisms on news media websites (self-regulation tool?)
Reasoning about the inclusion of disclaimer messages on news media websites informing audiences that they use algorithms. For example, in 'Terms and Conditions' pages.

Editorial decision is foremost when dealing with algorithms (self-regulation tool?)
Considering that when using algorithmic tools, for example data insights about articles, article metrics and other algorithmic inputs, the editorial criteria made by a human always prevails when deciding on what topic to write about, to publish, or to highlight in a news media homepage. Likewise, when doing A/B testing of digital headlines, the editor criteria is always the most important factor when making a decision. The decisions that are made based on the algorithms inputs are editorial decisions, aligned with editorial matrix and values of the newspaper. This tool can be described as being already implemented in newsrooms: "internal self-regulation".

Ethical codes could have a chapter dedicated to the use of digital tools (self-regulation tools)
Hypothesizing about the possibility of ethical codes to include the use of digital tools in journalistic profession, which includes the use of algorithms, is deemed appropriate.

Problematizing a possible excessive regulation of algorithms in journalism
Contending that excessive regulation on the use of algorithms in journalism can harm freedom of expression, freedom of the press and access to information. For example, self-regulation on ethical codes can harm freedom of expression.

Journalists are accountable for themselves in using algorithms
When using algorithms, journalists should keep themselves accountable in order to dignify the profession and the class. Likewise, the need to be trustworthy.

Governments, journalists and/or social media should help explain audiences how algorithms are used in news production
Advocating for the role of governments and/or journalists and/or social media platforms in explaining to audiences the impact of algorithms in news production, distribution and/or consumption.

Problematizing the algorithm as a result of a programming process whose intentions aren't known
Reasoning about the fact that an algorithm is the result of a programming process whose intentions are not disclosed. Likewise, when built it has a life on its own. For example, the purposes might be to sell products.

Reinforcement of existing journalistic principles concerning the use of algorithms in ethical codes
It contends that if the uses of algorithms are included in ethical codes it must be done on the basis of reinforcing the already existing journalistic principles of newsworthiness, validation of information, confirmation of sources etc.

The criticism towards the use of algorithms in journalism can be made in the already existing instruments of accountability
The criticism towards the use of algorithms in journalism should be made via the tools that already exist, such as letters to editor. It is affirmed that there is no need to create new instruments to hold journalists accountable for the specific use of algorithms.

Transparency measures can harm freedom of the press
Assesses a possible negative impact of transparency measures on the freedom of the press, specifically the protection of sources.

Indirect impact of algorithmic controlled environments in journalism
Reference to social media platforms and search engines as places where news media content and non-media content coexist. The impact is related to the fact that these environments do not rely on editorial and journalistic criteria, which creates an unfair competition for news media content.

Possible problems related with the use of algorithms in non-news media environments
Expressing the fact that social media platforms and search engines use algorithms, which can harm media diversity and information, and the truthfulness of news media articles. In the same way, they can subvert the public sphere.

Social media could allow access to the source code as a mechanism of transparency (self-regulation mechanism)

96

ERC can intervene on news media content that is distributed on social media platforms if they do not comply with matters, such as national security or children's rights (already existing government mechanism on the use of social media by journalists themselves)

Negative impact of non-news media content (that exists on social media and search engines) on journalism
Mentioning the impact of media content produced by non-journalistic sources which impact not only the credibility of journalism but also compete in the search for with advertising profits and gains.

Possible problems related with the use of algorithms in non-news media environments
The use of algorithms in non-news media environments might harm media diversity, the public sphere, truthfulness of information, as well as can foster more easily the spread of fake news, falsities and defamation.

Social media self-regulation already exists
Mechanisms that enhance social media platforms accountability are currently in place, such as codes of conduct, fact-checkers, blocking of pages that do not comply with these platforms' rules as well as general terms and conditions.

23 May

91 codes into 8 themes

Overall impact of algorithms in journalism
Algorithmic accountability in general
Algorithmic power of social media
Social media and the impact on journalism
Algorithmic transparency
Audiences and the use of algorithmic-controlled environments
Indirect use of algorithms: solutions and practices
Direct use of algorithms: solutions and practices

23 May (evening)

13 themes

Algorithmic accountability in journalism
Algorihtmic power of social media
Algorithmic transparency: direct use
Algorithmic transparency: indirect use
Audiences and algorithmic controlled environments
Direct use of algorithms: General and outsider
Direct use of algorithms: Governmental frame
Direct use of algorithms: Professional frame
Impact of algorithms on journalism
Indirect use of algorithms: General
Indirect use of algorithms: Governmental frame

97

Indirect use of algorithms: Professional frame
Social media and the impact on journalism

25 May

96 codes into 13 themes

Added five more codes:

- Critique of the influence of economic power in journalism (Algorithmic accountability theme)

- Regulation of online journalism as a possible area of intervention (Direct use of algorithms: governmental frame)

- Criticism from audiences might be difficult to happen (Direct use: professional frame)

- Internal self-regulation (Direct use: professional frame)

- Internal transparency (Direct use: professional frame) - <u>refined</u>

- There is no need for transparency when algorithms help spot topics to write about (Algorithmic transparency: direct use (mechanisms))

<u>Improved the labeling of the codes and themes:</u>

Algorithmic accountability
Considerations related to the primary layer of the broader discussion if journalists should or should not be accountable for the use of algorithms.

Algorithmic power of social media
Codes which acknowledge the general impact of social media on information consumption.

Algorithmic transparency: direct use (mechanisms)
Includes all the codes related with the transparency mechanisms that could be implemented concerning the direct use of algorithms in journalism.

Algorithmic transparency: indirect use (mechanisms)
Includes all the codes related with the transparency mechanisms that could be implemented concerning the indirect use of algorithms in journalism.

Audiences and the use of algorithmically-controlled environments
Assesses the uses that citizens make of digital media platforms and the criticism over their uses.

Direct use: General (and outsider code)
General considerations and impressions made about the direct use of algorithms by journalists. Including an outsider opinion of one way of holding journalists accountable for the use of algorithms, which does not fit both governmental and professional frame.

Direct use: Governmental frame
In which ways governments can make journalists accountable for the direct use of algorithms.

Direct use: Professional frame
In which ways self-regulation can hold journalists accountable for the direct use of algorithms.

Impact of algorithms on journalism
This theme assesses the general considerations about the impact of algorithms in journalism.

Indirect use: General
General considerations and impressions made about the indirect use of algorithms by journalists.

Indirect use: Governmental frame
In which ways governments can make journalists accountable for the indirect use of algorithms.

Indirect use: Professional frame
In which ways self-regulation can hold journalists accountable for the direct use of algorithms.

Social media and the impact on journalism
Relationship between social media and journalism nowadays. The uses and problematizing on the uses of social media by journalists.

26 May

97 codes (Portugal) - 13 themes

Added one more:

- Disclaimer messages on social media (Algorithmic transparency: indirect use (mechanisms)

133 codes - 13 themes

36 new codes from The Netherlands

27 May

186 codes - 13 themes

30 May

186 codes - 12 themes - 3 sub-themes

2 new themes:

Direct use of algorithms: Market frame
Comprises unexpected considerations and suggestions of mechanisms within the market frame.

Direct/Indirect use of algorithms: Public responsibility frame
Comprises unexpected considerations and suggestions of mechanisms within the public responsibility frame.

08 June:

15 themes: 7 themes + 5 sub-themes + 3 emergent themes

<u>7 main themes:</u>

Algorithmic accountability

Direct use: Governmental frame

Direct use: Professional frame

Indirect use: Governmental frame

Indirect use: Professional frame

Algorithmic transparency: direct use

Algorithmic transparency: indirect use

<u>5 sub-themes:</u>

Impact of algorithms on journalism

Algorithmic power of social media

Social media and the impact on journalism

Indirect use: General

Direct use: General

<u>3 emergent themes:</u>

Direct use of algorithms: Market frame
Comprises unexpected considerations and suggestions of mechanisms within the market frame.

Direct/Indirect use of algorithms: Public responsibility frame
Comprises unexpected considerations and suggestions of mechanisms within the public responsibility frame.

Audiences and the use of algorithmically-controlled environments
Assesses the uses that citizens make of digital media platforms and the criticism over their uses.

Appendix C

Portuguese interviews' summaries

Paulo Martins

Profile: Paulo Martins is a Portuguese journalist from 35 years, including 16 as a journalist in one of the oldest and well-known Portuguese newspapers: *Jornal de Notícias.* He is a lecturer and researcher at ISCSP, a unit from University of Lisbon, on the topic of journalism ethics and deontology. Paulo is an elected member of the *Commissão da Carteira Profissional de Jornalista,* an organisation that issues press cards and act as a vigilant of the compliance with the ethical principles and code of conduct. In addition, Paulo Martins manages a magazine founded by the Press Club, *Jornalismo e Jornalistas* that addresses subjects concerning ethics and deontology in journalism. Since 2014, he owns a PhD in journalism ethics, specifically focused on the conflict between the right of the public to information and personality rights.

Interview summary: Paulo Martins expertise concerns ethics and deontology. He is aware that the Portuguese media are using algorithms in journalism, particularly the use of social media (indirect) and the use of analytic tools controlled by algorithms, used by journalists (direct). Therefore, he contends that their widespread use raises ethical questions concerning the public interest and the more commercial orientation of news production. For example, due to the use of data analytics to predict audiences' tastes and preferences. He argues that both regulation and self-regulation could be ways of addressing the issue, specifically in the direct use of algorithms, with more emphasis on self-regulation. On the contrary, he affirms that the regulation of social media is impossible and mechanisms of accountability should be developed by these companies themselves. In the same way, as newspapers have codes of conduct the idea of having a code of conduct on social media is appealing. Furthermore, transparency is deemed an adequate path, yet Paulo doubts how such measures could be effectively implemented given the humongous amount of data and information, especially on Facebook. In both uses of algorithms, he also explains that journalists should abide by the existing codes of conduct and ethics as they remain the same, using or not algorithms. However, in the case of A/B testing of headlines he admits that if their use crashes with primordial values of citizens, then its use has to be regulated. In other words, although Paulo admits that the regulatory framework could eventually have a nuanced approach concerning the use of algorithms,

there is no need to adapt codes of ethics and codes to algorithms. "So, the problem is not technology, the problem is to comply with rules that have existed for years and that are more challenging today', he affirms. As with social media, he holds that transparency is always an adequate path to raise the credibility of journalists. For example, the use of blogs whereby journalists explain how they use algorithms could be a reasonable approach. Overall, Paulo Martins considers that journalist's mission in society stays the same, and technology such as the use of algorithms should only be a mean to that mission.

Manuel Molinos

<u>Profile</u>: Manuel Molinos is subdirector of *Jornal de Notícias*, one of the oldest newspapers in Portugal, with a strong focus on the digital edition. He works in the newspaper since 2000 when he started as online editor-in-chief. He is the founder of one the first digital newspapers in Portugal – Diário do Norte – which sparked his interest for digital journalism. Molinos also worked in the printing press, in Comércio do Porto, and had a brief involvement in radio, television and public relations. He is involved with algorithmic tools on a daily basis, mainly social media (indirect use), data-analytic tools and A/B testing of digital headlines (direct use).

<u>Interview summary</u>: Manuel Molinos, and journalists from *Jornal de Notícias*, are aware that algorithms exist, and the digital edition uses them on a daily basis. The newspaper use of several social media is twofold: generate traffic and engage with communities and readers. Concerning the direct use of algorithms, he highlights the use of data-analytics tools and A/B testing of digital headlines. For example, tools that give insights on how many people are clicking in the articles, in which devices, tracking the user behavior and time spent on each article and tools that help scout upcoming topics. Although he believes that algorithmic controlled tools can have a positive impact in journalism, the human interaction and editorial criteria must always be foremost in handling their use. Hence, he acknowledges that journalists should have ethical concerns about the use of algorithms in their work. He advocates the creation of an international organization that could certify these tools. In this sense, algorithms behind these instruments would be designed in multidisciplinary teams, including journalists, according to news values and ethical principles. By this token, he believes that regulation and self-regulation might not be the most adequate ways of holding journalists accountable for the use of algorithms. Concerning transparency, Molinos holds that it is an adequate path to algorithmic accountability. For example, disclosing the use of algorithmic tools by journalists in the Terms and Conditions' sections of the digital newspaper could be an option. Nonetheless, he defends that there is no need to be transparent about the use of these tools since the human choice and criteria is always applied. Furthermore, he affirms that overall, audiences and journalists' themselves in Portugal might not be ready to address the topic of algorithmic accountability up to the present time. One reason is related to the fact that the media market is very competitive. Also, addressing the topic is not a priority for the newspaper by now. Thirdly, the journalistic class is still aged, which hinders the shift to digital to some extent. For example, he explains that in general journalists know what is 'clickbait' but they don't know about

103

the existence of algorithmic tools which can help them in their work and routines.

In relation to the use of social media he supports that, on the whole, governments could intervene given the recent controversies, for example the Russian interference in the American elections. But, he believes that there needs to be more reflection about the issue as we are still in a "period of disgust". In what concerns the use of social media by journalists he stresses that Facebook is a commercial product and the decision to be in the platform is ultimately from journalists themselves. In this way, he avows the existence of some media cynicism towards these platforms: "It's a bit cynical, let's put it this way, so much criticism of the media towards Facebook when Facebook helped a lot of media isn't it?!". As with every tool, the use of social media comes with ups and downs in journalism and ultimately a self-regulation mechanism would be that every media quit the platform, he explains. "It would be fair to everyone but obviously this is not going to happen", he conveys. Transparency on social media could help raise the credibility of journalism. But Molinos stresses that mechanisms of transparency, such as reports, would be highly improbable, as they can harm their business models.

Rute Sousa Vasco

Profile: Rute Sousa Vasco is a Portuguese journalist and entrepreneur. She owns a independent media production company – Madre Media - which has a few media projects. Two of the most important are *SAPO24*, a news media website from SAPO, the most well-known Portuguese portal (similar to Yahoo), and a TV programme about entrepreneurship and innovation, *Next Big Idea*. As journalist and editor of the website SAPO24, she deals with algorithms on a daily basis, mainly tools related with data insights and trending topics, social media and some algorithmic features on SAPO24.

Interview summary: Rute Vasco works regularly with algorithmic tools as a journalist and editor at *SAPO24*, an online news website. Although she is aware of the dangers of using Feedly or FlipBoard (for example the danger of having content curated by an algorithm), she acknowledges that these tools can benefit journalists in their daily work, bring more efficiency and save time finding the news and topics to write about. Also, the can help organize huge amounts of information in categories. She explains that SAPO24 has an algorithmic recommendation tool - *the most popular news* –, and one or two widgets which use algorithms, but all the other editorial choices in the homepage are human. According to her opinion, the use of algorithmic tools raises ethical questions. For example, the fact that algorithms do not have emotions (yet), and the capacity to relate and contextualize. They also do not know how to deal with sensitive news and, most importantly, "it's a matter of trust in journalists" … "with all the mistakes and errors that humans might make". Because of this, she contends that journalists should naturally be hold accountable for the use of algorithms. "Human accountability is foremost. Everything is journalist's responsibility versus her/his audience, I don't see machines doing this, in any way.", she affirms. Yet, she believes that this is already happening in the most prestigious news media outlets. Concerning the use of social media by journalists, Rute considers that nowadays they are more beneficial from a marketing and brand awareness perspective than as content distributors. "We scroll through our timeline and click on very few (….) we see a headline, look at the image and we think we know everything". Concerning the use of social media by journalists, she reasons that only these platforms can be ultimately accountable for the use of algorithms as journalists do not have access to the algorithm. She compares these platforms with the health industry, "they are an absolutely sensible topic". Although there are private health entities they have to obey to certain rules and regulations. Likewise, social media should abide by certain rules like Advertising Codes and she

105

suggests that this regulation and monitoring could be done by the Regulation Authority for the Media. Ideally, this commission would involve journalists, psychologists, advertisers and lawyers for example. Moreover, given the recent controversies with the improper use of data from Facebook users, transparency is deemed necessary. Concerning the governmental intervention, this should be avoided, but it could exist some sort of monitoring of the work of journalists on social media. For example, the Regulatory Authority for the Media could evaluate periodically the content that is published by news media outlets on social media, in light with journalistic values, norms and codes of conduct. For the direct use of algorithms by journalists, Rute believes that the most referenced news media outlets have some sort of self-regulation put in place, mainly journalistic reflection and the editorial criteria which is never subverted by the algorithm. "It is not possible to hold machines accountable, people make people accountable, I don't see any other way", expresses Rute Vasco. Specifically related to journalists and the use of social media, she holds that Codes of Conduct and the Ethical Codes could be an instrument of action, for example on the use of social media as sources of information and the overall impact of these platforms on the journalistic production. Likewise, this should be a fundamental part of journalists' training. "All journalists that enter the profession must know that this [social media] is something that must be on their radar, that they understand what this entails and that they will be scrutinized accordingly", Rute explains. Yet, because of the strong competition in the media market it is unlikely that the class will demand such transformations. Therefore, this hinders the self-regulation to a great extent. She considers that transparency in this case is more difficult to put in place. "For example, if my source is a social media platform I will let users know in the article which social media was the source". But the use of disclaimer messages such as *powered by an algorithm* would likely pass unnoticed. "People don't notice. This is not a current concern for them, unless you have this concern and want to know where this information comes from (…) I think this makes sense, but if it has a mainstream impact… I don't think so", declares Rute Vasco.

João Pedro Figueiredo

Profile: João Pedro Figueiredo is a Portuguese lawyer with specialization in news media laws from 20 years. He is currently a lawyer at RTP - Portuguese public service broadcaster – and member of the Regulatory Council at the Portuguese Regulatory Authority for the Media. He participated in the creation of radio, TV and press laws as well as the *Status of Journalist.* João Pedro Figueiredo is the co-author of some books concerning news media legislation and participates regularly on conferences, seminars and other public events related with the topic.

Interview summary: João Pedro Figueiredo is not aware of the direct use of algorithms by journalists. But he contends the current impact of algorithmic controlled environments at the expense of journalism. In other words, he explains that the fact that algorithms are used beyond the scope of news media, they pose a great threat to the works of journalists. For example, he explicitly mentions Facebook and Google, which are not considered news media, yet gather ads revenue often based on *clickbait* and not editorial criteria. According to Figueiredo, they divert ads revenue to these companies instead of media companies. The lawyer considers that algorithms have ethical implications on the role of journalism in society. Firstly, they are mainly based on commercial purposes. That is, an algorithm that functions on the basis of people's preferences cannot fulfil the mission of news media. Also, they collide with values such as media diversity and pluralism, and truthfulness and accuracy of information. As they are, "they are subverting the public sphere", he considers. Yet, if optimized they can constitute useful tools to help citizens make their choices. In this sense, he defends the creation of an algorithm with social concerns, such as diversity and accuracy of information. Concerning the use of social media by journalists themselves, Figueiredo explains that commercial interests must not prevail in the creation of news. "Journalists must have the notion of public interest in mind and value the news for the sake of the news value and not for the commercial value that might be associated with it". The first step to accountability is the self-regulation of the platforms themselves, as well as more transparency. For example, Figueiredo suggests that they could make themselves accountable by giving access to the source code so that they can be monitored. The lawyer mentions their recent efforts to self-regulate themselves, for example the use of fact-checkers and to give feedback when users post certain types of publications that are not aligned with the terms and. Yet, he points out that this self-regulation might not be enough in the future and a tighter State intervention can be a second option. Currently, the bottom line is to know if the self-regulation is enough to make sure that

these platforms protect the public interest. Academic studies are having an important role in this regard, yet there is no definitive answer. João Pedro was not aware of the direct uses of algorithms. After half an hour of phone interview he had to interrupt due to professional reasons.

Catarina Mascarenhas

Profile: Catarina Mascarenhas is a Portuguese lawer since 1995. She currently works in Vieira de Almeida, a law firm based in Lisbon, where she gives advice on media regulation, media contracts and copyright matters. For example, she is involved on the debate about the possibility of considering platforms such as Google or social media traditional mass media companies. In the past she worked at the Regulatory Authority for the Media in matters related with the right of reply and lawsuits against the press. Additionally, she went to a telecommunications company, where she accompanied the liberalization of the telecommunications market. She expressed her interest in algorithms from a research perspective, as she acknowledges that from a professional point of view, the topic is not widely addressed in a broader sense in Portugal.

Interview summary: Catarina considers that algorithms are impacting journalism in Portugal, yet the topic is not acknowledged by journalists themselves. "Sooner or later this will happen specially if France can promote what it has been developing in this regard, extrapolating for the European level", she contends. She has doubts about the problem of algorithms if all the journalistic basic norms and rules are respected in principle. But she thinks they should be hold accountable for their use, as any other topic related with their job. To wit, she believes that if journalists validate the choices that are made by an algorithm then it does not constitute a bigger problem than any other problem that might arise. "[the algorithm] cannot cease to be a tool to support the profession, but it cannot replace the profession. Likewise, she recognizes the use of social media by journalists should be based on the same principle. "Adding regulation or legislation might not always solve the problem", considers Catarina. The actual existence of codes of conduct for what can and cannot constitute a legitimate page on social media, holds these platforms and also journalists accountable. This protects them from the possible consequences of certain types of news. On one hand, the uses of a certain type of content on social media has to go through a validation process from journalists. On the other hand, there needs to be more media literacy from audiences to distinguish journalistic content from non-journalistic one. In this regard, some sort of transparency (for example disclaimer messages alluding to content from non-journalistic sources) could work out as a mechanism close to self-regulation. But Catarina also mentions the work of journalists to inform audiences about the impact and functioning of social media. She admits that the audiences' criticism towards the use of social media by journalists can be disclosed but the existing accountability instruments are enough (for example: letters to the editor). "More regulation would

kill everything, including the traditional mass media." According to Catarina transparency might not be needed. In the same way that we don't know what criteria is behind the news selection process in the printing press, she asks why this would be different when the algorithms help journalists decide what is newsworthy. "We trust in journalism". She admits that in some cases some transparency might be adequate, for example using disclaimer messages in the website Terms and Conditions explaining that journalists use algorithmic tools. But, once again, she questions the role of audiences in processing and understanding this information. Above all, the editorial criteria is of utmost importance and should function as a self-regulation mechanism: "if this ends this is the death [of journalism]". Concerning the direct use of algorithms by journalists, she recognizes the benefits of these tools, such as speed and efficiency. As an illustration, she mentions the Panama Papers investigation. She questions: "would this be possible without these tools? Difficult." But she affirms that there always needs to be the professionals' work on top of these tools. Furthermore, she criticizes the excessive blame on algorithms whereas, at the same time, journalists are being freed of responsibility in the topic. As a mechanism of self-regulation, she admits the inclusion of principles related with the use of digital tools in journalism, yet this can damage freedom of expression which is considered "vital". Furthermore, this information could be based on the already existing principles such as "news values", "the confirmation of sources", "everything that already exists", she adds. Finally, Catarina argues that social media platforms and search engines should not be considered traditional mass media as this could "kill the internet" and "information". "This would put everyone on the same boat and I think this is not even fair for journalists", she expresses. Overall, journalists should not be blamed for the downsides and the negativity associated with algorithms, as audiences also need to be prepared for this reality. Hence, more education for the media is needed from governments, journalists and the platforms themselves.

Appendix D

CONSENT REQUEST FOR PARTICIPATING IN RESEARCH

FOR QUESTIONS ABOUT THE STUDY, CONTACT:
Catarina Osório,
Ijsclubstraat, 19 A3 - 3061GR Rotterdam, The Netherlands
449110cd@eur.nl
+31 (0) 6 82 83 91 55/+351 91 888 31 34

DESCRIPTION
You are invited to participate in a research about media accountability in the algorithmic age. The purpose of the study is to understand how journalists in Portugal and in The Netherlands can be held accountable for publishing their content in algorithmically controlled environments.

Your acceptance to participate in this study means that you accept to be interviewed. In general terms,
- the questions of the interview will be related to the actual role of the media in society, the use of algorithms by journalists and possible (future) instruments of accountability concerning algorithms.
- my analysis will focus on how Portugal and The Netherlands are addressing the issue of algorithms in journalism and to further the urgent discussion about the possible regulations on the matter.

Unless you prefer that no recordings are made, I will use an audio/video recorder for the interview.

You are always free not to answer any particular question, and/or stop participating at any point.

RISKS AND BENEFITS
A. As far as I can tell, there are no risks associated with participating in this research. Yet, you are free to decide whether I should use or not your name or other identifying information [such as the role or the name of the company you work for] in the study. If you prefer, I will make sure that you cannot be identified, by pseudonym, general identification or only mentioning age and gender, etc.

B. I am aware that the possibility of identifying the people who participate in this study may involve risks for the participant's mainly concerning professional relations. For that reason—unless you prefer to be identified fully (first name, last name, occupation, etc.)—I will not keep any information that may lead to the identification of those involved in the study. I will only pseudonyms to identify participants.

I will use the material from the interviews and my observation exclusively for academic work, such as further research, academic meetings and publications.

TIME INVOLVEMENT
Your participation in this study will take approximately 60 minutes. You may interrupt your participation at any time.

PAYMENTS
There will be no monetary compensation for your participation.

PARTICIPANTS' RIGHTS

If you have decided to accept to participate in this project, please understand your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. If you prefer, your identity will be made known in all written data resulting from the study. Otherwise, your individual privacy will be maintained in all published and written data resulting from the study.

CONTACTS AND QUESTIONS
If you have questions about your rights as a study participant or are dissatisfied at any time with any aspect of this study, you may contact –anonymously, if you wish– Matthijs Leendertse in the Department of Media and Communication, Erasmus School of History, Culture and Communication, Erasmus University Rotterdam. Email: leendertse@eshcc.eur.nl.

SIGNING THE CONSENT FORM
If you sign this consent form, your signature will be the only documentation of your identity. Thus, you DO NOT NEED to sign this form. In order to minimize risks and protect your identity, you may prefer to consent orally. Your oral consent is sufficient.

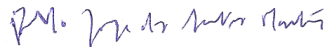I give consent to be audio/videotaped during this study:

PAULO MARTINS   _(signature)_   5/4/2018
Name   Signature   Date

I prefer my identity to be revealed in all written data resulting from this study

PAULO MARTINS   _(signature)_   5/4/2018
Name   Signature   Date

This copy of the consent form is for you to keep.