London School of Economics and Political Science

Digital literacy in theory and practice:

Learning from how experts and advocates engage

in civic life

Gianfranco Polizzi

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Abstract

This thesis explores the intersection of digital literacy and civic engagement. To do so, it conceptualizes digital literacy as functional and critical skills and knowledge about the internet that are contextually situated. Drawing on utopian studies and political theory, it conceptualizes *critical* digital literacy, in particular, as incorporating users' utopian/dystopian imaginaries of society in the digital age. Such an approach prescribes that critical digital literacy relies on understanding both the potentials and the limitations of the internet for civic life. I argue that applying utopianism/dystopianism to critical digital literacy enables us to disentangle users' imaginaries of the internet from their imaginaries of civic life, which align with different ideologies.

With this novel approach to digital literacy in mind, this study focuses on digital experts (e.g., information, IT and media professionals) and civic advocates (e.g., community councillors, political party candidates, activists) in the United Kingdom to address whether and how civic engagement provides opportunities for learning digital literacy, and whether and how the latter, in turn, facilitates civic engagement. To answer these questions, I employ a mixed qualitative methodology, using semi-structured interviews, enhanced by think aloud and diary methods, followed by thematic analysis, enhanced by elements of critical discourse analysis.

While media literacy research has subordinated functional to critical digital literacy, my fieldwork revealed that the latter can only be sophisticated provided it relies on functional digital literacy. Furthermore, this study found that civic engagement, from reading news and discussing politics to campaigning, provides opportunities for learning digital literacy both informally through social interaction, information seeking and experience of using digital technologies, and formally through digital training. In turn, digital literacy facilitates civic engagement in ways that are instrumental, trustful and strategic. More specifically, digital literacy enables both experts and advocates to use digital technologies as practical tools for civic purposes. It enhances their trust in

accredited media outlets while overcoming distrust in internet corporations. Finally, it enables them to strategically overcome bias, misinformation and their own privacy concerns as well as to navigate the internet's civic potentials and limitations. On the basis of how experts and advocates understand the digital environment and engage in civic life, I argue that constructing both utopian and dystopian imaginaries of the internet, but deploying one or the other, makes civic engagement contradictory. By contrast, deploying utopian *and* dystopian imaginaries is crucial to pursuing civic opportunities online while overcoming the limitations of the digital environment.

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Chapter 1 – Introduction

1.1 Background

We live in an age that is – at least in the West (e.g., Europe and North America) – increasingly mediated by digital technologies. When it comes to civic life, understood as both community and political life, the internet has become an integral part of how we participate in society, from discussing socio-political matters to signing petitions and exchanging information about protest events. But while the internet provides us with opportunities for participating in civic life, recent elections in the West, including the 2016 presidential election in the United States and the Brexit referendum in the United Kingdom, have signalled the extent to which it can also be a cause for concern. This has been the case particularly in relation to misinformation, especially when the latter is created and shared in order to cause harm for political or economic gain (Wardle & Derakhshan, 2017).[1] Misinformation has existed for a long time, and prior to the advent of the internet. The latter, nevertheless, has amplified the rate at which it can spread, fuelled by internet corporations' algorithms that make popular online information visible, regardless of its authenticity (Vaidhyanathan, 2018). In the last few years, furthermore, public concern about how these corporations operate has intensified in relation to how they collect, manage and (mis)use users' data as part of their business practices. The Cambridge Analytica scandal is an example of this. In 2018, political consulting firm Cambridge Analytica, which was involved in the US presidential and Brexit campaigns, became the subject of public outrage, having harvested the data of millions of Facebook users without their consent for political advertising purposes (Risso, 2018).

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[1] Wardle and Derakhshan (2017) distinguish between *misinformation*, which "is when false information is shared, but no harm is meant", and *disinformation*, which refers to false information that is shared deliberately to cause harm (p. 5). It can be hard to ascertain the extent to which disinformation is spread intentionally in order to do harm, or whether misinformation can become unintentionally harmful. Leaving aside questions of intent, this thesis uses the term *misinformation* to refer, more simply, to false information.

Western countries are equipped with institutions that operate under what is commonly referred to as *liberal democracy*, which consists of a system of governance based on delegating power to representatives under principles of economic and political freedom (Held, 2006). Insofar as democracy relies on a well-informed citizenry, the spread of misinformation online and the Cambridge Analytica scandal have prompted different actors across multiple countries, including in the media industry and among policymakers, to grapple with how to ensure that we live in a healthy information environment. This is why policymakers in countries like the United Kingdom have been gathering evidence on the risks that the internet presents, with emphasis on what should be done. Among the possible solutions discussed, two are particularly resonant in the UK. One concerns regulating internet corporations such as Facebook and Twitter in order to ensure that they operate with integrity, as well as playing an active role in curbing the spread of misinformation on their platforms. The other has to do with equipping the public with the skills and knowledge they need in order to navigate information critically in the digital age (DCMS Committee, 2019; UK Government, 2019b).[2]

The latter solution is commonly referred to as *promoting digital literacy*, which is a form of media literacy that has to do with using the internet and digital technologies. Media literacy is generally defined as the ability to access, analyse, evaluate and produce messages in a variety of forms (Aufderheide, 1997). Largely used as an umbrella term, it refers to a variety of different literacies, including information, media, digital, data and multimodal literacies (Livingstone, Wijnen, Papaioannou, Costa, & del Mar Grandío, 2013). Ultimately, all these fall under the overarching concept of *literacy*. Traditionally concerned with reading and writing, this concept can be understood more broadly as the skills and knowledge that people need within different contexts, which require different forms of literacy, be that traditional, for

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[2] After the submission of this thesis, the UK House of Lords Select Committee on Democracy and Digital Technologies (2020) published a report on the spread of misinformation online and the importance of promoting digital literacy. Refer to Chapter 8, p. 296, for details of the relevance of this report in the light of the findings and implications of this thesis.

instance, or digital (McKay, 1996). With this in mind, while *knowledge* refers to the understanding of a subject area, *skills* refers to the ability to perform different actions (Katz, 2011).

Given the extent to which our societies are mediated by digital technologies, it is often argued by educationalists and policymakers that the public needs digital literacy, with media literacy research focusing generally more on children than on adults. However, as we will see in Chapter 2, digital literacy can be approached in different ways, which makes it hard to identify what skills and knowledge are necessary in order to engage with digital technologies. Furthermore, while the education system has a considerable role to play when it comes to promoting digital literacy among children, it is particularly hard to reach adults, who are no longer in school. In the United Kingdom, the National Literacy Trust (2018) has found that only 2% of school children can identify all fake and real news stories in a misinformation quiz, with only 28% identifying at least four out of six stories correctly. Beyond children, furthermore, we know from Ofcom (2019a) that many adults lack "the critical skills needed to identify when they are being advertised to online" (p. 1). "Only six in ten understand that not all the websites returned [on search engines] will be accurate and unbiased" (Ofcom, 2019a, p 17). "Only half of search engine users correctly identify advertising on Google" (Ofcom, 2019a, p 16). And only somewhat "over half of internet users say they consider 'some' of the factual information they find online to be true, showing a degree of critical understanding" (Ofcom, 2019a, p. 18).

As argued by Hobbs (2010), digital literacy is essential for participating in civic life as well-informed and active citizens. It is about evaluating online content in terms of bias and trustworthiness. And it is necessary for producing and posting information online, including multimodal content that integrates different kinds of texts. Historically, digital literacy lies at the intersection of two paradigms: those of protection and of empowerment (Hobbs & Jensen, 2009). These two paradigms transcend civic life *per se*, in that they can be applied to using the internet within multiple domains of life. On the one hand, according to the protectionist paradigm, digital literacy is about developing the skills and knowledge that users need in order to protect themselves

from online risks, including not just misinformation but – as argued in the recent UK Government (2019b) white paper on online harms – cyberbullying, identity theft and exposure to inappropriate content, to name just a few. On the other hand, insofar as digital technologies enable users to be not just consumers but also producers of information, the empowerment paradigm prescribes that digital literacy enables users to participate actively in society.

The concept of empowerment is rather a contested one. Political research, traditionally, has approached this concept as referring specifically to citizens' impactful participation in decision-making (e.g., Verba, 1967). But when it comes to using digital technologies, this concept can be approached as a form of *enablement*, having to do with the opportunities for interaction and expression that these technologies provide within civic life, regardless of whether they necessarily translate into social change (Mäkinen, 2006). Similarly, as with the notion of empowerment, political research has generally approached the concept of participation as citizens' active involvement in decision-making (e.g., Arnstein, 1969; Verba, 1967). Some, however, have argued that there are two forms of participation. One is about sharing public life through social interaction. The other has to do with undertaking instrumental action aimed at "influenc[ing] … political power" (Scaff, 1975, p. 455). To overcome this distinction, the notion of civic engagement is helpful. As argued by Dahlgren (2003), civic engagement refers to how citizens take part in civic life in ways that serve as an expression of what matters to them, and that do not exclude, but are not necessarily expected to have, an impact on decision-making.

It is from this perspective that I am interested here in the intersection of digital literacy and civic engagement, bearing in mind that the latter is a crucial condition for democracy. Three reasons underpinned my decision to explore this subject. First, this decision was based on the conviction that it is important, given the stakes for society described above. Second, as we will see in section 1.3 and in Chapter 2, this thesis starts from the recognition that, while media literacy research as a whole has prioritized children and different aspects of digital literacy, more research is needed on adults and on whether and how they understand the digital environment, including

how internet corporations operate, along with the internet's potentials and limitations for civic life. Finally, building on this recognition, this thesis originated from my desire to bridge studies on utopian thinking with media literacy research, which underpinned the decision to conceptualize and explore digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age.

As discussed below when introducing the contribution of this thesis, such an approach to digital literacy has the potential to push the field forward both theoretically and empirically. The notion of social imaginaries refers to imagined representations of society, which consist of understandings and expectations of how individual and collective participation in society should be organized (Taylor, 2004). According to Thompson (1982), such representations are ideologically driven, where ideology refers to systems of ideas that are not fixed but compete, clash and can overlap in organizing, reproducing and transforming power relationships (Therbon, 1980). As framed in Chapter 3, utopian thinking, which is rooted in both imagination and realism, relies dialectically on critiquing the dystopian limitations of the present while projecting potentialities into the future (Jameson, 2005; Levitas, 2010). Insofar as utopian thinking is a powerful force for social change, this thesis is based on the assumption that digital literacy can empower users in the context of their civic practices, provided it incorporates their utopian/dystopian imaginaries of society in the digital age. Such imaginaries are conceptualized here as incorporating, on the one hand, imaginaries of the internet's civic potentials and limitations and, on the other, imaginaries of civic life that may be aligned with different ideologies.

Under these premises, the thesis is rooted in the desire to explore how digital literacy intersects, not just theoretically but also empirically, with civic engagement. As a result, this study is based on the decision to focus on two social categories of people in the United Kingdom: digital experts and civic advocates. The former category consists of media educators as well as information, IT and media professionals, including, for instance, librarians, publishers, IT managers, system administrators, journalists, website designers and social media coordinators. The latter category includes community councillors, political party candidates and activists involved in

various socio-political causes. The reason behind the choice of these social categories was a conceptual one: in order to explore the intersection of two key concepts, digital literacy and civic engagement. This reasoning followed logically from the assumption that these populations are ideal for this kind of investigation. On the one hand, experts are digitally savvy, with different levels of civic engagement. On the other hand, advocates are highly involved in civic life, with different levels of digital literacy.

This thesis is not primarily concerned with comparing these social categories. At the same time, as we will see later, I examine how experts and advocates develop and deploy digital skills and knowledge in different ways in the context of their civic engagement in order to learn how digital literacy operates in theory and in practice within civic life. Mindful that not all experts or advocates are the same, I focus on how their skills and knowledge shape and are shaped by their civic practices, with emphasis, as appropriate, on individuals who work at the intersection of expertise and advocacy. These included, for instance, media educationalists who work for organizations promoting media education as well as digital campaigners, where digital campaigning refers to the practice of using the internet for campaigning (Kreiss, 2015). Unlike the general public, experts and advocates enjoy, respectively, sophisticated digital skills and knowledge and a profound commitment to civic life. On the one hand, they are not representative of the general public. On the other hand, as discussed later in this chapter, their expertise and civic practices have implications for how we understand the nature of digital literacy and its role in civic life.

I have explained here the context in which this thesis originated. Section 1.2 below focuses on the relationship between civic engagement and democracy, while also discussing the role of the internet within civic life. Section 1.3 then introduces media literacy research as a broad and diversified field. It presents the research questions and methods of the thesis, and focuses on its contribution, addressing why it is important theoretically, empirically and practically. Finally, section 1.4 provides an outline of the structure of the thesis, offering a brief description of what follows in the next chapters.

1.2 Civic Engagement, Democracy and the Internet

As discussed above, civic engagement refers to what citizens do to take part in civic life, understood as both community and political life. The latter refers here to both institutional and non-institutional politics, which transcends formal politics insofar as it is unmediated by institutions, thus going beyond electoral politics (Mosca & Quaranta, 2016, p. 327). While institutional politics has to do, for instance, with voting and electoral campaigning, non-institutional politics includes activism and participation in civil society. Populated by campaigning organizations, charities and advocacy groups that represent the interests of different groups of people, it constitutes a space between the state and the commercial sector where citizens are involved in their communities and organize and pursue social and political action (G. White, 1994).

Insofar as the advent of the internet has diversified the ways in which citizens participate in civic life, civic engagement comprises activities that can be performed online and/or offline, including, for instance, reading news, voting, volunteerism, using government websites, sharing and commenting on political content, signing a petition, using alternative media, exchanging information about a protest event or participating in a demonstration (Dutton, Blank, & Groselj, 2013; R. Fox & Blackwell, 2016; A. Smith, 2013; Theocharis, 2015; van Laer & van Aelst, 2009). Before discussing this further, it is worth clarifying that alternative media are independent, unlike state or commercial media. They differ from mainstream media in terms of content, production and distribution (Bailey, Cammaerts, & Carpentier, 2007). Furthermore, it should be clarified that *the internet* is understood here as a technology with multiple dimensions. Not only does it rely on technical features, online content and internet usage, but it also depends on ownership, governance and the business models of corporations such as Google and Facebook (van Dijck, 2013, p. 28).

We live in an age when nation-states are challenged, in dealing with social inequalities, by the power of supranational institutions as well as by global capital

flows. For the past few decades, Western liberal democracy has suffered from a decline in citizens' participation in electoral politics. This is exacerbated by citizens' alienation from and dissatisfaction with the political process, which depends on the extent to which they feel under- or misrepresented (Coleman, 2013). It is often argued that liberal democracy and public communication in the West are deeply affected by citizens' distrust in institutions and traditional media, which many people believe are unable to represent their concerns (Coleman & Blumler, 2009). In the UK, for example, only 40% of the general public trust the news (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019, p. 69). As reported by the Reuter Institute: "trust in the news has fallen over 11 percentage points since 2015. Even the most trusted brands like the BBC are seen by many as pushing or suppressing agendas – especially over polarizing issues like Brexit and climate change" (Newman et al., 2019, p. 69).

At the same time, while the representative character of Western democracy has dwindled considerably, we "have evidence of alternative" practices of institutional participation in resistance and activism occurring "outside the parliamentarian context" (Dahlgren, 2004, p. ix). These practices invite reflection on the extent to which the concept of democracy needs to become more nuanced. On a descriptive level, we live in societies in the West which are equipped, as discussed above, with a liberal democracy that relies on delegating power to politicians through elections. By contrast, on a normative level, *democracy* can be understood in different ways, depending on how we expect it to function, which applies also to what may expected of citizens' participation in democracy.

According to democratic theory, there are four major normative models of democracy: the competitive elitist, pluralistic, participatory and deliberative models (Held, 2006; Rapeli, 2014, p. 78). While the last three challenge the representative character of liberal democracy, the competitive elitist model relies entirely on formal politics and elections, with citizens delegating power to representatives (Held, 2006, p. 157). Pluralistic democracy, by contrast, prescribes that groups and organizations should play a role in negotiating decision-making, with citizens participating more actively in civic life beyond voting (Dahl, 1982, p. 5; Held, 2006, p. 173). This is why

civil society plays a particularly important role in a pluralistic democracy, where citizens are expected to be involved in community life and do voluntary work as well as to participate in practices of resistance and activism, from organizing to taking collective action. In participatory democracy, citizens are directly involved in processes of decision-making (Held, 2006, p. 215). Finally, in deliberative democracy, which is a form of participatory democracy, they participate in such processes via deliberation in the public sphere (Bohman, 1998, p. 401; Held, 2006, p. 253). According to Habermas (1989), the latter consists of an arena between the state and private life, where the public is expected to engage in rational-critical debate.

These models have their own flaws. Competitive elitist democracy is overly reliant on formal politics. Requiring little of citizens' participation beyond voting, it reduces them to spectators of the political process (Held, 2006, p. 153). Pluralistic democracy needs a healthy civil society in order to thrive. Proponents of this model tend to pay little attention to the power asymmetries that exist between the different groups and organizations involved in decision-making (Held, 2006, p. 165). Participatory democracy suffers from problems of time and size. It expects citizens to commit time to participating in decision-making, and it hardly goes beyond the level of small communities and cities (Dahl, 2006, p. 118). As a result, participatory democracy is generally reduced to local government-led initiatives, which make governance more interactive but not necessarily more direct (Rosanvallon, 2011, pp. 203–205). Finally, deliberative democracy assumes that everyone has equal access to deliberation, which is not the case. In addition, it assumes that citizens will deliberate in rational terms, neglecting the fact that politics is grounded not just in rationality but also in passion (Mouffe, 1999).

With these models of democracy in mind, the advent of the internet has been championed for its potential to reinvigorate both institutional and non-institutional engagement in civic life. Thanks to its interactive features, the internet is often praised for its potential to decentralize politics, enable marginalized groups to participate in politics, foster an online public sphere and contribute to deliberative democracy (Benkler, 2006; Blumler & Coleman, 2010; J. A. Martin, 2015). The internet, in

addition, has shortened the distance between politicians and citizens, with social media enabling citizens to follow up on and engage more closely with what politicians do (E. J. Lee & Shin, 2014). The internet also contributes to citizen journalism inasmuch as it enables the public to report and disseminate news and information (Glaser, 2010). Finally, it is celebrated for supporting civil society and non-institutional politics. More specifically, it facilitates the production and dissemination of alternative media, better-organized activism and the fostering of communities and collective identities (Cammaerts, 2015a; Garrett, 2006).

At the same time, the internet not only facilitates but also impinges on civic engagement and democracy. Embedded in power structures, with a few corporations like Facebook enjoying most online traffic (Freedman, 2012), it fuels ideological extremism. Its algorithms, which depend on how these corporations operate, amplify popular content that triggers strong reactions. In addition, they reinforce the polarization of political debate by contributing to the problem of the filter bubble, which makes it unlikely that users will be exposed to content that challenges their pre-existing beliefs (Vaidhyanathan, 2018). The internet, furthermore, is rather elitist. Not only is it prevalently used for political purposes by white and middle-class men, but its economic structure encourages users to cluster around a few sites that enjoy visibility (Hindman, 2009). In addition, the internet has the potential to exacerbate voter manipulation, with users' data being not just tracked for political purposes but also misused, as exemplified by the Cambridge Analytica scandal (Risso, 2018). Relatedly, issues of privacy and data security, including the risk of foreign countries interfering with campaigns and elections through cyberattacks, are typical of the digital age (Pope, 2018). Insofar as users' data is shared by corporations like Google and Facebook with advertising companies, the internet also facilitates both commercial and government surveillance, with such corporations often working closely with governments (Fuchs, 2010; McChesney, 2013). Especially in non-democratic countries, government surveillance, furthermore, is often coupled with censorship, which fuels the political repression of dissent (Morozov, 2011). Finally, political content online is not just fragmented and polarized (Sunstein, 2007), but also subject to hate speech

(Leets, 2001) and to issues of trustworthiness, as captured by the spread of misinformation (Garrett, 2006; Oxley, 2012).

Insofar as the internet presents both opportunities for and constraints on participating in civic life, it is imperative that users are equipped with the skills and knowledge they need to navigate the digital environment. Media literacy theory and research enables us to transit from discussing the internet and its role in society to focusing on how users engage with digital technologies, and how they develop and deploy digital literacy in ways that are contextually situated. In the section below, I introduce the media literacy field. After providing a snapshot of its complexity and limitations, I present the research questions and contribution of this study.

1.3 Digital Literacy and the Field: Research Questions and Contribution

Media literacy research is broad and diverse.[3] As we will see in Chapter 2, this body of work can be categorized into different traditions, including research on digital inequalities, educational research inspired by social psychology, critical pedagogy and cultural studies, research inspired by the New Literacy Studies, information science and librarianship studies, research on human-computer interaction, and policy research on media literacy.

Overall, media literacy research has focused more on children than on adults. A few traditions, furthermore, have focused more on functional skills and knowledge about the internet, as with research on digital inequalities. Others, by contrast, have placed more emphasis on the critical dimension of digital literacy, as with research inspired by critical pedagogy and cultural studies. In the latter case, media literacy research has generally under-explored how users understand the broader digital environment, beyond their ability to evaluate online content. In addition, when it comes to digital

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[3] Insofar as this thesis uses *media literacy* as an umbrella term, *media literacy research* here refers to research that has employed not just notions of *media literacy* but also different variants including, among others, *digital literacy*, *data literacy* and *information literacy*.

literacy and civic engagement, research has either paid little attention to whether and how these shape one another, or it has approached their intersection restrictively as necessarily underpinned by progressive values. This latter limitation applies more prominently to research inspired by critical pedagogy. Within media studies, critical pedagogy refers to a teaching approach that primarily encourages students to challenge and deconstruct dominant media representations (Buckingham, 2008, p. 193). As argued later in this thesis, research inspired by critical pedagogy has perpetuated the idea that users' critical reflections and civic engagement will be inherently left-wing. As a result, a large body of work has under-explored the extent to which users' critique of media representations can, as we know from journalism studies (e.g., Figenschou & Ihlebæk, 2019), also be aligned with right-wing or far-right politics.

Given the gaps in the literature, this study approached the media literacy field with the overarching question of whether and how digital literacy and civic engagement shape one another, resulting in the decision to focus on experts and advocates in the UK. As unpacked in Chapter 2, what became evident while reviewing the literature is that this question translates *de facto* into two main research questions. The first of these relates to whether and how civic engagement provides opportunities for learning digital literacy. The second relates to whether and how digital literacy, in turn, facilitates civic engagement. As explained in Chapter 3, the thesis addresses these questions by addressing first the sub-question of what digital literacy consists of in practice, on the basis of how skilled and knowledgeable experts and advocates are. In addition, insofar as I am interested in digital literacy as incorporating knowledge about the digital environment, this study also addresses the sub-question of how experts and advocates discursively construct this kind of knowledge.

With these questions in mind, this thesis frames civic engagement as including both institutional and non-institutional forms of participation in civic life, which can be aligned with different ideologies. In addition, digital literacy is approached as having two aspects. On the one hand, functional digital literacy refers to the skills and knowledge that users need in order to use digital technologies practically. On the

other hand, critical digital literacy refers to the skills and knowledge that they need in order to engage critically with online content and digital technologies as embedded in power structures.

In order to explore whether and how experts and advocates in the UK develop and deploy digital literacy in different ways in the context of their civic practices, I answer the questions above by employing a mixed qualitative methodology. More specifically, data collection was based on semi-structured interviews enhanced by a conversational approach to the "think aloud" method, along with the diary method. As we will see in Chapter 4, I asked experts and advocates to use any of their digital devices in the interviews so that they could talk me through how they engage online. In addition, the participants were asked to take part in two interviews and, in between, to write weekly diaries about their civic practices. The decision to collect data in the United Kingdom was underpinned not just by convenience, since this is where I am based, but also by the conviction that London, which is where most interviews were conducted, would be ideal for recruiting a diversified sample of experts and advocates, given its cosmopolitan nature. The UK, furthermore, is particularly suitable for researching digital literacy and civic engagement. Not only does it have one of the highest internet penetration rates in the world, but it also has a thriving civil society, with a high density of advocacy and campaigning organizations (Dunleavy, 2018). Finally, once the data was collected, it was subjected primarily to thematic analysis enhanced by elements of critical discourse analysis.

In terms of theoretical contribution, this thesis has three aims. First, it aims to explore digital literacy and shed light on how functional digital literacy intersects with critical digital literacy. Second, it draws on utopian studies and political theory to conceptualize critical digital literacy as incorporating users' utopian/dystopian imaginaries of society in the digital age. Chapter 3 theorizes that such an approach enables us to 1) disentangle users' imaginaries of the internet from their imaginaries of civic life, 2) overcome the assumption that critical digital literacy leads to civic engagement that is inherently progressive, and 3) problematize polarizing conclusions within media research about users' interpretations of the internet as crucial or

detrimental to their online engagement. It is argued that the dialectical nature of utopian thinking, which relies on the interdependence of utopianism and dystopianism, prescribes, when applied to critical digital literacy, that users can only pursue civic opportunities online provided they understand both the internet's potentials and its limitations for civic life. Third, and finally, this thesis reflects on the implications for different literatures that follow from how digital literacy, as conceptualized and investigated here, intersects with civic engagement. These literatures include not just the different traditions of media literacy research outlined above, but also political research, including studies on citizens' participation in institutional politics as well as media studies on social movements.

In terms of empirical contribution, this thesis explores the intersection of digital literacy and civic engagement by focusing specifically on experts and advocates in the UK. In so doing, it examines empirically the benefits of conceptualizing digital literacy as both functional and critical. Finally, as discussed in Chapter 8, even though this thesis is not primarily concerned with digital literacy policy, it has practical policy implications, particularly in the context of how to promote digital literacy among both children and adults. Insofar as I address what functional and critical skills and knowledge are necessary for using digital technologies, and how these skills and knowledge intersect, the thesis has implications for how different actors understand digital literacy, including not just researchers but also educationalists, policymakers and civil society practitioners who are committed to promoting digital literacy. As mentioned above, what experts and advocates know about digital technologies, and how they engage in civic life, is not necessarily representative of the general public. But examining their expertise and civic practices is valuable for better understanding in general what digital literacy is and how it can be developed and deployed within civic life, which are questions that go beyond these social categories. As a result, the thesis has repercussions for how we can expect national curricula and teaching resources to promote digital literacy as both functional and critical. Furthermore, insofar as I address the question of whether and how civic engagement provides opportunities for learning digital literacy, this study has implications for how to

promote within civic life the digital literacy of adults, who are hard to reach via the education system.

Now that we have discussed the theoretical, empirical and practical contribution of the thesis, below is an outline of what follows in the next chapters.

1.4 Outline

This introductory chapter has set out the aims and approach of this thesis. It started with an overview of the challenges to Western societies and to democracy posed by the internet in relation to the spread of misinformation online and the misuse of users' data in the context of recent elections. After discussing the importance of digital literacy and some of the limitations of media literacy research, this chapter has then introduced the aims and research questions of the thesis, with emphasis on its theoretical, empirical and practical contribution.

Chapter 2 presents the theoretical foundations of this study. It starts by reviewing media literacy theory and research, focusing on what has been achieved, and with what limitations, by research on the intersection of digital literacy and civic engagement. As mentioned above, the literature is categorized under different traditions. After discussing how each tradition of media literacy research has approached digital literacy and examined its intersection with civic engagement, Chapter 2 ends with a summary of the main gaps and limitations identified through the literature review.

Building on the different traditions reviewed in Chapter 2, Chapter 3 introduces a novel approach to digital literacy as both functional and critical. It then draws on utopian studies and political theory in order to conceptualize critical digital literacy as incorporating utopianism/dystopianism, theorizing why and in what ways such a conceptualization can be expected to benefit media literacy research. Chapter 3 then unpacks the conceptual rationale for focusing on experts and advocates in the UK,

reviewing research on these social categories. A final section presents the key concepts and research questions.

Chapter 4 presents the methodological approach. It starts by addressing the epistemological rationale behind the research questions and the aims of this study. In so doing, it discusses each method employed, reflecting on its strengths and weaknesses. It then presents the research design of this study. It focuses on the choice of conducting fieldwork in the United Kingdom. It unpacks how the data was collected and analysed, discussing the ethical dimension of, and practical limitations encountered during, fieldwork. Chapter 4 ends with a section on reflexivity, my role as the researcher and the overall limitations of the research design.

Chapter 5 is the first empirical chapter. Based on a discussion of how skilled and knowledgeable experts and advocates are in the UK, it answers the questions of what digital literacy is and how experts and advocates construct discursively and in different ways their knowledge about the digital environment. To do this, I analyse the interview and diary data, with emphasis on the themes that stood out from the analysis. As a result, I make links between what I had theorized before conducting fieldwork and what emerged from the data. Relatedly, across the chapter and in the discussion section, I reflect on the benefits, implications and limitations of approaching digital literacy as conceptualized in this thesis.

Chapter 6 is the second empirical chapter. To answer the question of whether and how civic engagement provides opportunities for learning digital literacy, it examines whether and how experts and advocates develop in different ways skills and knowledge about the internet in the context of their civic practices. Based on the interview and diary data, it provides an analysis of the themes that emerged from the fieldwork, reflecting on the different formal and informal learning opportunities that enable experts and advocates to develop digital literacy. In so doing, it establishes connections with media literacy research and political research, building on Chapters 2 and 3, as well as with a few studies within education research and the literature on family and children.

Chapter 7 is the third empirical chapter. On the basis of whether and how experts and advocates deploy digital literacy in the context of their civic practices, it answers the question of whether and how digital literacy facilitates civic engagement. By focusing on the main themes that emerged from the analysis of the interview and diary data, it examines how experts and advocates participate in institutional and non-institutional civic life and whether and how their digital literacy contributes to their practices. In so doing, it makes links with the different literatures reviewed in Chapters 2 and 3. It reflects on the relation between critical digital literacy and civic engagement, as theorized in Chapter 3. And it establishes connections with studies that were not reviewed prior to fieldwork, including psychology research and a few studies within political research.

Chapter 8 presents the conclusions of the thesis. It starts by reiterating the aims and research questions of this study. After summarizing the main findings presented in the three empirical chapters, it discusses the implications of the thesis for theory and research. More specifically, I reflect on how this study pushes forward the field of media literacy research, while also benefitting political research. In addition, I reflect on its practical policy implications in the context of promoting digital literacy. Chapter 8 ends with a section on the limitations of this thesis and a concluding section on future directions for theory and research.

Chapter 2 – Digital literacy and civic engagement: Reviewing media literacy research

2.1 Introduction

Chapter 1 has discussed the role of the internet in civic life, introducing the aims and contribution of this study. This chapter reviews media literacy research by examining how it has addressed the intersection of digital literacy and civic engagement, and with what findings and limitations. After reviewing media literacy research and its different traditions (section 2.2), section 2.3 provides a summary of the literature, followed by a section with concluding remarks.

2.2 A Critical Review of Media Literacy Research

Given the interdisciplinary nature of media studies, approaches to media literacy – defined in Chapter 1 as an umbrella term that incorporates multiple literacies – vary considerably, as does research on its intersection with civic engagement. As discussed earlier, this study approached the field with the question of whether and how digital literacy and civic engagement shape one another. What became evident while reviewing the literature is that the field is not just vast and diverse but also messy. Reviewing the literature, furthermore, made it clear that the question above consists *de facto* of two complementary questions. One has to do with whether and how civic engagement contributes to digital literacy, which is a question about learning. The other is about how – if in any way – digital literacy facilitates, in turn, civic engagement.

With this in mind, in order to make sense of the literature, the studies reviewed were categorized under different traditions, which are presented below. These include 1)

research on digital inequalities, 2) educational research inspired by social psychology, 3) research inspired by critical pedagogy and cultural studies, 4) research inspired by the New Literacy Studies, 5) information science and librarianship studies, 6) research on human-computer interaction, and 7) policy research on media literacy. The media literacy field is so multifaceted and complex that making sense of the different approaches to, and research on, digital literacy is a considerable challenge. What was challenging, furthermore, was to identify – and to categorize the studies reviewed under – the above traditions on the basis of the different questions and epistemologies that they prioritize. In practice, these traditions tend to overlap, with studies lying at the intersection of different strands of research. Often, indeed, there are no clear cuts between one tradition and another. That is why this thesis does not claim to have reviewed all the literature on digital literacy, or that its way of synthesizing this is universal or transcends the nature of this specific study.

In other words, this chapter represents an attempt to identify patterns, gaps and limitations in the literature that are relevant to this thesis. The traditions and the studies reviewed were selected with a view to capturing different interpretations of digital literacy, and with an emphasis on whether and how they have researched this in relation to civic engagement. Each of these traditions grapples with different questions and priorities, providing insights into different aspects of digital literacy both in general and more specifically within civic life. This is why I value, for instance, research on digital inequalities for its contribution on digital skills, educational research inspired by social psychology for measuring whether the ability to evaluate online content corresponds to civic engagement, critical pedagogy research for its emphasis on the critical dimension of digital literacy, the New Literacy Studies for emphasizing the social dimension of digital literacy, the information science and librarianship studies tradition for addressing how users practically evaluate information online, research on human-computer interaction for its focus on users' understanding of digital affordances, and policy research for its commitment to promoting media literacy.[4]

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[4] The concept of *digital affordances* is defined later in this chapter,

When categorizing the literature, emphasis was placed on how these strands of research differ in terms of how they have approached and researched digital literacy and its intersection with civic engagement, and with gaps and limitations. At the same time, as recognized above, these traditions have come to converge, to some extent. As we see below, media literacy research includes studies that have taken inspiration from multiple traditions. This is why the latter are presented in the order below, with research inspired by the New Literacy Studies drawing, for instance, on critical pedagogy, and research on human-computer interaction overlapping with the New Literacy Studies. As a result, the traditions reviewed below are ordered in ways that do not provide a linear account of how digital literacy can be approached or how it intersects with civic engagement, as found in the literature. Such an account is provided in section 2.3, which offers a summary of the literature. By contrast, arguments, findings, gaps and limitations are discussed back and forth across the subsections below, providing links between the different traditions.

2.2.1 Research on digital inequalities

This tradition has been particularly interested in the non-user and in how vulnerable groups use the internet, focusing primarily on what is referred to in Chapter 1 as functional digital literacy, that is, the practical skills and understanding that users need in order to use digital technologies (e.g., Helsper, 2016; Reisdorf & Groselj, 2017; van Deursen, Helsper, & Eynon, 2015). Having prioritized whether marginal segments of society have the basic skills and knowledge to pursue tangible outcomes online – from searching for jobs to saving money through online shopping (Helsper, van Deursen, & Eynon, 2015) – this body of work has under-explored critical digital literacy, including users' ability to evaluate online content and understanding of the digital environment.[5] Leaving exceptions aside (e.g., Helsper, 2017), this tradition,

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[5] As introduced in Chapter 1, this thesis approaches such an understanding as including knowledge about the political economy of the internet along with its potentials and limitations for civic life. Refer to subsections 2.2.3 and 2.2.4, pp. 40-48, to see how such an approach resonates with media literacy

furthermore, has generally approached users' digital skills and knowledge as residing primarily within individual cognitive processes. The assumption is that digital literacy, once learned, can be transferred from one context to another.

In their classification of digital skills, van Deursen et al. (2015) distinguish between operational, information-navigation, social, creative and mobile skills (p. 816). Users need operational skills in order to conduct operations such as uploading/downloading of files, adjusting their settings or accessing websites. Information-navigation skills enable users to search for information by using keywords and navigating websites. Social skills include the ability to use online platforms, share information and add/remove friends to/from social media accounts. Creative skills enable users to design websites and create content, from comments on social media to music, images and videos. Finally, users need mobile skills in order to download and install apps on their phones.

Research on digital inequalities has interrogated how users develop digital skills through formal and informal learning, where the latter, unlike the former, occurs naturally without a structured format or instructor (de Mora, 2020). When it comes to formal learning, besides the role of the education system in teaching children digital skills, research and policy interventions in this area have advocated the potential of public libraries and community centres within Western countries and beyond to provide digital training for different adult populations (e.g., Dudziak, 2007; Helsper & van Deursen, 2015; Real, Bertot, & Jaeger, 2014). Given the role of these spaces in community life, this kind of training is rooted in the civic nature of our societies, which is why it can be understood as an example of how civic engagement at community level can be beneficial for learning digital literacy. However, as prioritized by this strand of research, such training is generally more about functional than critical digital

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research. Relatedly, refer to Chapter 3 to see how this thesis, building on such an approach, draws on media literacy research and utopian studies in order to conceptualize critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age, differentiating between users' imaginaries of the internet and their imaginaries of civic life. See Chapter 1, p. 16, for the definition in this thesis of *social imaginary*.

skills, teaching vulnerable communities skills ranging from how to retrieve information to how to apply for jobs and social benefits online.

Beyond formal learning, a few studies on digital inequalities have argued that social interaction and experience of using digital technologies are valuable for informal learning of digital skills (e.g., Eynon & Geniets, 2016; Matzat & Sadowski, 2012; Paus-Hasebrink, Kulterer, & Sinner, 2019). From a social constructivist perspective, social interaction refers to how "the reality of everyday life is shared with others" (Berger & Luckmann, 1966, p. 43). This process of sharing facilitates learning, as captured by the notion of *social learning* (e.g., Bandura, 1977; Webb, 1989). "The social process of developing shared understanding through interaction is the 'natural' way for people to learn" (Hiltz, 1994, p. 22). This is why social interaction is beneficial for informal learning. And so are "direct life experiences", based on exposure to and involvement in life events, as prescribed by *experiential learning* (Kolb, 2014, p. xix).

Quantitative and qualitative research on digital inequalities suggests that, provided users are motivated to learn, they can develop digital skills through "self-learning" (Eynon & Geniets, 2016; Ferro, Helbig, & Gil-Garcia, 2011, p. 8), which is why Dutton and Shepherd (2006) describe the internet as an *experience technology*. Recent work, furthermore, has moved away from understanding digital literacy individualistically to emphasize that socialization is key to learning digital skills (e.g., Helsper, 2017; Paus-Hasebrink et al., 2019). But, while social interaction and experience in using digital technologies apply to multiple social domains, this strand of research has under-explored whether these provide informal learning opportunities specifically in the context of civic engagement.

As to whether digital skills facilitate civic engagement, quantitative research on digital inequalities has argued that, besides socio-demographics and political motivation, digital skills are "strong predictors of political Internet use" (Min, 2010, p. 26). Inasmuch as users deploy these skills in seeking, for instance, political information or engaging in political discussion online, the lack of digital skills exacerbates a *democratic divide* in countries like the US, with some users unable to participate in

politics (Min, 2010). Similarly, it prevents activists in Latin America from using social media to promote social justice through the production and circulation of alternative media (Harlow, 2012).[6]

Besides focusing on digital skills, research on digital inequalities has interrogated how users develop and deploy dispositions towards the internet, in relation, for instance, to its advantages and disadvantages for health, safety, social interaction or online shopping. Often used interchangeably with *attitudes* and *motivations*, the notion of *dispositions* refers to subjective evaluations that lie at the intersection of knowledge and affect (Raney, 2006). As with research in psychology, research on digital inequalities has largely framed users' dispositions in individualistic terms, under-exploring whether users understand the potentials and limitations of the internet for civic life, as a technology embedded within power structures. Instead, while not always using notions of digital literacy, this body of work has addressed whether the internet is perceived, for instance, as "help[ing to] save time, mak[ing] life easier and allow[ing] people to keep in touch", and to make "travel arrangements", as opposed to posing "risks of fraud", "harmful content", misuse or addictive behaviour (Cushman & Klecun, 2006, p. 8; Durndell & Haag, 2002, p. 532; Eynon & Geniets, 2016, p. 473; Hakkarainen, 2012, pp. 1204, 1206; Park, 2014, p. 5; Reisdorf & Groselj, 2017, p. 1166).

Research on digital inequalities has argued that, except for users' trust in the safety of online services (e.g., Eynon & Geniets, 2016, p. 473), their dispositions towards the internet, unlike their digital skills, are not developed through experience of using digital technologies. Rather, these are explained by age and gender (Dutton & Shepherd, 2006, p. 434). And they lead to online engagement or disengagement, depending on whether users understand the internet in positive or negative terms, respectively (Cushman & Klecun, 2006; Durndell & Haag, 2002; Eynon & Geniets, 2016; Hakkarainen, 2012; Park, 2014; Reisdorf & Groselj, 2017). Recent work has

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[6] As defined in Chapter 1, alternative media are independent of state and commercial interests, differing from mainstream media in terms of content, production and distribution (Bailey et al., 2007).

argued that limited engagement online is not necessarily problematic where it corresponds to high-quality outcomes (e.g., van Deursen & Helsper, 2018). But this strand of research has ultimately perpetuated the idea that limited engagement online is a deficiency on the part of the non-user, which was contested by Bauer (1995). This tradition has polarized users' varying dispositions towards the internet as positive or negative for their online engagement. Furthermore, it has under-researched their dispositions in the context of their civic engagement.

2.2.2 Educational research inspired by social psychology

This tradition overlaps with a body of work that is interested in e-learning. Originating at the end of the 1990s, and rooted in cognitive psychology, this body of work consists of research on the use of digital technologies for teaching and learning (Andrews & Haythornthwaite, 2007). It was in the context of this research that the term *digital literacy* was first used by Gilster (1997) to describe "the ability to understand and use information in multiple formats from a wide range of sources […accessed] via computers" (p. 1). Building on the legacy of this field of studies, this tradition has approached digital literacy as residing primarily within cognitive processes. At the same time, it has addressed whether it is explained by social factors, with a few studies investigating whether it correlates, in turn, with civic engagement (e.g., Kahne, Lee, & Feezell, 2012; Martens & Hobbs, 2015). Employing quantitative methods largely adopted in social psychology, from surveys to field experiments in natural settings, this tradition has focused on school and university students. On the one hand, it has framed digital literacy as a property of the individual. On the other hand, unlike cognitive psychology, it has placed more emphasis on the social context in order to explain how students develop digital skills and knowledge. Nevertheless, it has often reduced the social context to a set of independent variables, including not just socio-demographic categories such as age and gender but also students' participation in formal or informal learning environments.

With this in mind, this tradition can be categorized into two different strands. Although not always explicitly using notions of digital literacy, one strand has focused on students' functional skills and knowledge about the internet, with research taking place in different countries such as the US, the Netherlands, Turkey and Taiwan (e.g., Chou, Yu, Chen, & Huan-Chueh, 2009; Dündar & Akçayır, 2014; Meelissen & Drent, 2008; Oliemat, Ihmeideh, & Slkhawaldeh, 2018; Peng, Tsai, & Wu, 2005). Another strand, which is prevalent in the US, has prioritized the critical dimension of media literacy, with emphasis on the skills necessary to analyse and evaluate traditional and digital media content in relation to bias and trustworthiness (e.g., Duran, Yousman, Walsh, & Longshore, 2008; Kahne et al., 2012; Martens & Hobbs, 2015). Occasionally, research within this latter strand has approached media literacy as incorporating an understanding of traditional media in terms of ownership, how they operate and how they make a profit (e.g., Duran et al., 2008). According to Hobbs (2011), this kind of understanding is not necessarily helpful for evaluating media content, but is crucial to appreciating its production and consumption processes (p. 426). A few studies, furthermore, have focused on news literacy, which is about evaluating news stories and understanding the news industry (e.g., Ashley, Maksl, & Craft, 2017; Maksl, Craft, Ashley, & Miller, 2017). This strand, nevertheless, has under-explored whether users understand critically not just traditional media structures but also the digital environment, including how internet corporations operate. Both strands, furthermore, have under-researched whether and how functional digital literacy intersects with critical digital literacy.

Exceptionally, a few studies on e-learning have proposed frameworks for understanding digital literacy in ways that incorporate, to some extent, both functional and critical aspects. Hinrichsen and Coombs (2013), for example, suggest that digital literacy relies on five dimensions: 1) *decoding*, as in deciphering the conventions of digital texts, which requires the information-navigation and operational skills necessary for retrieving information, as well as an understanding of digital design; 2) *meaning making*, which refers to the ability to read and write by using digital technologies; 3) *using*, that is, using digital technologies for different purposes; 4) *analysing*, which consists of the ability to deconstruct and question

information, and 5) *persona*, which refers to the ability to build one's own identity online. Similarly, Sharpe and Beetham's (2010) pyramid model describes digital literacy as incorporating different elements, from basic functional digital skills to the more sophisticated ability to use digital technologies creatively and, ultimately, to make informed decisions online. These frameworks are helpful for thinking of digital literacy as multidimensional. Nevertheless, they pay little attention to the extent to which it is contextually situated. They include both functional and critical aspects, but do not necessarily reflect on whether and how these intersect, while prioritizing the latter over the former. Finally, they focus on the importance of evaluating information online, but not on the broader digital environment.

When it comes to how students develop digital literacy, the strand of this tradition that has prioritized their functional skills and knowledge about the internet has focused on formal and, to a lesser extent, informal learning. According to Oliemat et al. (2018), the education system should do a better job of supporting school children's digital skills, which they tend to acquire primarily outside school settings, including the operational and social skills they need in order to download online content and use platforms like YouTube. Distinguishing between positive and negative dispositions towards the internet, research within this strand has also emphasized that schools and universities need to make sure students develop a positive understanding of its benefits not just for entertainment but also for socializing, accessing information, learning, and for school and academic work including reading and writing (e.g., Cazan, Cocoradă, & Cătălin, 2016; Chou et al., 2009; Oliemat et al., 2018; Peng et al., 2005; Zhang, 2007). A few studies have argued that students develop such an understanding beyond formal education, within family settings and influenced by how their parents perceive digital technologies (e.g., Dündar & Akçayır, 2014, p. 41; Meelissen & Drent, 2008, p. 978). Experience with these technologies, gained on the basis of how often they are used, is also important for developing positive or negative dispositions towards the internet, in relation, for instance, to learning, social interaction or wellbeing (Cazan et al., 2016; Dündar & Akçayır, 2014). Nevertheless, little is known within this strand of research about whether and how formal and/or informal learning is crucial to developing functional digital literacy within civic life.

When it comes to how students gain critical skills and knowledge about the media, the other strand in this tradition has measured the effectiveness of media literacy programmes in schools and universities, paying little attention to informal learning. This strand includes studies that have addressed whether media literacy, in turn, facilitates civic engagement (e.g., Duran et al., 2008; Kahne et al., 2012; Martens & Hobbs, 2015). These studies, nevertheless, have under-explored whether civic engagement provides opportunities for learning media literacy. Focusing on formal education, they have argued consistently that students of media literacy have higher levels of "media literacy analysis skills", including the ability to analyse news stories and advertisements (Martens & Hobbs, 2015, p. 127). These students know how to identify messages, target audiences, omitted information and media construction techniques (Martens & Hobbs, 2015, pp. 127–128, 129). They know the "history [and] economics" of mass media (Duran et al., 2008, p. 59; Martens & Hobbs, 2015, pp. 128, 129). And they know "how to assess the trustworthiness of … website[s]" (Kahne et al., 2012, p. 12).

As to whether and how students deploy digital skills and knowledge, research within the strand of this tradition that is interested in functional digital literacy has found that their digital skills facilitate their online engagement – and so do their positive dispositions towards the internet. Operational and social skills, for instance, are essential for enabling schoolchildren to use tablets and online platforms in the context of playing online games as well as of searching for information (Oliemat et al., 2018). Students' confidence in their digital skills, furthermore, goes hand in hand with positive dispositions towards digital technologies, with emphasis on their advantages for learning, socializing and entertainment (Chou et al., 2009; Oliemat et al., 2018; Peng et al., 2005). As with research on digital inequalities, this body of work has polarized users' positive or negative interpretations of the internet as leading to online engagement or disengagement, respectively. Chou et al. (2009), for instance, have found that female students do not use the internet as much as their male counterparts because they do not appreciate its advantages for accessing information for schoolwork, playing or meeting new friends. Similarly, according to Meelissen and

Drent (2008), female students have more negative dispositions towards the potential of digital technologies for learning and finding a job in the future. Also, regardless of their gender, students in higher grades are more likely to use and appreciate the usefulness of the internet than students in lower grades (Peng et al., 2005, p. 79).

While work within this strand has under-researched students' critical digital literacy, including how they evaluate online content and understand the digital environment in the context of their civic engagement, research within the other strand of this tradition has found that not only does media education facilitate media literacy, as discussed above, but the latter also facilitates civic engagement. Students of media literacy students who learn how to evaluate media content critically are more likely to engage in civic life, from voting and expressing political concerns to participating in protest events (Martens & Hobbs, 2015, pp. 127, 131). Those who understand media structures are more likely to engage in media activism (Duran et al., 2008, p. 60).[7] The ability to evaluate online content corresponds to accessing information about and discussing socio-political issues online. Such an ability, furthermore, is associated with more exposure to various political perspectives (Kahne et al., 2012, pp. 7–8, 14, 16).

Exceptionally, Ashley et al. (2017) have found that students who study news media literacy do not necessarily engage in more political activity, including voting or contacting government officials (p. 86). Based on a field experiment with university students, Mihailidis (2009), furthermore, has argued that those who learn how to evaluate media bias tend to be cynical about traditional media outlets, resulting in negativity about their role in society. In short, this strand of educational research inspired by social psychology has emphasized how media literacy facilitates, but does not always correspond to, greater civic engagement, potentially reinforcing cynicism in an age when Western democracy is afflicted by distrust in institutions and in the media. On the one hand, this strand has focused on students' critical analytical skills and knowledge of traditional media structures. On the other hand, it has paid little

[7] Media activism refers to activism around the media, including, for instance, campaigning for media regulation or digital rights to privacy and freedom of expression (Carroll & Hackett, 2006).

attention to their understanding of the digital environment or to their functional digital literacy.

2.2.3 Research inspired by critical pedagogy and cultural studies

Media literacy research inspired by critical pedagogy and cultural studies has focused predominantly on critical rather than functional skills or knowledge about the media. Building on the legacy of Marxist educationalist Paolo Freire (2000), critical pedagogy refers to a teaching approach rooted in critical theory, which encourages students to reflect critically about dominant ideologies and to take civic action. According to this body of work, *critical literacy*, which requires critical thinking in order to facilitate emancipation and social justice, does not just reside in cognitive processes. It is a "socio-cultural practice that … reflects and refracts power relations" (Hobbs & Jensen, 2009, p. 3). Within media studies, this tradition aspires to teach students to "read, write and rewrite the world through making media" (Buckingham, 2008, p. 193). However, it has perpetuated the expectation that critical literacy will lead to civic action aligned with left-wing politics and progressive values, leaving little room for different ideologies.

According to this strand of research, the critical dimension of media literacy refers primarily to the questioning of dominant media representations in relation to bias, prejudice and trustworthiness (e.g., Kellner & Share, 2007). This dimension is about understanding whether the media portray vulnerable communities in ways that exacerbate discrimination, from racism to misogyny, reinforcing power asymmetries. Exceptionally, a few scholars have argued that digital literacy should not be just about evaluating online content, but also about understanding the digital environment. For Buckingham (2007a), users should understand the political economy of the internet, that is, how internet corporations operate in relation to ownership, advertising and regulation. Furthermore, according to Fry (2014), they should understand the internet's potential and limitations for civic life, from its democratizing potential to decentralize communication and facilitate civic expression to its implications for

surveillance and coercion.[8] Leaving exceptions aside, however, research inspired by critical pedagogy and by cultural studies has focused more on users' critique of media representations than on their critique of the internet, which is why "little … of critical digital literacy … appears specifically 'digital'" within this tradition (Pangrazio, 2016, p. 164).

When it comes to how users develop critical literacy, this strand of research has focused predominantly on young people and on formal education (e.g., Dierdre, 2000; Kellner & Share, 2007; Morrell, Dueñas, Garcia, & López, 2013; Morrell & Duncan-Andrade, 2005). Occasionally, research has emphasized how the education system should encourage students to produce their own digital media content in order to learn how to use digital technologies practically and reflectively, thus reducing the gap between formal and informal learning (e.g., Buckingham, 2003, 2007b). Recently, a variant of critical pedagogy, dubbed *critical digital pedagogy*, has framed digital technologies as providing opportunities to create learning environments that can enable students to build empowered communities that are critical of power and institutions (e.g., Morris & Stommel, 2017). As to the extent to which such environments can exist within civic life, Banaji and Buckingham (2013), who conducted research in Europe, have argued that experience of using the internet enables "young people to [learn informally how to] … post their own civic and political content online" in ways that are both critical and creative (p. 91). However, leaving exceptions aside, research informed by critical pedagogy has generally paid little attention to whether civic engagement, in particular, is valuable as a means of informally learning digital literacy.

As to how critical literacy shapes civic engagement, this body of work has argued consistently that the questioning of mainstream representations is central to producing alternative media as part of practices of resistance and activism that challenge dominant ideologies (e.g., Kellner & Kim, 2010; Kellner & Share, 2007).

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[8] Refer to Chapter 1, pp. 20-22, for discussion in this thesis of the internet's potentials and limitations for civic life.

Critical pedagogy, nevertheless, has approached notions of critique and action as inherently left-wing, as argued by Brayton and Casey (2019). As a result, this strand of research has collapsed users' critique of media content into a normative understanding of civic engagement as necessarily progressive. In so doing, it has overlooked how the questioning of media bias, when devoid of respect for evidence, can fuel the propagation of misinformation aligned, as argued by Mihailidis and Viotty (2017, p. 450), with far-right ideologies. We know from journalism studies that users' critique of media representations and their production of alternative media can well align not just with left-wing but also with right-wing or far-right politics, underpinned by anti-immigration sentiments (e.g., Figenschou & Ihlebæk, 2019). Critical pedagogy, however, has left little room for civic engagement which, while not necessarily challenging the socio-political order in accordance with progressive values, may be underpinned by a critical understanding of online content or the internet in line with different ideologies.

Alternative media production online requires digital skills. But this strand of research has under-explored functional digital literacy. And despite acknowledging that digital literacy should incorporate judgments about the aesthetics of digital media, it has subordinated functional to critical digital literacy (e.g., Buckingham, 2006, 2007a). Recent research inspired by critical pedagogy has argued that far-right extremists in India have the functional skills to spread misinformation online. Most users, by contrast, need critical literacy in order to deconstruct information and fight extremism (Banaji & Bhat, 2019). In short, while the notion of critique is ideologically multifaceted, it is framed within critical pedagogy as intrinsically promoting progressive principles of social justice, as is the idea that it leads to alternative media production.

Contradictorily, despite approaching civic engagement as restrictively left-wing, a few scholars within this tradition have argued that users' alternative media production facilitates a pluralistic democracy that "embrac[es] *multiple* perspectives [emphasis added]", resulting in participatory "democratic self-expression, and social progress" (Kellner & Share, 2007, pp. 14, 17; Mihailidis & Thevenin, 2013). Unlike proponents of

democratic theory, these scholars' approach to democracy as pluralistic and participatory relies primarily on citizens' interactions and self-expression, with little attention to their participation in decision-making. It is hard to dispute that, as argued by Bennett, Wells, & Rank (2009), civic interaction and self-expression are crucial to civic engagement. Nevertheless, such an approach to democracy is rather monolithic, leaving unanswered the question of whether and how digital literacy facilitates *de facto* different democratic variants.[9]

Recent work inspired by critical pedagogy has focused on data literacy as a variant of digital literacy, moving away from users' critique as revolving primarily around media representations (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018). Pangrazio and Selwyn (2019) have researched how users deploy knowledge about how internet corporations like Google and Facebook operate, how they collect their data for advertising purposes through cookies and algorithms, and with what implications for users' privacy. On the basis of interviews with young people, these authors suggest that data literacy is crucial if users are to protect their privacy and resist corporate power through the use of information-obfuscation tactics, from posting ugly selfies to producing cryptic messages.[10] Their approach to data literacy as *socio-technical* knowledge implies that its critical dimension, which is about understanding how internet corporations operate, intersects with a functional understanding of cookies and algorithms. But such an intersection has remained silent within media literacy research.

As with work on data literacy, Banaji and Buckingham (2013) have, exceptionally, framed digital literacy as incorporating knowledge about the digital environment. In their view, young people's civic practices, from discussing civic issues online to participating in environmental initiatives, are underpinned by knowledge about the

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[9] Refer to Chapter 1, pp. 19-20, for how the concept of democracy in the West, which refers descriptively to liberal democracy, can be normatively understood as competitive, elitist, pluralistic, deliberative or participatory.

[10] Selwyn and Pangrazio (2018) draw on critical theorist de Certeau's (1984) distinction between *strategies* and *tactics* in order to refer to practices that respectively reinforce or resist the *status quo*. According to de Certeau (1984), institutional practices of power are an example of *strategies*, while what citizen do to resist their power comes under *tactics*.

internet, including its potential as a tool for campaigning and volunteering, but also as a vehicle for hate speech (Banaji & Buckingham, 2013, pp. 82, 83). Their approach to digital literacy echoes Fry's (2014) proposition that this should include an understanding of the internet's potentials and constraints for civic life. But whether and how critical digital literacy relies on both positive and negative interpretations of the internet has remained under-explored. So has whether such an approach has the potential to challenge polarizing conclusions about users' positive or negative interpretations being respectively beneficial or problematic for their online engagement, as perpetuated by digital inequalities research as well as by educational research inspired by social psychology. Finally, inasmuch as we live in an age where the social is increasingly intertwined with the digital, to address how users understand the digital environment invites reflection on whether and how their critical interpretations intersect with their understanding of the socio-political system. According to Fotopoulou (2014), while feminist activists are motivated by imaginaries of networked feminism based on the internet's potential for freedom and for open data, gaps in their digital skills hinder their civic engagement. Their imaginaries, for Fotopoulou (2014), do not come to represent a dimension of their digital literacy. By contrast, within the critical pedagogy tradition, it is users' critique of the socio-political order that, while not necessarily focused on the internet, is indicative of critical literacy. This tradition, however, has under-explored whether and how users understand the internet in ways that intersect with their critique, which is collapsed into the expectation that it will necessarily lead to progressive action.

2.2.4 Research inspired by the New Literacy Studies

The New Literacy Studies refers to a strand of research originating within sociolinguistics, which defines literacy in sociocultural terms as contextually situated practice. This tradition sees "knowledge and literacy practices … primarily … as constructions of particular social groups, rather than attributed to individual cognition alone" (K. A. Mills, 2010, p. 247). On the basis of ethnographic research, the New Literacy Studies has addressed how different communities of practice share and

sustain their knowledge. Its digital strand has largely focused on children's literacy practices mediated by digital technologies within and beyond formal educational settings (K. A. Mills, 2010, pp. 247–248). This strand, however, has generally prioritized users' creative engagement with multimodality, intended as the integration of different media texts, "while along the way learning skills of mastery and critique" (Pangrazio, 2016, p. 167). The idea of literacy as practice subordinates knowing to doing. As a result, the New Literacy Studies has often overemphasized users' creative skills and engagement online over their critical reflections, with little attention to their political participation (e.g., Bulfin & North, 2007; Hartley, McWilliam, Burgess, & Banks, 2008; Jewitt, 2008; Kress, 2003).

By contrast, when research has taken inspiration from the New Literacy Studies in synergy with critical pedagogy, it has approached digital literacy as practice that entails both functional and critical aspects (e.g., Dezuanni, 2018; Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, & Zimmerman, 2016; Livingstone, 2014; McGinnis, Goodstein-Stolzenberg, & Costa Saliani, 2007; Mihailidis & Cohen, 2013). Interested in the social dimension of digital literacy, a few studies, while not always claiming affiliation to either tradition, have researched children's digital skills and knowledge as having both functional and critical connotations. These studies have focused on children's functional digital literacy, with emphasis on their creative skills and understanding of digital affordances, including what video games and social media afford in terms of creating content and interacting with other users (e.g., Dezuanni, 2018; Livingstone, 2014). The concept of digital affordances refers to how digital technologies function and can (or cannot) be used because of their technical features, digital design, interface or the character of networks (Hutchby, 2001). Despite its interest in functional digital literacy, research on digital inequalities has hardly engaged with notions of digital affordances, except for emphasizing the interactional dimension of users' social skills online (e.g., Hsieh, 2012). These studies, by contrast, have addressed whether and how children understand how digital technologies are designed and what they afford in terms of playing, learning and socializing. At the same time, they have also framed children's digital literacy as incorporating critical reflection about media representations and interactions on

social media (e.g., Dezuanni, 2018; Livingstone, 2014). A few other studies, furthermore, have prioritized not just users' digital skills, in relation to creating and sharing multimodal content, but also their critical reflections about the internet's implications for participating in practices of resistance and activism (e.g., Shresthova, 2016b, 2016a).

Sitting between the New Literacy Studies and critical pedagogy, this body of work has expanded how digital literacy can be understood. Nevertheless, despite approaching digital literacy as incorporating functional and critical dimensions, it has hardly examined how these dimensions intersect, and with what implications for digital literacy. Research has prioritized the latter over the former (e.g., Darvin, 2017; Lankshear & Knobel, 2006). A few studies, furthermore, have focused on users' involvement in civic life (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; McGinnis et al., 2007). Given the legacy of critical pedagogy, these studies, however, of which the findings are reviewed later in this subsection, have largely collapsed users' critique into the expectation that this will necessarily be progressive. Promoting such an expectation, Mihailidis (2018) and Jenkins, Shresthova, Gamber-Thompson and Zimmerman (2016, p. 300) have proposed that digital literacy should be based on "civic imagination", which enables users to imagine "alternatives to current social, political or economic conditions". Their proposition is promising for exploring how digital literacy intersects with civic engagement in ways that incorporate knowledge about the internet's potentials and limitations for social change. But while we live in an age that is highly mediated by digital technologies, what has remained silent in the literature is whether and how users understand the internet in ways that intersect with their imaginaries of civic life, that is, with ideas and expectations of the socio-political order.

When it comes to how users develop digital skills and knowledge, research inspired by the New Literacy Studies has argued consistently that social interaction and experience of using digital technologies provide children with opportunities for developing digital literacy in ways that are enhanced by collaborative and creative practices within formal and informal learning environments, from the classroom to

the household (e.g., Bhatt & de Roock, 2013; Bulfin & North, 2007; Drotner, Jensen, & Schrøder, 2008). Barton and Hamilton (2005) have emphasized how the literacy of different segments of society is embedded within power structures based on social interaction that is asymmetrical. This is why it is essential to reflect on "'whose literacies' are dominant and whose are marginalized" (Street, 2001, p. 77). Ultimately, though, the New Literacy Studies has championed social interaction, however asymmetrical, on the grounds that it facilitates active and collaborative learning, both online and offline (e.g., Brown, 2015; Gourlay, Hamilton, & Lea, 2013; Lankshear & Knobel, 2003). Inspired by the New Literacy Studies and by critical pedagogy, Black (2009) has found that teaching school children how to create and share fan-fiction stories online provides them with opportunities to engage critically with popular culture and to produce counter-narratives. Beyond formal education, however, not many studies have focused on informal learning within civic life, understood, as approached in this thesis, as not just community but also political life.

Exceptionally, conducting an ethnography of online communities of young activists, Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al. (2016) have found that these act as "sources of expertise" (Soep, 2016, p. 295). Their "learning is connected" and "experience-based" (Soep, 2016, pp. 293, 295). It involves the production and sharing of digital storytelling, from YouTube videos about migration to social-media commentary debunking Islamophobia (Gamber-Thompson &Zimmerman, 2016; Shresthova, 2016a). According to Jenkins and colleagues, networked engagement underpinned by social interaction and experience in using digital technologies enables young activists to develop digital skills, including first and foremost creative skills, as well as critical reflection about the internet and civic issues (Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016). This is how they learn how to express their opinions online and to criticize multimedia content about the Global South that exacerbates discourses about Western supremacy. In addition, this is how they come to question the effectiveness of online campaigning (Shresthova, 2016b).

Research inspired by the New Literacy Studies and by critical pedagogy has addressed not only how users develop but also how they deploy digital literacy, from creative skills to critical reflection on mainstream media, often through blogging or digital storytelling (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; McGinnis et al., 2007). As argued by Jenkins and Shresthova (2016), the internet enables activists to "reimagine the civic [in ways] that allow for diverse voices to be heard" (p. 255). Gamber-Thompson (2016) has found that young libertarians in the US produce and share videos on YouTube in order to voice "their displeasure with the political status quo" (p. 219). Her work, nevertheless, does not address whether or how they understand the potential of the internet in ways that intersect with their own imaginaries of and involvement in civic life. Exceptionally, Shresthova (2016a) has found that American Muslim activists deploy their knowledge about the internet in order to engage both in storytelling and in self-censorship in the face of surveillance, resulting, respectively, in increased or decreased activism. According to McGinnis et al. (2007), young people use blogging to negotiate their identities in opposition to conservative stereotypes. Shresthova (2016a) suggests that they are motivated by an imaginary of a progressive America devoid of stereotypes. Her analysis, however, leaves unanswered whether and how their understanding of the internet is blended with such an imaginary.

In short, when influenced by critical pedagogy, research inspired by the New Literacy Studies has focused on users' creative skills and engagement online, as well as on critical reflection in the context of their civic practices. At the same time, this body of work has under-explored whether and how their practices have implications for how we can understand digital literacy as functional and critical. In addition, it has largely approached users' critique as inherently progressive. It has only occasionally interrogated their understanding of the internet's potential for civic life. And despite its emphasis on civic imagination, it has under-researched whether and how their understanding intersects with their imaginaries of civic life.

2.2.5 Information science and librarianship studies

This strand of research has focused on information literacy, approached as the ability to access, "locate, evaluate, organize and effectively create, use and communicate information" (Information Literacy Meeting of Experts, 2003, p. 1). In addition, it has focused on the role of librarians as information experts (e.g., Pressley & Gilbertson, 2011; Widdowson & Smart, 2015). The advent of the internet has led to an overlap of information literacy and media literacy, along with a convergence of information science and media studies (Livingstone, Van Couvering, & Thumim, 2008). This is exemplified by UNESCO's (2014) adoption of the term *media and information literacy* (MIL), based on the recognition that the "digital environment is deeply affecting the meaning and use of information" (p. 1). But while media studies has approached media literacy by borrowing from multiple traditions and epistemologies, information science, rooted more rigidly in computer science and psychology, has approached information literacy predominantly as a cognitive phenomenon that transcends social context (e.g., Macpherson, 2013; Wichowski & Kohl, 2013). Leaving aside exceptions that have emphasized the social dimension of information literacy (e.g., Meyers, Erickson, & Small, 2013), information science and librarianship studies, as criticized by a few scholars within this tradition (e.g., Elmborg, 2006; J. Martin, 2013), have largely framed information literacy in terms of individual skills which, once learned, can be transferred from one context to another.

The concept of information literacy is an overarching one because it refers to all information, mediated or not. When it comes to the internet, this tradition has addressed how users engage practically with and evaluate online content. A few studies have argued that deploying information navigation skills to search for and compare information from multiple sources is valuable for assessing trustworthiness (e.g., Goad, 2002; Weiner, 2011). The question of whether and how functional digital skills can be deployed to evaluate online content is important for understanding what digital literacy consists of. These studies, however, have paid little attention to whether and how the practice of using multiple sources lies at the intersection of

functional and critical digital literacy, or to what implications this holds for digital literacy.

This tradition, furthermore, has generally under-researched the critical dimension of digital literacy as including knowledge about the digital environment, beyond the ability to evaluate online content. The CRAAP test, for instance, which is popular within this strand of research, suggests that information should be evaluated in relation to its currency, relevance, authority, accuracy and purpose (Lewis, 2018; Wichowski & Kohl, 2013). Similarly, the 5Ws model, which is used to teach information literacy, encourages students to reflect on the author behind a source (*who*), on *what* the source is about, *when* it was produced, *where* it is from and *why* it may be useful (e.g., LeMire & Trott, 2016). These frameworks are used for evaluating information, online and offline. Nevertheless, they do not include questions about the broader digital environment within which online content circulates – that is, questions about the political economy of the internet, including how internet corporations operate, along with its potential and limitations for society.

Exceptionally, a few studies within this tradition have focused on copyright literacy, with emphasis on the importance for librarians, researchers, educators and students of understanding both the law and the ethics that underpin how information is created, disseminated, consumed and shared in the digital age (e.g., Secker & Morrison, 2010). Despite under-researching digital literacy as both functional and critical, a few others have argued that it is essential for users to understand search-engine algorithms and to engage with information beyond their own filter bubbles, which result from how internet corporations operate (e.g., Dillahunt, Brooks, & Gulati, 2015; Johnson, Edmundson-Bird, & Keegan, 2012; Spratt & Agosto, 2017; Valentine & Wukovitz, 2013).[11] Indeed, according to Gregory and Higgins (2013), information literacy in the digital age should include reflection on "the social, political, economic, and corporate systems […behind] information" (p. 4). As a whole, nevertheless, research inspired by information science and librarianship studies has largely

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[11] See p. 21 for details of what the term filter bubble refers to.

prioritized the issue of whether users engage practically or critically with online content, paying little attention to whether and how they understand the digital environment or whether and how such an understanding requires both functional and critical knowledge about the internet.

When it comes to how users develop information literacy, research inspired by information science and librarianship studies has generally focused more on formal than on informal learning. This body of work has emphasized three kinds of formal training: 1) the training in information literacy, when available, provided by librarians for students through school and university programmes, which may be extra-curricular or integrated into the curriculum (e.g., K. Anderson & May, 2010; Herring, 2011; Ivey, 2013; Moselen & Wang, 2014); 2) the training that librarians need in order to develop and teach information and copyright literacy (e.g., Ishimura & Bartlett, 2014; Secker & Morrison, 2010, pp. 211–238; L. Wang & Cook, 2017); and 3) the training in information literacy, when available, that public libraries offer to different segments of society (e.g., Harding, 2008; Julien & Hoffman, 2008; McDonald, 2015). Public libraries operate as part of the civic fabric of our societies, which is why their training is an example of how civic engagement at the community level provides opportunities for learning digital literacy. But, while research has emphasized the fact that librarians are equipped to teach functional and critical digital skills (e.g., Widdowson & Smart, 2015), public libraries in the West and beyond suffer from funding cuts, which limit these opportunities (Ryan & Cole, 2016). In addition, as argued earlier in this chapter, they tend to tackle digital inequalities by prioritizing a type of training for vulnerable groups that is more functional than critical, including how to search for jobs and apply for social benefits (e.g., Dudziak, 2007; Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012).

Besides training, research in this tradition has argued that social interaction within environments like the household or workplace is beneficial for informally gaining digital literacy (e.g., Meyers et al., 2013). This kind of research has emphasized the importance of social context, moving away from understanding information literacy individualistically. However, even though social interaction, as discussed above,

applies to multiple domains of social life, less is known within this tradition about whether and how it facilitates users' development of digital literacy specifically in the context of their civic engagement.

Finally, as to whether and how information literacy, in turn, facilitates civic engagement, a body of work within information science and librarianship studies has approached information literacy as a crucial condition for citizenship, understood as the relationship between individuals and communities and the broader socio-political context. The new definition of information literacy proposed (2018) by the Chartered Institute of Library and Information Professionals (CILIP) in the UK, resonates with such an approach in that it recognizes the relevance of information literacy for making informed decisions as well as for "engag[ing] fully in society" (p. 3). Similarly, Secker and Coonan (2011) have argued that the social dimension of information literacy requires citizens to make informed decisions on the basis of understanding the ethical and political implications of information. Ultimately, and along these lines, a strand that is rather dominant has drawn on critical pedagogy to frame *critical information literacy* as the ability to evaluate information bias, prejudice and trustworthiness, which is essential to the questioning of power and authority (e.g., Cope, 2010; Correia, 2002; Elmborg, 2006; Gregory & Higgins, 2013; Jacobs & Berg, 2011).

According to this strand of research, such an ability is crucial to deconstructing dominant power relations in ways that facilitate social justice. As argued by Tewell (2018), "critical information literacy [...refers to] a way of thinking … that examines the social construction and political dimensions of … information" (p. 10). A few years ago, the information literacy framework developed by the Association of College and Research Libraries (ACRL) was revised in order to place more emphasis on the link between critical information literacy and social justice (Foasberg, 2015). From this perspective, librarians have the potential to promote democratic values, from intellectual freedom to access to knowledge. Their role, as a result, can be understood as that not just of information experts, but also of advocates of social change, with emphasis on how they can support political education in school as well as copyright reforms at the intersection of public and private interests (Secker, Morrison, &

Nilsson, 2019; L. N. Smith, 2016). As argued above, however, leaving exceptions aside (e.g., Gregory & Higgins, 2013; Secker & Morrison, 2016), research on information literacy has rarely approached its critical dimension as including knowledge about the production and consumption processes behind information online, along with the internet's implications for civic life. Given the influence of critical pedagogy, this body of work, furthermore, has advocated its potential for facilitating social justice and democracy as being inherently left-wing and progressive. As a result, it has paid little attention to whether and how critical information literacy can be deployed in ways that intersect with different ideologies.

2.2.6 Research on human-computer interaction

Like information science research, research on human-computer interaction is rooted in computer science and psychology. Interested in the materiality of digital technologies, this body of work has largely prioritized questions about their *usability*, that is, how easy they are to use as a result of how their technical features are designed (Railean, 2017, pp. 69–70). In so doing, research on human-computer interaction has largely approached digital literacy in cognitive terms, with little attention to the social context, in order to explore how users – both children and adults – interact with digital technologies. While not always claiming affiliation to this tradition, research interested in this kind of interaction has often employed cognitive methods like the think aloud protocol to ask participants to verbalize their thoughts and actions while or after performing different tasks, from navigating websites to using digital technologies to read or write (e.g., Cardullo, Zygouris-Coe, Wilson, Craanen, & Stafford, 2012; Dalton & Proctor, 2007; Gilbert, 2014; Kodagoda & Wong, 2008; Zarcadoolas, Blanco, Boyer, & Pleasant, 2002).

As with research on digital inequalities, this tradition has been particularly interested in functional rather than critical aspects of digital literacy. Research has focused primarily on users' digital skills, including their information-navigation and creative skills (e.g., Alkali & Amichai-Hamburger, 2004; Feufel & Stahl, 2012; Marchionini,

2006). Although to a lesser extent, a few studies have also investigated users' dispositions towards the internet in relation, for instance, to its usefulness for working and communicating with others (e.g., Joyce & Kirakowski, 2015). Given their emphasis on the materiality of digital technologies, a large number of studies, furthermore, have explored how users understand and experience digital affordances, often in relation to digital design and interface (e.g., Hayes, Carr, & Wohn, 2016; Nagy & Neff, 2015; D. Smith, Brand, & Kinash, 2013; Vyas, Chisalita, & van der Veer, 2006; Zhao, Liu, Tang, & Zhu, 2013).[12] Finally, while research on human-computer interaction has generally prioritized functional digital literacy, research on e-learning within this tradition has addressed the critical dimension of digital literacy, with emphasis on how students evaluate online content (e.g., Damico & Baildon, 2007; Greene, Yu, & Copeland, 2014; Kiili, Laurinen, & Marttunen, 2008; Lévesque, Ng-A-Fook, & Corrigan, 2014; Messenger, 2013).

As with research on information literacy, Damico and Baildon (2007) have approached the ability to evaluate online content as incorporating reflections on the source, author and target audience of information. Using the think aloud method to explore how students use digital technologies, they have emphasized the role of pre-existing knowledge in assessing the trustworthiness of information. At the same time, they have drawn on critical pedagogy to stress that information serves particular interests, arguing that students assess the reliability of websites by "cross-check[ing] claims and evidence from other websites and sources" (p. 256). Their work suggests that information navigation skills are useful for evaluating online content. But rather than tracing systematically whether and how functional digital literacy intersects with critical digital literacy, research on human-computer interaction that is interested in e-learning, similarly to research in information science and librarianship studies, has under-explored the relationship between these. Furthermore, it has examined users' ability to evaluate online content in isolation from their understanding of the digital environment where information circulates.

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[12] As defined earlier in this chapter, the notion of digital affordances refers to how digital technologies can (or cannot) be used as a result of their technical features, digital design, interface or the character of networks.

When it comes to how users develop digital literacy, this strand of research has focused on experiential learning, but often in the context of formal education. More specifically, research has emphasized the importance of gaining experience with digital technologies, through interacting with these technologies within training settings, for acquiring functional digital skills and knowledge – from operational and creative skills to knowledge about coding and digital design (e.g., Angros, Johnson, Rickel, & Scholer, 2002; Rogalski & Samurçay, 1990; Yantaç, 2013). A few studies, furthermore, have approached digital literacy in terms beyond the cognitive in order to interrogate the potential of social interaction in the classroom for acquiring digital skills, including operational and social skills (e.g., Barker, van Schaik, & Hudson, 1998; Nunes et al., 2015). Bhatt and de Roock (2013), for instance, have drawn on the New Literacy Studies to emphasize how students learn to use digital technologies, and what these afford for writing, through interaction with classmates and teachers. Beyond formal education, however, less is known within this tradition about whether civic engagement provides opportunities for learning digital literacy.

Furthermore, research on human-computer interaction has under-explored whether digital literacy, in turn, facilitates civic engagement. More specifically, research has argued that users' digital skills and understanding of digital affordances enable them to use the technical properties of these, but with little attention to their use in civic practices (e.g., Nagy & Neff, 2015; Zhao et al., 2013). This is not surprising, since this tradition is concerned primarily with the implications of how users deploy digital skills and knowledge not for participating in society but for usability purposes. Similarly to research on digital inequalities and to educational research inspired by social psychology, research within this tradition has emphasized how users' positive or negative dispositions towards the internet respectively facilitate or undermine their online engagement in the context of working and communicating with others (e.g., Joyce & Kirakowski, 2015). Exceptionally, a few studies have focused on how users engage with government websites and e-voting technologies (e.g., MacNamara, Carmody, Oakley, & Quane, 2010; Oostveen & van den Besselaar, 2004a, 2004b). These studies, however, have been more interested in what users think about

usability than in how they deploy digital skills and knowledge in ways that may be relevant to their civic engagement. Aleixo, Nunes and Isaias (2012) have argued that users' digital skills, including operational and information navigation skills, depend on the interface of government websites, and how easy to use and secure these are. Their work suggests that digital literacy is constrained by levels of usability beyond one's own competences. Nevertheless, whether and how digital literacy intersects with civic engagement has remained largely silent within this tradition.

2.2.7 Policy research on media literacy

This body of work consists of national and international policy research on media literacy, including cross-comparative research in Europe and worldwide (e.g., Frau-Meigs & Torrent, 2009; Frau-Meigs, Velez, & Michel, 2017). Interested in promoting media literacy and in mapping policies and initiatives, this tradition has largely adopted UNESCO's definition of *media and information literacy* (MIL), which frames its cognitive dimension as contextually situated. As stated by UNESCO (2014), MIL refers to "21st century literacy practices […based on] knowledge, skills and critical attitudes to information [and] culture […, which enable] people to access, create and innovate" (p. 3).

As discussed above, the digital inequalities tradition includes research on the policy implications of promoting digital literacy as predominantly functional. By contrast, this strand of research has juxtaposed media literacy with digital literacy, with the latter having a pejorative connotation (Frau-Meigs, Velez, & Michel, 2017a, pp. 74–75). More specifically, research within this tradition has found that digital literacy is often supported by ministries of economics and telecommunications across Europe in ways that encourage the private sector to promote functional digital skills and knowledge in order to boost employment and the economy. Media literacy, by contrast, is supported by ministries of education and culture, which prioritize the critical skills and knowledge about the media that citizens need in order to participate in society (Frau-Meigs et al., 2017a). For countries like Austria, these include the ability to evaluate

online content as well as knowledge about the broader digital environment, including how information is produced and consumed online (Frau-Meigs et al., 2017a, pp. 36, 101).

Interested in promoting media literacy, this body of work has often been more about how users, both children and adults, develop than about how they deploy media literacy. To reach adults, however, is challenging, since most are no longer in school (Bulger & Davidson, 2018, p. 7; Livingstone, 2011). Policy research and interventions have focused on how to promote children's media literacy through the education system, national curricula and teaching resources (e.g., McDougall & Livingstone, 2014; National Literacy Trust, 2018). When it comes to adults, this body of work has emphasized that civil society organizations and traditional media have the potential to promote both formal and informal learning opportunities.[13] These opportunities, which exemplify how the involvement of such organizations and media outlets in civic life can facilitate the development of media literacy, may consist of informally raising awareness about the media through 1) media activism; 2) traditional media, like the BBC, that provide educational campaigns and resources; and 3) formal training provided by civil society organizations (e.g., del Mar Grandío, Dilli, & O'Neill, 2017, p. 124; Livingstone, 2011; McDougall, Turkoglu, & Kanižaj, 2017).

Examples of media activism promoting media literacy are captured in the work of organizations like Internet Matters (2019) and 5Rights (2019), which campaign for and provide resources on internet safety and digital rights in order to raise awareness among the public about the internet. Indeed, policy research on media literacy has argued that media activism is valuable for reaching the adult population, as are traditional media outlets (e.g., del Mar Grandío et al., 2017, p. 124; Jeong et al., 2009, p. 112; Livingstone, 2011; O'Neill, 2014). For example, "in Ireland the community media movement has been an important actor in promoting media literacy" by encouraging local communities to gain awareness of the media system and to produce their own media content (del Mar Grandío et al., 2017, p. 124). The Irish media,

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[13] See Chapter 1, p. 18, for this study's definition of civil society.

furthermore, have "target[ed] media literacy education as a recognized topic of broadcast content" (p. 124). This is exemplified by Ireland's 2019 Be Media Smart public awareness campaign, launched by the civil society organization Media Literacy Ireland together with the Broadcasting Authority of Ireland. Supported by a number of actors, including libraries, this campaign was designed to enhance Irish people's understanding of the media, particularly in relation to online misinformation (Russell, 2019).

Furthermore, besides raising awareness about the media through campaigning, "civil society associations and NGOs [have the potential to] foster MIL … training" for the general public (UNESCO, 2014, p. 6). Nevertheless, while training can in principle reach different adult populations, policy research on media literacy has prioritized *de facto* the training of media educators, given their role in promoting children's media literacy via formal education (e.g., McDougall, Turkoglu, & Kanižaj, 2017). The English and Media Centre, for example, is a UK charity which, besides lobbying, provides media studies teachers with training and support (McDougall & Livingstone, 2014, p. 24). Teachers, however, are only a small segment of the population, which makes this kind of training ineffective at reaching most adults.

Finally, as to why it is important to promote media literacy, policy research and interventions have often emphasized the fact that this matters for civic engagement. Research has found that policies in countries like France and Austria frame media literacy as "essential for the production of reflective, active and democratic citizens" (Trültzsch-Wijnen, Murru, & Papaioannou, 2017, p. 103). In Hungary, "'media awareness' … is aimed at enabling pupils to become responsible participants in a global and mediated public sphere, and to take an active part in a 'participatory culture of democracy'" (Trültzsch-Wijnen et al., 2017, p. 103). On the one hand, this body of work has argued that media literacy benefits democracy. On the other hand, it has under-researched what skills and knowledge citizens need in order to engage with the media, depending on how democracy may be understood within different contexts. Finally, as mentioned above, this tradition has warned against promoting digital over media literacy. This is sensible in terms of encouraging democratic

participation, given how digital literacy is often framed at the policy level. But, in so doing, media policy research has perpetuated a binary understanding of functional versus critical digital literacy, while under-exploring how these intersect.

2.3 Gaps in and Limitations of Media Literacy Research: A Recap

The section above has reviewed different traditions of media literacy research in order to address what has been achieved, and with what gaps and limitations, with regard to the intersection of digital literacy and civic engagement. Here is a summary of what stood out when reviewing the literature, with links between the different traditions:

(i)   Media literacy research has prioritized children over adults. A few traditions have focused on both – i.e., research on digital inequalities, research inspired by information science and librarianship studies, research on human-computer interaction, and policy research on media literacy. This, however, does not apply to educational research inspired by social psychology, to research inspired by critical pedagogy and cultural studies, or to research inspired by the New Literacy Studies.

(ii)   Media literacy research has under-explored how functional digital literacy intersects with critical digital literacy. On the one hand, we have research that has focused more on functional than on critical digital skills and knowledge, e.g., research on digital inequalities, research inspired by the New Literacy Studies and research on human-computer interaction. On the other hand, we have research that has focused on users' ability to evaluate online content, but often in isolation from their knowledge about the digital environment, e.g., educational research inspired by social psychology and research inspired by information science and librarianship studies. Occasionally, research inspired by critical pedagogy and at its intersection with the New Literacy Studies has placed emphasis on users' understanding of internet corporations along with the internet's potentials

and limitations for civic life. But as with policy research on media literacy, this body of work has generally subordinated functional to critical digital literacy. It has under-explored the latter where this relies on understanding both the potential and the limitations of the internet. And it has under-researched whether and how users' understanding of the internet intersects with their imaginaries of civic life, that is, with their understanding and expectations of the socio-political system.

(iii)   When it comes to how users develop digital literacy, media literacy research has either prioritized formal education, e.g., educational research inspired by social psychology, research inspired by critical pedagogy, policy research on media literacy, or it has also focused on informal learning, e.g., research on digital inequalities, research inspired by the New Literacy Studies, research inspired by information science and librarianship studies. Only occasionally, however, has research addressed formal and/or informal learning in the context of users' civic engagement, understood, as approached here, as their involvement not just in community but also in political life. Exceptions include research at the intersection of the New Literacy Studies and critical pedagogy, and policy research on media literacy. The former has emphasized the importance of learning digital literacy informally through social interaction and experience while using digital technologies within civic life. The latter has argued that media activism, traditional media and formal training provided by civil society organizations have the potential to promote media literacy. This body of work, however, has under-researched whether and how civil society organizations provide formal training in media literacy for different adult populations beyond the reach of media educators. By contrast, studies on digital inequalities as well as research inspired by information science and librarianship studies have focused on the digital training provided by public libraries and community centres for different populations. This kind of training, however, is generally more functional than critical.

(iv)   Media literacy research has argued consistently that digital literacy facilitates civic engagement. But while educational research inspired by social psychology has found that news literacy, in particular, does not necessarily correspond to civic engagement, research inspired by critical pedagogy and cultural studies has emphasized that critical literacy enables users to challenge dominant media representations, online and offline, as well as to produce alternative media. This strand of research, however, has largely approached critical literacy as leading intrinsically to social action underpinned by left-wing or progressive values, leaving little room for different ideologies. Given the legacy of critical pedagogy, the same applies to research at its intersection with the New Literacy Studies, which has focused on digital storytelling, as well as to research inspired by information science and librarianship studies, which has framed critical information literacy as promoting social justice. Despite using different terminologies, media literacy research has argued that the critical dimension of digital literacy, based primarily on evaluating online content, benefits democracy, e.g., research inspired by critical pedagogy and policy research on media literacy. But since the notion of democracy has been approached rather monolithically, what has remained obscure is whether and how the digital skills and knowledge required to participate in democracy vary depending on how the latter is understood. Finally, media literacy research has under-explored whether and how users participate in civic life by deploying knowledge about the internet's civic potentials and limitations. A few studies have polarized users' positive or negative interpretations of the internet as leading respectively to online engagement or disengagement. But, except for research inspired by the New Literacy Studies and by critical pedagogy, these studies have prioritized users' understanding of the internet in individualistic terms and beyond civic life, with emphasis on functional rather than critical digital literacy, i.e., research on digital inequalities, educational research inspired by social psychology, research on human-computer interaction.

2.4 Conclusions

This chapter offers a critical review of media literacy research on digital literacy and its intersection with civic engagement. The literature is synthesized under different traditions, which include research on digital inequalities, educational research inspired by social psychology, research inspired by critical pedagogy and cultural studies, the New Literacy Studies, information science and librarianship studies, research on human-computer interaction, and policy research on media literacy.

While media literacy research is messy and diverse, what is clear from reviewing the literature is that whether and how digital literacy intersects with civic engagement depends on how digital literacy is understood. This chapter has argued that the different traditions of media literacy research have prioritized different aspects of digital literacy. As discussed above, some of these traditions have under-explored its intersection with civic engagement. Others, by contrast, have researched such an intersection by focusing narrowly on functional or critical skills and knowledge about the internet, approaching the critical dimension of digital literacy as operating restrictively in the service of progressive ideologies and with limited attention to users' understanding of the digital environment. Given the gaps in and limitations of media literacy research, how should digital literacy be approached in order to facilitate richer analysis of its intersection with civic engagement? Finally, beyond media literacy research, what can be gained by drawing on different literatures, including political research? The next chapter addresses these questions, providing a new conceptualization of digital literacy.

Chapter 3 – Digital literacy and civic engagement: A new theoretical approach

3.1 Introduction

Chapter 2 has reviewed media literacy research on the intersection of digital literacy and civic engagement, with emphasis on how different traditions have approached digital literacy, and with what gaps and limitations. Now it is time to introduce how this thesis conceptualizes digital literacy. This chapter argues that, in order to facilitate richer analysis of whether and how digital literacy intersects with civic engagement, a novel approach to digital literacy as both functional and critical is necessary, where critical digital literacy is conceptualized as incorporating utopian/dystopian imaginaries of society in the digital age.

Section 3.2 below starts by laying the foundation of why and how this thesis approaches digital literacy, drawing on media literacy research, as reviewed in the previous chapter. It then draws on utopian studies and political theory to conceptualize critical digital literacy in ways that are grounded in utopian thinking, framed as relying on both utopianism and dystopianism. After discussing the benefits and implications of conceiving of critical digital literacy in this way, section 3.3 introduces the conceptual rationale of this thesis for focusing on experts and advocates, reviewing further literature beyond media literacy research. Finally, section 3.4 presents the study's key concepts and research questions.

3.2 Digital Literacy as Functional and Critical

As argued in Chapter 2, on the one hand, traditions like research on human-computer interaction have largely approached digital literacy as embedded within individual cognitive processes, with little attention to the social context (e.g., Railean, 2017). On

the other hand, traditions like the New Literacy Studies have been more interested in how digital literacy is contextually developed and deployed at the collective level, resisting the idea that it resides primarily within the individual (K. A. Mills, 2010). Seeking ontological common ground, this study is interested in the cognitive dimension of digital literacy as a phenomenon that is contextually situated and is both individual and collective.[14] Such an approach to digital literacy resonates with cognitive sociology. This strand of research understands cognition as socially constructed, but draws on cognitive psychology in order to study its complexities and to argue that culture exists not just at the collective level but also within cognitive processes (DiMaggio, 1997). Unlike social psychology, cognitive sociology "resist[s] efforts to portray culture as the aggregate of individual subjectivities" (DiMaggio, 1997, p. 266). But it "does not run counter to the psychological focus of cognition" (Miller, 2014, p. 3). It is interested in how people think as social beings who belong to communities, but also in the micro-foundations of their thinking (e.g., Bouvier, 2007; Zerubavel, 1999).

With this in mind, since the different traditions of media literacy research have often prioritized either the functional or the critical dimension of digital literacy, focusing on different aspects, this thesis argues that a novel approach to digital literacy is necessary. In order to analyse more fruitfully its intersection with civic engagement, digital literacy needs to be approached more comprehensively as incorporating functional and critical skills and knowledge about the internet that are contextually situated. As a result, functional digital literacy is understood here not just as digital skills and general dispositions towards the internet – as largely approached by research on digital inequalities (e.g., Reisdorf & Groselj, 2017; van Deursen et al., 2015) – but also as knowledge of digital affordances, as emphasized by research on human-computer interaction as well as by research inspired by the New Literacy Studies (e.g., Dezuanni, 2018; D. Smith et al., 2013). Critical digital literacy, rather, is understood here as the ability to evaluate online content as well as knowledge about

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[14] Refer to pp. 86-87 for what this means in relation to how this study focuses on experts and advocates exploring the intersection of digital literacy and civic engagement.

the digital environment. The latter incorporates knowledge about the political economy of the internet, including how internet corporations operate, along with the potentials and limitations of the internet for civic life, as approached by research inspired by critical pedagogy and at its intersection with the New Literacy Studies (e.g., Banaji & Buckingham, 2013; Buckingham, 2007a; Fry, 2014; Shresthova, 2016a).

Media literacy research, however, given the legacy of critical pedagogy, has largely, and restrictively, understood users' critique as inherently progressive. Furthermore, inspired by the New Literacy Studies, a few studies have argued that digital literacy should be based on civic imagination, which is crucial for imagining socio-political alternatives (i.e., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Mihailidis, 2018). Nevertheless, what has remained silent in the literature is whether and how users understand both the internet's potentials and its limitations in ways that are blended with different imaginaries of civic life, and in line with different ideologies. To overcome these limitations of media literacy research, this chapter turns to utopian studies and political theory. Section 3.2.1 frames utopian thinking as a form of imagination which, rooted in realism, relies on both utopianism and dystopianism. Section 3.2.2 conceptualizes, and discusses the benefits and implications of conceptualizing, critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age.

3.2.1 Utopian thinking: A dialectical approach

Utopian studies and philosophy represent an interdisciplinary strand of research that identifies and analyses utopian forms, content and functions by drawing on science-fiction literature, political theory, Marxism and postmodernism (Levitas, 2010, pp. 6, 179). Utopianism consists of ideas that produce utopia, a term coined in 1516 by Sir Thomas More when he published *Utopia*, which deals with a fictional island and its perfect society. By Latinizing two Greek compounds – *ou* (not) and *topos* (place), and *eu* (good) and *topos* (place) – More coined this term to refer ambiguously to what is both a non-place and a good place (Vieira, 2010). Dystopia, meanwhile, refers to a

fictitious, abhorrent socio-political world. It is believed to derive from the Greek prefix *dys*, meaning bad, dysfunctional, or from *Dis*, the underworld of the dead according to Greek mythology (Ransom, 2009).

Defining the perfect society is subjective, which is why no binary opposition should be established between utopia and dystopia – one person's utopia may be another's dystopia (Segal, 2012, p. 5). No binary opposition, furthermore, should be established because of the role of dystopianism in shaping utopianism. Indeed, the function of utopian thinking can be approached as twofold: 1) raising awareness through critique of the dystopian implications of the present, while 2) projecting utopian elements into the future (Shor, 2010, p. 125). Utopian thinking enables us to critique the present and to envision social change. As argued by Shor (2010), the probing of "utopian moments of building another world … requires some understanding of the dystopian elements of this and future worlds. In order to comprehend the utopian/dystopian dialectic, one needs to define that dialectic in ways that underscore […its] fictive and real nature" (p. 124).

The notion of dialectical thinking, which dates back to Hegelian theory, refers to a process of reasoning whereby opposing ideas – thesis and antithesis – are negotiated as synthesis (Maybee, 2016). Whereas Harvey's (2000) dialectical utopianism is based on the interdependence of an alternative space and time, for post-structuralist Marin (1990) it relies on imagination and realism, which is why utopian thinking requires the creation of a "timeless no-place" where contemporary socio-political forces are "critical[ly] examin[ed]" (p. xxiv). Similarly, as argued by Marxist political theorist Fredric Jameson (2005), "utopian space is an imaginary enclave within real social space" where tensions are played against each other in a "negative dialectic" (pp. 15, 180). This dialectic prescribes that utopian thinking relies on both utopianism and dystopianism, provided these are not pacified but in a state of conflict.

In order to facilitate social change, utopian thinking needs to be political and ideological. Utopian/dystopian configurations of utopian thinking include anti-utopianism, critical utopianism and critical dystopianism. Anti-utopianism is based on

the rejection, and reframing as dystopianism, of a type of utopianism that reproduces dominant power relations (Jameson, 2005, p. 199; Sargent, 1994, p. 9). Critical utopianism was theorized in the 1970s as referring to optimism about civil rights, anti-war and environmental movements. It consists of "ideological critique … and social dreaming/planning" when faced with the dystopian limitations of the present (Moylan, 2000, p. 82; Sargent, 1994, p. 9). Finally, theorized in the 1980s and 1990s as scepticism about neoliberal politics, critical dystopianism emerges when a utopian alternative is carved out of a dystopia (Jameson, 2005, p. 198; Sargent, 2001, p. 222).

Besides shaping discussions of ideology and utopia, Marxism has influenced how utopian thinking can be expected to guide action and social change. Marx's dialectical materialism exemplifies how the utopian/dystopian dialectic serves the political project of overturning capitalism. Dialectical materialism refers to a method of dialectical reasoning that understands sociality as developing through material conditions, and that aspires to overcome power asymmetries through action against the *status quo* (Edgley, 1990). Whereas anti-utopianism is often equated with rejection of left-wing utopianism, Marxism has underpinned forms of critical utopianism and critical dystopianism that oppose capitalism, ecological degradation and patriarchal society (Jameson, 2005, p. 199; Levitas & Sargisson, 2003, p. 15; Moylan, 2000, p. 82).

Levitas (2010) has built on Bloch's (1995) approach to utopia as hope in order to argue that social change results from combining desire with action. But, while Marxism assumes a link between utopian thinking and action, the former does not intrinsically lead to the latter (Levitas, 2010, p. 200). Notions of action and social change, furthermore, can vary, even within the Marxist tradition. Given the failure of the socialist revolution in the West, Western Marxism, unlike orthodox Marxism, is not as concerned with the utopian project of liberating the working class from capitalism by empowering them to control the state (P. Anderson, 1979). Central to critical theory, critical pedagogy and cultural studies, this underpins work on hope and utopia that has understood radical action as multifaceted.

While Bloch (1995) echoes orthodox Marxism in his "apocalyptic" alienation from society, defined as a condition for overturning capitalism through socio-political radicalism (Gunn, 1987, p. 93), Giroux (2004) defines "radical hope" as "a pedagogical … practice [that turns citizens into…] civic agents" (p. 38). For Giroux, "educated hope" is a "utopian longing" that operates as a "subversive force [that…] evok[es…] different futures" (Giroux, 2004, pp. 38–39). This form of utopianism, however, does not necessarily reject capitalism. Rather, it aligns with a vision of "radical [socialist] democracy", which "expand[s] the possibilities for social justice" through institutional and non-institutional politics (Kincheloe, McLaren, & Steinberg, 1997, p. ix). Similarly, for Raymond Williams (1980), utopian thinking and its connection with reality rely on cultural creativity that enables left-wing possibilities for social justice to be imagined (p. 198; Milner, 2016, pp. 418, 427).

Even though the field of utopian studies is indebted to Marxism, "utopias are not the monopoly of the Left" (Levitas, 2010, p. 214). There are left-wing utopias that reject power imbalances. But we also have "utopias of the dominant classes in society" that, however different in content or purpose, operate through a utopian/dystopian dialectic (p. 214). Neoliberal utopianism, for instance, projects a utopia of individual economic freedom and equality, framing taxation and bureaucracy as dystopian limitations. We can portray the neoliberal utopia as a dystopia, but "there is no doubt that […it promotes] an image of a desired society" (Levitas, 2010, pp. 215, 216, 218). And so does conservatism, which projects a utopia of "preservation …, loyalty to the state …, defence, order, [and] centralized power" (p. 218).

Insofar as utopianism varies in its socio-political purpose, conceiving "of the utopist as a radical revolutionary is problematic" (Morgan, 2015, p. 107). Ideologies, furthermore, are not fixed systems of ideas but can overlap (Therbon, 1980, p. vii). The goals of democratic welfare socialism and of sustainable development, for example, transcend conventional Left/Right politics. They operate through a utopian/dystopian dialectic based on critiquing social inequalities and environmental degradation while projecting hope for social justice and global sustainability. They coexist with capitalism and liberal democracy, relying on policy reforms and

institutions to promote social change (Morgan, 2015, pp. 115, 118). In short, the utopian/dystopian dialectic underpins the functioning of different ideologies that potentially, but not inherently, guide participation in society. The latter can be institutional or non-institutional, including voting for policy reforms as well as participating in resistance and activism.

3.2.2 Conceptualizing critical digital literacy as incorporating utopian thinking

How can media literacy theory and research benefit from utopian studies and political theory? This section argues that conceptualizing critical digital literacy as incorporating utopian thinking, as framed above, facilitates richer analysis of its intersection with civic engagement. Before discussing this further, it is worth examining the intersection of media studies and utopian studies. A dialectical approach to utopianism/dystopianism can help us to understand hopes and concerns that reflect different discourses about the internet's potential and limitations for civic life. As discussed in Chapter 1, the internet contributes, for instance, to decentralization of power, to deliberative democracy and to the political participation of marginalized groups. But it also facilitates political repression, surveillance and misinformation (Enjolras, Steen-Johnsen, & Wollebaek, 2013; McChesney, 2013; Oxley, 2012).

Indeed, media scholars have employed notions of utopia and dystopia to address, for example, the potential of a digital commons to challenge online commodification and surveillance (e.g., Frodsham, 2012; Loustau & Davis, 2012). In addition, given the ideological connotations of utopian thinking, discussions of utopianism and the internet are often coupled with discussions of ideology. Mejias (2012) has emphasized how euphoria about the use of Twitter during the Arab Spring served as a utopian discourse diverting attention in the West from capitalism's deepening of social inequalities. Similarly, according to O'Dwyer and Doyle (2012), digital capitalism represents, because of the structure of the digital environment, a form of utopianism that exacerbates inequalities. Barbrook (2007) has criticized the so-called internet gift

economy, which promotes online sharing in synergy with capitalism. In addition, Turner (2006) has argued that cyberlibertarianism, which is a form of utopianism promoting minimal internet regulation since the 1990s (Dahlberg, 2010), draws on progressive principles appropriated by Silicon Valley entrepreneurship. Cyberlibertarianism promotes liberal values rooted in the countercultural movements. But it "turned away from political struggle and toward social and economic spheres … to launch social change" (Turner, 2006, p. 244).

Contemporary utopian and dystopian imaginaries of society in the digital age perpetuate the idea that information facilitates both *freedom* and *control* (Cohen, 2012, p. 12). The internet is expected to promote economic and political freedom, which echoes cyberlibertarianism, but also utopianism in relation to citizens' participation in opposition to coercion and injustice. By contrast, a vision of information as control underpins the expectation that citizen welfare, financial profitability and collective security will necessitate internet regulation and surveillance. At the same time this vision legitimizes internet-based control and coercion, thereby undermining freedom and social justice (Mansell, 2017).

While media research intersecting with utopian studies has focused predominantly on the political economy of the internet, the question of how internet users deploy utopian thinking to understand society in the digital age is under-explored. And so is whether and how they deploy utopian/dystopian imaginaries of society in order to engage civically. Beyond media literacy research, a few media studies on social movements have argued that digital utopianism guides internet-mediated activism (e.g., Postill, 2014; Treré, 2019; A. White, 2012; Wilken, 2012). But media literacy research has under-explored the benefits of drawing on utopian studies. The subsections below discuss this further, establishing connections with political research.[15] I theorize here that conceptualizing critical digital literacy as incorporating users' utopian/dystopian imaginaries of society in the digital age enables us to: 1)

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[15] As we see below, this includes research on institutional politics, which is concerned with participation in formal and electoral politics, as well as research on non-institutional politics, which deals with social movements, activism and resistance.

differentiate between their imaginaries of the internet and their imaginaries of civic life; 2) overcome the collapse of critical digital literacy into civic engagement that is understood as inherently progressive; and 3) challenge polarizing conclusions about users' interpretations of the internet as crucial or detrimental to their online engagement.

3.2.2.1 Exploring users' imaginaries of society in the digital age

When it comes to media literacy research, as argued in the previous chapter, educational research informed by social psychology has interrogated users' civic engagement by focusing on their ability to evaluate online content in isolation from their understanding of the internet (e.g., Duran et al., 2008; Kahne et al., 2012). Research inspired by critical pedagogy has focused on users' civic action and critique of dominant media representations as inherently progressive (e.g., Kellner & Share, 2007). And while a few studies inspired by the New Literacy Studies and by critical pedagogy have argued that digital literacy should be based on civic imagination and knowledge about the digital environment (e.g., Jenkins , Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Mihailidis, 2018), the authors of these studies have under-researched whether and how users' understanding of the internet intersects with their imaginaries of civic life.

Approaching critical digital literacy as incorporating utopian thinking builds on these studies. Inasmuch as we live in an age that is highly mediated by digital technologies, such an approach enables us to explore users' utopian/dystopian imaginaries of society in the digital age by differentiating between 1) their imaginaries of the internet's civic potentials and limitations – as facilitating, for example, political emancipation and organized protest as well as misinformation and government surveillance, and 2) their imaginaries of civic life. In other words, such an approach has the potential to facilitate richer analysis of critical digital literacy and civic engagement by allowing us to disentangle users' imaginaries of the internet from their imaginaries

of the socio-political order, which may be aligned, for instance, with either conservative or progressive ideologies.

While critical digital literacy needs to incorporate knowledge about the internet in order to be digital, disentangling users' imaginaries of the internet from their imaginaries of civic life is valuable for analytical purposes. The potential of such an approach can be illustrated by drawing on political research, beyond media literacy research. A few studies on social movements have argued that activists' cyberlibertarianism, which champions the internet's implications for individual liberty and freedom of expression, can be blended with progressive visions of collective freedom and social justice as well as with anti-democratic and authoritarian values (e.g., Postill, 2013; Treré, 2019). These studies do not make reference to media literacy theory. But they suggest that digital utopianism can be interwoven with different visions of civic life. Conceptualizing critical digital literacy as incorporating utopian thinking has the potential to bridge media research on social movements with media literacy theory. Utopianism as such, however, is not critical digital literacy. As we will see below, a dialectical approach to utopian thinking prescribes that critical digital literacy needs to rely on both utopian and dystopian imaginaries of the internet.

The implications of such a dialectic for how critical digital literacy can be expected to shape civic engagement are discussed in the next subsections. It is worth emphasizing here that an example of how users' imaginaries of the internet can intersect with their imaginaries of civic life is captured by media activism underpinned by different ideologies. British organizations like the Campaign for Freedom of Information and the Open Rights Group promote visions of a better society by campaigning for users' freedom of expression and privacy, visions that are critical of internet censorship and surveillance in line with progressive ideologies. By contrast, Mediawatch UK and Accuracy in Media, in the US, campaign against biased and harmful media content in accordance with socially conservative and economically liberal agendas (Hackett & Carroll, William, 2006, p. 57).

3.2.2.2 Overcoming the collapse of critical digital literacy into civic engagement that is understood as inherently progressive

Utopian studies informed by Marxism have subsumed utopian thinking into action. But utopian thinking does not inherently lead to political participation. Furthermore, the utopian/dystopian dialectic applies to different ideologies, irrespective of whether social change is achieved through participation in formal politics or resistance and activism. Applying utopianism/dystopianism to critical digital literacy suggests that it potentially, but not inherently, underpins civic engagement. The critical pedagogy tradition within media literacy research has subsumed users' critique of dominant media representations into the expectation that this will lead to civic action and resistance, approached as intrinsically progressive (e.g., Kellner & Share, 2007). By contrast, conceptualizing critical digital literacy as incorporating utopianism/dystopianism has the potential to facilitate richer analytical inquiry insofar as it suggests that users' imaginaries of the internet may (or may not) contribute to their civic engagement in ways that are blended with different imaginaries of civic life and different ideologies.

To give an example, understanding the internet's potential for public debate as well as for elitism or misinformation may be beneficial to users' engagement with political content online in ways that are underpinned by conservative or by progressive imaginaries of civic life, in a context of resisting or of supporting mainstream politics. Put differently, users' imaginaries of the internet's potential to diversify public debate as well as to undermine the reach and trustworthiness of information may be interwoven with different visions of the socio-political system, potentially informing how they access, share or produce political content online. Media literacy research has under-explored how users understand the digital environment. Nevertheless, we know from a few studies within political research that citizens and activists involved in different socio-political causes use the internet in ways that are grounded in knowledge about its implications for political expression, building support and organizing action (Barassi, 2015b; Kwak et al., 2018). Conceptualizing critical digital

literacy as incorporating utopian thinking is promising for investigating whether and how users not only construct but also potentially deploy utopian/dystopian imaginaries of the internet and of civic life in order to participate in institutional or non-institutional politics in accordance with different ideologies.

3.2.2.3 Challenging polarizing conclusions about users' interpretations of the internet

Approaching utopian thinking as projecting utopian possibilities for social change, together with critiquing the dystopian implications of the present, prescribes an imagination/realism dialectic that relies on constructing both utopianism and dystopianism. As a result, conceptualizing critical digital literacy as incorporating utopian thinking makes the expectation of constructing both utopian and dystopian imaginaries of the internet a *sine qua non* of critical digital literacy. On the one hand, understanding the internet does not intrinsically translate into civic engagement. On the other hand, such an approach suggests that in order to pursue civic opportunities online users need to understand both the internet's utopian and its dystopian potentials in ways that intersect with their imaginaries of civic life. Before discussing this further, here is a practical example. In line with different ideologies, users' civic practices may be underpinned by an understanding of the internet's potentials for public debate as well as for elitism. Conscious of its utopian/dystopian implications, they may be able to reach wider audiences when campaigning or discussing politics online, overcoming the limitations of interacting predominantly with users from higher socio-economic backgrounds.

Conceptualizing critical digital literacy as incorporating utopianism/dystopianism has repercussions for research on digital inequalities, educational research inspired by social psychology, research on human-computer interaction, and research inspired by the New Literacy Studies. As argued in Chapter 2, these strands of research have polarized users' positive or negative interpretations of the internet as contributing, respectively, to online engagement or disengagement (Cushman & Klecun, 2006;

Durndell & Haag, 2002; Park, 2014; Reisdorf & Groselj, 2017). Once we go beyond media literacy research, we notice that this applies also to a few studies within political research that are interested in citizens' participation in institutional politics. Despite overlooking media literacy theory, these studies have argued that their positive or negative interpretations of the internet – in relation to its potential for public debate and community life as well as for limited impact and misinformation – respectively facilitate or undermine civic engagement, from seeking information about political parties to deliberating online as part of local governance initiatives (e.g., Gustafsson, 2012; B. J. Kim, Kavanaugh, & Hult, 2011).

By contrast, media research on social movements, while also paying little attention to media literacy theory, has emphasized the fact that activists know how to use digital technologies to pursue different actions strategically by adapting to the media ecosystem, since they are conscious of both its potentials and its limitations (e.g., McCurdy, 2011; Rucht, 2004). According to Cammaerts (2012), activists increasingly deploy "their lay-knowledge of how the mainstream media and technologies operate, partially adapting to them or appropriating them" (p. 117). McCurdy (2010, 2011), for instance, has found that they are often aware that mainstream media have a wider reach, online and offline, but are driven by corporate interests, which shapes news reporting. Alternative media suffer, rather, from limited visibility, which is why, in order to build support, they use both types of media strategically in order to maximize their respective potentials and compensate for their limitations. Similarly, Barassi (2015b) has argued that activists know that online platforms "are largely shaped by … corporate power" and are mindful of the implications of this for users' data and privacy (pp. 80–81). At the same time, they appreciate their potential for establishing "networks of solidarity" (Barassi, 2015b, pp. 80–81). As a result, they use the internet to organize action. But they also engage in media tactics to resist the power of internet corporations, including the use of alternative platforms (Barassi, 2015a, p. 62).[16] Finally, according to Treré (2019), activists often understand how algorithms

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[16] Barassi's (2015a) work echoes research on data literacy inspired by critical pedagogy, as reviewed in Chapter 2. Like Selwyn and Pangrazio (2018), even though her work does not draw on media literacy theory, she uses de Certeau's (1984) distinction between *strategies* and *tactics* to refer, respectively, to

function, and with what implications for gaining or suppressing visibility, and this underpins how they strategically produce and share alternative content online while pursuing social change (Treré, 2019). On the one hand, they worry about internet surveillance. On the other hand, conscious of the potential of social media for organizing action, they "delet[e] 'compromising' digital material" (Treré, 2015, pp. 174–175).

In line with media research on social movements, conceptualizing critical digital literacy as incorporating a dialectical approach to utopian thinking suggests that users' dystopian imaginaries of the internet are crucial to pursuing civic opportunities, provided they are coupled with utopian imaginaries of its potential.

3.3 Why Focus on Experts and Advocates? Reviewing Further Literature

Section 3.2 has unpacked how this thesis conceptualizes digital literacy, theorizing critical digital literacy as incorporating utopianism/dystopianism. This section explains why the thesis focuses on digital experts (e.g., information, IT and media professionals) and on civic advocates (e.g., community councillors, political party candidates, activists). The question of whether and how digital literacy intersects with civic engagement is not just theoretical but also empirical, which is relevant to how such an intersection unfolds in practice and among different populations. Similarly, whether and how applying utopianism/dystopianism to critical digital literacy works in practice, and whether and how it intersects with different dimensions of digital literacy, are empirical questions. As a result, while the methodology and research design of this thesis are presented in Chapter 4, this section introduces the conceptual

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how institutions operate through practices of power (strategies) and what citizens do to resist their practices (tactics). Unlike Barassi's, most studies within political research have used the notion of strategy – and in particular *media strategy* – to refer to how political campaigners and activists use traditional media and/or digital technologies to pursue different plans of action, irrespective of whether the latter relate to institutional or to non-institutional politics (e.g., Howard, 2005; Rucht, 2004). From this perspective, the notion of *media strategy* overlaps with that of *media tactics*, which can be understood more simply as the steps that are part of a strategy.

rationale behind the decision to focus on experts and advocates. It then reviews further literature in order to explore what has been accomplished, and with what limitations, by research on these two social categories, with emphasis on whether and how they develop and deploy digital skills and knowledge within civic life.

This kind of research includes studies on how experts like media professionals draw on their own expertise. In addition, as with some of the studies referenced in the previous section, it includes political research on how advocates such as activists or party candidates use and understand the internet. The assumption is that, of all the possible social categories that could be selected, experts and advocates are ideal for exploring the intersection of digital literacy and civic engagement. On the one hand, experts are digitally savvy, with different levels of civic engagement. On the other hand, advocates are highly involved in civic life, with different levels of digital literacy. With this assumption in mind, the subsections below shed light on what emerged from reviewing research on these social categories.[17]

3.3.1 Experts

This thesis defines *digital experts* as individuals whose professions revolve around the use of digital technologies, including media educators, and information, IT and media professionals (CEN, 2012; Dewdney & Ride, 2006; Huvilla, 2012).[18] When it comes to media educators, research has examined how they develop and deploy their expertise in the context of their profession (Buckingham, 2014; Jarman & McClune, 2010). This includes studies that have grappled with the question of whether media educators

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[17] These social categories are discussed here in the context of different literatures. But this does not mean that they do not overlap. Refer to Chapter 4 for how the experts and advocates recruited for this study included participants who work at the intersection of expertise and civic engagement. These include, for instance, media educators who work for civil society organizations promoting media education by lobbying and providing media studies teachers with training, as well as librarians who see their profession as a form of civic engagement, which resonates with some of the literature reviewed in Chapter 2 (e.g., McDougall et al., 2017; Secker et al., 2019; L. N. Smith, 2016).

[18] Examples of experts include media studies teachers (i.e., media educators), librarians (i.e., information professionals), IT engineers, systems analysts, website designers (i.e., IT professionals), publishers, journalists and social media coordinators (i.e., media professionals).

should encourage students' civic action as part of their teaching practices, as prescribed by critical pedagogy (e.g., Hobbs & Jensen, 2009, p. 7). In addition, as reviewed in Chapter 2, media policy research has focused on the training of media educators and their teaching resources (e.g., McDougall et al., 2017). But while media literacy research has prioritized students' digital literacy both inside and outside formal educational settings (e.g., Alvermann et al., 2012; Buck, 2012; Bulfin & North, 2007; Burnett, 2010), less is known about teachers' digital literacy beyond their profession. Research has outlined performance descriptors and benefits that can motivate them, regardless of the subjects they teach, to use digital technologies at work (e.g., Brooks-Young, 2007; Groth, Dunlap, & Kidd, 2007). Their digital skills and confidence, however, can vary considerably (J. White, 2015). Exceptionally, Burnett (2009) has explored how teachers develop "personal digital literacies" through experience of using digital technologies outside the classroom, which can benefit their teaching practices. Research, in addition, has focused on whether and how their political views shape the way they teach. Nevertheless, the question of whether and how they develop and deploy digital skills and knowledge within civic life is under-researched (e.g., Anderson & Cohen, 2015; Grissom, 2015; Hess, 2005; Kelchtermans & Ballet, 2002; J. P. Myers, 2009; Picower, 2013).

Similarly, when it comes to information, IT and media professionals, research has argued that digital literacy is central to their professions and that, depending on their backgrounds, there may be gaps in their expertise (CEN, 2012; Dewdney & Ride, 2006, p. 9; Huvilla, 2012, p. 25; Leahy & Dolan, 2010, p. 219; Stocchetti & Kukkonen, 2011). As argued in Chapter 2, information science research and librarianship studies have emphasized the fact that librarians are equipped with functional and critical digital skills, including the ability to navigate and to assess information (Widdowson & Smart, 2015). Their potential to promote social change by facilitating access to knowledge or copyright reforms is why they can be seen as both information experts and advocates who understand the broader environment within which information circulates (Secker et al., 2019; L. N. Smith, 2016). Public libraries, furthermore, offer digital training (Jaeger et al., 2012), which is an example of how civic engagement at the community level facilitates digital literacy. Their training, however, which targets primarily

vulnerable communities, is generally more functional than critical. In addition, little is known about whether and how librarians deploy their expertise within civic life in ways that go beyond their profession. As with librarians, research has paid little attention to IT and media professionals' expertise in the context of their civic practices. Notwithstanding this gap in the literature, the former are in professions that require sophisticated functional skills and knowledge about the internet (CEN, 2012). The latter, meanwhile, enjoy well-developed creative digital skills, which underpin their media production practices, as well as an understanding of the media system (Dewdney & Ride, 2006). A few studies have explored how journalists' reporting, in particular, is informed by political values, and how political journalists use social media as part of their profession (e.g., Corcoran, 2004; Parmelee, 2014). Research, furthermore, has focused on how the convergence of traditional and digital media has affected how media professionals operate (e.g., García-Avilés, Meier, Kaltenbrunner, Carvajal, & Kraus, 2009; E. Huang et al., 2006).

Defined as "the flow of content across multiple media platforms [and] the cooperation between multiple media industries" (Jenkins, 2006, p. 2), media convergence has increased, for example, the expectation among media professionals of financial compensation for multi-platform production, as well as raising issues of authorship and production quality (E. Huang et al., 2006). At the same time, media convergence has enabled users to share their lay expertise and to engage in a participatory culture where digital literacy, as addressed by research inspired by the New Literacy Studies, transcends "individual expression" to emerge through "community involvement" based on producing and sharing online content through collaborative practices (Jenkins, Clinton, Purushotma, Robison, & Weigel, 2009, p. 4). While a few studies inspired by the New literacy Studies, as reviewed in Chapter 2, have examined users' digital literacy in the context of their civic engagement (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016), research on media professionals has under-explored their civic practices.

3.3.2 Advocates

This thesis defines *civic advocates* as individuals who are professionally committed to civic life, including public officers (e.g., community councillors, political party candidates) and activists, who aim to shape public opinion and policymaking through lobbying, campaigning and protest events (Grunig, 1992, p. 504; B. Martin, 2007). The literature on how advocates participate in civic life by using digital technologies is vast. And so is the literature on citizens' participation, beyond advocates. These literatures fall under the overarching field of political research. As explained earlier, this body of work includes studies on how citizens and party candidates use the internet to participate in institutional politics, from seeking information about governments and political parties to using social media for election campaigns (e.g., Anduiza, Gallego, & Cantijoch, 2010; Karlsen, 2009; A. Smith, 2013; C. B. Williams, 2012). In addition, political research includes research on social movements and how activists use the internet to participate in non-institutional politics through practices of resistance, from raising awareness to organizing action (e.g., Garrett, 2006; van de Donk, Loader, Nixon, & Rucht, 2004; van Laer & van Aelst, 2010).

While these strands of political research are interested in whether, how and to what extent citizens participate in civic life, another strand, which consists of citizenship and political education studies, has been more interested in civic learning, with emphasis on civic literacy. A few studies within this strand have argued that civic literacy should be understood as not just the ability to participate in civic life – as well as knowledge of history, policies, current affairs and how governments and civil society operate – but also the ability to make judgments about information and its trustworthiness (e.g., Davies & Hogarth, 2004; Lund & Carr, 2008, pp. 13, 14). From this perspective, civic literacy resonates with information literacy. Insofar as it is framed within critical pedagogy as the questioning of power and authority (e.g., Giroux, 2017), it also overlaps with critical literacy. Nevertheless, while civic literacy can be understood as intersecting with notions of information and critical literacy, its intersection with digital literacy, as conceptualized here, has remained under-explored within both media literacy research and political research. Interested in civic learning, Bennett et

al. (2009) have drawn, exceptionally, on media literacy research to emphasize how civic literacy in the digital age needs to incorporate the ability to evaluate online content as well as social and creative digital skills, which are necessary to produce and share information online. Similarly, Kahne, Hodgin and Eidman-Aadahl (2016) have argued that civic education programmes in the digital age should incorporate media literacy education, so that students can learn how to evaluate and produce online content for civic purposes. Political research on citizens' participation, however, unlike citizenship and political education studies, has focused *de facto* on their factual knowledge of the socio-political system and on whether and how this informs their civic engagement. This body of work, in short, has paid little attention to digital literacy and whether and how it intersects with civic literacy, approached narrowly as political knowledge (e.g., de Vreese & Boomgaarden, 2006; Prior, 2005; Prior & Lupia, 2008).

Such a lacuna is also to be found in democratic theory, which has addressed how citizens' political knowledge and participation vary depending on how democracy is normatively understood (e.g., Held, 2006; Rapeli, 2014). As discussed in Chapter 1, democratic theory has conceptualized democracy, and what is required of citizens' democratic participation, on the basis of different normative variants.[19] This body of work, nevertheless, has under-explored whether their political knowledge intersects with the ability to evaluate online content or with knowledge about the digital environment (Polizzi, 2020b). Similarly, except for research, inspired by critical pedagogy, on activists' production of alternative media that challenge dominant representations (e.g., Feria-Galicia, 2011), media research on social movements has paid little attention to media literacy theory or research. This is also true of research on citizens' engagement with institutional politics, including how party candidates and political campaigners use the internet to campaign (e.g., Howard, 2005; LaMarre & Suzuki-Lambrecht, 2013; McGregor et al., 2016).

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[19] See Chapter 1, pp. 19-20, for discussion of how democracy can be understood in line with different normative models.

This is not to say that political research has overlooked whether citizens, and advocates, in particular, are digitally skilled or understand, for instance, how internet corporations operate, along with the internet's potential for campaigning. However, as argued above when theorizing critical digital literacy as incorporating utopianism/dystopianism, this body of work has hardly engaged with notions of media literacy. That said, even though media research on social movements has rarely addressed questions of learning, we know from this strand of research that activists improve their digital skills to protest online thanks to the help of fellow campaigners (Treré, 2012, p. 2368). In addition, they often learn through experience how to use digital technologies (Nielsen, 2013, p. 174). McCurdy (2011), for instance, has argued that they gain knowledge about the media's potentials and limitations in relation to news reporting of activism through their own experience with the media. Similarly, we know from citizenship studies that ordinary citizens, not only advocates, can learn through experience how to use the internet to discuss politics or to organize action through using digital technologies (Bennett et al., 2009).

As to whether and how digital skills and knowledge facilitate civic engagement, political research has found consistently that users need digital skills, including operational and information navigation skills, to participate in institutional and non-institutional politics, from contacting government officials to signing petitions online (e.g., Anduiza et al., 2010). Media research on social movements has emphasized, furthermore, that activists deploy their knowledge of digital affordances in order to engage in practices of resistance (e.g., Comunello, Mulargia, & Parisi, 2016; Kavada, 2012). According to Cammaerts (2015), they are increasingly conscious of what digital technologies afford in terms of organizing and coordinating protest events asynchronously and in real time (Cammaerts, 2015). In addition, while Krishna (2017) has argued that online misinformation turns users into misinformed activists, others have found that activists are generally cautious about misinformation, which is why they verify their sources (e.g., Howard & Hussain, 2013, pp. 28–29; Ronfeldt, Arquilla, Fuller, & Fuller, 1998, p. 71). Finally, political campaigners and activists often know how to use traditional media and digital technologies to pursue media strategies in the contexts, respectively, of institutional and non-institutional politics, from

campaigning and building support to raising money (e.g., Howard, 2005; LaMarre & Suzuki-Lambrecht, 2013; McGregor, Lawrence, & Cardona, 2016; Rucht, 2004).

At the same time, as discussed above, when it comes to whether and how citizens' and advocates' knowledge about the media ecosystem shapes their civic engagement, including their understanding of the internet's civic potentials and limitations, two different trends emerge from the literature. On the one hand, political research on how citizens engage in institutional politics has argued that their positive or negative interpretations of the internet, in relation, for instance, to its implications for online content and for participating in community life, are beneficial or detrimental, respectively, to their online engagement (e.g., Gustafsson, 2012; B. J. Kim et al., 2011). On the other hand, media research on social movements has emphasized that activists, in particular, use the internet strategically in ways that are underpinned, for instance, by an understanding of its potential for organizing action and building support as well as for exacerbating corporate power and government surveillance (e.g., Barassi, 2015b; McCurdy, 2011; Treré, 2015). According to this strand of research, activists know how to pursue different actions strategically by adapting to the media ecosystem inasmuch as they are conscious of both its potential and its limitations (Cammaerts, 2012; Rucht, 2004).

3.3.3 Gaps in and limitations of research on experts and advocates: A recap

Reviewing research on how experts and advocates develop and deploy digital skills and knowledge confirmed this study's assumption that focusing on these social categories is ideal for exploring the intersection of digital literacy and civic engagement. The evidence reviewed suggests that experts are digitally savvy. And that advocates engage in civic life in ways that are mediated by digital technologies, often relying on digital skills and knowledge. These findings, however, came with two surprises. The first was that there is little research on how experts draw on their own expertise in contexts beyond their professional lives. The second was that political research is rather disconnected from media literacy theory and research.

Research on experts shows that they are not a homogenous group and that, despite their expertise, there may be gaps in their skills and knowledge. This body of work, however, has argued that their expertise is central to their professions, while paying little attention to whether and how they draw on their expertise in other domains of their lives, including their civic engagement. By contrast, political research has offered insights into how citizens and advocates develop and deploy digital skills and knowledge in the context of their institutional and non-institutional participation in civic life. This strand of research, nevertheless, has under-explored questions of learning. It has hardly engaged with notions of media literacy. And it is rather divided on whether and how knowledge about the internet's limitations in terms of civic life facilitate or undermine civic engagement. Is this a matter of having or not having critical digital literacy, where the latter, as theorized above, relies on understanding both its potentials and limitations? Also, how do different functional and critical skills and knowledge about the internet intersect in ways that shape civic engagement, if in any way? These are questions that are not addressed within political research. Finally, not only has the latter under-explored whether and how civic literacy intersects with digital literacy, but it has also paid little attention to whether and how digital literacy varies depending on how we conceive of democracy.

3.4 Key Concepts and Research Questions

Given the gaps in and limitations of media literacy research, as discussed in Chapter 2, this chapter has provided a novel conceptualization of digital literacy, reviewing further literature beyond media literacy research. To conclude, this section presents the key concepts and research questions of this thesis. But first, since this chapter is an extension of Chapter 2, let us briefly summarize what was argued in that chapter:

(i)   Media literacy research as a whole has focused largely on functional or critical aspects of digital literacy (e.g., Kellner & Share, 2007; van Deursen et al., 2015), with research subordinating functional to critical digital

literacy (e.g., Buckingham, 2007a). This body of work, furthermore, has prioritized users' ability to evaluate online content in isolation from their knowledge about the digital environment (e.g., Kahne et al., 2012; Lewis, 2018). In addition, it has under-explored whether and how users understand the internet in ways that intersect with their imaginaries of civic life (e.g., Fry, 2014; Gamber-Thompson, 2016).

(ii)   When it comes to how users develop digital literacy, media literacy research has focused on formal and/or informal learning, but only occasionally in the context of their civic engagement. When interested in the latter, research has focused largely on young people and less on adults (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; McGinnis et al., 2007). This body of work, furthermore, has under-explored whether civil society organizations provide training in digital literacy that can reach adults beyond media educators (e.g., McDougall et al., 2017). In addition, it has prioritized the digital training provided by public libraries and community centres for different populations as predominantly functional, with little attention to critical digital literacy (e.g., Helsper & van Deursen, 2015).

(iii)   Finally, as to whether digital literacy facilitates, in turn, civic engagement, media literacy research has argued that it does. Restrictively, however, research inspired by critical pedagogy has framed critical literacy as leading intrinsically to progressive action (e.g., Kellner & Share, 2007). The concept of democracy has been approached monolithically (e.g., Mihailidis & Thevenin, 2013). On the one hand, media literacy research has under-explored whether and how users participate in civic life by deploying an understanding of the internet's civic potentials and limitations. On the other hand, this body of work has largely polarized their positive or negative interpretations as leading respectively to online engagement or disengagement beyond civic life (e.g., Chou et al., 2009; Joyce & Kirakowski, 2015; Reisdorf & Groselj, 2017).

In order to facilitate richer analysis of whether and how digital literacy intersects with civic engagement, this chapter conceptualizes digital literacy as more comprehensively incorporating functional and critical skills and knowledge about the internet. More specifically, this thesis conceptualizes functional digital literacy as: 1) digital skills – drawing on research on digital inequalities (e.g., van Deursen et al., 2015); 2) knowledge of digital affordances – in line with research inspired by the New Literacy Studies as well as research on human-computer interaction (e.g., Dezuanni, 2018; D. Smith et al., 2013); and 3) dispositions towards the internet's advantages and disadvantages beyond civic life and with emphasis on the individual – as interrogated by research on digital inequalities, educational research inspired by social psychology and research on human-computer interaction (e.g., Chou et al., 2009; Joyce & Kirakowski, 2015; Reisdorf & Groselj, 2017). Critical digital literacy, meanwhile, is understood here as: 1) the ability to evaluate online content – as addressed, for instance, by educational research inspired by social psychology (e.g., Kahne et al., 2012); 2) knowledge about the political economy of the internet – as emphasized by research inspired by critical pedagogy (e.g., Buckingham, 2007a) and in line with this thesis's theoretical contribution; 3) utopian/dystopian imaginaries of society in the digital age, differentiating between users' imaginaries of the internet and their imaginaries of civic life. Finally, as discussed in Chapter 1, civic engagement is approached here as taking part in community and political life, where the latter can be institutional or non-institutional, from contacting politicians, sharing political content and signing petitions to using alternative media and participating in protest events (e.g., R. Fox & Blackwell, 2016; A. Smith, 2013; Theocharis, 2015; van Laer & van Aelst, 2009).

With these key concepts in mind, section 3.3 has argued that this thesis focuses on experts and advocates because these are ideal categories for exploring the intersection of digital literacy and civic engagement, being respectively digitally savvy and highly involved in civic life. Traditions like research on human-computer interaction, on the one hand, and the New Literacy Studies, on the other hand, have largely approached the cognitive dimension of digital literacy, respectively, as

embedded within the individual beyond the social context and as part of collective practices that are contextually situated. By contrast, as explained in section 3.2, this study takes the individual as a unit of analysis, i.e., experts and advocates. At the same time, as in Chapters 5, 6 and 7, it examines their digital literacy – in general and in the context of their civic practices – at both individual and collective levels.

Even though this thesis is not primarily concerned with comparing experts with advocates as different social categories, it explores whether and how digital literacy intersects with civic engagement on the basis of how their skills, knowledge and practices may differ. Surprisingly, what emerged from reviewing research on how they develop and deploy skills and knowledge about the internet is that research on experts, on the one hand, has hardly addressed how they draw on their expertise beyond their professions. On the other hand, political research on how citizens and advocates, in particular, participate in civic life has hardly engaged with notions of media literacy. This strand of research, furthermore, is far from conclusive on whether and how their knowledge about the internet's implications for civic life facilitate or undermine their civic engagement. As a result, considering the gaps in and limitations of both media literacy research and research on experts and advocates, this study takes a novel approach to digital literacy, as conceptualized above, in order to address the following research questions:

> *RQ1: In what ways, if any, does civic engagement provide opportunities for learning digital literacy?*

> *RQ2: In what ways, if any, does digital literacy facilitate civic engagement?*

This study's research questions do not assume that civic engagement inevitably provides opportunities for learning digital literacy or that digital literacy, as theorized earlier in this chapter, inherently facilitates civic engagement. Under these premises, two points need to be made. First, while the key concepts here are functional and critical digital literacy and civic engagement, these concepts may be expected to shape one another as part of a wider framework that includes different elements, such as

political motivation, civic literacy and access to resources like money. Political research has argued, for instance, that political motivation and political knowledge facilitate civic engagement (e.g., Prior, 2005; Strömbäck, Djerf-Pierre, & Shehata, 2012). As appropriate, therefore, references will be made to these elements in the empirical chapters, in line with what emerged from the fieldwork for this study. Second, even though this thesis argues that media literacy research and democratic theory have under-explored how digital literacy varies depending on how we understand democracy, RQ2 above should not be understood as a proxy for whether and how digital literacy benefits different democratic variants. Such a question goes beyond the scope of this thesis. Nevertheless, upon examining whether and how digital literacy facilitates different forms of civic engagement, Chapter 7 reflects on how the digital skills and knowledge that experts and advocates deploy within civic life vary, depending on how democracy may be normatively understood.

Informed by different traditions of media literacy research, this thesis conceptualizes digital literacy as functional and critical skills and knowledge about the internet. As argued above, such an approach has the potential to contribute to more nuanced analysis of whether and how digital literacy intersects with civic engagement. The literature, however, does not shed light on whether or how the skills and knowledge conceptualized here are crucial to digital literacy among experts and advocates in the UK. Relatedly, it is not clear whether or how they intersect. This thesis therefore addresses the following sub-question, which logically precedes the questions above:

> *SQ1*: *Considering the skills and knowledge of experts and advocates, what is digital literacy?*

Relatedly, since this thesis conceptualizes critical digital literacy as incorporating knowledge about the internet as embedded in power structures in ways that intersect with different imaginaries of civic life and ideologies, it addresses the following sub-question:

SQ2: In what ways do experts and advocates discursively construct their knowledge about the political economy of the internet and their utopian/dystopian imaginaries of society in the digital age?

With these questions in mind, the thesis has three theoretical aims: 1) to explore digital literacy as functional and critical; 2) to explore critical digital literacy as incorporating users' utopian/dystopian imaginaries of society in the digital age; and 3) to reflect on the implications of how digital literacy intersects with civic engagement. The question of how digital literacy, as conceptualized here, intersects in practice with civic engagement is an empirical question. And so is whether applying utopian thinking to critical digital literacy is useful, as theorized above, for investigating such an intersection. The next chapter therefore presents this study's methodology and research design, discussing what methods were used to answer the questions above. Chapter 5 then begins with SQ1 and SQ2, examining what digital literacy is and how experts and advocates in the UK construct their knowledge about the digital environment. Chapter 6 answers RQ1, interrogating whether and how civic engagement provides opportunities for learning digital literacy. Finally, Chapter 7 answers RQ2, that is, whether and how digital literacy, in turn, facilitates civic engagement.

Chapter 4 – Methodology and research design

4.1 Introduction

This chapter presents the methodology and research design of this thesis. As explained in the previous chapter, my study focuses on experts and advocates in the UK because they are ideal cases for exploring the intersection of digital literacy and civic engagement. This decision was based on the assumption that experts master digital skills and knowledge, with different levels of civic engagement. Advocates, meanwhile, are highly involved civically, with different levels of digital literacy. Given the gaps and limitations of the different literatures reviewed in Chapters 2 and 3, this thesis addresses the following research questions:

> *RQ1: In what ways, if any, does civic engagement provide opportunities for learning digital literacy?*

> *RQ2: In what ways, if any, does digital literacy facilitate civic engagement?*

As argued in Chapter 2, media literacy research has approached digital literacy in different ways. In so doing, it has under-explored how its functional and critical dimensions intersect, with research placing the former in a subordinate position. To facilitate richer analysis of its intersection with civic engagement, Chapter 3 has offered a novel conceptualization of digital literacy. But we do not know whether or how the skills and knowledge conceptualized here are crucial in practice to digital literacy among experts and advocates, which is why this study addresses the following sub-question:

SQ1: Considering the skills and knowledge of experts and advocates, what is digital literacy?

Finally, since this thesis conceptualizes critical digital literacy as incorporating knowledge about the internet as embedded in power structures, it also addresses the following sub-question:

SQ2: In what ways do experts and advocates discursively construct their knowledge about the political economy of the internet and their utopian/dystopian imaginaries of society in the digital age?

This study has three theoretical aims. First, it explores what digital literacy is in terms of both its functional and its critical dimensions. Second, it draws on utopian studies and political theory to explore critical digital literacy as incorporating users' utopian/dystopian imaginaries of society in the digital age. As theorized in Chapter 3, conceiving of critical digital literacy in this way enables us to disentangle users' imaginaries of the internet from their imaginaries of civic life, to resist the collapse of critical digital literacy into civic engagement, and to problematize conclusions about users' interpretations of the internet that polarize these as either crucial or detrimental to their online engagement. Finally, this thesis reflects on the implications, for different literatures including media literacy research as well as political research, of how digital literacy intersects with civic engagement.

Section 4.2 below presents the methodological rationale of this thesis and how the research questions above align with the methods employed. Section 4.3 then discusses how the research questions were operationalized. Section 4.4 presents the research design of the thesis, focusing on sampling, data collection and analysis. Finally, section 4.5 discusses some general limitations of the research design and my own role as the researcher.

4.2 Methodological Rationale

Before discussing the epistemology behind the methodology of this thesis, it is worth reiterating that, as explained in Chapter 3, digital literacy is approached here as socially constructed. On the one hand, this study takes the individual as the unit of analysis, i.e., experts and advocates. On the other hand, as we will see in the next chapters, it examines how they develop and deploy digital literacy both individually and collectively in the context of their civic practices. Digital literacy relies on skills and knowledge that exist within the cognitive, yet in ways that are shaped by the social context, which resonates with cognitive sociology. As argued earlier, this body of work has understood cognition as socially constructed. At the same time, it has drawn on cognitive psychology in order to study its complexities, suggesting that culture exists not just at the collective level but also within cognitive processes (DiMaggio, 1997).

In line with such an approach to digital literacy, this thesis employs a mixed qualitative methodology informed by social constructivism and cognitive sociology. In terms of data collection, it relies on qualitative interviewing, enhanced by cognitive probing and by a conversational approach to the think aloud method, together with the diary method. In terms of data analysis, it primarily employs thematic analysis enhanced by elements of critical discourse analysis. Each of these methods is discussed below.

4.2.1 Qualitative interviewing

Qualitative research questions generally "articulate what a researcher wants to know about the […practices and] perspectives of [those] involved" in their research (Agee, 2009, p. 432). This study investigates how digital literacy and civic engagement intersect, examining how experts and advocates understand the digital environment and use digital technologies for civic purposes. Qualitative interviewing, which is popular within qualitative research, is ideal for exploring individuals' views, motivations and experiences (M. W. Bauer & Gaskell, 2000, p. 39; Warren, 2002, p. 83). This is why this method is particularly suitable for this study. Qualitative research,

however, unlike quantitative research, does not aspire to generalizations based on numerically capturing patterns and trends across different populations. On the one hand, qualitative interviewing, which tends to be small-scale-oriented, provides access to what people think and do in context (B. L. Berg, 2001; Dillman, Smyth, & Christian, 2008). On the other hand, this method strives for representativeness on the basis of capturing the range of experiences and perspectives that characterize representatives of a given population as they emerge from the field (Kitzinger, 2005, p. 59; Seidman, 2006, pp. 51–52). This form of representativeness is dependent on reaching saturation, which is achieved when new data sheds no further light on what has been collected (Mason, 2010).

This study employs qualitative interviewing to focus on experts and advocates as individuals within social categories. Their experiences and interpretations are examined in order to explore whether and how digital literacy intersects with civic engagement not just in ways that are contextually situated but also as a broader social phenomenon. Informed by interpretivism and social constructivism, qualitative interviewing relies on the researcher's interpretation and construction, together with participants, of meaning (Warren, 2002). As a result, however ideal for exploring their practices and perspectives, this method involves a risk of generating biased and/or misunderstood theoretical claims (Odgen, 2008, p. 60). To minimize this risk, section 4.4 below provides a reflexive and transparent account of how the data for this study was collected and analysed. As argued by Gaskell and Bauer (2000), such a risk can only be minimized by maximizing *public accountability*.

With this in mind, I conducted semi-structured interviews, which are ideal for answering deductively formulated research questions, that is, questions that are theoretically informed, as with the questions in this study, as detailed above. Unlike structured and unstructured interviews, semi-structured interviews neither rigidly employ nor avoid structured questions (Schuh & Associates, 2009, p. 66). Based on flexible topic guides, they are beneficial for collecting data both deductively and inductively. Indeed, the reason why I considered semi-structured interviews valuable for this project was that they enable the researcher to ask all participants the same

questions while also making it possible to follow up on what they say, allowing reflections to emerge organically from the interviews.[20]

4.2.1.1 Cognitive interviewing

Cognitive interviewing techniques were employed during the interviews in order to delve into the cognitive and contextual dimension of digital literacy. More specifically, these techniques were used to explore how experts and advocates deploy digital skills and knowledge, articulate their understanding of the internet, and recall and discuss the context of their experiences. Unlike standard interviewing, cognitive interviewing allows the researcher to gather richer data about how participants construct thought processes and perform tasks. From a cognitive sociology perspective, this method is ideal for exploring their interpretations, experiences and skills as cognitive processes that are socially constructed (Gerber, 1999; Willson & Miller, 2014, pp. 22, 27), which was particularly suitable for this study. Two main techniques were used: cognitive probing and the think aloud method.

Cognitive probing

Cognitive probing refers to the use of probes to explore participants' responses and comprehension (Knafl, 2008). Besides the purpose of testing survey questionnaires, it is used to enrich interview data through techniques such as asking respondents to explain their answers and probing them about their experiences by asking, for instance, "what was the context?" (Willson & Miller, 2014, pp. 20-23, 27). This study used these techniques to delve into participants' responses and recollections of their experiences as contextually situated (Brekhus, 2007; Chepp & Gray, 2014, p. 10). Cognitive probing was used to gather richer data on how experts and advocates develop and deploy digital literacy to engage in civic life. Relatedly, it was used to

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[20] See section 4.4.4.1, pp. 117-120, for details of how topic guides were designed.

explore how they articulate their understanding of the digital environment in the form of utopian/dystopian imaginaries.

(A conversational approach to) the think aloud method

The think aloud method is a cognitive interviewing technique that requires respondents to verbalize their thoughts and actions after or while performing a task. This method can be employed in isolation from or in conjunction with probing, which is where respondents are asked "to tell everything they can remember or are thinking of while performing [a] task" (Ericsson & Simon, 1980, pp. 220, 222). This study took a conversational approach to the think aloud method in order to explore how experts' and advocates' civic experiences inform and are informed by their digital literacy. More specifically, I asked participants to perform tasks on their digital devices (e.g., phones, tablets, laptops) while showing me and talking me through how they engage online, from reading news to using social media for political purposes.[21]

The think aloud method is ideal for capturing digital "literacy events" (Bhatt & de Roock, 2013, p. 5; Prinsloo & Baynham, 2008, p. 4), which aligns with the research objectives of this thesis. As argued in Chapter 2, research on human-computer interaction has used this method to capture internet users' verbalizations while they perform different tasks. These include digital reading or writing (Bhatt & de Roock, 2013; Cardullo et al., 2012; Dalton & Proctor, 2007; Gilbert, 2014), conducting online searches (Feufel & Stahl, 2012), and navigating and evaluating online content (Damico & Baildon, 2007; Greene et al., 2014; Kiili et al., 2008; Lévesque et al., 2014; Messenger, 2013). While the researchers on these studies employed minimal probing during their think aloud sessions, Makri et al. (2011) probed their respondents more extensively in order to "understand why […they perform] particular behaviours" online (pp. 341, 342). Similarly, Coiro and Dobler (2007) used active probing to learn

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[21] See subsection 4.4.4.1, pp. 117-120 for details of tasks.

about their respondents' reading strategies online (p. 225). And so did Henry (2005), who probed his respondents while they searched for information online.

"Think-aloud interviewing and verbal probing are very often used in unison" (Willis & Artino, Anthony, 2013, p. 354). However, the extent to which participants should be probed while thinking aloud has been contested (Willson & Miller, 2014, p. 21). On the one hand, active probing can create biases, as the researcher interferes with the respondents' flow of thinking (Ericsson & Simon, 1993; Makri, Blandford, & Cox, 2011, p. 342). On the other hand, thinking aloud uninterruptedly can be burdensome for respondents, besides generating "meandering verbalizations" (Willis & Artino, Anthony, 2013, p. 354). "To decide whether and how much to intervene in a think-aloud session, it is important to examine the purpose of the session" (Makri et al., 2011, p. 342). If the purpose is to collect quantitative data, non-intervention is advisable. But if it is to gather qualitative data, as in the case of this thesis, it is "often necessary to prompt for data about [...the respondents'] expectations or explanations [...behind the] actions" (Boren & Ramey, 2000; Makri et al., 2011, p. 342; Tamler, 1998, p. 12).

In conjunction with active probing, the think aloud method can become a conversation between interviewer and participant, which is how it was approached in this study. When participants are required to perform tasks by using objects, this method can take the form of an *intraview*, which focuses on the "material-discursive intra-actions" of the interview (Petersen, 2014, p. 41). As a result, both the think aloud method and the intraview challenge the distinction between interview and participant observation (Bodén, 2016, p. 55). Similarly to how I used the think aloud method, Bodén (2016), for instance, has conducted intraviews with teachers, who were asked "to bring their laptops to … talk about different themes while simultaneously engaging with the computer" (pp. 55-56).

Valuable for researching digital literacy, the think aloud method provides more accurate analytical measurements than self-reported measurements (Greene et al., 2014, p. 57), which is beneficial for assessing digital skills and knowledge. This

method, however, makes "data collection … labour intensive" (Greene et al., 2014, p. 57) and this is especially the case when it is supplemented by video equipment.

The subcam

The think aloud method is often supplemented by real-time video recording, screen recording, or screen-in-screen recording. On the one hand, video recording while a think aloud session takes place is useful for capturing human interaction (e.g., Bhatt & de Roock, 2013). But this goes beyond the scope of this thesis. On the other hand, screen recording and screen-in-screen recording are useful for videoing, respectively, how participants perform tasks on computers and how, at the same time, they move and adopt facial expressions (Bhatt & de Roock, 2013, p. 1). While screen recording makes it hard for participants to use their own digital devices, screen-in screen recording is suitable for researching affect and visual literacy (e.g., Lévesque et al., 2014; McEneaney et al., 2016), which is not what this thesis is about.

As a result, the experts and advocates interviewed were asked to wear a subcam, which consists of a miniature video camera mounted on a pair of glasses (Glăveanu & Lahlou, 2012, p. 152). The subcam was preferred to similar forms of video equipment like GoPro, which is worn on a head strap, because it is less clumsy and easier to wear. With this in mind, I asked participants to wear a subcam in order 1) to gather richer data on how they used their digital devices and engage online, 2) to capture what they did while saying *this* or *that*, and 3) to identify discrepancies between what they said and did.

The subcam was developed by Lahlou (2011) for use in conducting subjective evidence-based ethnography (SEBE). SEBE allows the researcher to gather first-person audio-visual recordings of participants' experiences, which are followed by replay interviews in which they reflect on their own practices (Lahlou, Le Bellu, & Bosen-Mariani, 2015, p. 216). A limitation of using the subcam is that participants' behaviour may be affected by their awareness of the camera. But research shows that they

usually forget about it "after a few minutes and their behaviour is spontaneous" (Lahlou, 2011, p. 629). This type of video equipment lends itself to being used, as here, beyond conducting SEBE. The latter is appropriate for observing behaviour within relatively well-defined contexts (Lahlou et al., 2015, p. 219), but, by the same token, it is inadequate for gathering rich data about practices which, especially online, can be rather dispersed, as with experts' and advocates' civic practices.

4.2.2 The diary method

Given the extent to which experts' and advocates' civic practices can be dispersed, and considering that participant observation would not provide satisfactory access to their practices, this study employed a supplementary diary method in addition to the interviews. The diary method, where participants record their thoughts, feelings and experiences as solicited by the researcher (Barlett, 2012, p. 1718), is ideal for gathering detailed and reflexive self-produced evidence about "communicative relationships and practices articulated via … media technologies on an everyday basis" (M. Berg & Düvel, 2012, p. 71).

While diarists may be asked to fill in structured diaries (e.g., Heinonen, 2011), a structured/unstructured approach to the diary method enables the researcher to track their "'subjective' reflection[s]" within "some 'objective' structure" (Couldry, Livingstone, & Markham, 2007b, p. 46). This study took such an approach. On the one hand, experts and advocates were asked to write diaries between first and second interviews in order to reflect on their own civic practices and how they use the internet. On the other hand, they were given no further instructions on what or how much to write. Furthermore, while diaries can be time-based or event-based (Iida, Shrout, Laurenceau, & Bolger, 2012, pp. 280–281), both formats were combined here. More specifically, diarists were asked to submit their diary entries on a weekly basis, but they could write whenever they performed civic activities.[22]

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[22] See section 4.4.4.2, pp. 120-121, for details of how the diary method was implemented.

The diary method minimizes the presence of the researcher by reducing the power asymmetries between the latter and participants, who are encouraged to express themselves in their own voices (Bird, 2003; Elliott, 1997; Markham & Couldry, 2007, p. 608; Meth, 2003). Conducted in tandem with interviews, this method allows the researcher to explore the complexities and inconsistencies of what participants write in their diaries. This is why combining these methods made it possible for this study to triangulate the diary with the interview data. Post-diary interviews, in particular, allow respondents to "reflect on the accuracy and meaning of their reflections" (Couldry & Markham, 2006, p. 257). But diarists can find the process demanding and time-consuming, besides having to remember to write their diaries (Greenberg et al., 2005, p. 2). In addition, since they can end by under- or over-contextualizing their practices, providing them with feedback is essential (Couldry, Livingstone, & Markham, 2007a, pp. 45, 49). This study therefore provided participants with regular reminders about and feedback on their weekly submissions.

4.2.3 Thematic analysis enhanced by elements of critical discourse analysis

The primary method of analysis used for this thesis was thematic analysis, enhanced by elements of critical discourse analysis (CDA). Both methods are rooted epistemologically in interpretivism. I used these methods to analyse and interpret interviews and diaries. In addition, I used thematic analysis to analyse my fieldnotes.[23]

Based on the researcher's interpretation and "careful reading and re-reading" of textual material, thematic analysis is ideal "for identifying, analysing and reporting patterns (themes) within" qualitative data (Braun & Clarke, 2006, p. 6; Guest, MacQueen, & Namey, 2012; Rice & Ezzy, 1999, p. 205). This method is valuable for exploring themes and patterns across individuals' experiences and perspectives (S. Gibson & Hugh-Jones, 2012, p. 131), which made it particularly suitable for analysing

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[23] See section 4.4.4, p. 115, for details of fieldnotes.

how experts and advocates discuss and reflect on their civic practices, the digital environment and their use of digital technologies.

Since this thesis approaches critical digital literacy as incorporating knowledge about the internet as embedded in power structures, thematic analysis was conducted in ways that drew on CDA. Thematic analysis allows the researcher to map themes within a wide range of texts (Willig, 2013, p. 61). CDA is interested, rather, in how discourse is linguistically realised through "relations … of power" (Fairclough, 1993, p. 135; Mirzaee & Hamidi, 2012, p. 183). Ideal for exploring how different discourses intersect in ways that make reference to power and ideology (Gill, 1996, p. 149), elements of CDA were employed in this study to enrich the thematic analysis of how experts and advocates understand the digital environment, focusing on how they discursively construct their knowledge (SQ above). As we will see later in this chapter, this thesis partially draws on, but in some ways differs from, Fairclough's (1992) analytical approach to CDA.[24] For now, it is worth emphasizing that this method was used to build on the thematic analysis of interviews and diaries to explore how experts' and advocates' understanding of the political economy of the internet and their utopian/dystopian imaginaries of society in the digital age are discursively constructed. This was done by focusing primarily on how their understanding and imaginaries are linguistically realised and whether and how they resonate discursively with different ideologies.

Thematic and critical discourse analyses are prone to over-interpretation (Haig, 2004, p. 136), which was minimized by reading the material several times. CDA, furthermore, is anchored in the ambition of identifying power imbalances to promote social justice, in line with progressive values (Jørgensen & Phillips, 2002, p. 2). This thesis rejects such an ambition, but not because of my own political biases, which are consistent with those of CDA.[25] Inspired by critical theory, CDA idolatrizes research as emancipatory. But "there is no particular reason why readers should accept CDA's

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[24] See subsection 4.4.5.1, pp. 123-125.
[25] See section 4.5, p. 126, for details of my background.

political stance" (Breeze, 2011, p. 500). Fairclough "in principle … agrees that critical research need not be left-wing, and that right-wing forms of CDA are perfectly conceivable" (Breeze, 2011, pp. 500–501). But in practice, the "scholarly project of CDA […is] heavily conditioned by political choice" (Breeze, 2011, pp. 500–501).

As a result, while this study's thematic analysis was enhanced by elements of CDA's analytical framework (Fairclough, 1995a), the thesis resists the idea of taking a political position that is normatively conditioned by left-wing values. As argued in Chapter 2, media literacy research inspired by critical pedagogy has approached users' critical reflections against dominant ideologies as inherently progressive. By contrast, as reflected in this study's approach to CDA, I am interested in whether and how experts and advocates understand the internet as embedded in power structures – from how internet corporations operate to its utopian/dystopian potential – in ways that draw on different ideologies, but without imposing one over another.

4.3 Operationalization

This thesis conceptualizes digital literacy as both functional and critical. Functional digital literacy comprises 1) the digital skills necessary for using digital media, including technical, social and creative skills (Buckingham, 2007a; van Deursen et al., 2015), 2) knowledge of digital affordances, in relation, for instance, to their technical features and digital design (Dezuanni, 2018), and 3) dispositions towards the internet's advantages and disadvantages in the context, for example, of connectivity, online shopping or financial safety (Hakkarainen, 2012; Reisdorf & Groselj, 2017).

Critical digital literacy, meanwhile, includes 1) the ability to evaluate online content in terms of bias and trustworthiness (Kahne et al., 2012), 2) knowledge about the political economy of the internet, with a focus on how internet corporations operate, online advertising and regulation (Buckingham, 2007a), and, in line with this thesis's theoretical contribution, 3) utopian/dystopian imaginaries of society in the digital age,

differentiating between users' imaginaries of the internet's civic potentials and limitations and their imaginaries of civic life, in line with different ideologies.

Civic engagement refers here to how citizens take part in community and political life. It includes institutional and non-institutional activities, both online and offline, such as seeking civic information, contacting politicians, posting or commenting on political content on social media, signing a petition, exchanging information about protest events, participating in a demonstration, and using alternative media (R. Fox & Blackwell, 2016; A. Smith, 2013; Theocharis, 2015; van Laer & van Aelst, 2009).

Given the assumption that experts and advocates are ideal social categories for exploring the intersection of digital literacy and civic engagement, Table 4.1 below summarizes how the research questions and sub-questions in this thesis were operationalized, focusing on the key concepts employed and the methods and aims of data collection and analysis.

Table 4.1 Operationalization of research questions and sub-questions

Research questions	Key concepts	Methods and aims of data collection and analysis
RQ1: In what ways, if any, does civic engagement provide opportunities for learning digital literacy? **RQ2**: In what ways, if any, does digital literacy shape civic engagement? **SQ1:** Considering the skills and knowledge of experts and advocates, what is digital literacy? **SQ2:** In what ways do experts and advocates discursively construct their knowledge about the political economy of the internet and their utopian/dystopian imaginaries of society in the digital age?	**Functional digital literacy** – 1) digital skills, 2) knowledge of digital affordances, 3) dispositions towards the internet **Critical digital literacy** – 1) the ability to evaluate online content, 2) knowledge about the political economy of the internet, 3) imaginaries of society in the digital age, differentiating between imaginaries of the internet and civic life **Civic engagement** – online/offline,	**Semi-structured interviews** (data collection) – to gather data on experts' and advocates' digital literacy and civic practices, with emphasis on their understanding of the internet and experiences using digital technologies for civic purposes **Cognitive probing and the think aloud method as part of interviews** (data collection) – to gather data on their digital literacy and civic practices, with emphasis on their understanding of the internet and how they use their own digital devices for civic purposes **Diaries** (data collection) – to gather data on their civic practices, how the internet fits within their practices, and on their reflections about the internet **Thematic analysis enhanced by elements of critical discourse analysis** (data analysis) – to synthesize and find themes and patterns across the interview and diary data in ways that draw on critical discourse analysis in order

	institutional/non-institutional	to examine how their knowledge about the political economy of the internet and their utopian/dystopian imaginaries of the internet and civic life are discursively constructed, with emphasis on how these are linguistically realised and whether and how they resonate with different ideologies

4.4 Research Design

This study employs a mixed qualitative methodology to explore whether and how digital literacy, as conceptualized here, intersects with civic engagement. In order to do this, it focuses on experts and advocates in the UK, based on the assumption that the former master digital skills and knowledge while their civic engagement varies, while the latter are involved civically, with different levels of digital literacy.

The choice of the UK, with most interviews conducted in London, was underpinned by five reasons. First, beyond the fact that this choice was a matter of convenience since I am based in the UK, London is highly cosmopolitan (McCarthy, 2016), which was ideal for diversifying the sample. Second, it is one of the most high-tech cities in the world (Weller, 2016), which was beneficial for recruiting experts such as IT and media professionals. Third, the UK has among the highest internet penetration rates worldwide. London, in particular, has the highest rate in the UK (94%) (ONS, 2016), which is ideal for researching digital literacy. Fourth, there are many advocacy and campaigning organizations in the UK (Dunleavy, 2018), which was beneficial for recruiting activists. Finally, conducting fieldwork after the 2016 Brexit referendum was valuable for discussing civic imaginaries reflecting hopes and concerns about UK politics.

Prior to fieldwork, a pilot study was conducted to test whether qualitative interviewing and the topic guides designed would generate relevant findings. Based on three interviews with two experts and one advocate, recruited via word of mouth,

the pilot study informed revisions of the topic guides, besides concluding that qualitative interviewing was appropriate for this study.[26]

Full participation in the study required experts and advocates to take part in an initial interview, followed by two to four weeks of diary writing and a final interview based on their diaries.[27] The second interviews enabled me to follow up on what participants wrote in their diaries and discussed during their first interviews, as documented in my fieldnotes. Initially, data collection and data analysis were intended to be conducted at the same time in order to allow data analysis to guide data collection. But given the intensity of the data collection, the data was fist gathered and then analysed. Data collection took place between February and October 2018. Concerns in the UK about Brexit and about Cambridge Analytica were particularly resonant during this period, since the Cambridge Analytica scandal broke in March 2018 (Cadwalladr & Graham-Harrison, 2018).[28] Once the data was collected, it was transcribed and anonymized, and then analysed over three months. Taking fieldnotes enabled me to reflect on preliminary findings, which guided recruitment and revisions of the topic guides.[29]

4.4.1 Sampling strategy

The distinction between professional expertise and lay expertise is blurred, the latter being not necessarily less advanced than the former, depending on the context (Collins & Evans, 2002; Durant, 2008; Grundmann, 2017; Wynne, 1992, 1996). Nevertheless, as captured by Table 4.2 below, expertise is understood here as professional (Saks, 2012; M. Young & Muller, 2014). To define expertise in this way was necessary in order for me to recruit from a better-defined population, including media educators, information, IT and media professionals (CEN, 2012; Dewdney &

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[26] See section 4.4.4.1, pp. 117-120, for how topic guides were designed and revised before and throughout fieldwork.

[27] See Table 4.6 and Table 4.7, pp. 116-117, for details of how many interviews were conducted, and how many diary entries collected.

[28] See Chapter 1, p. 12, for details of the Cambridge Analytica scandal.

[29] See section 4.4.4, p. 115, for details of fieldnotes.

Ride, 2006, p. 9; Huvilla, 2012, p. 25). That is, individuals whose professions revolve around the use of digital technologies. These are individuals who are likely to use digital technologies also within their personal lives, which is why their professional expertise may be expected to overlap with lay expertise. As argued in Chapter 3, there may be gaps in their skills and knowledge, which means that their expertise is not homogeneously distributed. Arguably, this population includes individuals who master more functional than critical digital skills and knowledge (e.g., IT engineers, website designers) and *vice versa* (e.g., media studies teachers, journalists).

Similarly, this study refers to advocates as individuals who are professionally committed to civic life, including individuals involved primarily in forms of civic engagement that may be more institutional (e.g., community councillors and party candidates) or non-institutional (activists). When it comes to the latter, we need to differentiate between individuals who join protest events more or less occasionally, and individuals who are professionally involved in activism. This thesis is interested in the latter, which, again, was grounded in the decision to work with a better-defined population. As a result, this study defines activists as individuals who work for pressure or campaigning organizations to influence public opinion and policymaking through lobbying, campaigning and protest events (Grunig, 1992, p. 504; B. Martin, 2007).

Table 4.2 Examples of experts and advocates

Social category	Professions
Experts	Information professionals (e.g., librarians)
	IT professionals (e.g., systems analysts, IT engineers, website designers)
	Media professionals (e.g., publishers, editors, journalists, video editors, social media coordinators, multimedia developers)
	IT/media educators (e.g., media studies teachers)
Advocates	Public officers (e.g. community councillors, party candidates)
	Activists (e.g., fundraising consultants, policy officers, campaign coordinators, campaign strategists, directors of advocacy, pressure or campaigning organizations)

With these definitions in mind, the sampling strategy for this study was purposive, which differs from probability and convenience sampling in that respondents are selected neither randomly nor haphazardly but sampled strategically in ways that "are relevant to the research questions that are being posed" (Bryman, 2012, p. 408). While a limitation of purposive sampling is that it can be prone to researcher bias, maximizing diversity within the sample is crucial to capturing a wide range of practices and interpretations (Bryman, 2012, p. 408).

Experts and advocates were recruited with the objective of maximizing diversity in terms of demographics such as age, gender, ethnicity and – in the case of advocates – political orientation. As for education and socio-economic status, given the nature of the populations, the sample was expected to be predominantly middle-class.[30] To gain access to these populations, as summarized in Table 4.3 below, potential field-sites in London were chosen before undertaking fieldwork.

Table 4.3 Selected field-sites

Experts	Advocates
Three high schools with A-level programmes in media studies	Three cross-party groups
Two charities promoting, respectively, digital training and media education	Six organizations campaigning for conservative causes and for individual and economic liberty
Two libraries	Six organizations campaigning for progressive and socially liberal causes
Two publishing houses	
Three digital media companies	
Three IT companies	

To recruit experts, three A-level high schools with different student progress scores were selected by drawing on the 2016 UK government rankings (UK Government, 2019a). These schools, of which one is located in a disadvantaged area of London, were chosen with a view to recruiting media and computer studies teachers with different competencies and ethnicities. Two charities promoting, respectively, digital

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[30] See subsection 4.4.2, p. 110, for further details of middle-class nature of sample. Refer to section 4.5, p. 126, for implications for future research.

training and media education were also selected, with one of these involved in lobbying, which was considered ideal for recruiting educators committed to politics. Besides a large library, which was expected to provide access to a wide range of librarians, a smaller library specializing in political literature was selected in the hope of recruiting librarians interested in politics. In addition, two publishing companies and three digital media companies from different areas of London and specializing in marketing and in animation were selected. Two of these had been established less than 15 years ago, one, with branches across the UK, less than ten years ago, and two, with branches worldwide, more than 15 and in one case 100 years ago. Larger and older companies were deemed particularly valuable for diversifying the sample. Finally, three 20-40-year-old IT companies located in different areas of London were selected, of which one had branches across the UK and one worldwide.

The possibility of recruiting community councillors and party candidates was not considered initially, which is why the field-sites selected for recruiting advocates consisted exclusively of advocacy and campaigning organizations where activists are found. To maximize diversity, organizations advocating for different causes were chosen in order to recruit activists who varied by age, gender, ethnicity and political affiliation. Besides three cross-party groups campaigning for representative democracy and constitutional change in the UK, six organizations of the Right were selected, and six of the Left. The former included organizations campaigning on rural life, for individual liberty, lower taxes, Conservative legislation, technological progress, and against abortion. The latter included organizations campaigning for a more inclusive democracy, digital rights to privacy and free speech, peace and environmental sustainability. The conservative and progressive organizations that campaign for technological progress, digital rights and free speech were chosen with a view to recruiting media activists. While the organizations of the Right were expected to facilitate recruitment of white activists over 30, the cross-party organizations and those of the Left were considered ideal for sample diversification in terms of age and ethnicity. Despite the extent to which these organizations were selected from across the Left-Right political spectrum, no field-sites were chosen with a view to recruiting activists supporting extremist ideologies underpinned by sentiments of violence or

discrimination, such as white supremacists. As discussed below, I made this decision to maximize my own safety during fieldwork.[31]

Recruitment and data collection continued for nine months. Ten field-sites were shortlisted for initial recruitment, maximizing diversity among the sites. Those selected with a view to recruitment of experts included a charity promoting media education, one school, one library, one IT company and one media company. In addition, those selected in order to recruit advocates included three organizations of the Left and two of the Right. Experts and advocates were contacted by email, where their contacts were available online. Furthermore, they were recruited via word of mouth and by asking participants whether they knew others who would be interested in participating. This "snowball" approach enhanced the purposive nature of the sampling strategy, facilitating recruitment from the selected field-sites as well as from new sites across London and beyond. So did the use of LinkedIn Premium, which enabled me to send messages with an extended word limit and to run profession- and location-based searches to maximize sample diversity.

Five experts and four activists were recruited, respectively, from four of the field-sites chosen for recruiting experts and three of those chosen for recruiting advocates. Besides the activists, community councillors and party candidates were recruited via word of mouth, as were librarians from different universities. In addition, activists working for the Conservative Party and for progressive organizations campaigning for the environment and for social justice were recruited via LinkedIn Premium, as were IT professionals working in banks and in the retail sector.

4.4.2 Sample

A total of 44 participants were recruited (including three from the pilot study) with a view to saturation. As mentioned earlier, this is achieved when new data sheds no

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[31] See subsection 4.4.3, p. 114.

further light on what is being explored (Mason, 2010). The sample consisted of 22 experts and 22 advocates, recruited by maximizing diversity in terms of age, gender, ethnicity and, in the case of advocates, political orientation. It included experts such as librarians, media educators, publishers, journalists, website designers, social media coordinators, IT managers, system administrators and senior analysts. In addition, it included advocates such as community group founders, political relations managers, policy officers and campaign coordinators working for different campaigning organizations, as well as party candidates and community councillors.

Tables 4.4 and 4.5 below provide an overview of the sample. The two target populations differ, in principle, in terms of how digitally savvy (experts) and civically engaged (advocates) they are. In practice, eight experts and 11 advocates out of the 44 participants exemplify how these social categories can overlap, lying at the intersection of expertise and civic engagement. Recruiting these participants was particularly important for exploring the intersection of digital literacy and civic engagement. They include librarians and journalists who identify their professions as a form of civic engagement, a media educator who works for a charitable group promoting media education, an information scientist who works for community councils, media activists, digital campaigners and a community councillor who is also a website designer.

The sample is balanced in terms of gender, consisting of 12 male and 10 female experts, and 11 male and 11 female advocates. While the target populations are predominantly male, women are overrepresented in the sample in order to maximize diversity of female experiences and interpretations. As for age, the sample includes fewer younger advocates than younger experts, which was expected given the prominence of youth activism in the population. The sample consists of one expert aged 18-24, six aged 25-34, eleven aged 35-44, three aged 45-54, and one over 55. It includes three advocates aged 18-24, nine aged 25-34, five aged 35-44, three aged 45-54, and two over 55.

In terms of ethnicity, the sample consists of 17 experts who are Caucasian, including participants from Europe (four) and North America (two), and five non-Caucasian participants of Asian (four) and African (one) origins. As for the advocates, 13 are Caucasian, including three from Europe, and nine are non-Caucasian, including participants of African (four), Asian (three), Afro-Asian (one) and Middle Eastern (one) origins. As the target populations are predominantly white in the UK, the extent to which the sample includes different ethnicities was considered sufficient for maximizing diversity in how experts and advocates use and understand digital technologies. However, in terms of education and socio-economic status, the sample is, and was expected to be, homogeneous and representative of the populations.

Experts and advocates in the UK are middle-class social categories, with most participants being graduates. It is sensible to assume that this does not mean that all participants necessarily share similar backgrounds. Experts and advocates are in professions which, based on their income and relatively high level of education, can be categorized as middle-class. However, the fact that they qualify as middle-class social categories does not exclude their coming from different walks of life – not just in terms of ethnicity but also in relation to family background and country of origin.

Table 4.4 Overview of the experts who participated in the project, ordered alphabetically, with details under "Intersection" of those lying at the intersection of expertise and civic engagement

Pseudonym	Gender	Age	Ethnicity	Profession	Field-site	Intersection
Abby	Female	35-44	Caucasian	Journalist and Senior Producer	Media/news outlet	Sees news reporting as a form of civic engagement
Anthony	Male	45-54	Caucasian (non-UK)	User Experience Designer	Library	Founder, and runs the website of, a charity protecting rural heritage
Carol	Female	35-44	Caucasian	Lecturer in Information Science and former Librarian	University	Sees librarianship as a form of civic engagement
Chloe	Female	25-34	Non-Caucasian (Asian origins)	Senior IT Analyst	Household goods company	/
Christian	Male	35-44	Caucasian (non-UK)	Cloud Architect and	Cloud services provider	/

				former IT Manager		
David	Male	45-54	Caucasian	Researcher in Social Informatics	University	Runs the websites of, and takes minutes for, community councils
Emma	Female	25-34	Non-Caucasian (Asian origins)	Technical Business Analyst	Bank	/
Frank	Male	25-34	Caucasian	Media Publisher	Media outlet	/
George	Male	35-44	Caucasian (non-UK)	Librarian	University	/
Joseph	Male	35-44	Caucasian	Journalist	Freelancer	/
Linda	Female	55+	Caucasian	Media Educationalist	Charity promoting media education	Works for a charity that promotes media education through lobbying and provides media studies teachers with training and resources
Matthew	Male	35-44	Caucasian	Senior Learning Technologist	University	/
Monica	Female	35-44	Caucasian (non-UK)	Librarian	University	/
Oscar	Male	18-24	Caucasian	Head of IT	Management Consulting Provider	/
Peter	Male	45-54	Non-Caucasian (African origins)	Information Consultant and former Librarian	Freelancer	Sees librarianship as a form of civic engagement
Rosie	Female	25-34	Non-Caucasian (Asian origins)	IT Engineer and Test Consultant	Bank	/
Shawn	Male	25-34	Caucasian (non-UK)	Librarian	University	Has a degree in a politics-related subject and sees librarianship and the training of students in information literacy as a form of civic engagement
Simon	Male	35-44	Caucasian	Systems Administrator	University	/
Sophia	Female	25-34	Non-Caucasian (Asian origins)	Social Media Coordinator	Clothing company	/
Tom	Male	35-44	Caucasian	A-Level Media Studies Teacher	School	/

| Vanessa | Female | 35-44 | Caucasian (non-UK) | Senior Learning Technologist | University | / |
| Whitney | Female | 35-44 | Caucasian | Director of Legal Affairs | Media outlet | / |

Table 4.5 Overview of the advocates who participated in the project, ordered alphabetically, with details under "Intersection" of those lying at the intersection of expertise and civic engagement

Pseudonyms	Gender	Age	Ethnicity	Profession	Field-site	Intersection
Adam	Male	55+	Caucasian	Chair	Left-wing group campaigning for freedom of speech	Has a background as an Information Systems Manager and Researcher in Computer Studies
Adele	Female	25-34	Caucasian	Campaign Coordinator	Progressive organization campaigning for human rights	/
Alex	Female	45-54	Non-Caucasian (African origins)	Panel member	Progressive charity promoting social justice	Composes and produces socially conscious music, which he identifies as a form of civic engagement
Andrew	Male	35-44	Caucasian	Councillor	Local community council	Works as a website designer for an IT company
Amanda	Female	45-54	Caucasian	Director	Traditionally right-wing organization campaigning for media regulation and children's safety	Advocacy work concerns the media
Georgia	Female	25-34	Non-Caucasian (African origins)	Founder	Progressive organization campaigning against online abuse	Advocacy work concerns the internet
Helen	Female	35-44	Caucasian	Green Party Candidate; Panel Member; Digital Campaigner and Fundraising consultant	The Green Party; Progressive organization campaigning for democratic participation; Freelancer	Profession as a digital campaigner relies on knowledge about the internet
Jack	Male	25-34	Caucasian	Head of Campaigns	Conservative organization campaigning in support of rural life	/
Jacob	Male	18-24	Non-Caucasian	Activist and volunteer	The Conservative Party	/

			(Asian origin)			
Julia	Female	25-34	Caucasian (Non-UK)	Policy officer	Progressive organization campaigning for digital privacy and freedom of speech	Advocacy work concerns the internet
Kelly	Female	25-34	Non-Caucasian (Afro-Asian origins)	Co-founder and Chair	Conservative organization campaigning for social justice	/
Laura	Female	25-34	Non-Caucasian (Asian origins)	Digital campaigner	Left-wing charity campaigning for social justice	Profession as a digital campaigner relies on knowledge about the internet
Mark	Male	25-34	Caucasian	Lib Dem Candidate	The Liberal Democrat Party	
Mary	female	35-44	Caucasian	Co-founder; Former Campaign Coordinator	Progressive community group promoting environmental sustainability; Anti-war campaigning organization	Studied digital marketing
Michael	Male	35-44	Non-Caucasian (African origins)	Labour Councillor	The Labour Party	/
Miriam	Female	55+	Caucasian (non-UK)	Chair	Local Community Council	/
Moana	Female	45-54	Non-Caucasian (African origins)	Secretary; Activist	Conservative organization campaigning for gender equality; The Conservative Party	/
Patrick	Male	18-24	Non-Caucasian (Middle Eastern origins)	Intern; Former Member of Youth Parliament	Centre-right-organization campaigning for lower taxation	/
Richard	Male	25-34	Caucasian	Political Relations Manager	Conservative organization campaigning in support of rural life	/
Robert	Male	25-34	Caucasian (non-UK)	Fellow	Right-wing libertarian organization	/

Roger	Male	35-44	Caucasian	Digital campaign strategist	Progressive organization promoting environmental sustainability	Profession as a digital campaign strategist relies on knowledge about the internet
Sue	Female	18-24	Non-Caucasian (Asian origins)	Party Member; Former Vice President	The Conservative Party; Right-wing libertarian organization campaigning for free speech	Studied digital marketing

4.4.3 Research ethics

This study did not, and was not expected to, harm participants' physical or mental well-being. Interviews were not conducted in sensitive circumstances, nor were sensitive issues covered. In addition, as mentioned above, no activists supporting extremist ideologies underpinned by sentiments of violence were recruited during fieldwork, in order to ensure that I would not be exposed to situations that could potentially put me in danger. Before the interviews, participants were given an information sheet about the study.[32] This included details of how their data would be handled. The information sheet states that they were "free to leave the research at any point", and that "no identifiable information [would] be linked … to [their] name[s]". The participants, furthermore, were asked to sign a consent form expressing their willingness to be interviewed, to use the subcam, and for the interviews to be audio-recorded.[33]

At the end of their second interviews, respondents who participated in full received £50 each as a sign of appreciation. As experts and advocates are not disadvantaged social categories, the use of honoraria was not considered problematic, since it was not expected to condition their participation.

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[32] See Appendix 1, pp. 364-365.
[33] See Appendix 2, p. 366.

Prior to fieldwork, this study was approved by the Research Ethics Committee at the London School of Economics and Political Science (LSE). During the data collection, I was particularly careful about how the subcam was used, making sure that participants were not just willing to use it but also comfortable showing me what they do online. As stated in the ethics review application approved by LSE, no online content from third parties gathered through the use of the subcam during the think aloud sessions was included in the analysis. Finally, the data collected was stored on a secure server at LSE as well as on my own laptop and portable hard drive, encrypted using VeraCrypt.

4.4.4 Data collection

The participants were asked to take part in an initial interview followed by two to four weeks of diaries and a final interview. Upon recruitment, they were told about the subcam and asked to bring any of their digital devices to the interviews (e.g., phone, tablet, laptop).

First and second interviews lasted around 90 minutes each. As indicated in Table 4.6 below, a total of 69 interviews were conducted, of which 44 were first and 25 were second interviews. Five of the 44 participants did not use the subcam during their interviews, including two advocates who preferred not to use it, and one advocate and two experts during the pilot study, for which the subcam was not used. The interviews were held wherever was most convenient for participants, including coffee bars, their workplaces, homes, and LSE campus. Fifty-two interviews were conducted across London, five in towns near London, and 12 across the UK, including Cambridge, Canterbury, Manchester, Edinburgh and a town near Newcastle.

During the interviews, I took extensive fieldnotes, combining different types of notes, as categorized by Emerson, Fretz and Shaw (1995). These included descriptions of the settings as well as notes about the themes that emerged, the methods used, and my own feelings and impressions.

Twenty-eight participants submitted a total of 65 diary entries of one or two paragraphs each, with a few longer entries. Diarists were asked to submit, and were reminded about, their diaries weekly via email or LinkedIn, depending on how they had been recruited. Most of them submitted their entries with delays of a few days. Two advocates and one expert submitted theirs a few months after their first interviews. Table 4.7 below provides an overview of how many experts and advocates submitted diaries. The number of entries they were encouraged to submit depended on how insightful their entries were, with a view to a second interview, as well as on their willingness to submit more.

Table 4.6 Overview of data collected

No. of participants	44
No. of interviews	69
No. of first interviews	44
No. of second interviews	25
No. of participants who used the subcam	39
No. of participants who submitted diaries	28
No. of diary entries	65

Table 4.7 Experts and advocates who submitted diaries

No. of experts who submitted diary entries	12/22 experts (31 entries)
No. of advocates who submitted diary entries	16/22 advocates (34 entries)
Experts (no. of entries)	Carol (3) Chloe (2) Christian (2) David (4) Frank (1) George (3) Linda (1) Monica (3) Peter (3) Shawn (4) Sophia (3) Whitney (2)
Advocates (no. of entries)	Adele (2) Alex (2) Amanda (2) Georgia (2) Helen (1) Jacob (2) Kelly (1) Laura (2)

	Mark (3)
	Mary (3)
	Michael (4)
	Miriam (3)
	Moana (2)
	Patrick (2)
	Roger (2)
	Sue (1)

4.4.4.1 First interview

One topic guide was used with the experts and one with the advocates.[34] The guides were piloted and revised after the pilot study and throughout fieldwork in order to ensure that they would elicit responses. Familiar topics were discussed at the beginning. *Civic engagement* was discussed earlier with the advocates than with the experts, but the topics and questions were the same. The guide used with the experts was structured as follows:

1) *Access and motivation*. Cognitive probing was used to ask respondents what came to their minds when they thought about Information Communication Technologies (ICTs). Their access to, and motivations for using, the internet were then discussed (e.g., "How important is it for you to use the internet?"

2) *Online engagement*. Respondents were asked what they usually do online and what they find the internet useful for.

3) *Functional digital literacy – digital skills.* Participants were asked how comfortable they feel using digital technologies and what they find easy or difficult. Cognitive probing was used to ask them in what context they had learnt to use the internet. Emphasis was placed on their technical, social and creative skills, from managing settings to creating content online.

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[34] See Appendices 3 and 4, pp. 367-368.

4) *Civic engagement*. While this study approaches the civic as an overarching concept that incorporates political practices, respondents were asked through cognitive probing what came to their minds when they thought about *civic and political engagement*, in order to emphasize both community and political life. They were asked how they engage civically and politically, and how the internet fits within their practices. After the pilot study, the topic guides were amended to include questions about civic literacy (e.g., "How familiar do you feel with civic and political matters and the political system?"). After a few months of fieldwork, new questions were added, such as "Is your voice as a citizen listened to?".

Cognitive probing was used to delve into the participants' recollection of their experiences (e.g., "In what situation?"). A conversational approach to the think aloud method was employed. The participants were asked to recall and describe their latest civic or political activity online, or one they could remember. They were asked to wear the subcam and use any of their own digital devices (e.g., phone, tablet, laptop) to show me and talk me through their activities. Concurrently, they were asked "How easy or difficult was it for you to do this?" and "Do you see any potentials or limitations for society in using the internet to do this?". If any constraints were discussed, they were asked "Have any of these issues affected how you use the internet? How did you deal with them?". These questions were meant to explore whether and how their digital literacy, from their digital skills to their understanding of the digital environment, facilitates their civic engagement. In addition, to explore whether and how their civic engagement contributes to their digital literacy, they were asked "How did you develop such perspectives?". After a few months of fieldwork, the topic guides were revised to include "What made you realise this?".

5) *Functional digital literacy – dispositions towards the internet*. Participants were asked how the internet has changed people's lives, and with what advantages

and disadvantages. Emphasis was placed on connectivity, online shopping and financial security, among other issues.

6) *Functional digital literacy – knowledge of digital affordances.* The participants were asked what advantages and disadvantages they see in the internet's technical features. Emphasis was placed, for instance, on what digital design affords. Follow-up questions included "How did you learn this?".

7) *Critical digital literacy – imaginaries of society in the digital age.* To explore participants' utopian/dystopian imaginaries of the internet's civic potentials and limitations, they were asked "In what ways would you imagine that using the internet may be relevant to or affect democracy in the long run?". This question was also asked replacing *democracy* with different aspects of civic life, from *civil society* to *authoritarianism*. The use of *imagine* reflects the imaginative connotations of utopian thinking. As this thesis interprets utopianism as embedded in realism, *in the long run* bridges the future with the present. *Relevant to or affect* mirrors the dialectic between utopianism and dystopianism. To explore whether and how respondents' imaginaries inform their civic practices, they were asked whether any constraints identified in relation to the internet had ever affected their practices and how these had been dealt with.

To disentangle participants' imaginaries of the internet from their civic imaginaries, they were asked "How optimistic and/or pessimistic do you feel about democracy and the political system?" and "Has this changed in the last few years?". After a few months of fieldwork, the topic guides were revised to include "What kind of social change do you hope for or are you concerned about?" and "Where do you position the internet?".

8) *Critical digital literacy – the ability to evaluate online content.* Participants were asked whether they had ever engaged with online content subject to bias, misrepresentation or misinformation, and how confident they feel in

assessing trustworthiness. Follow-up questions included "What do you need to know when consuming online content?", "How did you learn this?" and "What do you do when confronted with bias, misrepresentation or misinformation?". These questions were asked in order to explore whether and how their digital literacy informs and is informed by their civic engagement. A conversational approach to the think aloud method was employed by asking participants to wear the subcam and to talk me through how they engage with news online. If they had already done so when discussing their *civic engagement* (see above), they were asked to perform a different activity from the one they had previously mentioned. Concurrently, they were asked about digital affordances, internet corporations, and their imaginaries of the internet and of civic life. Follow-up questions included "Does familiarity with how the internet functions come in handy?" and "Have you ever consumed and/or produced alternative content?".

9) *Critical digital literacy – ownership, advertising, data collection, regulation.*
   Participants were asked how familiar they feel with who owns search engines and social media, and whether they see any risks in how these operate. They were also asked about internet regulation and how they had developed their perspectives. Halfway through fieldwork, the topic guides were amended to focus more on whether and how their knowledge about internet corporations intersects with knowledge of digital affordances. A conversational approach to the think aloud method was employed by asking participants to show me and talk me through how they manage different aspects of their social media accounts in relation, for instance, to privacy. Concurrently, they were asked questions such as "Have you ever managed your cookies, browser history or settings?" and "Are you familiar with how the algorithms of corporations like Facebook and Google work?".

4.4.4.2 Diary

At the end of their first interviews, participants were shown a weekly diary entry form, which was used to collect their dairies.[35] As indicated on the form, they were asked to write about how they engage "civically and politically both online and offline" and to reflect on what they do, the context of their practices, and whether and why the use the internet. No requirements concerning length were provided. Once participants had agreed to the diary writing, they were sent the form via email or LinkedIn and given a flexible weekly deadline.

It was not hard to convince participants to do the diary exercise, given their interest in the internet (experts) and in civic life (advocates). What was harder was to ensure that they would commit to this. A few quit after one or two entries. In addition, it was hard to ensure that participants would submit their diaries on time. When they did not, which happened often, they were sent reminders. Once I received their diaries, I provided them with feedback to encourage them to keep writing, especially about thoughts and practices that seemed relevant. Finally, once participants had submitted a number of entries that seemed sufficient for a conversation, ideally between two and four entries, they were invited to a second, concluding interview.[36]

4.4.4.3 Second interview

The second interviews were based on what participants had written in their diaries, which is why no new topic guides were used. Upon receiving the diary entries, I took notes on these in order to tailor the interviews to the participants. My notes consisted of follow-up questions on what seemed most interesting or needed clarification in relation to their civic practices and how they use the internet.

At the beginning of their second interviews, participants were asked for feedback on the task of diary writing. Most of them found it useful for reflecting on their practices,

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[35] See Appendix 5, pp. 369-370.
[36] See Table 4.7, pp. 116-117 above, for details of how many entries were submitted.

while a few found it time-consuming and stressful. The interviews then continued with questions on their practices, as reported in their diaries. Afterwards, a conversational approach to the think aloud method was employed. Participants were asked to wear the subcam to show me and talk me through how they had used the internet to engage in civic life. Concurrently, they were asked questions enabling me to delve into the functional and critical dimensions of their digital literacy in the context of their civic practices. These questions were similar to those asked during their first interviews (see above). But the range of practices discussed was considerably wider thanks to their diaries.

Conducting second interviews allowed me to gain deeper insights into whether and how digital literacy and civic engagement intersect. It was beneficial for following up on participants' civic practices, for gathering richer data on their digital literacy in the context of their practices, and for asking follow-up questions about themes that had emerged from their first interviews, as documented in my fieldnotes.

4.4.5 Data analysis

The interviews were partially transcribed by me and mostly by a professional transcription company in the UK. Afterwards, I anonymized the transcripts and transcribed the subcam material by describing in *italics* within square brackets what was salient in the videos. What I considered *salient* was what participants did with their digital devices (e.g., where they clicked or touched), how confidently they handled their devices (e.g., whether they scrolled through content hesitantly or quickly), and what type of content they engaged with (e.g., news stories or posts on social media). An example of how the subcam material was transcribed is as follows:

> David: [*He opens a folder in the Finder on his Mac laptop, using his laptop mouse touchpad… He then … chooses a file…, opening it as a HTML page, which contains a white text in a light red rectangular on a dark red blank page*] …what CSS does [*referring to the style sheet language*

that he used to format the HTML page], it says, right, background is going to be red and the box is going to be there.

4.4.5.1 Thematic analysis enhanced by elements of critical discourse analysis

Once the data had been transcribed and anonymized, it was uploaded onto NVivo to be subjected to thematic analysis, which was the primary analytical method in this study. The material included the interview transcripts, diaries and my fieldnotes, which I had taken in a notebook and then transcribed as Word documents. The material was synthesized by identifying 1) codes – words/phrases capturing descriptively portions of data (Saldana, 2009) and 2) themes – abstract labels under which codes are aggregated (Boyatzis, 1998).

The coding process was both deductive and inductive. Prior to coding, three overarching nodes were generated deductively on NVivo in order to capture this study's research questions. These include *Node 1* ("What is digital literacy?"), *Node 2* ("Whether and how civic engagement provides opportunities for learning digital literacy") and *Node 3* ("Whether and how digital literacy facilitates civic engagement"). Under *Node 1*, six sub-nodes were added deductively in order to capture how this study conceptualized digital literacy, as operationalized above, on the basis of its review of the literature. These included "FDL1 – Digital skills", "FDL2 – Knowledge of digital affordances", "FDL3 – General dispositions towards the internet", "CDL1 – Ability to evaluate online content", "CDL2 – Knowledge about the political economy of the internet" and "CDL3 – Utopian/dystopian imaginaries of society in the digital age", where FDL and CDL stand, respectively, for *functional digital literacy* and *critical digital literacy*. As explained earlier, and in Chapter 5 below, fieldwork was approached without knowing whether these dimensions would prove crucial in practice to experts' and advocates' digital literacy, or whether or how they intersect. As the coding process began, the material was read multiple times in order to generate sub-nodes inductively, capturing descriptive codes under *Node 1* (i.e., under the six sub-nodes listed above), *Node 2* and *Node 3.* The codes were then aggregated

under new sub-nodes, created inductively in order to capture abstract themes emerging from the data.[37] The diary data and fieldnotes were useful for triangulating the interview data by checking for common themes and patterns. Once the material had been read and coded several times, relationships between the codes and themes were examined by establishing connections with theory and research.

As explained earlier, the interview and diary data was subjected to thematic analysis enhanced by elements of critical discourse analysis (CDA). This was done to examine how experts and advocates discursively construct their knowledge about the digital environment, with emphasis on how their knowledge is linguistically realised and whether and how it intersects with different ideologies. During the coding process, portions of data that capture how the participants make reference to power and ideology when discussing how internet corporations operate, along with their imaginaries of society in the digital age, were double coded. This data was added not just under *Node 1*, *Node 2* or *Node 3* as appropriate, but also under a *CDA* node, which was created a priori, keeping in mind that CDA is "best suited … with small corpora" (Coffin, Hewings, & O'Halloran, 2014, p. 218).

Once the material had been gathered and coded, it was saved as a Word document. This document, which was categorized by theme in line with the coding process, included codes such as "Online advertising negatively affects traditional media outlets" and "Online advertising benefits businesses" under the theme "Online advertising". Afterwards, the textual material under each code was analysed in ways that partially draw on but also differ from CDA. Traditionally, CDA relies on Fairclough's (1995) analytical framework, which includes textual, discursive and social dimensions. According to this framework, the data should first be analysed linguistically in order to focus on its grammatical and stylistic properties. Second, the material should be analysed to examine whether and how such properties reflect different discourses, and how these discourses are intertwined, which is what

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[37] Refer to Appendices 6, 7 and 8, pp. 371-387, for codes and themes generated under *Node 1*, *Node 2* and *Node 3*, including examples from data.

Fairclough (1995) refers to as interdiscursivity. Finally, the social implications of the discourses identified should be examined by reflecting on the broader social context and underlying power relations (Fairclough, 1992, p. 95).

This study limited itself to examining the textual and, to some extent, the discursive dimensions of the material gathered, which had been thematically synthesized. As argued earlier in this chapter, CDA is heavily conditioned by political choice, which is largely reflected in its discursive and social dimensions. Indeed, CDA prescribes that the relationship between, and social implications of, the discourses identified should be examined in ways that are grounded in progressive values against power asymmetries and dominant ideologies. By contrast, since this study rejects such a normative position, the data gathered was analysed primarily at the linguistic level in order to identify how experts and advocates construct their knowledge about the digital environment through the use of subject positions and interpersonal meanings, linguistically realised through pronouns, attributes, figures of speech and keywords, as well as through the use of modality to express probability, obligation or permission.

Finally, the material was analysed to examine whether and how the linguistic elements identified capture discursive elements of their knowledge. This was done, however, without imposing a left-wing position aiming to unmask, as Fairclough (1992) remarks, how different discourses "reproduce, restructure or challenge existing hegemon[ic]" structures (p. 95). Emphasis was placed, rather, on whether and how experts and advocates discursively construct their understanding of internet corporations and their utopian/dystopian imaginaries of the internet and civic life in ways that intersect with their political orientations, echoing different ideologies. With this in mind, the discursive elements identified range, for instance, from "Surveillance has become normalized" to "Surveillance is essential for ensuring collective security", and from "Government regulation of online content means giving up on freedom of speech" to "Government regulation of internet corporations is needed to gain transparency about how they operate".

4.5 Limitations and Role of the Researcher

The sections above have discussed epistemological limitations of the methods used along with practical limitations encountered during fieldwork, from the inability to generalize findings to different populations to the challenge of getting participants to commit to the diary. This section discusses general limitations relating to the research design of this study and my own role as the researcher.

While focusing on experts and advocates is ideal for exploring the intersection of digital literacy and civic engagement, this study was limited to two middle-class social categories in the UK, which invites further research in different contexts and among different populations. Furthermore, while this study is based on a mixed qualitative methodology, quantitative research is needed to address the extent to which digital literacy correlates with civic engagement. Survey items should be created and tested on the basis of this study, particularly in the context of how digital literacy is operationalized.

Finally, since qualitative research is based on interpretation, it is essential to reflect on the background of the researcher, which can influence the research process and outcomes (Mruck & Breuer, 2003). My academic background is in media and communications. I am a supporter of the Left. I am not a British citizen and communicate in English as a second language. My cultural background and professional inexperience with activism and digital technologies were used as an opportunity for asking participants to clarify their responses, enhancing data quality. In addition, while I felt uncomfortable discussing political practices that clash with my own political interests, the choice of conducting CDA in ways that did not impose progressive values was key to minimizing bias. At the same time, as discussed above, while advocates were selected from across the Left-Right political spectrum, no activists supporting extremist ideologies driven by sentiments of violence were recruited. It is with these considerations in mind that future research should draw on this study and its methodology to address how digital literacy intersects with civic engagement.

Chapter 5 – What is digital literacy?

5.1 Introduction

This chapter sets the scene for exploring whether and how digital literacy and civic engagement intersect. On the basis of how skilled and knowledgeable experts and advocates are in the UK, I address the question of what digital literacy is. Media literacy research has under-explored how functional digital literacy intersects with critical digital literacy, while subordinating the former to the latter. To advance the field, this chapter examines the experiences of experts and advocates in order to interrogate what digital literacy consists of, addressing whether and how different functional and critical digital skills and knowledge intersect in practice.

Section 5.2 below focuses on functional digital literacy, with emphasis on experts' and advocates' digital skills, knowledge of digital affordances and general dispositions towards the internet. Each subsection builds on the previous one by exploring whether and how these dimensions of functional digital literacy intersect. Section 5.3 focuses on critical digital literacy, investigating experts' and advocates' ability to evaluate online content, knowledge about the political economy of the internet and, in line with the theoretical contribution of this thesis, utopian/dystopian imaginaries of society in the digital age. Each subsection builds on the previous ones to examine whether and how these different dimensions intersect. Since this thesis conceptualizes critical digital literacy as incorporating an understanding of the internet as embedded in power structures, section 5.3 addresses how experts and advocates discursively construct their knowledge about the digital environment.

The sections below present examples of participants with sophisticated digital skills and knowledge, as well as of participants whose digital literacy is not as advanced. As explained in Chapter 2, this thesis is not primarily concerned with comparing experts

and advocates as different social categories. At the same time, as see below, inspecting how their digital skills and knowledge differ is useful for capturing what digital literacy is. Even though this chapter includes examples of how experts and advocates use the internet both within and beyond civic life, it is limited to discussing the nature of digital literacy. Chapter 6 and 7, meanwhile, focus on how civic engagement provides opportunities for learning digital literacy, and on how digital literacy facilitates civic engagement.

5.2 Functional Digital Literacy

Chapter 3 has conceptualized functional digital literacy as digital skills, knowledge of digital affordances, and dispositions towards the internet. Given the gaps in the literature, what was not known before the fieldwork for this study is whether these skills, knowledge or dispositions would prove crucial in practice to experts' and advocates' digital literacy, and whether and how they intersect. I answer these questions in the subsections below, using a few examples that best represent the findings of this study.

5.2.1 Digital skills

Central to functional digital literacy are users' digital skills. We know from research on digital inequalities, which is interested in vulnerable groups and in the non-user, that digital skills rely on a combination of operational, information-navigation, social and creative skills (Helsper & Eynon, 2013; van Deursen et al., 2014). The evidence reviewed in Chapter 3 suggests that experts' digital skills are generally well-developed. This subsection begins by examining their skills in order to illuminate the different dimensions of digital literacy and to understand how it works in practice.

Chloe is a young senior analyst who works for a retail company selling household products. She has a background in computer science and has worked in the IT sector for many years. Her digital skills are central to her profession. As she explained during her interview, she deploys operational and creative skills in order to develop the software behind her company's website, enabling customers to make purchases. As she remarked:

> I work with IT developers... I basically am in charge of creating the requirements for the new software. ...I design and identify the requirements [...and] work with the end-users to clearly understand what they need.

To design her company's software, Chloe uses her creative skills coupled with operational skills that enable her to run and test it. Like Chloe, Anthony deploys his digital skills in the context of his profession. He is a user experience designer who has designed the website of a library. Outside work, he uses the internet to "buy lots of stuff on Amazon ... and sell things on eBay", and deploys his creative and social skills to produce and upload videos on social media. As he put it:

> Anthony: I've produced lots of music and I put that on ... Soundcloud, and Facebook even and YouTube. ...I've always wanted to be a stand-up comedian, so I [also] do comedy skits...
> Researcher: And you upload them onto YouTube?
> Anthony: [Yes,] I create different [comedy] characters [...and I group them] together under their own channel.

But not all experts master digital skills. This study is based on evidence that they are digitally savvy but gaps and differences, as reviewed in Chapter 3, were expected in terms of what their expertise involves. George is a university librarian who frequently uses the internet in his personal life for "buying things, online banking [...and] booking holidays". He struggles with social media because his operational skills are not coupled with social skills. This finding echoes those of research on librarianship, according to which not all librarians enjoy the same competences (Real et al., 2014). As George explained:

I'm very comfortable with the technical side of the internet. …In my case, the challenge is … the use of social media … to participate, … to express myself, to take part in discussion.

Turning to the advocates interviewed, Labour councillor Michael values how "user-friendly platforms" have become for the ordinary user, especially for creating content. Michael has his own blog, where he writes about what he does as a councillor. As he emphasized, it has become easy for a "lay person … to build [their] own blog or … website". The networked character of digital technologies has made it possible for a *participatory culture* to thrive, where users are not just consumers but also producers of content (Jenkins, 2006). Michael's remarks exemplify the blurring of professional and lay expertise in the context of using digital technologies, which is typical of such a culture. But not all advocates know how to design a blog or website, and a few find it hard to use social media. Amanda is a media activist who campaigns for media regulation and internet safety. Beyond her activism, she uses the internet for "browsing, shopping […and] desk research". But her challenge is "the creating content side" of social media. She finds it challenging "to be original and to stand out, and not just aimlessly retweet stuff". Similarly, Jacob deploys his social skills in isolation from creative skills. He is a young Conservative activist who is active on Facebook but struggles to create and post multimodal content such as videos. Being under 20, he grew up with digital technologies, but started using social media only a few years ago. His struggle suggests that, as argued by Helsper and Eynon (2013), members of his generation are not necessarily digitally skilled and that the "digital native" rhetoric championed by Prensky (2001), among others, can be misleading.

The findings from my fieldwork suggest that a lack of digital skills is not always just a matter of competence, but also of usability. This resonates with research on human-computer interaction, as reviewed in Chapter 2. According to Aleixo, Nunes and Isaias (2012), digital skills, such as the ability to retrieve and create information online, depend on how easy it is to use the technologies. Mary is the founder of a community

environmental organization. She is confident in using social media, including her "personal Facebook, work Facebook, personal Twitter, work Twitter and … WhatsApp" but, as she put it, "[there are] types of software I find more difficult than others. But then that's just about its usability". Similarly, as emphasized by Simon, a systems administrator in a university:

> I haven't encountered a problem … that I feel is through a lack of my own education on how to use something. I usually find frustrations coming from the sort of inherent unreliability of network services and bad design.

Mary's and Simon's remarks indicate that their digital skills depend on the usability of digital technologies. This subsection has shown that experts, despite not always enjoying the same competences, are generally well-equipped with operational, social and creative skills. This finding aligns with the rationale for focusing here on this social category because of their expertise, and it builds on research on information, IT and media professionals, as reviewed earlier in the thesis (Dewdney & Ride, 2006; Gallagher, Kaiser, Simon, Beath, & Goles, 2010; Kobre, 2008; Wineburg & McGrew, 2017). While experts know how to deploy multiple skills when using the internet, the way advocates like Jacob struggle to draw on their creative skills in synergy with social skills signals how functional digital literacy requires a combination of digital skills. On the one hand, digital technologies have made it possible for advocates like Michael to deploy creative skills as lay experts. On the other hand, the extent to which digital skills can be deployed depends on the technologies' usability.

5.2.2 Knowledge of digital affordances

As reviewed in Chapter 2, research on digital inequalities has paid little attention to users' knowledge of digital affordances as a form of functional digital literacy (e.g., Helsper, 2016; Reisdorf & Groselj, 2017). Interested in users' engagement with multimodality, research inspired by the New Literacy Studies, by contrast, has emphasized that "text-making practices … are guided by the perceived affordances" of

digital technologies (C. K.-M. Lee, 2007, p. 223). Similarly, research on human-computer interaction has found that users learn how to use these technologies, deploying both operational and creative skills, in synergy with an understanding of their technical features in relation, for instance, to writing and coding (e.g., Angros et al., 2002; Bhatt & de Roock, 2013).

Given these strands of research, fieldwork was approached with the question of whether experts and advocates deploy their digital skills together with knowledge of digital affordances. David is an information scientist who works as a researcher in a university. In addition, he manages the websites of a few community councils. He knows that the Twitter interface differs depending on whether he uses his phone or a computer, which requires him to look "in different places" to find, for example, the home or search button. While understanding this difference is rather basic, Helen, who is a Green Party candidate and activist, is conscious of the technical features of different social media. As a digital campaigner who works at the intersection of digital expertise and civic engagement, she uses social media like Twitter and Facebook for campaigning, as well as to "communicate with other people" including friends and family. Her knowledge of digital affordances enhances her digital skills. As she explained, during her think aloud session, with regard to the Instagram interface:

> [Instagram]'s very similar to Facebook in that people can like your stuff … [*she clicks on "likes" under a photo where she is tagged, opening a list of people who have liked it*]. …So, it tells me it's liked by [name of a person], who I'm following [*pointing at the first person in the list. …She then goes back to the previous page*] […And] if I click on the hashtag for Green Party… [*she clicks on "#greenparty" under a photo, opening the hashtag page of the Green Party*] … this tells you how many Instagram posts … have the hashtag Green Party [*pointing at the number of posts at the top*].

While Helen's familiarity with the Instagram interface underpins her social and information-navigation skills, David's operational and creative skills are enhanced by knowledge about what the internet affords in terms of coding. As he explained when talking about the layout of a website he had designed:

[*He opens a folder in the Finder on his Mac laptop, using his laptop mouse touchpad… He then … chooses a file…, opening it as a HTML page, which consists of a dark red page that contains white text inside a light red rectangle*] …what CSS does [*referring to the style sheet language that he used to format the HTML page*], it says, right, background is going to be red and the box is going to be there.

Understanding the affordances of digital technologies enables experts and advocates to use their technical properties, and this study found that a limited understanding of digital affordances goes hand in hand with limited digital skills. This is exemplified by how Reddit is used by Sophia, who works as a social media coordinator for a clothing company. Sophia is in charge of promoting ads on social media for her company's products. As she put it: "because of the nature of my role, I am definitely quite confident in delivering content". Beyond her professional role, she frequently uses Reddit to keep abreast of news. She deploys operational skills to access different posts. But she is unaware that these include a single number indicating the difference between upvotes and downvotes, which affects her information-navigation skills. During one of her interviews she struggled to find downvoted posts. Mistakenly, she conjectured:

There is an internal Reddit system that filters between the different kinds of categories. They do it whenever the votes come through [*she scrolls down hesitantly*] but don't […trust] me on that. I'm not entirely sure. …Not […many] negatives today but when it's negative, they tend to be filtered out, so that could be why.

Sophia's lack of knowledge of what Reddit affords impinges on her ability to use it. This does not mean that she does not know how to use Reddit at all, but she misunderstands what it affords in terms of searching for information, which undermines, in turn, her information-navigation skills. This section has shown that knowledge of digital affordances, including an understanding of the digital interface and technical features of social media, is essential for deploying social, creative, operational or information-navigation skills. On the one hand, this finding builds on

research inspired by the New Literacy Studies, as well as on research on human-computer interaction (Angros et al., 2002; Bhatt & de Roock, 2013; C. K.-M. Lee, 2007). On the other hand, it invites research on digital inequalities to pay closer attention to how knowledge of digital affordances underpins different digital skills.

5.2.3 Dispositions towards the internet

As discussed when reviewing the literature, different strands of media literacy research have interrogated users' general dispositions towards the internet in relation, for instance, to its advantages and disadvantages for accessing information, mental health, learning, social interaction and online shopping. These strands include research on digital inequalities, educational research inspired by social psychology and, to a lesser extent, research on human-computer interaction (e.g., Chou et al., 2009; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Oliemat et al., 2018; Reisdorf & Groselj, 2017). What was obscure before the fieldwork for this study was what kind of dispositions experts and advocates have towards the internet, whether and how these dispositions intersect with their digital skills and knowledge of digital affordances, and whether and how they shape their online engagement.

What emerged from interviewing experts and advocates is that they often perceive access to information, social interaction and online shopping as areas where the internet entails risks and opportunities. As media activist Amanda put it:

> I see the internet as a positive thing … because of its access to information, its ability to connect people, to discover new things. I think there are obviously concerns around what that looks like for generations growing up totally in an internet age … whether through our connectedness online we're somehow losing connectedness offline and skills around socializing face-to-face. This is … concerns; it's not necessarily drawn out in evidence.

Amanda's mixture of positive and negative dispositions towards the internet resonates with research on its potential for increasing access to information as well as,

on the one hand, connectivity and social interaction and, on the other, social isolation (e.g., Borgman, 2003; Hampton, Sessions, & Her, 2011; Marlowe, Bartley, & Collins, 2017). Meanwhile, Oscar, who is head of IT for a management consulting company, values the internet for online shopping, appreciating how "everything is one-touch". As he put it: "[Even] my mother has an iPad and has discovered the joys of Amazon shopping". But he is conscious of its implications for privacy and financial safety. He worries that as "we put so much of [our information] on Facebook, [...including what] financial institutes ask for security, people are effortlessly passing security". His concerns resonate with Paullet, Pinchot and Morris's (2012) proposition that cybercrime is facilitated, however inadvertently, by users oversharing information online.

Positive and negative dispositions towards the internet are often blended with knowledge of digital affordances. Rosie is a young IT engineer and test consultant in a bank, with a background in computer science. She is in charge of testing new software, and beyond her professional role she frequently uses social media. She values search engines like Google for online shopping. Her positive disposition towards online shopping is coupled with an understanding of how Google organizes its results. She had not fully developed such an understanding before our interview, bearing witness to the socially constructed and reflexive nature of knowledge and digital literacy (Bourdieu, 1990; Schirato & Webb, 2010). Asked whether Google results are always the same, she admitted:

> I've never actually thought about that, but I would assume [...they depend] on past searches and websites you frequently visit ...because sometimes ... when I'm looking for gifts ... I'm, like, it's getting ... the ... brands that I would go for.

Like Rosie, Patrick, who campaigns for lower taxation, values the internet for online shopping. At the same time, he is concerned that companies online can overcharge consumers. As already discussed here, different strands of media literacy research have largely concluded that users' positive or negative dispositions towards the

internet lead respectively to online engagement or disengagement (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). Patrick's concerns, nevertheless, signal that we need to better understand whether and how users' negative dispositions coexist with their positive dispositions in ways that can be overcome by deploying digital skills and knowledge of digital affordances that facilitate internet use.[38] As Patrick explained, when talking about what cookies afford:

> What cookies do is [...to] store information on the user. ...If you want to book flights, one day you'll go online and the price will be £200, the next day you check they'll have gone up by £40. But ... when you disable cookies on Google Chrome, and you open the page again it's back to £200.

Beyond online shopping, Rosie thinks that, while the internet has the advantage of expanding access to information, it has the downside of providing users with too much information, including content that is not interesting to her. Her concerns echo research on the internet's potential for information overload (e.g., Feng et al., 2015). As Rosie put it, this is especially the case with social media, where she does not "like it when someone's posting too much" unless they post about "self-development" or "women and their careers". As a result, she overcomes her negative disposition towards internet overload by managing her feed on social media like Facebook. Conscious of the internet's advantages for accessing content that she likes, she deploys operational and social skills along with an understanding of what Facebook affords in terms of managing her feed, hiding posts she "do[es]n't want to see".

The ways in which Patrick and Rosie understand the internet suggest that their dispositions towards the internet, in relation to shopping and accessing information, intersect with knowledge of what it affords in terms of making purchases and

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[38] Refer to pp. 214-216 below on how experts and advocates deploy negative dispositions towards the internet in ways that do not undermine their online engagement when using the internet specifically for civic purposes. In addition, refer to pp. 234-244 below on how, when it comes to critical digital literacy, experts and advocates engage in civic life by deploying both utopian and dystopian imaginaries of the internet in synergy with other dimensions of digital literacy.

managing feed preferences on social media. That users need to have positive dispositions towards the internet in order to engage online was anticipated before beginning fieldwork, in line with existing research on digital inequalities, educational research inspired by social psychology, and research on human-computer interaction (e.g., Joyce & Kirakowski, 2015; Oliemat et al., 2018; Reisdorf & Groselj, 2017). Experts and advocates, when using the internet, draw not just on their digital skills but also on their understanding of how useful it is, particularly in relation to accessing information, social interaction and online shopping. But while the aforementioned body of work has under-researched whether and how such an understanding intersects with knowledge of digital affordances, this section has shown something unforeseen. Understanding what the internet affords not only enhances operational, social, creative and information-navigation skills, as argued in the previous subsection. As examined here, it is ultimately underpinned by users' dispositions towards the internet, in relation to shopping and accessing information. Finally, negative dispositions do not necessarily undermine online engagement. Coupled with positive dispositions, they can actually contribute to engagement in ways that are enhanced by digital skills and knowledge of digital affordances.

5.3 Critical Digital Literacy

Chapter 3 has conceptualized critical digital literacy as not just the ability to evaluate online content but also knowledge about the digital environment, approached as including knowledge about the political economy of the internet and, as theorized by drawing on utopian studies and political theory, utopian/dystopian imaginaries of society in the digital age. Prior to fieldwork, it was not clear whether such ability, knowledge and imaginaries would prove to be crucial to critical digital literacy among experts and advocates. Furthermore, it was not known whether and how they intersect, or whether and how they are intertwined with functional digital literacy. These questions are answered in the subsections below, which draw on a few examples that best show the findings of this study.

5.3.1 The ability to evaluate online content

What emerged from interviewing experts and advocates was that the first thing they do when confronted with information, be it online or offline, is to reflect on its nature and origin. This is particularly important for information experts. Monica is a librarian who works in higher education. Online content, from news stories to posts on social media, would draw her suspicion "if it's too extreme …, if it wasn't bringing in lots of viewpoints, if it didn't have any data to back it up, and then if I wasn't sure about the source". Librarian George asks himself, "do I know the people who produced this information?". Similarly, when talking about the owner of a newspaper that he follows online, information scientist David remarked: "he's someone I can trust".

That information experts find it important to reflect on the nature and origin of information aligns with findings of librarianship studies and of research on information literacy. According to this body of work, as discussed in Chapter 2, cognitive frameworks such as the CRAAP test encourage the use of critical thinking to assess information in terms of its currency, relevance, authority, accuracy and purpose (e.g., Wichowski & Kohl, 2013). In addition, the ways in which experts and advocates assess the trustworthiness of information suggest that comparing and contrasting multiple sources, in synergy with trust in accredited media outlets, are also paramount. This practice is common among not just experts but also advocates. Interestingly, among the experts interviewed, this transcends the specific domains of their expertise, applying not just to information professionals like librarians but also to IT and media professionals.

Whitney is the director of legal affairs at a media company. In her words, "a news story will first be brought to my attention" on Twitter. Then, "there are a handful of trusted sources that I would look [to] for more detail", including, as she wrote in her diary, "the BBC News app and the *Times* app". Similarly, Christian, who is a cloud architect at a cloud services company, relies on news apps that vary in terms of ideological leaning and country of origin. As argued earlier in this thesis, *news literacy*

is a variant of media literacy, which is specifically about evaluating news. As Christian put it: "If the same news is on multiple outlets with the same details, then it has more … credibility". And while many value reputable news sources for their commitment to fact-checking and the quality of their reporting, for librarian George using multiple sources goes beyond relying on accredited media outlets. He wrote in his diary that, in order to "better understand" how Cambridge Analytica was involved in political micro-targeting, besides reading the *Guardian* he found it helpful to read a "balanced but still critical" blog post.[39] Not everyone, however, diversifies their sources sufficiently. Activist Patrick admitted that: "I only use the BBC". Similarly, Miriam, the chair of a local community council, "read[s] the *Times*, the *Guardian* and … the BBC News… But […not] much news beyond that".

As reviewed prior to fieldwork, information and librarianship studies have emphasized the practice of using multiple sources as crucial to evaluating information (e.g., Goad, 2002; Weiner, 2011). Besides this practice, what became evident from interviewing both experts and advocates was that contextual knowledge about a topic is essential for evaluating claims about information – and so is knowledge about the socio-political context. Such knowledge is particularly important when reading news stories, which resonates with the notion of civic literacy. As explained earlier, this notion implies knowledge of history, of the political system and of civic affairs. In addition, it can be understood as the making of informed judgements about information, which is why it intersects with notions of information and critical literacies (Lund & Carr 2008, 14; Giroux 2017).

Librarian George reads the *Financial Times* online, but "sometimes … I don't understand [their articles] because … I'm not such a finance person". Activist Adam, by contrast, who campaigns for social justice in the Middle East, is familiar with the socio-political context of the region, but that familiarity depends on what he reads in media reports. As he emphasized, when talking about the ongoing Syrian civil war:

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[39] As explained in Chapter 1, the Cambridge Analytica scandal refers to the unauthorized access to and misuse of Facebook data by Cambridge Analytica for political advertising purposes. As indicated in Chapter 3, this scandal broke while fieldwork was being conducted.

It's very difficult to work out what's going on because there's no clear narrative, you just don't know who's saying what and for what purpose. The situation is so confusing.

Contextual knowledge, furthermore, is limited by personal interests. Human rights campaigner Adele reads about the Middle East, but not about Gulf politics. As she explained: "because I lived in Lebanon, I'm interested in … stuff about Lebanon".

Whether and how contextual knowledge underpins the ability to evaluate online content has remained under-explored within media literacy research. Exceptionally, as reviewed in Chapter 2, Damico and Baildon (2007) have argued that it is essential to have "background knowledge to contextualize and corroborate sources of information" and "determine the credibility of claims and evidence" (p. 261). While little is known about the boundaries of contextual knowledge in relation to digital literacy, Adam's and Adele's remarks indicate that, even though this knowledge is important for evaluating online content, it is inherently limited.

Knowledge about the socio-political context within which information circulates requires an understanding of media bias. Such an understanding, which is central to the notion of news literacy, depends on knowledge about how traditional media operate (Maksl, Craft, Ashley, & Miller, 2017). Social media coordinator Sophia, for instance, values the BBC for its objectivity, which she knows is based on "address[ing] multiple … dimensions" in their stories. Similarly, as head of IT Oscar remarked: "the BBC is very, very neutral …, which is why I trust it so much". But even though the BBC is the most trusted news outlet in the UK, not everyone is satisfied with its reporting (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019, p. 69). Carol, who is a lecturer in information science and former librarian, wishes it had a more progressive agenda. She was disappointed in its coverage of the 2017 UK general election. And when it comes to other media outlets, cloud architect Christian thinks you can find news about US President Trump in "every outlet … except for Fox News…, especially if it's negative to Trump or the Republicans". IT engineer Rosie, by contrast, has a poor

understanding of media bias. When talking about the *Daily Mail*, she said: "I believe they're more left-wing, but I don't know".

Besides contextual knowledge, what stood out from fieldwork suggests that, since online content is mediated by the internet, the ability to evaluate its trustworthiness relies also on digital skills and knowledge of digital affordances. These include information-navigation skills along with an understanding of digital design and of what search engines like Google afford in terms of comparing and contrasting information. University librarian Shawn is conscious, for instance, of the affordances of hyperlinks in terms of following up on sources and evaluating information. As he explained, when reading an article about American politics: "you get redirected to an entry [*he clicks on an abbreviation that is hyperlinked, opening a Wikipedia page*]. It could be Wikipedia; it could be an article from a news media". Similarly, cloud architect Christian relies on his ability to navigate news websites and is appreciative of what their digital design affords. While browsing the Fox News website, he explained that: "these opinions here [*pointing at "Opinion" under the headline of an article*] … they don't even try to be objective".

For Christian, assessing whether information online is badly written, or whether a website is badly designed, is important. At the same time, as with information scientist David, he is conscious that misinformation can be well-presented. This is why many experts and advocates ultimately rely on the practice of using multiple sources. This practice is not just a question of using multiple news apps and relying on accredited media outlets, as examined above, but also underpinned by awareness that search engines like Google afford the possibility of deploying information-navigation skills to compare their results. As digital campaigner Helen explained:

> If a particular name is mentioned in the article, I will Google those names plus the content of the article. Sometimes, I'll pick up an unusual sentence … and Google that to see if it's been copied from somewhere else.

Similarly, Julia, a policy officer at an organization campaigning for digital rights, uses Google Reverse Image Search to assess the origin of images. Freelance journalist Joseph uses Google Translate to "find different sources" and "get different angles" on news stories. Community founder Mary uses Google to access fact-checking sites such as Snopes. And user experience designer Anthony checks the trustworthiness of a website by deploying information-navigation skills and knowledge of what is afforded by WHOIS protocols, which are available on Google. During his think aloud session, he said:

> There's lots of WHOIS lookups [*scrolling up and down several Google results*] … if I find something […that] I think it's dodgy… Let's just try ICANN… [*he clicks on "whois.icann.org/en"*] …so, say you like a website that's published by Joeblogs.com, I can find out where that website is, where it's hosted, and who has registered that.

In short, the ability to evaluate online content is not only based on being able to reflect on information, on contextual knowledge and on the use of multiple sources, but also relies on information-navigation skills and knowledge of what search engines and websites afford in terms of comparing and contrasting information. This finding suggests that critical digital literacy requires functional digital literacy. As a result, it problematizes media literacy research inspired by social psychology, critical pedagogy and the New Literacy Studies, which has under-explored how functional digital literacy enhances evaluation skills (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Kahne, et al., 2012; Kellner & Share, 2007a; Martens & Hobbs, 2015). Given the gaps in the literature, this finding came as a surprise. As discussed here earlier, information science research has argued that searching for and comparing information is valuable for assessing its trustworthiness (e.g., Goad, 2002; Weiner, 2011). A few studies, furthermore, have approached digital literacy as incorporating knowledge of digital affordances (e.g., Buckingham, 2007a; Dezuanni, 2018; Livingstone, 2014; Livingstone & Van de Graaf, 2010). Ultimately, however, media literacy research has paid little attention to how critical digital literacy

intersects with functional digital literacy, with studies placing the latter in a secondary position (e.g., Buckingham, 2007a; Lankshear & Knobel, 2006).

By contrast, the examples above suggest that functional digital literacy is crucial to the ability to evaluate online content. Given that this thesis conceptualizes critical digital literacy as incorporating an understanding of the digital environment, I examine in subsection 5.3.4 below whether and how such an ability is underpinned not just by functional skills and knowledge about the internet but also by such an understanding. The latter consists of knowledge about the political economy of the internet and, as conceptualized in Chapter 3, utopian/dystopian imaginaries of society in the digital age. This is why critical digital literacy is inherently political: it is about understanding the internet as embedded within the socio-political context. Before addressing whether and how the knowledge of both experts and advocates about the digital environment enhances their ability to evaluate online content, subsections 5.3.2 and 5.3.3 shed light on what their knowledge consists of, how it is discursively constructed, and whether and how it intersects with functional digital literacy.

5.3.2 Knowledge about the political economy of the internet

I have argued in Chapter 2 that media literacy research has predominantly approached the critical dimension of digital literacy as the ability to evaluate online content. Exceptionally, Buckingham (2007a) and Fry (2014) have drawn on critical pedagogy to emphasize that it should incorporate knowledge about the political economy of the internet, including an understanding of how information circulates online, in relation to ownership, advertising and regulation

According to Ofcom (2019a), around one third of internet users in the UK do not know how online services are funded, and less than 50% of adults know how to identify online ads. Their study signals that many in the UK are not aware of how internet corporations operate, but it does not go much further into what users do or do not know. By contrast, our study found that most experts and advocates are well aware

that corporations like Google and Facebook profit from collecting, and sharing with advertisers, users' personal data and user-generated content. Peter, an information consultant and former librarian, remarked that: "Google, Twitter, Instagram, they all … rely on adverts to make more revenue". Similarly, Emma, a technical business analyst who works in a bank, knows that "they collect … your personal details […and] things you are searching for […to] give you targeted ads".

Knowledge about the political economy of the internet is often intertwined with knowledge of digital affordances, which is an example of how critical digital literacy intersects with functional digital literacy. What became clear during fieldwork was that many experts and advocates are not just aware of *why* internet corporations, driven by economic interests, collect users' data, but they also know *how* the corporations do this, and are conscious of how cookies function and what they afford for their business models. Disentangling these two forms of knowledge is not as straightforward as it may seem, since they complement each other. On the one hand, understanding how search engines and online platforms operate as internet corporations is a form of critical digital literacy. On the other hand, understanding how they function technically is a form of functional digital literacy.

Social media coordinator Sophia, for instance, knows that internet corporations like Google profit from online advertising. Relatedly, she knows that they track users by using cookies in order to target them with ads. Her knowledge about online advertising is blended with knowledge about cookies. As she explained:

> If you create a business account with Google … you are able to generate … ads, which are attached to the cookies… Once [users] come into [a] website, [a] cookie is dropped, and then they leave and Google tracks them through that. And the ad generates on the different pages that they visit.

Activist Jacob, by contrast, however conscious that internet corporations like Google and Facebook profit from advertising, does not know that they use cookies, or that they operate under different ownership, which adds to his lack of knowledge. Asked

whether he needs to be logged in to Facebook to be tracked, he replied: "I don't know… Is Facebook owned by Google or do they cooperate?".

Sophia's and Jacob's remarks suggest that knowledge about how internet corporations operate, in order to be sophisticated, needs to be coupled with knowledge of what their platforms afford for their business models. The intersection of these two forms of knowledge, which is a form of critical and functional digital literacy, is arguably implicit in Pangrazio and Selwyn's (2019) approach to data literacy as incorporating *socio-technical* knowledge about *why* and *how* users' data is collected and processed online. Generally, however, media literacy research has paid little attention not only to how functional skills and knowledge about the internet enhance the ability to evaluate online content, as examined in the previous subsection, but also to how knowledge about internet corporations intersects with an understanding of what their platforms afford in terms of collecting users' data.

Unlike Jacob, who does not know enough about internet corporations, Activist Adam has doubts about Twitter, suggesting that it is impossible to fully understand how it operates because of a lack of transparency. As he emphasized: "the only way [Twitter] can be making money … has to be on getting information on its users and selling it on somewhere… [However,] the mechanisms for doing that are not clear". While we need more research on whether and how digital literacy depends on the structure of the digital environment, Adam's reservations invite us to go further than the literature reviewed in Chapter 2. More specifically, they echo Livingstone's (2018) proposition that "we cannot teach data literacy without transparency" (para. 10).

Considering how experts and advocates discursively construct their knowledge about internet corporations, it is clear that this knowledge entails different positions that legitimize, and place responsibility on, different actors.[40] Media publisher Frank, for instance, blames online advertising for having affected traditional media outlets. His

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[40] See subsection 5.3.3, pp. 147-160, for how they construct discursively not just their knowledge about the political economy of the internet, but also their imaginaries of society in the digital age.

concerns echo research on the amount of revenue that the news industry is losing to online platforms (e.g., Hogarth, 2018). Talking about traditional media, he said:

> The majority make their money from advertising. However, the scale of that revenue and the potential growth is very small… Say that in 2017 there are 100 pounds … spent on digital advertising in the UK and the next year there are 101 pounds. Of that extra pound, Facebook and Google get 95 pence of it and everyone else is scrambling around for the other five pence.

Frank juxtaposes "Facebook and Google" with traditional media outlets, positioning the latter as having shifted from profitable ("revenue", "growth") to "declining" as a result of their asymmetrical power relationship with the former. He frames Facebook and Google as profiting the most from online advertising ("95 pence" of one pound), while traditional media outlets compete for an insignificant amount ("scrambling around", "five/ pence").

By contrast, according to social media coordinator Sophia:

> Sophia: Google is the one linking us to that audience to target. …Google is the glue. …I'll give you an example, googling … how to eat Kit Kat. …if I am in the confectionary industry, I would be applying the term Kit Kat … often…
> Researcher: How does that relate to how people['s…] data is collected?
> Sophia: We access this through Google. We can access all these key terms that people have searched most and utilize that to our advantage.

Sophia juxtaposes "Google" with "us" as a proxy for businesses like her clothing company, which advertises its products online. Google is framed as a tool ("linking", "glue", "utilize") that enables companies (e.g., "the confectionary industry") to "target" their "audience[s]" to their "advantage" by "access[ing]" users' search habits. The real beneficiaries are not Google, but the companies that advertise their products online through Google.

In short, knowledge about the political economy of the internet can be discursively constructed in different ways. While "discourse production … is impossible without knowledge", the latter "presupposes [that] discourse" can take multiple forms (van Dijk, 2003, pp. 87–89). As shown above, both Frank and Sophia understand the business models of internet corporations such as Google and Facebook. But they construct their knowledge discursively by taking different positions on the power relations between such corporations and, respectively, media outlets and advertisers. The positions of both suggest that knowledge about the political economy of the internet, and therefore critical digital literacy, can be articulated differently when it comes to understanding the internet as embedded in power structures. In the next subsection, I build on this argument in order to reflect on its implications for media literacy research. In addition, I examine how experts' and advocates' imaginaries of the internet are discursively constructed in ways that intersect with different imaginaries of civic life and different ideologies.

5.3.3 Utopian/dystopian imaginaries of society in the digital age

A few studies have argued that digital literacy should ultimately incorporate an understanding of the role of the internet for civic life (Banaji & Buckingham, 2013; Fry, 2014). Relatedly, according to Mihailidis (2018) and to Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al. (2016), it should be based on civic imagination, which enables users to imagine socio-political alternatives. On the one hand, these studies have expanded how we can understand critical digital literacy. On the other hand, they leave aside the question of how to disentangle users' understanding of the internet from their understanding of the socio-political system. As a result, Chapter 3 has conceptualized critical digital literacy as incorporating utopian thinking, framed dialectically as relying on both utopianism and dystopianism.[41] While such an approach to critical digital literacy prescribes that users should understand both the

[41] In Chapter 3 I have argued that such a dialectic is based on the interdependence of imagination and realism, and that critiquing the dystopian limitations of the present is a *sine qua non* for projecting utopian possibilities.

potentials and the limitations of the internet for civic life, fieldwork was approached through two questions, which are relevant here. First, does applying utopianism/dystopianism to critical digital literacy enable us in practice, as theorized in Chapter 3, to explore users' utopian/dystopian imaginaries of society in the digital age, differentiating between their imaginaries of the internet and of civic life? Second, in what ways, if any, do experts and advocates discursively construct their imaginaries in line with different ideologies?

Media research has employed the notion of social imaginaries to refer to different discourses about the internet (e.g., Felt, 2015; Goggin, 2015). Mansell (2017), for instance, has focused on the internet's potential for economic and political freedom, on the implications of internet regulation and surveillance for maximizing financial profitability and collective security, and on how the internet contributes to forms of coercion. By contrast, as discussed earlier in this thesis, less is known about how users construct their imaginaries of the internet, with Treré (2019), exceptionally, looking at activists' imaginaries of the internet's potential to facilitate both democracy and authoritarianism. Despite paying little attention to media literacy theory, a few studies within political research have examined how users' understanding of the internet shapes their civic practices, with emphasis, for instance, on its potentials and limitations for sharing political content on social media, organizing protest, corporate power and the use of alternative media (e.g., Barassi, 2015b; Gustafsson, 2012; McCurdy, 2011; Penney, 2016). Links with these studies are established in Chapter 7 in the context of how experts' and advocates' imaginaries of the internet intersect with their imaginaries of civic life, shaping their civic engagement. The present section, by contrast, is limited to shedding light on the nature of their imaginaries and on how these are discursively constructed, reflecting, in turn, on the nature of critical digital literacy.

I found that experts' and advocates' utopian/dystopian imaginaries of society in the digital age are often blended with knowledge about the political economy of the internet, along with an understanding of digital affordances. Their imaginaries of the internet and of civic life revolve predominantly around democracy as an aspiration,

populism, misinformation and surveillance as constraints of the digital age, and internet regulation as a possible, but often contested, condition for reimagining the digital environment.

Democracy

Both experts and advocates are concerned about citizens' dissatisfaction with representative politics in the West and appreciate the internet's potential to improve liberal democracy through e-voting. According to librarian Shawn, the "ability to cast your vote … online would be a major improvement to voter turnout". But as policy officer Julia emphasized:

> People imagine e-voting as this magical thing that is going to increase participation and democratize everything. […But if] it is not secure enough, it's going to be really easy to rig the elections and essentially make the democratic process unattainable, or non-existent.

Conscious of the internet's dystopian implications for data security, Julia discursively juxtaposes the utopian imaginary of e-voting as a "magic solution" with a dystopia where elections are "rig[ged]" and representativeness is "unattainable" or "non-existing". Her understanding of e-voting resonates with academic research (e.g., Zissis & Lekkas, 2011), which suggests that knowledge about the digital environment, and therefore about critical digital literacy, sits between lay and academic expertise. As captured by Seiter's (1999) approach to audiences' *lay theories of media*, lay knowledge replicates or contradicts academic knowledge, which is rooted in the "critical judgements […of] ordinary people" (Boltanski, 2011, p. 4). Constructed as an imaginary, knowledge about the digital environment lies at the intersection of realism and imagination, which is typical of utopian thinking (Shor, 2010, p. 124). It sits between rationality and affect, which are intrinsic to knowledge (Jaggar, 1989), and it is both utopian and dystopian.

As argued in Chapter 3, the dialectic behind utopian thinking, which Jameson (2005, pp. 15, 180) refers to as a "negative dialectic", requires that tensions are not pacified into a synthesis but in a constant state of conflict. Julia's imaginary captures the idea that utopian thinking is based on the opposition of utopianism and dystopianism. And while dialectical thinking in the philosophical realm involves argumentative negotiation that resolves tensions into solutions, her imaginary suggests that argumentation in everyday life is reduced, as proposed by Billig et al. (1988), to the articulation of "opposing themes" (pp. 3, 6). Approaching critical digital literacy as incorporating utopianism/dystopianism therefore prescribes that users should appreciate *de facto* the internet's civic potentials *and* limitations. Such an approach builds on media literacy research on users' understanding of the internet and with civic imagination (Banaji & Buckingham, 2013; Fry, 2014; Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Mihailidis, 2018). At the same time, this is an analytically richer approach because it emphasizes the (negative) dialectic inherent in such an understanding. Furthermore, it allows us to disentangle users' imaginaries of the internet from their imaginaries of civic life, that is, from their imaginaries of the socio-political order. As discussed earlier when theorizing critical digital literacy, Postill (2013, 2014) has found that activists' progressive visions of collective justice are often blended with cyberlibertarian utopianism, promoting individual liberty and minimum internet regulation. His work does not engage with media literacy theory, but suggests that activists' imaginaries of the internet intersect with different imaginaries of civic life.

Information scientist David appreciates the internet's potential for participatory democracy, as discussed by Loader and Mercea (2011). As he put it: "when the internet came about, [...we thought] we'll all have a vote, we'll all be able to take part in town hall meetings". But he is concerned about the internet's dystopian implications of elitism. He thinks that "there will always be people who can't use [it]", as addressed by G. Martin (2017). Not only is David's imaginary of the internet constructed dialectically as both utopian and dystopian, but it also intersects with civic utopianism about democracy. The latter, for him should be both "representative and participatory". His vision of social change, as a supporter of the Left, is based on

"work[ing together] for the best" but he worries that citizens' direct involvement in decision-making may not be for the common good.

Andrew is a community councillor and Green Party supporter. He appreciates the internet's potential for improving democracy by "making engagement easier […and] providing information", but is conscious of its dystopian implications of corporate power. His imaginary of the internet intersects with left-wing libertarian utopianism, along with knowledge about the political economy of the internet. Based on decentralization of power, left-wing libertarianism aligns with Green politics (Neumayer, 2004). Andrew worries that the internet has not "fulfilled its early promises" to decentralize power and overcome capitalism. Similarly, according to environmental activist Roger:

> [The internet was] seen as a way to bypass a capitalist system, which would mean, I built this app. I'm not going to charge you for it, but I will … sell your data to this party … as if it's not engaging in capitalism in the same way.

Roger frames the internet as providing the illusion of "bypass[ing]" capitalism. His imaginary echoes Turner's (2006) critique of cyberlibertarianism as rooted in progressive principles appropriated by Silicon Valley entrepreneurship and free-market spirit. For Roger, the internet has failed to meet expectations of a left-wing libertarian utopia.

Populism

Both experts' and advocates' imaginaries of society in the digital age revolve around not just democracy but also extremism, which librarian George worries has infiltrated mainstream politics in the West in the form of populism. This refers to a political approach that is often at the service of radical ideologies that appeal to citizens by capitalizing on their dissatisfaction with institutional politics (Müller, 2016). Labour councillor Michael is concerned about Brexit and populism in ways that intersect with

awareness of the internet's utopian/dystopian potential for politics. He values the internet for making politicians "more accessible", but is conscious of its dystopian implications in terms of facilitating right-wing and far-right politics. As he explained:

> Populism has … tapped into the internet in the way that, say, *status quo* parties haven't. …The Brexit campaign … was able just to reach out... As much as I'd want to be optimistic, I find myself more pessimistic… [Brexit] has unearthed a lot of negativity… In Britain we kind of thought, oh, we're post-racial […and] very liberal … and then Brexit …, this big bang and it's made us very illiberal.

Michael's views resonate with the findings of research on the internet and far-right populism (Alvares & Dahlgren, 2016; Cammaerts, 2018). His civic dystopianism is blended with digital dystopianism. He discursively constructs his imaginary of the UK (through "pessimistic" and "negativity") as a country which, afflicted by Brexit as a calamity ("big bang"), has shifted as a result of internet-mediated populism from "post-racial" and "very liberal" to "illiberal".

Sue also worries about extremism, along with the polarization of political views. She is a member of the Conservative Party and former vice president of a right-wing libertarian organization that campaigns for free speech. As she emphasized:

> If we don't do anything to stop the polarization … people will be too busy fighting each other or be[ing] at each other's throats to worry about who we are going to vote next [time] for our prime minister.

Sue's imaginary of civic life is constructed as a dystopia where elections and civic debate are undermined by polarization, hyperbolized through "fighting" and "at each other's throats". While she values the internet for "connect[ing] us to all kinds of people", her civic dystopianism is tangled with awareness of the internet's dystopian implications of a rise in far-right trolling, echoing Forestal's (2017) concerns. Trolls, as librarian Peter remarked, are users who "look for a way to start arguments". For Sue, the internet has contributed to platforms like 4chan, where far-right trolls thrive.

In short, while Labour councillor Michael's imaginary of the internet is blended with left-wing dystopianism about populism, Sue's imaginary of its potential for extremism and trolling coexists with dystopianism about polarization, underpinned by right-wing libertarian values. How both discursively construct their knowledge suggests that users' imaginaries of the internet intersect with imaginaries of civic life that are aligned with different ideologies. This finding challenges those of media research inspired by critical pedagogy. As argued in Chapter 2, this strand of research has approached critical literacy as inherently left-wing (e.g., Feria-Galicia, 2011; Kellner & Share, 2007).[42] By contrast, applying utopianism/dystopianism to critical digital literacy suggests that understanding of the internet as embedded in power structures transcends Left-Right politics.

Misinformation

As well as populism, both experts and advocates often construct their imaginaries of society in the digital age around misinformation. Christian feels "pessimistic", believing that we "live in the post-truth period" where facts no longer matter, which undermines democracy and citizens' ability to make informed decisions, as argued by Nichols (2017). Christian's civic dystopianism is blended with digital utopianism/dystopianism. His post-truth dystopia is a digital dystopia where you can speak "freely without … responsibility", but he values the internet's potential for a well-informed citizenry in ways that intersect with a positive disposition towards its advantages for providing "amazing access to information" beyond politics. The way his disposition is blended with his imaginary exemplifies how functional digital literacy can intersect with critical digital literacy. While the former is not about understanding the internet as embedded in power structures, the latter is inherently political.

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[42] In Chapter 2 I have argued that the critical pedagogy tradition prescribes that students' critique and action will necessarily be progressive, with little room for different ideologies.

Senior analyst Chloe values the internet's democratizing potential "to discover … the opinions of the minorities", as advocated by Downey and Fenton (2003), but has an awareness of its dystopian implications in terms of misinformation that intersects with knowledge about internet corporations and digital affordances. Her critical digital literacy intersects with her functional digital literacy. She is conscious that content on Google and Facebook is organized via algorithms that draw on users' search habits and preferences. Relatedly, she knows that their algorithms create filter bubbles that, as examined by Vaidhyanathan (2018), reinforce users' pre-existing beliefs and exposure to misleading content. As she emphasized:

> The Facebook algorithm shows [you] what pleases you rather than what needs to be shown to you […, which] is really detrimental to a democracy and [to] having an unbiased opinion, or … having the factual information.

Unlike Chloe, activist Patrick exempts internet corporations from responsibility for spreading misinformation. As he put it: "if you decide to tell ten lies to a friend and you write a letter to them and the postman delivers it, is it the postman's fault? …I think it's your fault". Patrick positions the internet as a means, blaming those who use it to misinform. His "postman" metaphor aligns with the idea that the internet should enable free expression and, as encouraged by the E-Commerce Directive, "movement of information society services" (EU Parliament and Council, 2000, p. 2). His imaginary of the internet is blended with an understanding of internet corporations, which is intertwined with civic utopianism. As a right-wing libertarian, he is optimistic that "the market will correct itself" as internet corporations "find new ways of getting … reliable [information]". His optimism echoes Tomasi's (2012) championing of the free market. Relatedly, his understanding of misinformation and of internet corporations suggests that critical digital literacy can be discursively constructed in different ways, depending on one's ideological leanings.

Surveillance

Experts' and advocates' imaginaries of society in the digital age also revolve around surveillance, and are often based on knowledge about the political economy of the internet. According to environmental activist Roger, the internet makes it "harder for a government to do something nefarious … and just get away with it". His imaginary of internet transparency feeds into civic utopianism about "equity and justice". But he is concerned about the internet's dystopian implications when it comes to tracking users through platforms like Google and Facebook, which has "become completely normalized". His concerns resonate with research on internet surveillance (Fuchs, 2010; McChesney, 2013). Similarly, conscious that the internet has "a huge potential for being beneficial and negative", user experience designer Anthony worries about its implications for government surveillance. As he put it:

> If this country … would turn to be more authoritarian […, and] if we lost our political freedoms, which could always happen, which happens, we would be extremely and completely vulnerable to being rounded up in prison for just being left-wing or right-wing.

As a progressive supporter of liberty, Anthony discursively constructs his dystopian imaginary of the UK government (synecdochally referred to as "this country") as potentially "authoritarian". By shifting the modality of his hypothetical clause ("if this country") from epistemic to declarative ("which could always happen", "which happens"), he frames his dystopia as more probable than possible.

Liberal Democrat candidate Mark appreciates the internet's potential "to provide a voice for people" but worries about its dystopian implications not just for surveillance but also for voter manipulation, based on data tracking. As he wrote in his diary about the Cambridge Analytica scandal: "I have read with grave concern the extent in which Facebook and … Cambridge Analytica have been using personal data for highly Orwellian manipulation of elections". As an advocate of liberty, he frames Facebook and Cambridge Analytica, through intertextuality, as responsible for his dystopia of voter "manipulation" ("Orwellian"). But while he worries about online microtargeting,

he fails to question its effectiveness at manipulating users, as disputed by Baldwin-Philippi (2017) and Risso (2018). His imaginary is not symptomatic of critical digital literacy but lacks the balance between imagination and realism intrinsic to a dialectical approach to utopian thinking (Jameson, 2005, pp. 15, 180; Marin, 1990; Shor, 2010, p. 124).

Similarly, activist Alex, who campaigns for social justice, constructs his dystopian imaginary of voter manipulation in ways that are based on fabricated knowledge, which is why it is articulated as a conspiracy theory. As he put it: "[The government is] an integral part of the dysfunction… [It] implement[ed] certain algorithms into Facebook …, turned a blind eye […and] packed [its] pockets". Alex frames the Cambridge Analytica scandal as a dystopia ("dysfunction") where the government is complicit with Facebook ("they turned a blind eye") and responsible for "implementing certain algorithms" while sharing its profits ("packed their pockets"). Critical of the government, his dystopian imaginary is based, however, on imagination, not realism. It is indicative of a lack of critical digital literacy, illustrating how imagination, when devoid of realism, is antithetical to knowledge (Currie, 1998, p. 161). Librarian George, by contrast, knows that online microtargeting is not new and that "nobody can really prove" its effectiveness.

But not everybody sees data tracking as a constraint of the digital environment. Being knowledgeable about how internet corporations operate, head of IT Oscar, a Conservative supporter, sees surveillance as a legitimate technology of the state. He worries about the internet's dystopian implications for misinformation, but values its potential to "create a personal archive of human interaction", which resonates with research on governments' use of social media data (Bertot, Gorham, Jaeger, Sarin, & Heeyoon, 2014; Q. Huang & Xu, 2014). As he emphasized:

> If you have nothing to hide, if you're a perfect law-abiding citizen, then if the government are looking at you, they're going to see that you like going to the opera… Even if all of our technology didn't exist, you still exist in terms of written documents.

By framing surveillance as a government operation used for archiving information, Oscar places responsibility on the "perfect law-abiding citizen", who should share their private life if they have "nothing to hide". Similarly, Conservative activist Jacob values the internet's potential for the government to access users' data. His views echo research on collective security (Bajc, 2013; Cucchiara, 2005). For him, internet surveillance is not a dystopia but a condition of his utopian vision of collective security, based on protecting citizens from "crime or terrorism". His imaginary resonates with Betts's (1992) proposition that such a vision aligns with conservatism's aspiration to preserve the *status quo*. In short, how the internet is discursively constructed reflects different imaginaries of civic life and different ideologies. As argued above, approaching critical digital literacy as incorporating utopianism/dystopianism problematizes the expectation that knowledge will necessarily be constructed in the service of progressive values.

Regulation

Finally, both experts' and advocates' imaginaries of society in the digital age are often about regulation. Amanda campaigns for media regulation and internet safety within an organization rooted in conservatism. Government regulation is key to her utopian vision of social change, which intersects with utopianism/dystopianism around the internet's potential for participation as well as for misinformation and harmful content. She thinks that "imposed regulation [...of online content is the] best thing". According to Amanda, the right to free speech should not be a deterrent to regulation, as suggested by Leets (2001) and Wu (2017).

For Liberal Democrat Mark, government regulation is crucial to overcoming his dystopia of corporate power and realising the utopia of a "liberal society". As he wrote in his diary: "social media does have the potential for ... bringing people together. However, in a completely unregulated landscape its use will always be skewed to those who wish to make most money out if it". Mark is concerned about the internet's dystopian implications in terms of exacerbating corporate power ("those who ... make

most money"). For him, it is not the regulation of online content that is essential to his utopia, but the regulation of internet corporations, of how they are taxed and how they handle users' data. His imaginary echoes Yar's (2018) proposition that they should be liable for failing to regulate their own platforms. Similarly, according to learning technologist Matthew, the government should regulate their "monopolistic tendencies".

Librarian Shawn's vision of social change relies on utopianism around the EU General Data Protection Regulation (GDPR).[43] As he wrote in his diary before this was implemented:

> Perhaps the provisions of GDPR, with its "privacy by design" and returning the control over data to the users will help in reshaping the way internet giants operate […through the] imposition of hefty financial penalties for breaching the law.

Juxtaposing "users" with internet corporations (hyperbolized as "giants"), Shawn discursively constructs his utopianism around GDPR as hopefully ("perhaps") redressing power imbalances by giving users "control" over their data. His utopianism parallels Coopamootoo's (2018) research with privacy experts who "hope" that users will become more empowered with GDPR (p. 78). Blended with dystopianism around corporate power and knowledge about the affordances of digital design, this exemplifies how critical digital literacy can intersect with functional digital literacy.

But while Shawn values GDPR, not everyone is in favour of government regulation, with its emphasis on regulating not just how corporations operate but also online content. When it comes to the latter, the fear of losing liberty is intertwined with

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[43] GDPR stands for General Data Protection Regulation, a piece of EU legislation on data protection implemented in May 2018 (EU Parliament and Council, 2016). This legislation aims to give users more control over their data by requiring companies that provide online services to prioritize users' privacy. Among the requirements, companies need to take account of data privacy in the design of their online services (referred to as "privacy by design"). They need to seek users' informed consent before colleting their data. They need to minimize the amount of data they collect. The data they collect must be erased when it is no longer needed for its original purposes. Users, furthermore, have the right to request companies to erase their personal data (known as the "right to be forgotten").

dystopianism around internet surveillance. As right-wing libertarian Sue remarked: "I don't think people will be comfortable having the internet police watching their every move on social media". Similarly, and appreciative of the internet's "potential for [both] emancipation and … control", left-wing campaigner Adam is conscious of the thin line between regulating the "extraordinarily unpleasant" side of the internet and "censorship", which resonates with research on free speech and censorship (e.g., Aranda Serna & Belda Iniesta, 2018).

Sceptical of regulation, IT engineer Rosie's utopianism/dystopianism around the potential of artificial intelligence for content filtering intersects with awareness of the internet's dystopian implications with regard to misinformation and hate speech. This is blended with knowledge about internet corporations and digital affordances – an example of how critical digital literacy can intersect with functional digital literacy. She values the internet for raising awareness, but knows that the algorithms of corporations like Facebook are not sophisticated enough to filter online content, as discussed by Davidson, Warmsley, Macy and Weber (2017) and Osoba and Welser (2017). As she emphasized:

> Artificial intelligence is really, really powerful. [...But] it's [not] smart enough to understand irony or satire. [...Furthermore,] any bias that gets fed into it [...is] going to come out, but it'll come out a hundred times worse.

Rosie refers discursively to artificial intelligence as a "powerful" technology that could enable algorithms to distinguish misinformation and hate speech from "irony or satire". But she frames this, through an oxymoron, as "intelligence" that is not "smart enough" and can amplify human "bias", with detrimental effects ("a hundred times worse"). For Rosie, the utopia of artificial intelligence can turn into a dystopia. Instead of expecting the government to implement or avoid regulation, she places responsibility on technological progress. Indeed, the way that experts and advocates discursively construct their imaginaries of regulation suggests that knowledge about the internet's civic potentials and limitations is blended with different imaginaries of

civic life. And it often intersects with an understanding of internet corporations and digital affordances.

5.3.4 Back to the ability to evaluate online content

Having discussed how experts and advocates understand the digital environment, I can return to the question of whether and how their knowledge underpins their ability to evaluate online content, together with their functional digital literacy. The subsections above have argued that not all experts and advocates have a sophisticated understanding of the digital environment, especially when it comes to data tracking and voter manipulation. But when they do have such an understanding, this study found that their knowledge shapes how they compare information and use multiple sources online. Subsection 5.3.1 above shows that, besides contextual knowledge and reflections on the nature and origin of information, the ability to evaluate online content relies on the practice of using multiple sources, in synergy with digital skills and knowledge of digital affordances. Ultimately, what emerged from fieldwork suggests that this practice is also underpinned by knowledge about the digital environment, which is indirectly beneficial to evaluation of online content.

Librarian Peter follows multiple media outlets on Twitter in order to form a balanced opinion. Appreciative of the internet's potential for mainstream and non-mainstream content, he values the latter for representing social minorities. His views resonate with research on alternative media (e.g., Downey & Fenton, 2003). As a Labour supporter who believes in helping, for the betterment of society, "people that are suffering", he thinks that "it's good to hear both sides". At the same time, he is conscious of the internet's dystopian implications in terms of undermining political debate through misinformation, hate speech and irrelevant content, as addressed by Oxley (2012) and Forestal (2017). As a result, he relies on his information-navigation skills to search for information – an example of how his critical digital literacy is intertwined with functional digital literacy. As he explained:

When I am using Twitter and I want to find out about Brexit [*he types "Brexit" into the search bar*] … if I just type the word "Brexit" … [*he clicks on "Search"*] … you can see there is quite a lot […of] irrelevant [posts] … [*pointing at a tweet about Brexit that is not from a politician*]. I don't really want to look at this. I just want Brexit and politicians. I want politicians to be talking. So, one way I can do this is by adding the word "politician" [*he scrolls up, clicks on the search bar and adds "politician"*]. … it's reduced the end results, showing anything about politicians. If you look here [*referring to the first tweet that has appeared in the results*], this is about an MP.

Mindful of the dystopian implications for internet surveillance inherent in how internet corporations operate and in their collection of users' data, librarian Carol "worr[ies] about … privacy and facial recognition in protests". Insofar as she also values the internet's potential for diversifying information and using multiple sources, she uses Google and DuckDuckGo as search engines, appreciative that the latter is less invasive of privacy. Aware of what these search engines afford, she admitted: "sometimes I just can't find [what I'm looking for] on DuckDuckGo so then I will use Google". Similarly, systems administrator Simon compares information on the two search engines, conscious that DuckDuckGo's "index is [not] as comprehensive as Google's". The way Carol and Simon use the internet resonates with the findings of research on data literacy, which is interested in how users engage online in ways that are underpinned by privacy concerns (e.g., Pangrazio & Selwyn, 2019; Preibusch, 2015). Their experiences suggest that these kinds of concerns shape the way information is accessed and compared on the internet.

According to senior analyst Chloe, engaging with information that confirms one's pre-existing beliefs is "detrimental to … democracy['s]" reliance on a well-informed citizenry. As librarian Monica remarked, it has a "profound impact" on the ability to diversify and evaluate sources. Aware of the dystopian implications of the filter bubble inherent in how algorithms organize online content, media professional Whitney looks beyond Google's top results when searching for information. Her knowledge of how Google operates and what it affords in terms of accessing multiple sources informs her ability to evaluate online content, bearing witness to how critical digital literacy can

intersect with functional digital literacy. Similarly, conscious of the internet's potential for exacerbating the polarization of political debate by exposing users only to what they like, journalist Abby "look[s] at [the] Twitter accounts" of people that have oppositional views" to hers. Indeed, as librarian Shawn emphasized:

> We all have preferred ways of accessing information and sources … but it would be good to be in the loop of what other people that you don't normally agree with think.

Shawn's remarks echo a few studies within information science, which have argued that digital literacy should incorporate knowledge about the filter bubble and how to use the internet to access multiple sources and diversify one's exposure to information (e.g., Johnson et al., 2012; Spratt & Agosto, 2017). Blended with an understanding of the internet's implications for civic life and of how internet corporations operate, this kind of knowledge is both functional and critical.

This subsection has argued that understanding the digital environment shapes the practice of using multiple sources, enhancing, in turn, the ability to evaluate online content. This finding challenges the idea that knowledge about the media ecosystem, however crucial to appreciating the context in which information circulates, may not necessarily be helpful, as suggested by Hobbs (2011, p. 426), for practically evaluating its trustworthiness. This subsection has shown that understanding the internet's potentials and limitations for civic life, with emphasis on its implications for political debate, surveillance and the filter bubble, can intersect with knowledge about internet corporations in ways that are blended with an understanding of what search engines and online platforms afford, shaping, in turn, the ability to use multiple sources and evaluate online content.

5.4 Discussion

This chapter has addressed what digital literacy is. The fieldwork was approached with an idea, informed by the literature, of what functional and critical skills and knowledge could be crucial to digital literacy. But it was not known whether these skills and knowledge would prove crucial to digital literacy among experts and advocates in the UK. Furthermore, since media literacy research has approached digital literacy by focusing on functional or critical aspects over others, it was not known whether or how these intersect. Understanding that internet corporations profit from advertising does not necessarily require an understanding of what cookies afford for their business models, as demonstrated by activist Jacob's limited knowledge. Similarly, as exemplified by social media coordinator Sophia, one may be able to deploy operational skills when using platforms like Reddit, but without an understanding of what these afford when searching for posts. Indeed, this study found that not all experts and advocates are digitally skilled or knowledgeable about the digital environment. But many are digital savvy and, in terms of how they use digital technologies, their digital literacy relies on a combination of functional and critical skills and knowledge about the internet.

When it comes to functional digital literacy, fieldwork revealed that not only are digital skills enhanced by knowledge of digital affordances, but the latter is also underpinned by general dispositions towards the internet. As captured by one of the examples discussed above, information scientist David deploys operational and creative skills to design websites in ways informed by an understanding of what digital technologies afford. Interested in digital skills, digital inequalities research has paid little attention to the importance of such an understanding, unlike research inspired by the New Literacy Studies or research on human-computer interaction (e.g., Angros et al., 2002; C. K.-M. Lee, 2007). This strand of research, furthermore, has largely approached users' positive or negative dispositions towards the internet as respectively beneficial or problematic for their online engagement (e.g., Eynon & Geniets, 2016; Hakkarainen, 2012; Reisdorf & Groselj, 2015). So has research on human-computer interaction, as well as educational research inspired by social psychology (Chou et al., 2009; Joyce & Kirakowski, 2015; Peng et al., 2005). By contrast, this chapter has argued that we need more research on how users' positive

dispositions may be coupled with negative dispositions in ways that can be overcome through deploying digital skills and knowledge of digital affordances. As seen above, activist Patrick, for instance, values the internet for online shopping but has worries about companies overcharging consumers that are blended with his knowledge about cookies. To avoid this risk, Patrick knows how to manage his cookies before making purchases online. His negative disposition towards the internet does not undermine his online engagement. In fact, it contributes to it.

When it comes to critical digital literacy, this thesis argues that it should be understood not just as the ability to evaluate online content but also as knowledge about the digital environment. This knowledge was conceptualized in Chapter 3 as including an understanding of the political economy of the internet and, as theorized by drawing on utopian studies and political theory, utopian/dystopian imaginaries of society in the digital age, differentiating between imaginaries of the internet and civic life. What was obscure before fieldwork was conducted was whether such an approach would prove beneficial to researching critical digital literacy, as conceptualized here, among experts and advocates. Relatedly, it was not known whether or how its different dimensions intersect.

This study found that the ability to evaluate online content is underpinned by imaginaries of the internet's potentials and limitations for civic life, which are blended with knowledge about how internet corporations operate. This finding problematizes the idea that understanding the media ecosystem, as suggested by Hobbs (2011), may not necessarily be beneficial for evaluating information. Furthermore, while media literacy research has often subordinated functional to critical digital skills and knowledge (e.g., Buckingham, 2006; Lankshear & Knobel, 2006), this study has discovered that functional digital literacy enhances critical digital literacy. Their relation is partial, as each can be deployed independently. But, in order to be sophisticated, critical digital literacy needs to rely on functional digital skills and knowledge. Knowledge about internet corporations is often intertwined with an understanding of what their platforms afford for their business models. In addition, digital skills and knowledge of digital affordances enhance the ability to evaluate

online content. In order to discuss these findings in more depth, let us take a closer look at what this chapter has argued, drawing on some of the examples presented above.

This chapter has shown that the ability to evaluate online content relies on reflections on the nature and origin of information as well as on contextual knowledge, which builds on the findings of research on information literacy and human-computer interaction, as reviewed in Chapter 2 (e.g., Damico & Baildon, 2007; Wichowski & Kohl, 2013). Since online content is mediated by the internet, what emerged from the fieldwork suggests consistently that such an ability also requires digital skills and knowledge of digital affordances. Conscious of what Google affords, many experts and advocates use it to compare different sources. The practice of using multiple sources, furthermore, is underpinned by an understanding of internet corporations, which is often intertwined with knowledge of what cookies and algorithms afford for how these corporations operate. This finding builds on a few studies in information science, according to which digital literacy should include an understanding of how search engines and social media function (e.g., Johnson et al., 2012; Spratt & Agosto, 2017). Ultimately, this chapter has argued that such an understanding is blended with imaginaries of the internet. Information science lecturer Carol, for instance, is concerned about its implications for privacy and surveillance. Conscious of its potential for diversifying information, she uses multiple search engines, not just Google, to search for and compare different sources. Journalist Abby is mindful of its implications for creating filter bubbles, which exacerbate the polarization of public debate. As a result, she diversifies her information on social media by following users with opposing views.

This study has found that approaching critical digital literacy as incorporating users' utopian/dystopian imaginaries of society in the digital age enables us to disentangle their imaginaries of the internet from their imaginaries of civic life. This was anticipated theoretically but it was not known whether or how experts and advocates construct *de facto* their imaginaries of the internet and civic life. Fieldwork revealed that their imaginaries of society in the digital age revolve around democracy,

populism, misinformation, surveillance and regulation. In the process of discovering these findings this chapter has drawn on research on the role of the internet in relation to e-voting, far-right politics, Cambridge Analytica, surveillance, GDPR and artificial intelligence (Bajc, 2013; Cammaerts, 2018; Coopamootoo, 2018; Osoba & Welser, 2017; Risso, 2018; Zissis & Lekkas, 2011).

In terms of understanding the internet, policy officer Julia values its potential for revitalizing democracy through e-voting. But she is cautious of its dystopian implications with regard to data security. Her imaginary is based on understanding its potentials *and* limitations, as prescribed by a dialectical approach to utopian thinking. Sitting between rationality and affect, her imaginary lies at the intersection of academic and lay expertise, which is typical of audiences' understanding of the media (Seiter, 1999). Expecting critical digital literacy to rely on both utopian and dystopian imaginaries of the internet prescribes that understanding the internet in either positive or negative terms is antithetical to critical digital literacy. Furthermore, while media research inspired by critical pedagogy has framed critical literacy as inherently progressive (e.g., Kellner & Share, 2007), what stood out consistently during fieldwork was that knowledge about the internet is discursively constructed in ways that intersect with different imaginaries of civic life and different ideologies.[44] For environmental activist Roger, the internet has failed the left-wing libertarian promise to bypass capitalism. Right-wing libertarian Sue values its potential for political participation but worries about its dystopian implications with regard to far-right politics. Progressive Anthony, however, is concerned about internet-based government surveillance, which is key to Jacob's conservative utopia of collective security.

As explained in Chapter 3, this thesis is not primarily concerned with comparing experts and advocates as different social groups. Nevertheless, this chapter has examined, in order to reflect on the nature of digital literacy, how their digital skills

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[44] Chapter 7 builds on this argument to show how critical digital literacy facilitates civic engagement in line with different ideologies.

and knowledge differ. As mentioned at the beginning of this section, I found that there are skills and knowledge gaps among experts and advocates. While activists Jacob and Amanda struggle, for instance, with the creative side of social media, activist Alex misunderstands the implications of the Cambridge Analytica scandal. At the same time, even though experts are generally better equipped with digital literacy than advocates, many advocates are digital savvy. And this is especially the case for those whose professions revolve around digital media, as with digital campaigner Helen who is confident navigating social media. I found that digital literacy depends not just on one's own competences, but also on the usability of digital technologies, which builds on research on human-computer interaction (e.g., Aleixo et al., 2012), as reviewed in Chapter 2. In addition, while we need further research, what emerged from fieldwork suggests that digital literacy also depends on how internet corporations operate and on their degree of transparency, as explained here by drawing on the work of Livingstone (2018). In short, users need multiple skills and socio-technical knowledge about the digital environment. But digital literacy is patchy because of gaps in individual and collective knowledge.

This chapter invites media literacy research on digital literacy as explored here, that is, incorporating the functional and critical skills and knowledge about the internet examined above, with emphasis on how these intersect. Future research should build on this study to approach critical digital literacy as incorporating utopianism/dystopianism and explore how functional digital literacy enhances critical digital literacy. This study, however, was limited to two middle-class social categories, as argued in Chapter 4. Finally, while this chapter has investigated what digital literacy is, research is needed on how different populations develop and deploy digital literacy, as conceptualized here, within different contexts. Based on the skills and knowledge of experts and advocates, Chapters 6 and 7 below examine this in the context of their civic engagement.

Chapter 6 – How civic engagement provides opportunities for learning digital literacy

6.1 Introduction

Chapter 5 has explored what digital literacy is, on the basis of how skilled and knowledgeable experts and advocates are in the UK. This chapter and the next address, respectively, whether and how civic engagement provides opportunities for learning digital literacy, and whether and how digital literacy, in turn, facilitates civic engagement. As argued in Chapter 2, media research has either prioritized how media literacy is learned through formal education, or it has also focused on informal learning, but only occasionally within civic life. Furthermore, except for research on the policy implications of media literacy and digital inequalities, media literacy research has generally focused more on children than on adults. Questions about whether and how experts and advocates develop their digital literacy through civic engagement bring to the fore questions about formal and informal learning, which in turn invite reflection on how to promote this among the adult population. The sections below examine how civic engagement provides opportunities for learning digital literacy informally through social interaction (Section 6.2 below), information seeking (Section 6.3) and experience of using digital technologies (Section 6.4). Finally, section 6.5 explores how civic engagement contributes to learning digital literacy through both formal and informal training. Each section below examines how experts and advocates learn different dimensions of digital literacy, and how these dimensions intersect.

6.2 Social Interaction

Chapter 2 has noted that a few traditions of media literacy research have focused on the importance predominantly of formal education for school and university students' learning of digital literacy. Despite addressing informal learning to some extent, educational research inspired by social psychology has prioritized how students learn to evaluate online content as well as gaining digital skills and dispositions towards the internet within formal educational settings (e.g., Cazan et al., 2016; Kahne et al., 2012; Peng et al., 2005). Similarly, the critical pedagogy tradition and research on human-computer interaction have generally paid more attention to formal learning. Leaving aside exceptions (e.g., Buckingham, 2003, 2007b), this tradition has addressed how students learn to challenge, and produce alternative, media representations within classroom settings (e.g., Kellner & Share, 2007; Morrell et al., 2013). It has focused on how students develop digital skills and knowledge of digital affordances in relation, for instance, to coding and writing (e.g., Angros et al., 2002; Bhatt & de Roock, 2013).

Compared with this body of work, other traditions have shown more interest in informal learning. Recent work in information science, as well as on digital inequalities, has emphasized how both children and adults learn digital skills informally through social interaction, moving away from understanding digital literacy as embedded primarily within individual cognitive processes (e.g., Helsper, 2017; Meyers et al., 2013). As discussed earlier in this thesis, social interaction involves a process of sharing reality with others, which is crucial for learning, as captured by the notion of *social learning* (e.g., Bandura, 1977; Webb, 1989). Building on the idea of *connected learning*, which describes learning as a social process (Ito et al., 2013), the New Literacy Studies has argued consistently that digital literacy is contextually situated, placing emphasis on social interaction, both online and offline (Gourlay et al., 2013, p. 4). This strand of research, including studies at its intersection with critical pedagogy, has focused on young users' digital skills, prioritizing their social and creative skills, as well as their critical understanding of media representations (e.g., Drotner, Jensen, & Schrøder, 2008; Mihailidis & Cohen, 2013). Overall, nevertheless, media literacy research has under-explored whether social interaction provides opportunities for learning digital literacy specifically within civic life, understood as not just community but also political life. Exceptionally, Jenkins, Shresthova, Gamber-

Thompson, Kligler-Vilenchik, et al. (2016) have examined youth activism, arguing that networked engagement online facilitates a transfer of digital skills and critical reflections about socio-political issues. This transfer results from the creation and sharing of multimodal content, based on activists' interaction within online communities (Jenkins, 2016, p. 17).

Considering how this line of inquiry differs from media literacy research on formal education, this study approached the field with the question of whether and how formal and/or informal learning enables experts and advocates to develop digital literacy in the context of their civic engagement. Relatedly, it was not clear whether or how social interaction might play a role in their process of learning. While the first question above is answered across this chapter, what follows in this section is a response to the second question, based on examples that best represent the findings of this study.

Media educator Linda, who works for an organization promoting media education, has improved her ability to use digital technologies with the help of colleagues. Growing up, besides often studying computing or media studies at university, experts often refine such ability by relying on the help and guidance of friends, relatives or university colleagues, in ways that go beyond their civic engagement. By contrast, interacting with colleagues involved in civic life can enable advocates and experts professionally committed to activism – that is, individuals like Linda who work at the intersection of expertise and advocacy – to improve their digital skills. Linda's organization lobbies for media education, as well as providing training and resources for media studies teachers. As argued in Chapter 5, functional digital literacy requires a combination of digital skills. While Linda understands the broader digital environment and is conscious of how internet corporations operate, she struggles with the technical side of digital technologies because of her limited operational, social and creative skills. As she put it:

> Linda: I'm certainly not very good at Twittering, at Tweeting […and] I am very
> poor at things like downloading stuff and editing stuff. …

Researcher: Do you recall any instances of asking for help…? How did you learn how to use [the internet]?

Linda: Constantly. … We have a wonderful woman called Jessica who … is responsible for running our website here […and] helping us to access shared files and so on … She is the kind of go-to person here. Before that, we've always had, you know, designers around or people around who knew a little bit more than me, so I was constantly asking them really.

Similarly, Jacob, who campaigns for the Conservative Party, has improved his social and creative skills with the support of fellow activists. We saw in Chapter 5 how, despite growing up with digital technologies, he started using social media like Facebook only a few years ago. On the one hand, he struggles with creating multimedia content like videos. On the other hand, Jacob feels confident in using social media for interacting and posting information. Asked how he learned to use these, he replied:

I found it relatively easy. … But also, like, talking to other colleagues within my party, including Kate, […who is] really good. She gives me tips … on how to use it. …I did for example ask her about putting photographs [on Facebook].

Linda's and Jacob's remarks suggest that engaging collectively in civic life can be valuable for informally developing digital skills through social interaction involving help and guidance from colleagues. Before presenting further examples from this study's fieldwork, it is worth highlighting the ways in which this finding builds on research on digital inequalities, research in information science, and research inspired by the New Literacy Studies. As discussed earlier in this section, these traditions include studies on the importance of socialization for learning digital literacy (e.g., Gourlay et al., 2013; Helsper, 2017; Meyers et al., 2013). Leaving aside these studies, however, these traditions come from different positions. Research in information science and on digital inequalities have generally approached users' digital skills as embedded within individual cognitive processes, with little attention to the social context (e.g., Macpherson, 2013; Wichowski & Kohl, 2013). By contrast, the New

Literacy Studies has focused primarily on the collective dimension of digital literacy as contextually situated (K. A. Mills, 2010).

As argued in Chapter 3, in order to find common ground this thesis draws on cognitive sociology to approach the cognitive dimension of digital literacy as socially constructed in ways that apply to both individual and collective processes. How Linda and Jacob have improved their digital skills is an example of how digital literacy can be developed at the individual level, but in ways that are situated within collective practices of civic engagement. Beyond media literacy research, such an example builds on media studies on social movements, as reviewed earlier in this thesis. Treré (2012) has studied the protests of the Anomalous Wave movement against university funding cuts in Italy in 2008. While his work does not engage with notions of media literacy or questions about learning, he has emphasized how the most "tech-savvy activists … provided the expertise and practical skills needed to help other activists carry out their online protest practices […and] improve the effectiveness of online advocacy" (Treré, 2012, p. 2368).

Not only can advocates and experts professionally committed to civic life learn digital skills through social interaction with colleagues in the context of their civic engagement, but they can also learn these alongside knowledge of digital affordances. As examined in Chapter 5, this knowledge represents a dimension of functional digital literacy, which has to do with understanding, for instance, digital design, the character of networks, and what platforms afford in terms of their technical features. How this kind of social interaction contributes to digital skills and knowledge of digital affordances is captured by something that Conservative activist Moana explained during one of her interviews. Moana is involved in a Conservative association that fundraises and campaigns in support of the Conservative Party. Social interaction in the form of help and guidance from fellow activists has enabled her to develop the operational skills she needs in order to use the campaigning platform of the Conservative Party. At the same time, this kind of interaction has enabled her to understand what this platform affords, and how it should be used for campaigning. We know from political research that activists increasingly use campaigning platforms

that integrate different tasks, from managing emails and making phone calls to designing petitions, into a unified system (e.g., Aron, 2015; Hughes, 2018; McKelvey & Piebiak, 2016). As Moana put it:

> Moana: We have a VoteSource system at [name of Conservative Party campaign headquarters]… It's … an internet company which we use to log in to make calls to all the constituencies around the country whenever there's […an] election… If there's a new person …, they have to set up their own VoteSource account to be able to call. A lot of people tend to have problems…
>
> Researcher: [Are there any] people who would help them?
>
> Moana: … Yes, I learned from them… [For example,] there's … one woman called Tanya… For me, anything … I don't understand, I try to find … the guys who are very savvy.

As reviewed prior to fieldwork, research on human-computer interaction has emphasized how social interaction within classroom and training settings provides students with opportunities for learning not just digital skills but also what digital technologies afford, including operational and social skills, as well as an understanding of their affordances for writing (e.g., Bhatt & de Roock, 2013; Nunes et al., 2015). Moana's remarks suggest that, beyond formal education, social learning, based on social interaction, contributes to informally developing knowledge of digital affordances through civic engagement, particularly in the context of understanding how to use campaigning platforms. This finding was unforeseen, considering the gaps in media literacy research. Chapter 5 has found that functional digital literacy is often intertwined with critical digital literacy. Before shedding light on how social interaction within civic life provides opportunities for understanding digital affordances in ways that intersect with critical skills and knowledge about the internet, we need to examine whether and how social interaction is beneficial for learning not just functional but also critical digital literacy.

On the one hand, social interaction within family settings can be particularly beneficial in enabling experts, including those whose professions sit between expertise and

advocacy, to develop contextual knowledge, which in turn allows them to refine their ability to evaluate online content. On the other hand, social interaction in the form of talking to friends involved in politics and to supporters can enable advocates to develop knowledge about the political economy of the internet, as well as utopian/dystopian imaginaries of society in the digital age. Chapter 5 has argued that these are crucial dimensions of critical digital literacy, showing how they intersect. When it comes to the ability to evaluate online content, what stood out from fieldwork suggests that discussing news within the household is particularly valuable for gaining contextual knowledge about the socio-political context behind news stories, which Chapter 5 has shown is essential for evaluating online content. This kind of social interaction is prevalent among experts like information scientist David, who runs the websites of, and takes minutes for, a few community councils. David uses news apps like the *Guardian* to keep abreast of politics. When he reads something he is not familiar with, in order to assess its accuracy he asks his wife, who works as a civil servant for the government. As he put it: "she is in a position to know … a lot more detail […, which is why] I trust her".

As discussed in Chapter 5, knowledge about the socio-political context in which information circulates includes an understanding of traditional media bias. Like David, media publisher Frank is an avid user of news apps. He understands media bias, which helps him to assess the reliability of news stories. He values accredited media outlets for their "professionalism", based on the principle that "any story" must be "verifiable". But he knows that the *Guardian*, for example, is "fundamentally liberal", that "it's highly unlikely to ever support the Republicans in the United States", and that it is not as "vociferous in the support of the Labour Party" as the *Mirror*. Growing up in and interacting with his family was crucial for him in developing an interest in news and an understanding of accredited media outlets. As he explained:

> Growing up, we always had newspapers at home and my parents read to me a lot when I was small … and then I developed a pretty early interest in newspapers myself… I remember from the early age of 13 I used to get the *Sunday Times* fairly regularly … and that interest in the news and … trust of big news brands like that is pretty well established.

That social interaction in the context of civic engagement can provide informal learning opportunities that enhance the ability to evaluate online content was anticipated before fieldwork. As reviewed in Chapter 2, research inspired by the New Literacy Studies has found that young activists develop critical reflection about multimodal content, from blog posts to videos, by interacting within online communities (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; McGinnis et al., 2007). David's and Frank's experiences, which are not of engaging with online communities, suggest something different. That is, that social interaction within family settings is valuable for gaining contextual knowledge about current affairs, the socio-political context and traditional media bias, which is essential, in turn, for evaluating online content. Relatedly, the way Frank gained interest in news along with knowledge about news outlets signals the importance of family life for developing civic literacy, together with news literacy, which is a variant of media literacy.

As reviewed earlier in this thesis, a few citizenship and political education studies have argued, exceptionally, that civic literacy, understood as the ability to engage in civic life as well as knowledge about the socio-political system and current affairs, should incorporate the ability to question information, online and offline (e.g., Bennett et al., 2009; Davies & Hogarth, 2004; Lund & Carr, 2008). This is why civic literacy can be approached as intersecting with notions of information, critical and digital literacy. However, leaving such exceptions aside, this intersection is under-researched. As a result, the extent to which digital and civic literacy can be learned at the same time was not foreseen before fieldwork. Examples of how experts and advocates learn civic literacy in tandem with digital literacy are presented across this chapter. What we have seen in this section suggests that discussing news within family settings was crucial for Frank, as a child, to develop an interest in news, learn about current affairs and understand media bias. This finding can be explained by drawing on research that was not reviewed in Chapters 2 or 3. Frank's remarks echo the idea that parents can teach their children media literacy while encouraging their news habits (Fromm &

Smith, 2019). On the one hand, family life is a space of political socialization and civic engagement with news, as argued by N.-J. Lee, Shah and McLeod (2012). On the other hand, it is a space of informally learning media literacy, as advocated by Marsh and colleagues (Marsh, Hannon, Lewis, & Ritchie, 2015; Marsh & Thompson, 2001).

Social interaction within civic life can be beneficial for developing not just the ability to evaluate online content but also knowledge about the political economy of the internet and of digital affordances, that is, critical and functional digital literacy. This is particularly the case for advocates. As emphasized by human rights activist Adele: "talking [to friends] about … social media is quite a common topic of conversation … because it's such a dominant feature of our lives". Like Adele, this is how right-wing libertarian activist Sue improved her understanding of how internet corporations operate and what their algorithms afford for online advertising and profiling of users by collecting their data. She knows that "the Facebook algorithm is […used] to advertise things to you that they know that you'll like, based on your Google searches and your public data". Talking to friends involved in politics has contributed to her knowledge. As she emphasized:

> [Once] we were just laughing at how stupid the Facebook algorithm can be… I always get really awkward Asian dating sites promoted to me. And I'm like, … am I really the demographic you're trying to promote this to? So, in regard to social media campaigning, you're, like, I wonder what the algorithm is.

Sue delegitimizes the Facebook algorithm by describing it as "stupid" and "awkward", given its inability to profile users correctly. Her remarks resonate with Schou and Farkas's (2016) proposition that, however advanced, "Facebook's algorithms are not always perfect" (p. 41). It is through social interaction with friends involved in politics that Sue has come to "wonder" how it works for "social media campaigning". Except for a few studies (e.g., Treré, 2015, 2019), media research on how activists understand the algorithms of social media has been limited. While research is needed on how they develop such an understanding, Sue's remarks suggest that civic engagement provides opportunities for learning informally about these algorithms through social interaction.

As emphasized when reviewing the literature, a few studies within the New Literacy Studies tradition have argued that the literacies of different segments of society are embedded within power structures and based on social interaction that is never symmetrical (e.g., Barton & Hamilton, 2005; G. Myers, 2005). At the same time, while this tradition has ultimately championed social interaction for its contribution to active and collaborative learning beyond formal education (e.g., Brown, 2015; Lankshear & Knobel, 2003), less is known about whether social interaction can be detrimental to learning digital literacy. Interestingly, something that emerged from fieldwork suggests that it can. Robert is an academic affiliated with a right-wing libertarian group that advocates economic liberty. As he explained during his interview: "I'm really quite bad at using computers and technology… So I rely on other people, usually my brother". But while interaction with his brother has enabled him to improve his digital skills, interaction with a colleague who shares similar political views has distorted his understanding of what search engines and online platforms afford in terms of how they operate as corporations. Robert is unaware that Google's results are algorithmically organized on the basis of users' preferences and past searches, beyond their popularity. Because of what his colleague told him, he has come to conjecture that they are organized in ways dependent on Google's own political and economic agenda and its support from the government. As he put it:

> I am perfectly aware … that Google is biased. … I have a fellow academic who is … quite on the Right. He told me … "don't use Google if you can… because Google skews the results". …He wrote a book … on … a politicized issue. … In the context of discussing his book, he told me, … "if you look for my book …, Google has placed [it] among the top results with regards to negative reviews". …Corporations [like Google] have their agendas and very often they are in control thanks to the support that they get from the government.

Robert frames Google as "biased" not because of how its algorithms function, privileging popular content, but because Google's political and economic interests allegedly affect its results. His position, linguistically realised through words like

"skews", "agendas", "control" and "support … from the government", involves fabricated knowledge and, therefore, a lack of functional and critical digital literacy.

This means that social interaction can undermine, and not just facilitate, digital literacy, which has remained under-explored within media literacy research. This finding, which was unexpected given the gaps in the literature, did not emerge as prominently as the idea that social interaction *is* valuable for learning digital literacy, with experts benefitting from interacting with family, and advocates from interacting with friends and colleagues involved in politics, as examined above. While this signals that we need more research on this subject, in order to make sense of it, we can draw on education and child development studies, according to which social interaction can have both positive and negative consequences for learning (Eddowes & Ralph, 1998; Evans, 2009, p. 111). An extreme example is that of the correlation of social learning with youth delinquency (Winfree, Bäckström, & Mays, 1994). While social interaction is key to language development, it is not always beneficial, since language can be used to spread false information (Wells, 1981).

Ultimately, however, this study found consistently that social interaction contributes to functional and critical digital literacy among experts and advocates. And not just in relation to their knowledge about digital affordances and the political economy of the internet, as shown above. As explained in Chapter 3, this thesis conceptualizes critical digital literacy as incorporating utopianism/dystopianism, differentiating between users' imaginaries of the internet and their imaginaries of civic life. Such an approach suggests that critical digital literacy requires an understanding of the internet's civic potentials and limitations. Even though a few media studies on social movements have examined how activists understand the internet as embedded in power structures, these studies have rarely engaged with questions of learning, under-researching how they gain such an understanding (e.g., Barassi, 2015b; Treré, 2015). By contrast, drawing on both critical pedagogy and the New Literacy Studies, Jenkins and colleagues have emphasized that social interaction within online communities enables activists to develop and share their knowledge about the internet and its implications for activism, which they deploy to engage creatively with multimodal

content in ways that are underpinned by civic imagination (Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Shresthova, 2016; Soep, 2016).

What was unknown before fieldwork was whether and how social interaction within civic life is beneficial for constructing utopian/dystopian imaginaries of society in the digital age. Relatedly, it was not clear whether these kinds of imaginaries can be developed in synergy with any other functional or critical dimensions of digital literacy. The answer to these questions emerged from interviewing advocates, as best captured by how Mary has refined her understanding of the digital environment. Mary is the founder of a community environmental organization. Her civic utopianism/dystopianism about climate change intersects with an understanding of the internet's utopian/dystopian potential for raising awareness. Her imaginary of the internet is intertwined with knowledge of what social media algorithms afford in terms of online visibility. Her vision of social change is about "mak[ing] our environment [...and] world a better place". But she worries that "we won't have any trees left on Earth", since "15 billion trees are cut down each year". Her concerns echo research on tree density worldwide (e.g., Crowther, Glick, & Bradford, 2015). Asked whether and how the internet plays a role in the context of her hopes and concerns, she replied:

> The internet brings us closer together globally… [It enables us to] reach people and mobilize, using online communication to activate offline action. [...And it enables] people to find out what's happening [...and] how they can get involved… But I think the limitation would be that my voice might not be heard that well online.

Mary frames the internet as facilitating mobilization and raising awareness as well as having limited impact ("my voice might not be heard"). Her imaginary resonates with media research on the internet's potentials and limitations for participating in non-institutional politics (Garrett, 2006). Offline and online interaction with people interested in her organization has contributed to her imaginary, while also enhancing

her knowledge of what the internet affords for raising awareness and maximizing online visibility. As she explained:

> …I was out in the field … and a woman came by and … I told her about [Mary's organization] and she said […"if I add you on Facebook] right now then you'll always just pop up and I won't have to seek you out". And I thought … that means I have to do more postings so that I stay active and so that she gets engaged […and my posts] will come up in her feed. … Similarly, … one of our events … got cancelled [and a woman] wrote… "we were really looking forward to it". … And then because she follows us, she heard about [another event] and she came along … So, yes, there are opportunities to engage people.

Interacting with supporters of her organization has prompted Mary to reflect on the potential of the internet for "engag[ing] people", along with its affordances and limitations for maximizing online visibility ("that means I have to do more postings"). In short, social interaction has provided her with opportunities for informally gaining functional and critical digital literacy in the context of her civic engagement.

This section has examined how social interaction enables advocates and experts professionally committed to civic life to informally learn functional digital literacy, developing operational, social and creative skills as well as knowledge of what online platforms afford for campaigning. While social interaction, in this case, takes the form of receiving help and guidance from colleagues, talking to family and friends contributes to the development of critical digital literacy. Discussing news within family settings can be particularly beneficial to experts in terms of gaining contextual knowledge about current affairs and, especially while growing up, traditional media bias. This practice enhances their ability to evaluate online content, while also refining their civic literacy. Social interaction, however, can also undermine digital literacy, distorting knowledge about how internet corporations operate. Ultimately, nevertheless, it provides opportunities for learning both functional and critical digital literacy, which are prevalent among advocates. Discussing with friends involved in politics how social media operate can enable activists to better understand internet corporations and what their platforms afford for targeting users with ads. Finally, as we saw with Mary, interacting with supporters of her organizations has enabled her to

construct imaginaries of the internet's implications for raising awareness, refining her knowledge of what the internet affords for maximizing visibility.

6.3 Information Seeking

As explained earlier, fieldwork was conducted with the question of whether and how experts and advocates learn digital literacy formally and/or informally in the context of their civic engagement. The section above has shown how they do so informally through social interaction. This section presents a few examples in order to examine how they learn functional and critical digital skills and knowledge through the practice of seeking information. The concept of *information seeking* refers to obtaining information in human and/or technological contexts (Limberg & Sundin, 2006). When human-mediated, this overlaps with *social interaction*, but it is employed here to refer to a process that is technologically mediated in ways that involve no direct exchange between human actors.

What emerged consistently from fieldwork suggests that experts, given their interest in digital technologies, are particularly keen to access, follow and engage with information about the internet. Media literacy research has under-explored whether and how the practice of information seeking is valuable for learning digital literacy. Before discussing this further, let us examine how this practice has enabled Carol, for instance, to develop functional and critical skills and knowledge about the internet in the context of her civic engagement. Carol, a lecturer in information science and former librarian, is aware of how internet corporations operate. She knows that social media like Facebook profit by "selling [users'] data to other companies" for advertising purposes. Relatedly, she knows that they track users through cookies. As she put it: "when you go to a website […that is] using cookies, they would store that on your computer …, and that would allow […them to] get certain information about what you were doing on that website". Conscious of what cookies afford for internet corporations and of their implications for users' privacy, Carol knows how to manage and delete those stored in her browser. As she explained:

Carol: To see … what websites […are] collecting [my] information. … I would normally go to that right-hand side line thing [*she clicks with the touchpad mouse of her laptop on the menu button, which is on the right side of the top bar of her Firefox browser*]. …And then here … is where I would change the cookies [*she opens a section that allows her to manage her cookies, after clicking on "preferences" and "privacy and security"*] …

Researcher: What do these settings allow you to do with the cookies?

Carol: You can close them … when your browser closes or leave them just to expire naturally. […Or] you can "manage data" [*she clicks on "manage data", opening a list of her cookies*]. So, I could select [any of the cookies] if I want to get rid of specific ones.

Carol's knowledge about how internet corporations operate and what cookies afford is underpinned by the practice of seeking information from civil society organizations that campaign for online privacy, which she follows on social media. Such a practice has enabled her to refine her knowledge as well as her ability to manage her cookies and privacy settings, developing critical and functional digital literacy. When asked how she has learned what she knows and how to manage her settings, she replied:

[I] just picked it up because, periodically, a lot of the people I follow on Twitter [like] the Electronic Frontier Federation, the EFF, … tweet guidelines, best practices for … trying to shore up your security or privacy online. […They have] like, little mini checklists about stuff you can do [like] chang[ing] your settings.

Before introducing more examples from fieldwork, it is worth reflecting on the implications of Carol's remarks. That information seeking can be beneficial for learning digital literacy was not expected on the basis of the literature review. To some extent, this finding can be explained through drawing on research inspired by information science and librarianship studies. But while this strand of research was reviewed in Chapter 2, this finding extends beyond the literature reviewed, and can only be explained partially, inviting further research. Information science research has

emphasized how the practice of seeking information is central to information literacy, which is generally understood as the ability to access, locate, evaluate and create information (Information Literacy Meeting of Experts, 2003, p. 1). A few studies within this strand of research have argued that such a practice enhances the quality of students' learning outcomes, irrespective of what they study (e.g., Limberg & Alexandersson, 2009; Limberg & Sundin, 2006). Indeed, as argued by research on information-seeking behaviour, which is a branch of information science that predates the internet, this kind of behaviour is explained by a motivation to learn and fulfil information needs (e.g., Weiler, 2005; Wilson, 1981). Less is known, however, about whether information seeking is valuable not just for learning in general but, more specifically, for learning digital literacy.

Carol's remarks suggest that it is. In addition, they signal that media activism plays an important role in promoting knowledge about the internet, which ties in with policy research about media literacy. As argued earlier in this thesis, according to this body of work, advocacy and campaigning organizations that raise awareness about the media, whose work falls under *media activism*, have the potential to promote media literacy among adults, who are hard to reach via the education system (e.g., del Mar Grandío, Dilli, & O'Neill, 2017, p. 124; Jeong et al., 2009, p. 112). These kinds of organizations are often involved in campaigning and providing resources on the media. Carol's experience suggests that seeking information from organizations involved in media activism by following them on social media is beneficial for informally learning digital literacy.

Information seeking within civic life can come in different forms. Like Carol, senior analyst Chloe is interested in online privacy. But while Carol follows civil society organizations on social media, Chloe reads about online privacy on tech blogs, relying on her community of experts. In addition, reading news can be particularly valuable for learning about the digital environment, with emphasis, again, on privacy and how users' data can be (mis)used. This study found consistently that this applies to both experts and advocates, with many referring in their interviews to Cambridge Analytica. Media regulation campaigner Amanda was asked, for example, how she came to

understand how internet corporations operate in terms of their implications for users' privacy and political advertising. As she put it: "there's been a lot more media coverage … of things like the Cambridge Analytica scandal". Reading about this scandal was an opportunity not just for advocates like Amanda, interested primarily in its political implications, but also for experts, who understand the digital environment, to refine their knowledge of what online platforms afford in terms of collecting and taking advantage of users' data.

As argued in Chapter 5, this knowledge is often blended with utopian/dystopian imaginaries of society in the digital age, as exemplified by how Anthony has refined his knowledge about the digital environment. While he is pessimistic about the failures of the political system in the West to represent citizens, he is "optimistic that the [election of] Trump … in America has awoken a sleeping giant of protest". His utopianism/dystopianism about politics and the representative character of liberal democracy intersects with utopianism/dystopianism about the internet. Conscious that the latter has "a huge potential for being [both] beneficial and negative", he thinks that it can democratize access to information, but worries about how "propaganda […can] be used … against society" through targeted advertising based on internet surveillance. His imaginary of the internet resonates with the literature on its potential for democracy but also for propaganda and surveillance (e.g., Bradshaw & Howard, 2018; Coleman & Blumler, 2009; McChesney, 2013).

Anthony's imaginary of the internet is blended with an understanding of how internet corporations operate and what their platforms afford for tracking users' data, which is an example of how his critical digital literacy intersects with functional digital literacy. Reading news about Cambridge Analytica provided him with an opportunity to refine such an understanding. Interviewed when Cambridge Analytica was still operating,[45] Anthony explained:

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[45] Following the Cambridge Analytica scandal and allegations of bribery, Cambridge Analytica closed its operations in May 2018 (Solon & Laughland, 2018).

Anthony: Cambridge Analytica … worked for Trump and … down to that person who lives there… they're profiling on all the political sort of things… They get a profile and … they can pick out the vulnerable people, using targeted advertising… And they can find that through Facebook… Facebook … collect[s] my data because it has a monetary value to them… Information is not just information. It's also coupled with all the engines that are processing this information […, which is why] I could be easily tracked down within seconds…

Researcher: How did you learn about this, about Cambridge Analytica?

Anthony: …News bites. Yes, there's several.

Anthony frames Cambridge Analytica as having targeted the most "vulnerable" in the US to vote for Trump through profiling and "advertising" on Facebook, mindful of what its platform affords for tracking users' data ("information is not just information"). His experience suggests that reading news about the digital environment is valuable for informally learning critical and functional digital literacy.

This finding was somehow expected, since fieldwork took place when public concerns about Cambridge Analytica were very resonant. But it was not anticipated that it would emerge as prominently as it did, or that it would bear witness to how digital literacy can be learned in tandem with civic literacy. For Anthony, as with many experts and advocates, following news about Cambridge Analytica enhanced his understanding of how online platforms like Facebook operate, what they afford for tracking users' data and how the latter can be profiled for political purposes. At the same time, it enabled him to learn about the political implications of Cambridge Analytica while keeping abreast of current affairs. Political research has argued that information seeking is essential for gaining political knowledge (Xenos & Becker, 2009), which is at the heart of civic literacy (Lund & Carr, 2008). Anthony's remarks suggest that reading news can be beneficial for developing both civic literacy and digital literacy.

This section has examined how information seeking within civic life provides opportunities for learning functional and critical digital literacy. As argued above, experts are particularly keen to read about the internet, given their interest in digital

technologies. How Carol has improved her understanding of internet corporations and privacy settings suggests that the media activism of organizations like the one she follows on social media has the potential to promote digital literacy among adults, who are hard to reach via the education system. In addition, the way Anthony has refined his functional and critical knowledge about the internet reminds us that, as argued by Livingstone (2011), traditional media should also play a role in reaching adults. Following news about Cambridge Analytica was an opportunity for many experts and advocates to learn about current affairs and better understand how online platforms operate and can track users' data for political purposes. We need more evidence of the potential of news reporting to promote digital literacy. Arguably, scandals like Cambridge Analytica, which revealed how the internet can be (mis)used for political campaigning, can make the public more conscious of how internet corporations operate. We are living through a moment when the political use of social media has probably never been under such intense scrutiny. As a result, engagement with news, provided the latter has to do with the internet, offers informal opportunities for learning functional and critical digital literacy in synergy with learning civic literacy.

6.4 Experience

Informal learning can occur through experience in the form of exposure to and involvement in life event, as captured by the notion of *experiential learning* (Kolb, 2014, p. xix). The latter may well be based on social interaction and/or information seeking, but the notion is an overarching one because it refers to learning that is more or less extended over a period of time (Kolb, 2014, p. 347). As reviewed in Chapter 2, a few traditions of media literacy research have emphasized how users learn digital literacy informally through the experience of using digital technologies. Research on digital inequalities has found that this kind of experience, whether or not specifically in a context of engaging in civic life, is essential for learning digital skills, including operational and information-navigation skills (e.g., Eynon & Geniets, 2016; Matzat & Sadowski, 2012). This is why Dutton and Shepherd (2006) have called the internet an

experience technology. As long as there is a motivation to learn, "the acquisition of … IT skills" often occurs "through … 'self-learning' (learning by doing)" (Ferro et al., 2011, p. 8). Despite prioritizing formal education, research inspired by social psychology has argued that children develop positive or negative dispositions towards the internet through experience outside the classroom with digital technologies, in relation, for instance, to socializing or accessing information (Cazan et al., 2016; Dündar & Akçayır, 2014). Finally, research inspired by the New Literacy Studies and by critical pedagogy has found that this kind of experience is beneficial for learning not just digital skills, including creative and social skills, but also critical reflection on socio-political issues and the internet. Interested in youth activism, Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al. (2016) have argued that this is how users learn how to produce and share multimodal content that challenges dominant representations, and how they become sceptical about the internet's potential for campaigning (Soep, 2016, p. 293).

However, media literacy research as a whole has under-explored experiential learning in the context of civic engagement. We know from a few studies on social movements that "digital … technologies are … tools" that activists learn to use from experience (e.g., Nielsen, 2013, p. 174). This strand of research, however, has hardly engaged with media literacy theory, paying little attention to questions of learning. As a part of this study, therefore, experts and advocates were interviewed in order to understand whether experience of using digital technologies for civic purposes enables them to learn digital literacy, and in what ways. What emerged is that this is particularly the case for advocates, including those whose practices are rooted in expertise about digital technologies. Below I examine a few examples that best demonstrate what I found.

Let us start with functional digital literacy and how activist Alex has developed, for instance, his ability to produce and disseminate music, and is conscious of what platforms like SoundCloud afford for sharing it online. Alex campaigns for social justice by composing and promoting socially conscious songs, which is why he identifies his engagement with music as a form of civic engagement. Shortly before his first

interview, he had worked on a tribute album about the residents of a building destroyed by fire. As he put it, "my job [was] to articulate the feelings and the emotions of the residents through music, […along with] their frustrations at the … council, the State [and] even the fire brigade". Talking about his album, he explained:

> Alex: I had to write and produce and upload [instrumentals] into Soundcloud…
> [*He grabs his smartphone … and types "Soundcloud" in the Google search bar on the home page. He then clicks on the first result suggested by Google, i.e. "soundcloud.com", opening the SoundCloud site*]. This is Soundcloud, where I uploaded the instrumentals…
> Researcher: How did you learn how to use the internet? …
> Alex: I'd run a record company before. I'd run a media company which was a radio station/TV so we had a Sky channel that would broadcast some of our transactions. … I've always been in and around media because I'm a music professional, so I've been on computers and programmes and software.

Alex's long experience with digital technologies is embedded within experience in the music industry for civic purposes. This is how he has developed operational and creative skills that enable him to produce his music by using digital technologies, as well as the social and information-navigation skills that allow him to use and share his music on SoundCloud, conscious of what it affords.

Alex's remarks suggest that experience of using digital technologies for civic purposes can be valuable for learning digital skills together with knowledge of digital affordances. Before presenting further examples from fieldwork, it is worth highlighting that this finding resonates with media literacy research, including, as mentioned at the beginning of this section, studies on digital inequalities (e.g., Eynon & Geniets, 2016; Matzat & Sadowski, 2012). Despite under-exploring civic engagement, these studies have argued that users learn digital skills through experience. At the same time, a few studies on human-computer interaction have found that, besides social interaction, experience with digital technologies, based on interacting with such technologies, is beneficial for learning not just digital skills but also what these afford, including operational and creative skills as well as knowledge

about coding and digital design (e.g., Angros et al., 2002; Yantaç, 2013). While under-researching civic engagement, these studies have focused on students' interaction with digital technologies within formal educational settings, paying little attention to informal learning. By contrast, Alex's remarks suggest that his experience with digital technologies transcends formal education in ways that intersect with his experience in civic life.

This is also exemplified by how Conservative activist Moana gained awareness of what the internet affords in terms of reaching young people while campaigning, which is intertwined with her positive disposition towards its advantages for connecting with this age group. Chapter 5 has argued that experts' and advocates' dispositions towards the internet, which often revolve around connectivity, online shopping or accessing information, underpin their knowledge of digital affordances. As Moana explained:

> [The internet]'s led to … being able to reach people, you know, very quickly, with texts, or even WhatsApp Messenger. … and it's usually the younger ones that are engaging more with the internet.

Experience of campaigning was beneficial for Moana's development of a positive disposition towards the internet, which underpins her understanding of what platforms like WhatsApp Messenger afford for connecting with others ("reach people") in terms of speed ("very quickly"). Her expectation that young people are more engaged with the internet resonates with the fact that "virtually all" youth aged 18-24 in the UK, as defined by the United Nations (2020), are internet users (ONS, 2018). Asked how she had learned the value of what the internet affords for reaching this age group, she replied:

> Moana: I think it's when I first actually joined the [Conservative] Party, you know, and went out campaigning with David Cameron. … Before, I wasn't using the internet as much…
> Researcher: And you noticed at that point in time that young people would be more engaged?

Moana: Yes ... through the internet. So that got me really thinking.

Research on digital inequalities has emphasized the fact that users need to be motivated to learn how to use the internet (Reisdorf & Groselj, 2017). We also know that political motivation is necessary for participating in politics, online and offline (Vissers & Stolle, 2014). How Moana gained an appreciation of what the internet affords suggests that her experience of campaigning, rooted in her decision to join the Conservative Party, has crucially enabled her to improve her functional digital literacy.

Experience in civic life underpins not just positive but also negative dispositions towards the internet. Adele is a human rights activist who works for a non-governmental organization, campaigning in support of migrants and refugees. Her negative experience of using the internet when working for a similar organization abroad made her aware of its distracting potential. Her views echo Thatcher, Wretschko and Fridjhon's (2008) research on internet procrastination. As she put it:

> I feel actively intruded upon by having access to the internet all the time ... [When] I had my job in [name of country], I had to be on call 24 hours a day, and [...I] was like, I feel like this is having a negative effect on my wellbeing. ... I felt I was using, like, Facebook in this totally unproductive [way], ... I'll just spend ... three hours lying on my bed, like, pointlessly scrolling through Facebook.

As reviewed earlier in this thesis, a few traditions of media literacy research have focused not just on users' digital skills but also on their dispositions towards the internet, in relation, for example, to safety, social interaction, finding information, learning or online shopping. These traditions include research on digital inequalities, educational research inspired by social psychology and, although to a lesser extent, research on human-computer interaction (e.g., Chou et al., 2009; Eynon & Geniets, 2016; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Oliemat et al., 2018; Peng et al., 2005; Reisdorf & Groselj, 2017). On the one hand, research on digital inequalities has found that, except for users' trust in online services and internet safety (Eynon &

Geniets, 2016), their general dispositions towards the internet are not explained by experience with digital technologies. Instead, they tend to be shaped by age and gender (Dutton and Shepherd, 2006, p. 434). On the other hand, despite prioritizing the role of formal education in shaping students' digital literacy, educational research inspired by social psychology has argued that they develop positive and negative dispositions – with emphasis on learning, social interaction and wellbeing – not just at school or university but also, thanks to this kind of experience, outside the classroom (Cazan et al., 2016; Dündar & Akçayır, 2014). Given this tension in the literature, it was not clear before beginning fieldwork whether experience of using digital technologies would prove to be fruitful for informally developing dispositions towards the internet. Moana's and Adele's comments above suggest that it is. And, again, these comments demonstrate how this kind of experience in the context of civic engagement intersects with experience in civic life.

As argued at the beginning of this section, this is prevalent among advocates, including activists like Alex who, as we have seen above, operate at the intersection of expertise, as reflected in his work as a music producer, and activism. Insofar as experience requires long-standing exposure to and involvement in life events, it is not surprising that experience in civic life primarily benefits advocates, who use digital technologies as part of their long-standing professional commitment to civic engagement. Besides contributing to their functional digital literacy, experience of using digital technologies for civic purposes enables them to learn both functional and critical digital literacy in synergy with learning civic literacy. More specifically, this kind of experience can provide activists with informal opportunities for developing, on the one hand, knowledge of digital affordances as well as utopian/dystopian imaginaries of society in the digital age and, on the other, an understanding of how to participate in civic life.[46] This is best captured by how Roger has gained awareness of the broader digital environment.

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[46] As defined earlier, civic literacy includes not just knowledge about politics, the government and current affairs, but also the ability to participate in civic life, from voting to organizing and joining protest events.

Roger is a digital campaigner who works, at the intersection of expertise and activism, for an organization that campaigns for the environment. His civic utopianism/dystopianism is blended with awareness of the internet's utopian/dystopian potential for political participation. Social change, for him, should be about "equity and justice", which prescribes that everybody should have "the same opportunities to … earn a living". His civic utopianism/dystopianism in relation to (in)equality is intertwined with awareness of the internet's potential to facilitate interaction between citizens and politicians, as well as to "effect change and reach out to people" through campaigning. But even though he praises the Arab Spring as an example of how the internet can be used to mobilize action, he is conscious of its dystopian implications for the suppression of action through government surveillance based on tracking users' data. Furthermore, he is sceptical about its impact. His views resonate with the literature on the internet's potential for undermining authoritarianism through social action while also facilitating political repression through surveillance (Diamond, 2010; McChesney, 2013). In addition, they echo research on *clicktivism*, raising the question of whether taking action online is effective in generating social change (Drumbl, 2012; Halupka, 2017). As he put it:

> The government can use [users'] data in their surveillance techniques to effectively just shut down any kind of voice of dissent… [And while] it's good to have easy access to MPs, I don't think what that does is encourage deeper political engagement. …If [people] think that by sending [an] email … it's going to change and make a big difference, then they might not do anything else […, which] degrades democracy.

Roger frames the internet as enabling governments to use it for the political repression of dissidents (synecdochally referred to as the "voice of dissent") through "surveillance". Furthermore, he worries about its implications in terms of devaluing citizens' political engagement, resulting in limited impact and the "degrad[ation of] democracy".

His imaginary of the internet intersects with knowledge of what social media like Twitter afford for campaigning. Talking about how he has learned about the internet's potential for mobilizing and suppressing action, he emphasized how:

> [A] turning point … was watching the Iranian Green Revolution, … and how they were using Twitter to organize street by street… I hadn't thought to use Twitter, which is public messages, to organize. […And during] the Arab Spring … I was in touch with people who were in Tahrir Square […when] Mubarak shut down the broadband access.

In other words, Roger's imaginary of the internet and understanding of how to mobilize action through Twitter is informed by his experience as an activist and based on his exposure to political events ("the Arab Spring"), to information seeking ("watching the Iranian Green Revolution") and to social interaction with "people who were in Tahrir Square".

Experience of using digital technologies as an activist has also been crucial to Roger's appreciation of how the internet does not inherently lead to social change, refining his ability to mobilize action. Roger is conscious that the limited impact of the internet depends on social context, which is why a few activists remarked during fieldwork on the importance of taking a "multi-pronged approach" to campaigning by combining online and offline forms of action. As he explained:

> I was working with […a] team … in [name of country in the Global South], campaigning […for] creating safer spaces in public where women can be without fear of attack… So, to bring more streetlights into the area they had had a march with 20,000 people. They had requested meetings with their political representative, which were always turned down. … Then they started additional petitioning, got less than 100 signatures … and they got a phone call from the political representative saying we need to talk… I guess the politician felt like 100 signatures on a digital platform was scary … but, like, 20,000 people walking the streets, yes, whatever... [And] that really woke me up to the idea that you have to try lots of different things … because you never really know what's going to have an impact.

How Roger has gained knowledge about the digital environment suggests that experience of activism contributes to the ability to participate in civic life as well as to utopian/dystopian imaginaries of the internet and knowledge of what it affords for mobilizing action. His remarks suggest that experience in civic life is not only blended with experience of using digital technologies, but also provides informal opportunities for learning civic literacy together with functional and critical digital literacy.

This finding builds on those of some of the literature reviewed before beginning fieldwork, but only partially, since media research has generally focused more on users' development, through using the internet, of either civic literacy or digital literacy but not necessarily both. Interested in civic learning, Bennett et al. (2009) have argued, exceptionally, that civic literacy in the digital age, which includes the ability to organize and participate in protest events, should incorporate social and creative digital skills. How Roger has gained digital and civic literacy resonates with their work and with media literacy research, according to which the internet provides networked and interactive opportunities for civic learning based on experience, including how to participate in public debate and organize action (i.e. Banaji & Buckingham, 2013; Bennett et al., 2009). At the same time, this finding echoes the proposition of Jenkins and colleagues that "experience-based learning" is essential to young activists' development not just of digital skills but also of critical reflection about the internet, particularly in terms of campaigning potential (Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Soep, 2016, p. 293). Finally, although media research on social movements has under-explored media literacy theory, this finding aligns with the idea that activists learn about the media's potentials and limitations from experience, which enables them to learn, for example, how to engage with both mainstream and alternative media (McCurdy, 2011, p. 623).

To recap, this section has argued that experience of using digital technologies for civic purposes enables advocates, including those who operate at the intersection of advocacy and expertise, to informally learn functional and critical skills and knowledge about the internet. This kind of experience can be beneficial to their learning of operational, creative, social and information-navigation skills. In addition, it

contributes to their understanding of what online platforms afford in terms of raising awareness and reaching young people. Advocates' knowledge of digital affordances is underpinned by their dispositions towards the internet, with emphasis on connectivity and internet procrastination, which they also develop through experience with digital technologies. Finally, this kind of experience intersects with experience in civic life, enabling digital campaigners like Roger to develop an understanding of how to participate in civic life as well as utopianism/dystopianism about the internet's potential for campaigning and knowledge of what social media afford for organizing action. In short, experience in civic life and using digital technologies provides opportunities for informally learning civic literacy in tandem with functional and critical digital literacy.

This finding suggests that the challenge of promoting digital literacy among adults, who are hard to reach because they are no longer in school, is part of a wider challenge. We live in an age when the representative character of Western liberal democracy is affected by citizens' distrust and by a participation deficit in institutional politics.[47] Participation in non-institutional politics is often a response to dissatisfaction with formal politics. The internet has contributed to new forms of civic engagement based on sharing information and self-expression (Dahlgren, 2004). Nevertheless, in order to promote adults' digital literacy through their civic engagement we need to ensure that they are actively involved in civic life. But not everybody is civically active. As argued above, social interaction and information seeking provide both experts and advocates, although in different ways, with opportunities for learning digital literacy as part of their civic practices. If these opportunities are not to be isolated ones, civic experience in the form of exposure to, involvement in and commitment to civic life is essential.

6.5 Training

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[47] See Chapter 1, pp. 18-20, for discussion of liberal democracy in the West.

Chapter 2 has argued that research and policy interventions on media literacy aim to promote it among not just children but also adults, who are hard to reach. To this end, civil society organizations that support media education by lobbying and providing resources and training play a considerable role (Kanižaj, 2017; McDougall & Livingstone, 2014; McDougall et al., 2017). This body of work has focused predominantly on training teachers, given their role in promoting children's media literacy via formal education. Educators, however, are only a small segment of the adult population. By contrast, information science research and librarianship studies have placed emphasis on training librarians and on the potential of public libraries to train different communities (e.g., L. Wang & Cook, 2017; Widdowson & Smart, 2015). Similarly, research and policy interventions on digital inequalities have advocated the training provided by libraries and community centres for different populations (e.g., Helsper & van Deursen, 2015). Such training, however, as prioritized by this strand of research, is often more about the teaching of functional than of critical skills or of knowledge about the internet.

In light of the achievements and limitations of media literacy research, this study's fieldwork was conducted with the question of whether and how formal and/or informal training might play a role in how experts and advocates learn digital literacy when engaging in civic life. Beneficial for reaching adults in a professional context, training can be both formal and informal, mirroring the distinction between formal and informal learning. Formal training requires an instructor and a structured format. By contrast, examples of informal training include mentoring, networking and receiving advice and instructions from colleagues (Benson, 1997).

Unfortunately, during the interviews, no more than a handful of experts and advocates discussed training in the context of their civic engagement. While this is a finding in itself, before reflecting on what it means let us examine what this study found. Unlike the examples presented in the sections above, those that follow emerged from fieldwork in rather isolated ways. Media educationalist Linda, for instance, is an expert who works in civil society. She is part of an organization which,

besides lobbying for media education, provides media studies teachers with formal resources for training and teaching. As Linda explained during her interview:

> I have been a media educator all my working life… During […my] time [here], I [have run…] courses for teachers […and lately] I've been teaching a post-graduate certificate in education course for students who want to become media teachers.

What Linda does within her organization is an example of how civic engagement at the community level can facilitate digital literacy, as argued earlier in this section, by equipping media educators with the skills and knowledge they need to teach media education within formal education settings. The training that Linda provides is particularly geared towards teaching current and prospective media studies teachers how to teach about media bias and the media industry and how to use digital technologies responsibly. Her experience suggests, as emphasized by policy research on media literacy (e.g., McDougall & Livingstone, 2014; McDougall et al., 2017), that organizations like hers play an important role in promoting media education.

Librarian Shawn works in a university and provides students with extracurricular courses on digital literacy, with emphasis on how to manage privacy settings and use the affordances of digital technologies to protect their privacy as well as identify misinformation online. As we saw in Chapter 5, Shawn relies, for instance, on his understanding of what the hyperlink affords for assessing information, following up on and comparing different sources. The training he provides signals that he is equipped with functional and critical skills and knowledge about the internet. As argued earlier in this thesis, information science research has focused on the importance of training librarians, educators and students as well as on the potential of public libraries to provide different populations with digital training (e.g., Harding, 2008; Julien & Hoffman, 2008; McDonald, 2015). This kind of training, as advocated by research on digital inequalities (e.g., Helsper & van Deursen, 2015), is embedded in the civic fabric of our societies, since it takes place at the community level. Shawn does not work in a public library but identifies his commitment to teaching students how to evaluate online content, and make informed decisions as well-informed citizens, as a form of

civic engagement. This is an example of how the latter can provide opportunities for learning digital literacy, and in ways that are not just functional but also critical. It is also an example of how the role of librarians may be shifting from that of trainers to that of educators who value the critical evaluation of sources as a fundamental aspect of their profession, which some librarians perceive as similar to that of teachers (Wheeler and McKinney, 2015). Finally, as discussed when reviewing the literature, it is an example of why librarians, who have the potential to promote social change and democratic values, from copyright reforms to access to knowledge, can be considered as not just information experts but also advocates (Secker et al., 2019; L. N. Smith, 2016). Talking to librarians, however, produced no evidence about the role of public libraries in promoting digital literacy, since most of those interviewed work, like Shawn, in universities.

Activist Georgia, unlike Shawn, is the founder of an organization that campaigns against online abuse. She runs workshops to raise awareness among women about hate speech online and to teach them what to do when receiving hateful comments, including how to report these to the platforms they use. As she emphasized: "when we do trainings with other women, we tell them 'don't feel like you have to respond … because sometimes … you get more abuse, [and also] don't feel like you have to ignore or delete [the comments you receive] because sometimes that also brings on abuse'". Section 6.3 above has argued that seeking information from organizations involved in media activism is essential for informal learning of digital literacy. Georgia's commitment to raising awareness about the internet suggests that organizations like hers, which fall under the umbrella of *media activism*, promote digital literacy not just by campaigning and providing resources, as argued by policy research on media literacy (e.g., del Mar Grandío et al., 2017, p. 124; Jeong et al., 2009, p. 112), but also through formal training. This form of training can reach different populations, consisting in the case of Georgia's organization of women from different backgrounds. On the one hand, this finding builds on those of policy research on media literacy. On the other hand, it invites media research on social movements to examine the relationship between media activism and media literacy, which has

remained under-explored within this strand of research (e.g., Carroll & Hackett, 2006; Meikle, 2003).

Finally, beyond media activism, what stood out from fieldwork is that both formal and informal training about digital campaigning have the potential to enable activists, in particular, to learn civic literacy in synergy with digital literacy.[48] This is how Moana has improved her ability to campaign and participate in institutional politics, which is a form of civic literacy (Lund & Carr, 2008). At the same time, this kind of training has enabled her to develop digital skills and knowledge of digital affordances as well as an understanding of the political economy of the internet, along with her utopian/dystopian imaginary of society in the digital age. Moana is involved in an association that campaigns in support of the Conservative Party. Her civic utopianism/dystopianism intersects with awareness of the internet's utopian/dystopian potential for campaigning. While she supports the Conservative Party for its championing of capitalism, the free market and lower taxes, her vision of social change advocates equality in ways that draw on left-wing politics. She thinks that the Conservative Party "need[s] to become a little bit more liberal" and hopes it will do a better job at attracting young people. Her vision of social change is intertwined with knowledge about the internet. Asked where she positions it in relation to her vision, she replied:

> Moana: I would like to … get more members engaged … and it's usually the younger ones that are engaging more with the internet. […so] the internet might be a way to do [it].
> Researcher: What are those potentials that you see that the internet has for improving democracy …, the political system or political participation?
> Moana: It will be easier for people to access, to even find out how they can go about joining a political group. … I'm just very, very optimistic. … I mean obviously we will have … security threats. […Also,] you get people that straight away start trolling, … saying very derogatory comments and using horrible bad language.

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[48] As defined earlier, digital campaigning refers to the practice of campaigning by using the internet (Kreiss, 2015).

Moana frames the internet as instrumental in "get[ting] more members engaged" with the Conservative Party, especially young people. She praises its potential for facilitating political participation by enabling citizens to join political groups. But her optimism intersects with awareness of its dystopian implications for data security. She mentioned the Cambridge Analytica scandal during one of her interviews, conscious that it entailed a breach of users' Facebook data for micro-targeting purposes. And she worries about hate speech undermining the political debate ("trolling", "derogatory comments", "horrible bad language"). As she wrote in her diary: "social media can be good for society to […express] democratic views but there is a downside of considerable hate, trolling and even death threats". Her views resonate with research on the internet's potential for facilitating young people's involvement in politics as well as for online abuse (e.g., Forestal, 2017; Kann, Berry, Gant, & Zager, 2007).

Both formal and informal training was crucial to Moana's improvement of her ability to campaign as well as her functional and critical skills and knowledge about the internet. Put differently, it was beneficial to her learning of civic literacy in tandem with digital literacy. Let us start with her formal training. This came in the form of a seminar on digital campaigning which, recommended to her by her association, made it possible for Moana to improve her digital skills and learn about the internet's potential, and what it affords, for campaigning and targeting different audiences. As she explained:

> Moana: When we had the election, … I noticed that I could choose my audience, you know. You can … pay to reach a bigger audience. …
> Researcher: Pay, like, Facebook, for example?
> Moana: Yes, Facebook. …
> Researcher: Was it a suggestion coming from somebody working with you … or was it something that you figured out by yourself? How did you learn about this?
> Moana: What it was, they had a seminar last … year to train people who weren't very good on the internet. […and] they mentioned about how you can target the audience, the age group.
> Researcher: And was […the seminar] recommended to you by someone?

Moana: It was recommended by [name of Moana's association]. They actually encouraged all candidates to come along and to do this particular seminar.

Besides attending a seminar on digital campaigning, Moana has also benefitted from informal training based on information seeking and social interaction, which builds on what this chapter has argued above in relation to the potential of these for informally learning digital literacy. As explained earlier in this section, examples of informal training range from mentoring and networking to receiving advice and instructions from colleagues (Benson, 1997). Information seeking in the form of engagement with the Conservative Party's emails has enabled Moana to learn informally about Cambridge Analytica and Facebook's data breach. As she put it: "everyone now has been receiving emails [about this]". In addition, social interaction in the form of advice from senior members of her party was beneficial for her to learn informally about some of the limitations of the digital environment, contributing to her imaginary of the internet. Asked how she had learned about online trolling, she explained:

It's been … through … people in the party who advise, even senior cabinet … and also MPs, councillors, association members have said to me, obviously, you're starting out, so you just need to be very careful as to what you say and what you post.

In short, how Moana has developed her digital skills and knowledge suggests that digital training in the context of civic engagement has the potential to enable activists to learn functional and critical digital literacy, formally and informally, in synergy with civic literacy. Both formal and informal training have contributed to Moana's ability to use the internet for civic purposes. At the same time, they have made it possible for her to gain an understanding of the internet's potentials and constraints for civic life as well as knowledge about internet corporations and digital affordances.

This section has examined how civic engagement contributes to the development of digital literacy via formal and informal training. As we have seen above, media

educator Linda works for a civil society organization that promotes media education, providing formal training to media educators. According to policy research on media literacy, these kinds of organizations provide valuable opportunities for media literacy training (Kanižaj, 2017; McDougall et al., 2017). But while this body of work has prioritized the training of media educators, I have shown here that campaigning organizations, regardless of what they advocate, have the potential to promote functional and critical digital literacy through training that can reach different segments of society.

Georgia works for an organization that campaigns against, and provides women with formal training about, hate speech online. Conservative activist Moana has improved her ability to campaign through formal and informal training, developing an understanding of its potential, and what it affords, for campaigning. Her formal training was in the form of a seminar. Her informal training was based on information seeking and social interaction, in the form, respectively, of reading emails and receiving advice from colleagues.

Given the gaps in the literature, these findings were not anticipated. As mentioned earlier, the importance of formal training for learning digital literacy did not emerge as prominently as the idea that civic engagement provides informal learning opportunities, as discussed in the previous sections. This study's limited evidence concerning formal training, which is disappointing, is in itself significant in that it suggests that informal learning plays a more considerable role than formal learning in facilitating digital literacy within civic life. Furthermore, this is symptomatic of a deeper issue. As argued by Titus (2016), civil society practitioners in the UK suffer from a lack of training in how to do advocacy work, run campaigns and participate in non-institutional politics. While these competencies fall under *civic literacy* (Lund & Carr, 2008), in an age that is highly mediated by digital technologies it is reasonable to expect that, as captured by Moana's experience, training in civic literacy will overlap with training in digital literacy. The interdependence of these two forms of literacy is at the root of digital campaigning. However, the lack of training within civil society

signals that there may be issues of funding and resources which transcend the scope of this chapter, but require further attention within media literacy research.

6.6 Discussion

This chapter has addressed, on the basis of my fieldwork with experts and advocates in the UK, the question of whether and how civic engagement provides opportunities for learning digital literacy. Except for research on digital inequalities and the policy implications of media literacy, media literacy research has focused predominantly on children rather than adults, placing more emphasis on formal education, as do studies that draw on critical pedagogy or social psychology (e.g., Kahne et al., 2012; Kellner & Share, 2007), or on informal learning, as does research at the intersection of the New Literacy Studies and critical pedagogy (Drotner, Jensen, & Schrøder, 2008; Mihailidis & Cohen, 2013). In neither case, except for a few studies (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016), has media literacy focused more than rarely on whether and how civic engagement, in particular, is beneficial for learning digital literacy.

This study found consistently that informal learning plays a more significant role than formal learning in developing digital literacy within civic life. Research inspired by the New Literacy Studies has championed the importance of learning digital literacy through social interaction (e.g., Gourlay et al., 2013; Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Soep, 2016). In line with this body of work, the findings from my fieldwork suggest that advocates and experts professionally committed to activism – who operate at the interaction of expertise and advocacy – can develop functional digital literacy through the help of friends and colleagues involved in civic life. Of the examples discussed above, media educator Linda, for instance, who works for an organization that promotes media education, has improved her digital skills thanks to her colleagues. Furthermore, when it comes to functional and critical digital literacy, talking to people who support her environmental organization has enabled community founder Mary to refine her

understanding of the internet's potentials and limitations for raising awareness, as well as of what Facebook affords for maximizing visibility. Unlike the New Literacy Studies, however, this study found that social interaction is not necessarily positive for learning digital literacy, as exemplified by how activist Robert has come to misunderstand how Google operates and functions as a search engine. This finding was not expected, since media literacy research has generally praised the potential of social interaction. While we need more research to make sense of this, this chapter has drawn on education studies on the negative consequences of social interaction for learning, in relation, for instance, to social delinquency and language development (e.g., Wells, 1981; Winfree et al., 1994).

Besides social interaction, what emerged from fieldwork suggests consistently that the practice of seeking information can also be beneficial for developing digital literacy in the context of civic engagement. Since little is known about the importance of this practice for learning not just in general, as argued by Limberg and Sundin (2006), but also specifically of digital skills and knowledge, this finding came as a surprise. Experts are keen to read about the internet, given its relevance to their expertise. Information science lecturer Carol, for instance, has improved her understanding of how internet corporations operate and how to use her privacy settings by following on social media an organization that campaigns for online privacy. Both many experts and many advocates, furthermore, have refined their understanding of the digital environment by engaging with news stories about Cambridge Analytica. This is how user designer Anthony has come to better understand how internet corporations operate and what their platforms afford in terms of tracking users' data. This finding resonates with policy research on the potential of traditional media to promote media literacy among adults, who cannot be reached via the education system (e.g., Livingstone, 2011). While more research is needed, this finding suggests that news reporting, when it relates to the digital environment, can be beneficial for promoting digital literacy.

This study also found that experience of using digital technologies is valuable for learning functional and critical digital skills and knowledge in ways that are blended with experience in civic life. To some extent, this finding builds on a few traditions of

media literacy research. According to research on digital inequalities, experience with digital technologies, while not necessarily in a context of civic engagement, is crucial for learning digital skills (e.g., Dutton & Shepherd, 2006; Eynon & Geniets, 2016; Ferro et al., 2011; Matzat & Sadowski, 2012). However, except for their trust in online services (Eynon & Geniets, 2016), this is not the case for users' general dispositions towards the internet, which are explained by age and gender (Dutton & Shepherd, 2006). Unlike this strand of research, my fieldwork revealed that experience with digital technologies within civic life enables activists to develop not just operational, creative, social and information-navigation skills, as we saw with Alex, who works at the intersection of music production and activism, but also positive and negative dispositions towards the internet. This is how Moana and Adele, who use the internet for campaigning, learned about its advantages and disadvantages for connectivity and procrastination.

This finding aligns with a few educational studies inspired by social psychology (e.g., Cazan et al., 2016; Dündar & Akçayır, 2014). Despite prioritizing formal education, these studies have addressed how children informally develop positive and negative dispositions towards the internet through experience with digital technologies. In addition, while research on human-computer interaction has addressed how students learn about the affordances of coding and digital design within formal educational settings (e.g., Angros et al., 2002; Yantaç, 2013), this study found that this kind of experience within civic life can be valuable for learning informally about what social media afford for campaigning. At the same time, it can be beneficial for developing dispositions towards the internet as well as imaginaries of its civic potentials and limitations. On the one hand, activist Moana's positive disposition towards online connectivity intersects with her understanding of what the internet affords for reaching young people. On the other hand, through experience in the Global South, activist Roger has come to appreciate that its potential for social change and affordances for campaigning depend on social context.

This study found that media activism represents another way, besides news reporting, of raising awareness about the internet. This is why media policy research has

underlined its importance for promoting media literacy among adults (e.g., del Mar Grandío et al., 2017, p. 124). As discussed above, information science lecturer Carol has improved her understanding of the digital environment by following on Twitter an organization involved in media activism campaigning for online privacy. In addition, this study found that organizations involved in media activism have the potential to raise awareness about the internet by providing not just resources but also formal training. Media activist Georgia, in particular, provides women with training about hate speech online. Furthermore, besides the training offered by Georgia, or that offered by Linda's organization to media educators, pressure and campaigning organizations have the potential to provide their own staff with both formal and informal training in digital campaigning, which can be valuable for learning functional and critical skills and knowledge about the internet. This is how Conservative activist Moana improved her understanding of the internet's potential for raising awareness, as well as her digital skills and knowledge of what social media afford for reaching different audiences.

This discovery is particularly important because it suggests that civil society organizations can be expected to promote digital literacy by training different adult populations beyond media educators. This is something that policy research on media literacy has under-explored (e.g., Kanižaj, 2017; McDougall et al., 2017). This finding suggests that the training in digital campaigning provided by pressure and campaigning organizations has the potential to promote not just functional but also critical skills and knowledge about the internet. This finding, however, did not emerge prominently, which was disappointing but also revealing. On the one hand, civic engagement provides opportunities for learning digital literacy that are more informal than formal. On the other hand, as argued by Titus (2016), more training is needed among civil society practitioners in the UK in order to ensure that they learn how to participate in non-institutional politics, including how to campaign and organize action. While media literacy research is needed on this subject, not all pressure and campaigning organizations enjoy opportunities for providing training in digital campaigning, which raises questions about funding and resources.

Finally, something that fieldwork revealed consistently is that civic engagement provides both experts and advocates with opportunities for learning digital literacy in tandem with civic literacy. The extent to which this finding emerged was not anticipated insofar as the intersection of digital literacy and civic literacy had previously remained under-explored, with a few studies, exceptionally, approaching the latter as overlapping with notions of information, critical and digital literacy (e.g., Bennett et al., 2009; Davies & Hogarth, 2004; Lund & Carr, 2008). Since a young age, media publisher Frank, by discussing news with his family, has gained an understanding of media bias, which is central to his ability to evaluate online content, as well as to his interest in news. Reading about Cambridge Analytica has made it possible for expert Anthony and activist Amanda to learn about the digital environment, while keeping abreast of current affairs. Activist Roger's experience with digital technologies in the Global South has enabled him to learn about the internet's potential for social change, refining his ability to campaign. Similarly, digital training was beneficial for activist Moana's learning about the internet's implications and how to use it for campaigning.

The idea that digital literacy can be learned in tandem with civic literacy, both formally and informally, within civic life is promising for addressing how to promote it among adults, which is challenging since most of them are no longer in school. At the same time, expecting adults to learn digital literacy through their engagement in civic life means that they need to be civically active, a requirement that is inherently exclusionary. As argued at the beginning of this thesis, Western representative liberal democracy suffers from a participation deficit, rooted in citizens' dissatisfaction and distrust in institutional politics. Forms of resistance and activism, often mediated by the internet, have intensified in response to alienation from formal politics (Dahlgren, 2004). But not everyone is civically active, which limits the extent to which we can promote adults' digital literacy through civic engagement.

Further research is needed on how civic engagement facilitates the development of digital literacy among different populations. We also need more research on how users learn civic literacy together with digital literacy, and how to promote the two

through media activism and digital training within civic life. This chapter invites media studies on social movements to address questions about learning and media activism in relation to media literacy theory. Media literacy research, furthermore, should build on this study to investigate how adults can learn digital literacy both formally and informally through their civic engagement, but also within other domains of life. Finally, this chapter has examined how civic engagement provides opportunities for learning digital literacy, but we also need to address whether digital literacy, in turn, facilitates civic engagement, which is what the next chapter does.

Chapter 7 – How digital literacy facilitates civic engagement

7.1 Introduction

Chapter 6 has explored how civic engagement provides opportunities for learning digital literacy. Based on how experts and advocates in the UK deploy skills and knowledge about the internet, this chapter examines whether and how digital literacy, in turn, facilitates civic engagement. Media literacy research has addressed this question by focusing either on functional more than on critical digital literacy or, when prioritizing the latter, on users' ability to evaluate online content but rarely on their knowledge about the digital environment. Research inspired by critical pedagogy, furthermore, has perpetuated the assumption that critical literacy leads to progressive action. As a result, the question of whether and how digital literacy, as conceptualized here, facilitates civic engagement has remained under-explored.

Section 7.2 below examines how functional digital literacy makes civic engagement instrumental. Examples of how advocates and experts deploy functional skills and knowledge about the internet to engage in civic life are presented alongside examples of participants whose functional digital literacy is not as advanced. This chapter goes on to explore how critical digital literacy, often in synergy with functional digital literacy, makes civic engagement trustful (Section 7.3) and strategic (Section 7.4). Section 7.5, finally, examines how a lack of functional and critical digital literacy shapes civic engagement in contradictory ways.

7.2 Instrumental Engagement

Traditionally, political research has distinguished between participation as *interaction*, based on sharing public life, and *instrumental action* that "influenc[es] … political

power" (Scaff, 1975, p. 455). As argued at the beginning of this thesis, the notion of *civic engagement* problematizes this distinction by emphasizing that citizens participate in civic life in ways that matter to them, but without necessarily affecting decision-making (Dahlgren, 2003). The internet, furthermore, has contributed to "noninstrumental … participatory acts" that can be either more or less impactful (R. Gibson & Cantijoch, 2013, p. 706). Discussing politics on social media, for instance, is a way of sharing public life, but it can also lead to "more concerted political behaviour" (R. Gibson & Cantijoch, 2013, p. 703).

Within the field of education, *instrumental engagement* refers to "getting things done" for specific purposes on the basis of deploying knowledge and skills *practically* within specific contexts (Fear, Rosaen, Bawden, & Foster-Fishman, 2006, p. 257; O'Brien, 2006). When it comes to digital literacy, its functional dimension is generally understood as "instrumental" because it enables users "to undertake particular operations", from navigating search engines to posting content online (Buckingham, 2006, pp. 263, 265). Regardless of whether or not civic engagement is instrumental in influencing decision-making, the fieldwork was approached with the question of whether and how functional digital literacy, as explored here, facilitates civic engagement based on using digital technologies instrumentally as practical tools.[49] To answer this question, this section presents a few examples that best represent the findings of this study, making links with media literacy research and political research.[50]

Policy officer Julia works for an organization that campaigns for online privacy and free speech. She once managed to sign up to a protest event announced on Facebook because her social skills were coupled with information-navigation skills. The event was organized to protest against the murder of a journalist in a country outside the

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[49] Chapter 5 has argued that functional digital literacy consists of digital skills, knowledge of digital affordances, and dispositions towards the internet, showing how these intersect.

[50] While this section is concerned with the instrumental nature of functional digital literacy, examples of how functional skills and knowledge about the internet facilitate civic engagement are presented within the next sections, specifically in the context of how functional digital literacy intersects with critical digital literacy.

UK. As she explained, the announcement "did not include the link" to register for the event. Nevertheless, she managed to find this online by "play[ing] with … different combinations of words". Arguably, searching for a protest event can be relatively easy. By contrast, systems administrator Simon knows how to deploy more advanced digital skills to collaborate with a residents' association addressing problems in his local area. His operational and creative skills were instrumental in setting up an online "survey … to find out what the problems were" among residents.

Not everybody needs advanced digital skills in order to participate in civic life. However, this is only true provided they can rely on the expertise of others. This is particularly prominent among advocates. Richard, the political relations manager of an organization campaigning on rural life, relies on colleagues who are digital savvy. As he put it: "we have two people whose job is to do our Facebook page, our newsletter, Twitter accounts". Meanwhile, Miriam, the chair of a community council, has to rely on colleagues who lack digital skills, including basic operational skills, which hinders their civic engagement. As she wrote in her diary:

> Spent hours putting together a survey (Surveymonkey) for feedback on [a participatory budgeting initiative]. [The survey] needs endless input from others who don't quite understand how to […use] Survey monkey.

Before introducing further examples, let us reflect those above. On the one hand, Julia's and Simon's experience suggests that operational, social, information-navigation and creative skills are instrumental for engaging in civic life. On the other hand, Miriam's remarks demonstrate that the way digital skills are deployed collectively is dependent on how expertise is distributed. That deploying digital skills facilitates civic engagement was anticipated before beginning fieldwork. Research on digital inequalities has found, for instance, that activists' lack of digital skills, including operational and social skills, prevents them from using social media to promote social justice (e.g., Harlow, 2012). Similarly, political research has emphasized that digital skills, including operational, information-navigation, social and creative skills, facilitate

participation in both institutional and non-institutional politics, from contacting politicians to signing petitions (e.g., Anduiza et al., 2010). Miriam's remarks remind us that social context shapes how digital skills can be deployed. Her experience suggests that the effective use of one person's skills may depend on the skills of others when participating collectively in civic life. This finding can be explained by drawing on political research, beyond the studies reviewed prior to fieldwork. As argued by Dessewffy and Nagy (2016, p. 2884), digital skills facilitate civic engagement. But their uneven distribution when individuals are engaging collectively can place constraints on participation.

Along with digital skills, this study found that knowledge of digital affordances contributes to how digital technologies can be used instrumentally within civic life. Both activist Roger and librarian George, for instance, use the *Guardian* app to read news, being knowledgeable about what it affords in terms of customization. Their knowledge enhances their engagement with news, underpinning their operational and information-navigation skills, which they deploy to select and prioritize articles. As George explained: "that's "personalize" [*pointing at "personalize" in the settings*], and then you can edit your homepage here [*he clicks on "home screen sections"*]". By contrast, right-wing libertarian activist Robert has limited operational and creative skills, which, coupled with limited knowledge of what WordPress affords in terms of publishing online content, hinders his civic engagement, affecting his ability to blog about his political views. Talking about WordPress, he said: "you know the system that is behind the blog? I have no idea how that works".

As reviewed in Chapter 2, research on human-computer interaction, interested in the usability of digital technologies, has examined users' understanding of digital affordances, but with little attention to their civic engagement. By contrast, media research on social movements, despite hardly engaging with media literacy theory, has argued that such an understanding enables activists to use the internet for political purposes (e.g., Comunello, Mulargia, & Parisi, 2016; Kavada, 2012). According to Cammaerts (2015), activists internalize the real-time and asynchronous affordances of the internet in ways that inform their practices including coordinating protest and

producing alternative media. Similarly, political research on institutional politics has found that citizens and politicians value its technical features when interacting directly with one another or promoting their own views and connecting with people with similar socio-political views (e.g., Coleman, Morrison, & Yates, 2011; Porwol & Ojo, 2017). In accordance with this body of work, George's and Robert's experience suggests that knowledge of digital affordances is valuable, together with digital skills, for using the internet for civic purposes, from reading news to blogging about politics.

When it comes to activists, digital campaigner Laura, who works for an organization campaigning against poverty and climate change, deploys operational and creative skills to pressure corporations to support a green economy. She and her colleagues use a campaigning platform for non-profits. As discussed in Chapter 6, we know from political research that activists use campaigning platforms to perform different tasks, from managing emails to designing petitions (e.g., Aron, 2015; Hughes, 2018; McKelvey & Piebiak, 2016). Conscious of the affordances of their campaigning platform, Laura and her colleagues have used it to build an "e-action" enabling their supporters to "sign a petition" and send emails to financial corporations asking them to fund renewable energy projects. But, while knowledge of digital affordances enhances their digital skills, their platform does not require sophisticated skills, which also, paradoxically, limits their options for civic engagement. As Laura put it:

> All you need to do is literally drag and drop… You don't need to know coding… [But unlike us, a different campaigning organization] … have their own bespoke platform, which is why they can do a lot more.

Thanks to the affordances of her campaigning platform, Laura and her fellow activists do not need to master functional digital literacy, but this also hinders how much they can accomplish with their campaigning. This finding, which did not emerge prominently from the data, was unexpected. On the one hand, Laura's remarks align with research on human-computer interaction, according to which functional skills and knowledge about the internet depend on digital design (e.g., Aleixo et al., 2012). On the other hand, while more research is needed, they suggest that knowledge of

digital affordances is beneficial for using campaigning platforms instrumentally, provided these platforms are designed in ways that encourage activists to deploy advanced digital skills.

Besides focusing on digital skills, a few traditions of media literacy research, as argued earlier in this thesis, have largely emphasized how users' positive or negative dispositions towards the internet respectively facilitate or undermine their online engagement. These traditions include research on digital inequalities, which has focused on how users understand the internet in relation, for instance, to finding information, safety or online shopping (e.g., Cushman & Klecun, 2006; Eynon & Geniets, 2016; Hakkarainen, 2012; Reisdorf & Groselj, 2015). In addition, this body of work includes research on human-computer interaction, in the context of how the internet is perceived in terms of working and communicating with others (e.g., Joyce & Kirakowski, 2015). Finally, the same applies to educational research inspired by social psychology, with emphasis on students' understanding of the internet's advantages or disadvantages for learning, playing and socializing (e.g., Chou et al., 2009; Meelissen & Drent, 2008; Oliemat et al., 2018; Peng et al., 2005). Similarly, beyond media literacy research, we know from political research that users' positive or negative dispositions towards the usefulness of the internet lead, respectively, to more or less online engagement, including when contacting government officials or using government services (e.g., Y. Zheng, 2015).

Chapter 5 has argued that experts' and advocates' negative dispositions towards the internet do not necessarily undermine online engagement beyond civic life. Is this also the case when it comes to their civic engagement?[51] As we saw in Chapter 5, accessing information, shopping and social interaction are aspects of the internet that they often perceive as presenting risks or opportunities. Turning to whether and how they

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[51] This question is answered here in relation to functional digital literacy. Section 7.4, pp. 224-244, examines how experts and advocates understand the internet not just in general and individualistically but, more specifically, in relation to its potentials and limitations for civic life. As conceptualized in Chapter 3, such an understanding is a form of critical digital literacy. By contrast, understanding the internet in terms of general dispositions towards its advantages and disadvantages is a form a functional digital literacy.

deploy their dispositions towards the internet in ways that inform their civic engagement, librarian Peter, as with many experts and advocates, values it for connecting with other users, which facilitates his engagement with social media for discussing politics. His positive disposition intersects with knowledge of what Twitter affords in terms of customizing his profile, underpinning his ability to use it. As he explained:

> The benefit [of Twitter] is that you're building more friends online who share your interests… I customize [...my profile] because I want people who follow me to … talk about Brexit.

By contrast, as we saw in Chapter 6, activist Adele is concerned about internet procrastination, which she became aware of when spending too many hours "pointlessly scrolling through Facebook". On the one hand, she values its potential for staying in touch with friends, family and colleagues who, like her, campaign in support of migrants and refugees. On the other hand, her negative disposition towards internet procrastination has reconfigured how she uses Facebook. As she put it:

> I didn't want to delete it completely because … it's an incredibly valuable way of staying in touch. And so, … I locked myself out of the account …, my sister changed the password and I re-logged back into Messenger because I was, like, I want to have access to Messenger… So, this was the compromise that I found.

Similarly, systems administrator Simon is concerned about overuse of the internet, which is why he is reluctant to use Twitter, despite knowing that it can be "useful for […its] political side". But his reluctance is not symptomatic of online disengagement. As he emphasized: "this isn't to say that I'm now not using the internet at all, but [...what] I'm now consuming is mediated by … media corporations". His negative disposition towards overuse has reconfigured his online engagement with news as a result of his disengagement from Twitter. Adele's and Simon's remarks challenge the

assumption that users' negative dispositions towards the internet necessarily undermine their online engagement (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). As a result, they problematize the idea, which is popular within research on digital inequalities (e.g., Olphert & Damodaran, 2013), that resistance to technology is intrinsically a deficiency of the non-user, as objected by Bauer (1995). At the same time, they resonate with recent work on digital inequalities, according to which limited engagement online is not necessarily problematic if it leads to high-quality outcomes (e.g., van Deursen & Helsper, 2018).

This section has examined how experts and advocates deploy functional digital skills and knowledge within civic life. Regardless of whether civic engagement is instrumental in influencing decision-making, functional digital literacy facilitates civic engagement by making it instrumental, insofar as it is based on using digital technologies in a practical way for civic purposes. Digital skills, from social and information-navigation to operational and creative skills, are crucial to searching for protest events on social media and setting up online surveys within local communities. The ways in which advocates deploy digital skills, however, depend on how their expertise is distributed. Knowledge of digital affordances, furthermore, is often deployed, along with digital skills, when using news apps or campaigning. Understanding the affordances of campaigning platforms enables activists, in particular, to design e-actions. These platforms, nevertheless, may not require advanced digital skills and, paradoxically, this may also limit their campaigning. Finally, positive dispositions towards internet connectivity enhance how social media like Twitter can be used for discussing politics, intersecting with an understanding of what they afford in terms of profile customization. At the same time, negative dispositions towards internet procrastination and overuse do not necessarily lead to online disengagement. Instead, they reconfigure how the internet can be used for civic purposes.

7.3 Trustful Engagement

Western liberal democracy suffers from a participation deficit in formal politics, which is exacerbated by citizens' distrust in institutions and the media (Coleman, 2013; Coleman & Blumler, 2009; Enli & Rosenberg, 2018). As noted in Chapter 2, Mihailidis (2009), conducting educational research inspired by social psychology, has found that students' ability to identify media bias reinforces their distrust in traditional media outlets. While the section above has argued that functional digital literacy makes civic engagement instrumental, this section examines whether and how critical digital literacy shapes civic engagement in ways that relate to trust. This question became resonant as the interviews with experts and advocates were being conducted. Presented below are a few examples of what I found, which relate to how they engage with accredited media outlets (subsection 7.3.1) and what they think of GDPR (subsection 7.3.2).

7.3.1 Trust in reliable sources

Chapter 5 has argued that the ability to evaluate online content relies on using multiple sources. When reading news online, experts and advocates often diversify their sources, relying on a range of accredited media outlets with varying ideological leanings. Although to different extents, this is how both community council chair Miriam and cloud architect Christian engage with news, as examined earlier. One may think that activists are more inclined to use alternative than mainstream sources, given the literature on alternative media (e.g., Lievrouw, 2011).[52] But this is not necessarily the case, with environmentalist activist Roger and Conservative activist Jacob relying, for instance, on the *Guardian* and the *Telegraph*, respectively, among different sources.

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[52] As defined earlier, alternative media are independent, unlike state and commercial media. They differ from mainstream media in terms of content, production and distribution (Bailey et al., 2007).

Indeed, during their interviews, both many experts and many advocates expressed trust in accredited media outlets, being conscious of how these operate. This is not to say that they are perceived as unbiased. But they are valued for their professionalism and fact-checking, which shapes how experts and advocates keep abreast of news online. Referring to the BBC as "a bastion of neutral journalism", Roger explained: "I think … they have different biases … but […overall] it seeks to have balance […and] represent two sides of the story". Trust in reliable sources underpins his engagement with news, which is why he has subscribed to accredited news outlets like the *Guardian*. Similarly, appreciative of their editorial standards, media professional Whitney has subscribed to a few. As she put it: "I would trust something I read in the *New Yorker* … and that made me, you know, I'm a *New Yorker* subscriber".

Roger's and Whitney's reliance on trusted sources exemplifies how knowledge about news media underpins not just the ability to assess the trustworthiness of information online, as argued in Chapter 5, but also engagement with news. The UK is affected by low levels of trust in the media, with trust in accredited media outlets decreasing among the general public (Newman et al., 2019). Experts and advocates, however, are particularly knowledgeable about how these operate, which is essential to their critical digital literacy, facilitating, in turn, how they keep abreast of news. When it comes to educational research inspired by social psychology, this finding contradicts the proposition of Mihailidis (2009), also advanced by danah boyd (2018), that media literacy can reinforce negativity towards traditional media outlets. At the same time, as argued earlier in this thesis, this body of work, except for a few studies (e.g., Ashley, Maksl, & Craft, 2017), has argued consistently that the ability to evaluate online content facilitates civic engagement, including the seeking of information online about politics (Kahne et al., 2012, p. 8; Martens & Hobbs, 2015). This strand of research, however, has been more interested in the extent to which such ability corresponds to more political activity. By contrast, Roger's and Whitney's experience indicates that knowledge about news media enhances not just the quantity, based on accessing multiple sources, but also the quality of engagement with news, as captured by their emphasis on trust.

Given the quantitative focus of educational research inspired by social psychology, this finding was not anticipated. Beyond this strand of research, this finding has repercussions for media literacy research inspired by critical pedagogy. The latter body of work has emphasized that questioning dominant media representations is essential for participating in society (e.g., Kellner & Kim, 2010; Kellner & Share, 2007). Critical pedagogy, however, as argued when reviewing the literature, has understood participation as inherently progressive and predominantly non-institutional, having to do with resistance and activism. The examples above suggest, rather, that critical digital literacy can facilitate not only social action but also other forms of civic engagement such as following news.

This kind of reliance, however, is rather elitist. Like Whitney, media publisher Frank thinks that subscribing to trusted sources is crucial for engaging with high-quality news. Contesting th*e Guardian*'s decision to offer free access to their online content, he remarked:

> They've helped create an environment where people expect to get … valuable media content for free, where people expect to get news free. And they expect that news to be reliable… [People] can read the *Guardian* for free […online]. When [they] read other stuff for free from other sources that are fundamentally less reliable […they think] "I'm just reading this on the internet, it's the same". And it's not the same.

Franks' remarks raise the question of how inevitably elitist is to engage with news in ways that are trustful, since not everybody can afford to subscribe to accredited media outlets. This question emerged from fieldwork as a surprise. But, as acknowledged earlier in this thesis, focusing on experts and advocates is not just ideal for exploring the intersection of digital literacy and civic engagement, but also potentially exclusionary. According to Street (2003), the literacy of different segments of society varies in terms of how "dominant" or "marginalized" they are (p. 77). How experts and advocates deploy their critical digital literacy suggests that knowledge about traditional media, which is essential for evaluating online content, makes civic engagement trustful by enhancing reliance on trusted sources. At the same time, we

need to keep in mind that in the UK these social categories are mostly middle-class, which means that their civic engagement is not necessarily constrained by resources like money.

Bourdieu (1974) has criticized the extent to which knowledge is largely produced by and for the most dominant classes in society. The way critical digital literacy relies on understanding and using accredited media outlets raises questions about whether high-quality journalism should be accessible free of charge. These questions, which are beyond the scope of this thesis, require further enquiry, casting doubts, as addressed by Abramson (2010), on the sustainability of media outlets. In short, knowledge about news media enhances both experts' and advocates' trust in accredited media outlets and improves the quality of their engagement with news. However, the practice of paid subscription to trusted sources exemplifies how critical digital literacy makes such an engagement elitist.

7.3.2 Overcoming distrust in internet corporations

Chapter 3 has conceptualized critical digital literacy as related not just to evaluating online content, but also to understanding the digital environment. As we have seen in the previous chapters, experts and advocates understand how internet corporations operate in ways that can be discursively constructed as concerns about how these corporations collect and handle their data, with many referring to the Cambridge Analytica scandal.[53] As this finding became evident from fieldwork, a question that emerged was whether and how such concerns shape civic engagement.

As discussed in Chapter 5, librarian Shawn relies on the potential of GDPR to regulate how internet corporations operate.[54] On the one hand, not all experts and advocates are concerned about their data being collected and used for advertising purposes,

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[53] See p. 12 for details of the Cambridge Analytica scandal.
[54] As explained earlier, GDPR stands for General Data Protection Regulation, a piece of EU legislation on data protection implemented in May 2018. See p. 158 for details.

with some, like activist Sue, expressing more discomfort about the government regulating corporations. On the other hand, those who believe in the need for regulation of the internet are not just distrustful of how internet corporations manage users' data, but also confident that GDPR will empower users, making them more aware of how their data is used. According to librarian George, GDPR comes at a moment when awareness about data protection is needed, since platforms like Facebook have failed to protect users' privacy from companies like Cambridge Analytica illegally harvesting their data. Similarly, as business analyst Emma put it: "[GDPR] is a step in the right direction… We're not just sitting back and complaining. We're actually putting out legislations like GDPR, making sure that corporations adhere to it".

Not only does confidence in GDPR enable both experts and advocates to overcome their distrust in how internet corporations manage their data, but it can also encourage experts, who are not as civically active as advocates, to use the internet more trustfully for civic purposes. Interviewed prior to its implementation, Shawn knew that its concept of privacy by design would require websites to embed data-protection features. Asked whether GDPR would affect his civic engagement in the context of using social media, he replied:

> If they implement that privacy by design, and giv[e] you more control over what gets shared … it might actually make me more likely to engage, because […when you] reflect on the Cambridge Analytica group …, you realise how little control you have.

Shawn discursively positions GDPR's "privacy by design" as redressing power imbalances between internet corporations and users. Concerned about "Cambridge Analytica", he frames his civic engagement online as "more likely" because of overcoming distrust in how his data "gets shared", shifting from having "little control" to gaining "more control". Shawn's confidence in GDPR is underpinned by knowledge about internet corporations and what GDPR entails in the context of what their platforms afford for online privacy, which lies at the intersection of functional and critical digital literacy. Sitting between distrust in internet corporations and trust in

GDPR, his remarks suggest that digital literacy has the potential to facilitate civic engagement by making it trustful, that is, based on using platforms like Facebook more trustfully. To make sense of this finding, it is worth drawing on media research on trust, which was not reviewed before fieldwork.

Media research has emphasized that there is a positive association between users' trust in others and their self-disclosure, and that interpersonal trust mitigates privacy concerns (DuBois, Goldbeck, & Srinivasan, 2011; Krasnova, Spiekermann, Koroleva, & Hilderbrand, 2010; Taddei & Contenta, 2013; Y. Wang, Norcie, & Cranor, 2011). A few studies have remarked that users' privacy concerns about internet corporations, and how their data is collected and handled, undermine their trust in and intention of using their platforms (Y. A. Kim & Ahmad, 2013, p. 448; Malhotra, Kim, & Agarwal, 2004; Turel, Yuan, & Connelly, 2008; Yang, 2013). Similarly, political research has argued that users' trust in others and in technology is crucial to e-voting and to discussion of politics (e.g., Himelboim, Lariscy, Tinkham, & Sweetser, 2012; Oostveen & van den Besselaar, 2005). Users, however, are often torn between trusting governments to collect their data and fears that it may be misused (Dutton, Guerra, Zizzo, & Peltu, 2005). Finally, while activists' trust in users and in technology is essential in order for them to undertake social action, they worry that their online privacy is not safe on social media (Gurak, 2014; Haciyakupoglu & Zhang, 2015; Youmans & York, 2012).

What emerged from my fieldwork builds on this literature. As examined above, experts and advocates often rely on the potential of GDPR to give them more control over their data, which enables them to overcome their distrust in internet corporations, making experts like Shawn more inclined to use online platforms for civic purposes. This finding echoes a study by Mohallick, De Moor, Özgöbek and Gulla (2018), according to which "control … over one's own data" is crucial for "increas[ing] users' trust" (p. 319). Nevertheless, while their research and the studies mentioned above do not engage with notions of media literacy, experts' and advocates' reliance on GDPR signals that it is underpinned by their knowledge about the digital environment, which is a form of critical digital literacy.

Not only is knowledge about GDPR beneficial for overcoming distrust in internet corporations, but, when it comes to activists, it can also enhance these individuals' trust in the quality of the membership of their organizations. During fieldwork, it became evident that they are largely aware of the implications of GDPR for civil society. As explained by Mary, who is the founder of a community environmental organization:

> [GDPR] is affecting charities and activist groups… Whereas before, people usually had to opt out …, now say I've got 100 email addresses, I would email those people and say, "you've indicated in the past that you want to hear from [name of Mary's community organization], please can you tick this box to let me know that you want me to email you"

Mary knows that, because of GDPR, organizations like hers need to seek their members' consent before using their data and personal information in order to contact them. Besides the inconvenience of having to send multiple emails, Conservative activist Kelly, who runs an organization that promotes social justice, worries about a drop in the number of supporters who, because of GDPR, must opt in to receive her emails. Unlike Kelly, activists Adele and Laura, by contrast, think that GDPR represents an opportunity for their organizations to engage with a more reliable membership. As emphasized by progressive activist Laura, who also campaigns for social justice:

> We want the quality, not the quantity. There's no point in having 50,000 people on your list if only 10,000 of them are active … Instead, we want to deepen our engagement.

According to Laura, GDPR has enabled campaigning organizations to "deepen" their engagement with a more trustworthy membership, framed as "active" and in terms of "quality" and not, as valued by Kelly, of "quantity". On the one hand, political research

has focused predominantly on the impact of GDPR on how users' data is processed for political campaigning purposes (e.g., Dimisianos, 2019). On the other hand, less is known about how GDPR is perceived by activists and individuals involved in politics. Laura's remarks suggest that knowledge about the implications of GDPR can make activists' civic engagement more trustful, that is, based on trust in the membership of their campaigning organizations. This knowledge relates to an understanding of the political economy of the internet, which is a dimension of critical digital literacy. Kelly's reservations about GDPR, however, indicate that such an understanding, as argued in Chapter 5, can be discursively constructed in different ways. Her concerns about the quantity rather than the quality of her membership exemplifies why critical digital literacy, when constructed in these terms, does not relate to trust.

To recap, critical digital literacy, based on knowledge about GDPR and about internet corporations, enables experts and advocates to overcome their distrust in how these corporations handle their data. Coupled with an understanding of what online platforms afford in terms of online privacy, this knowledge has the potential to encourage experts to use the internet more trustfully for civic purposes. When it comes to activists, understanding the implications of GDPR for their organizations can enhance their trust in their membership. Nevertheless, this depends on how such an understanding is discursively constructed.

7.4 Strategic Engagement

The idea of engaging *strategically* with digital technologies resonates with the concept of *media strategy*.[55] Media literacy research has hardly engaged with notions of strategy, except in data literacy research on what users do, mindful of how internet

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[55] Research on data literacy has employed notions of *strategies* and *tactics* to refer, respectively, to how institutions operate through practices of power and what citizens do to resist their practices (e.g., Selwyn & Pangrazio, 2018). By contrast, this section, like most studies within political research (e.g., Howard, 2005; McCurdy, 2011; Rucht, 2004), uses the notion of strategy to refer to how traditional media and/or digital technologies can be used as part of plans of action, irrespective of whether the latter relate to participation in institutional or non-institutional politics.

corporations operate, to protect their online privacy, (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018). By contrast, political research has largely used this concept to describe how party candidates and activists use traditional media and digital technologies to pursue media strategies for campaigning, building support and organizing action (e.g., Howard, 2005; LaMarre & Suzuki-Lambrecht, 2013; McGregor et al., 2016; Rucht, 2004). Despite under-exploring media literacy theory, media research on social movements has emphasized the fact that activists, in particular, use traditional media and digital technologies *strategically* insofar as they know how to pursue different actions by adapting to the media ecosystem and overcoming its limitations (e.g., Cammaerts, 2012; McCurdy, 2011; Rucht, 2004).

With these literatures in mind, fieldwork was approached with the question of whether and how experts and advocates deploy digital skills and knowledge to engage strategically in civic life. As theorized in Chapter 3, this thesis conceptualizes critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age. Such an approach prescribes that users can pursue civic opportunities as long as they understand the internet's civic potentials and limitations. Before conducting fieldwork, it was not known whether this is how experts and advocates engage *de facto* in civic life, adapting to the digital environment. In addition, beyond their imaginaries, it was previously not clear whether or how they overcome its limitations by deploying other dimensions of digital literacy.

The subsections that follow address these questions by examining a few examples that best represent the findings of this study. As we see below, experts and advocates deploy digital literacy in ways that inform the strategic decisions behind their civic engagement, from reading news to campaigning. Their strategies are aimed at overcoming bias and misinformation (subsection 7.4.1), overcoming their privacy concerns about the corporate nature of their data (subsection 7.4.2), and navigating the internet's civic potentials and limitations (subsection 7.4.3).

7.4.1 Overcoming bias and misinformation

Chapter 5 has argued that critical digital literacy of a sophisticated kind relies on functional digital literacy. The ability to evaluate online content, which is one of its dimensions, relies on digital skills, including first and foremost information-navigation skills, as well as the practice of using multiple sources. This practice, in turn, is underpinned by knowledge of digital affordances, which includes an understanding of what search engines afford in terms of comparing and contrasting information. What stood out from my interviews with advocates, including activists whose professional practices are grounded in expertise, is that they deploy these skills and knowledge within civic life to identify and strategically minimize their exposure to biased information and misinformation. Conservative activist Jacob, for example, knows how to assess whether political information is subject to bias by deploying information-navigation skills along with knowledge of what Google affords in terms of using multiple sources, even when it comes to content produced by the Conservative Party. As he wrote in his diary about one of the Party's newsletters:

> [This] newsletter […had] a link to a new feature added to the Conservative Party website […, which allows you to] see key Conservative achievements in your area… [As] this … was (quite inevitably) one-sided, I was able to research it in further detail by typing the key-words such as "business" and "GDP" into Google to validate stats provided by independent sources… This provided a useful nuancing/balancing of perspectives.

Similarly, Green Party candidate and activist Helen deploys her ability to evaluate online content in ways that rely on digital skills and on knowledge of digital affordances. As a digital campaigner, Helen works at the intersection of advocacy and expertise. She relies on social and information-navigation skills to use WhatsApp and Google. Conscious of what Google Reverse Image Search affords in terms of checking the origins of photos, she deploys her digital skills in ways that inform a two-part strategy underpinning her engagement with fellow activists: 1) identifying and 2) rectifying misinformation. As she explained:

> [A] person […who] campaigned for us … sent me … on WhatsApp a picture of a family who he said was Syrian refugees who had been given a mansion somewhere in the UK […where people are] going homeless. …So, I put the image into Google Reverse Image Search, and it showed that … their story was nothing like […that. So,] what I do usually, I say … this is not true, here's a link to the actual story. Please send this back to the person that sent this to you and ask them to forward it to everyone.

The examples above suggest that the ability to evaluate online content facilitates civic engagement in ways that are strategic in overcoming bias and misinformation. This finding echoes those of media literacy research inspired by social psychology, which has argued that such an ability corresponds to increased civic engagement (e.g., Kahne et al., 2012; Martens & Hobbs, 2015). But while this strand of research has focused on how much users engage in civic life, Jacob's and Helen's experience suggests that their ability to evaluate online content enhances the quality of their civic engagement. Such an ability requires both functional skills and knowledge about the internet.

Like Helen, policy officer Julia uses Google Reverse Image Search to assess the trustworthiness of photos. That activists would know how to spot misinformation was not necessarily anticipated because media research on social movements, as reviewed earlier in this thesis, has offered contradictory evidence. Studying the US anti-vaccination movement, Krishna (2017) has emphasized that "fake news stories […convert] individuals into fervent activists" with limited knowledge (p. 176). Others, by contrast, have found that activists are often cautious about misinformation (Ronfeldt, Arquilla, Fuller, & Fuller, 1998, p. 71). Howard and Hussain (2013), for instance, have argued that "when state officials in Syria started spreading misinformation over Twitter [during the Arab Spring], activists used Google Maps to self-monitor and verify" sources (pp. 28-29). While more research is needed on this subject, how Helen and Julia deploy their digital literacy suggests that it enables activists to counter the spread of misinformation.

Not only is digital literacy essential for identifying misinformation, but also knowledge about accredited media outlets shapes civic engagement in ways that are beneficial for avoiding misinformation altogether, minimizing exposure to it. This is prevalent among experts, and to a lesser extent also among advocates. Chapter 5 has argued that knowledge about news media, deployed in synergy with the practice of using multiple sources, is essential for evaluating online content. Trust in reputable brands prescribes the use of some sources over others, which is why the ability to evaluate online content makes civic engagement not just trustful, as examined above, but also based on *strategic disengagement*. User experience designer Anthony, for instance, avoids individual blogs, relying on accredited media outlets. Conscious that the aesthetics of a website can be misleading when trying to spot misinformation, as Anthony emphasized: "[I] ignore … individual, little blogs … and concentrate only on real news sources, like the *New York Times*".

Similarly, when asked whether he reads any political blogs, cloud architect Christian replied: "I used to… [Now] I tend to stick to […the] sources that I find credible", referring to news outlets like the BBC and CNN. Likewise, Conservative activist Moana prefers to live-stream political debates from BBC Live TV instead of reading comments about these on Facebook or Twitter. Like Anthony, Christian and Moana are aware of what websites and social media afford in terms of spreading misinformation, conscious that blogging and platforms like Facebook enable users to create and upload their own content. Their disengagement from individual blogs and from social media commentary is not symptomatic of civic disengagement, but suggests that critical digital literacy, in concert with functional digital literacy, makes civic engagement strategic in terms of overcoming misinformation, which can happen through forms of online disengagement.

Further examples of how experts' and advocates' digital literacy facilitates their strategic (dis)engagement in the context of different civic practices are provided across the rest of this chapter. It should firstly be emphasized that, given the gaps within media literacy research, the finding that digital literacy can lead to strategic disengagement was unexpected. It was theorized in Chapter 3 that applying

utopianism/dystopianism to critical digital literacy challenges research arguing that users' negative interpretations of the internet lead necessarily to online disengagement, which digital inequalities research has generally assumed to be both problematic and typical of the non-user (e.g., Olphert & Damodaran, 2013).[56] Beyond the question of whether or not this is the case, not just theoretically but also empirically – which is addressed in subsection 7.4.3 below – it was not foreseen that experts and advocates like Christian and Moana would report deploying other dimensions of critical digital literacy, such as the ability to evaluate online content, in ways that problematize such an assumption. To better understand this finding, it is worth drawing on a few studies that were not reviewed in Chapters 2 and 3.

Within political research, Casemajor, Couture, Delfin, Goerzen and Delfanti (2015) have challenged the view of non-participation as representing alienation from civic life by distinguishing between passive non-participation and active non-participation. Passive non-participation entails a lack of "intention toward a specific political end" (p. 855). Active non-participation refers, rather, to a "refusal" to use "a platform or service [..., often along with the] decision to join an alternative" network (pp. 855-856). "Exodus", for example, is a collective "strategy" that involves "acts of … withdrawal" (p. 862). Exceptionally, and building on this distinction, recent work on digital inequalities has differentiated between positive and negative non-participation (Lutz & Hoffmann, 2017). While the former is underpinned by causes perceived as constructive for society, such as online boycotts of unjust economic practices, the latter is seen as aimed at avoiding limitations of the digital environment, from misinformation to surveillance.

Christian's and Moana's disengagement from blogs and social media commentary is both active and negative. How they deploy their digital literacy to avoid misinformation suggests that online disengagement contributes strategically, beyond activism, to institutional engagement in civic life such as following news and political

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[56] Section 7.2 above has argued, in relation to functional digital literacy, that negative dispositions towards the internet reconfigure online engagement without necessarily leading to disengagement from civic life.

debates. This subsection has shown that advocates, including digital campaigners whose practices are based on expertise, deploy their ability to evaluate online content along with digital skills and knowledge of digital affordances in order to overcome strategically biased information and misinformation. Activists Jacob and Helen engage, respectively, with political content and with fellow activists by deploying information-navigation skills and knowledge of what Google affords for checking the trustworthiness of information and photos. Finally, knowledge about accredited media outlets, which is essential for assessing information, enhances both experts' and advocates' civic engagement, making it strategic in overcoming misinformation in ways that can rely on forms of online disengagement.

7.4.2 Overcoming privacy concerns about the corporate nature of users' data

While not all experts and advocates worry about the privacy implications of how internet corporations like Facebook operate, subsection 7.3.2 above has examined how knowledge about GDPR enables those who do worry to overcome their distrust in how these corporations collect and handle their data, amid concerns about the Cambridge Analytica scandal. As reviewed in Chapter 2, research on data literacy has addressed how users protect their privacy from internet corporations through tactics such as the posting of obfuscatory information, including, for instance, deliberately ugly selfies (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018). Do experts and advocates deploy strategies informed by digital literacy to overcome these kinds of concerns in the context of their civic engagement? Relatedly – since negatively active non-participation can take the shape of withdrawal from online platforms because of privacy concerns (Casemajor et al., 2015, p. 856; Lutz & Hoffmann, 2017, p. 887) – do they rely on forms of strategic disengagement? Below are a few examples that best capture the findings of this study.

Conscious that social media platforms like Facebook profit from sharing her data with advertisers, librarian Monica worries about the lack of privacy inherent in the commodification of user-generated content. As she put it:

I wouldn't feel confident commenting on … one of these sorts of Facebook or Twitter kind of debates because [of…] the corporate nature of these things. There's somebody at the end of the day making money off of that. It's not just a political debate that I could just go down the pub and start talking to somebody and then get into a political conversation. It's not that. It's like, you know, mediated by someone making money off that.

As a result, Monica avoids posting on social media platforms. Appreciative of their affordances for accessing information about politics, she limits herself to lurking – reading posts and comments about politics but not expressing her own opinions. Monica is conscious of the power asymmetries between internet corporations and users. Her disengagement from posting on social media is blended with a practice of strategic lurking aimed at accessing political information while minimizing how much of her data is commodified.

Similarly, Sophia, who works as a social media coordinator for a clothing company, limits herself to lurking on Facebook to read about politics, including Brexit. When asked whether she worries about the power that Facebook has over her information, she replied: "that is a vulnerability I don't enjoy". Overall, strategic disengagement is more prevalent among experts than among advocates, who benefit from using social media platforms to participate more actively in civic life. Indeed, while lurking is common among experts, it is not an option for activists. Georgia, for instance, uses Facebook to promote her activism, campaigning against hate speech online. But this does not prevent her from also relying on forms of strategic disengagement. Inasmuch as she worries about her data being profiled for political purposes on the basis of what she likes and does beyond her political engagement, she "make[s] a conscious effort to minimize" what she posts on Facebook. Concerned about the Cambridge Analytica scandal, she knows that Facebook uses algorithms to profile users. As a result, she has withdrawn from expressing what she likes and from adding to her profile personal information about where she lives or what she studied.

Beyond the literatures reviewed in Chapters 2 and 3, we know from audience research that users' strategies to overcome their privacy concerns range from minimizing self-disclosure to deleting photographs and limiting friendship requests on social media (Vitak, Blasiola, Patil, & Litt, 2015; A. L. Young & Quan-Haase, 2009, 2013). While this body of work has focused predominantly on interpersonal privacy, research on data literacy, as reviewed before my fieldwork, has found that users engage strategically with digital technologies to protect their privacy against internet corporations. Similarly, media research on social movements has argued that activists are "critically aware" of social media's "corporate power", resulting in "processes of negotiation with digital capitalism" (Barassi, 2015b, p. 80). Building on these strands of research, how Sophia and Georgia deploy an understanding of internet corporations and what online platforms afford for collecting personal data suggests, as examined above, that their civic engagement, from reading about Brexit to campaigning online, is underpinned by privacy concerns and strategic disengagement.

While Sophia's and Georgia's strategic disengagement manifests as, respectively, lurking and minimizing posting on social media, others like systems administrator Simon rely on strategic disengagement when accessing news outlets. As we saw in Chapter 5, the practice of using multiple sources to evaluate online content may be underpinned by privacy concerns. This is why information science lecturer Carol, for instance, use DuckDuckGo, conscious that it does not profile users on the basis of what they search for. When it comes to reading news online, Simon uses news sites rather than news apps. His disengagement from the latter is underpinned by awareness that they are designed in ways that make it easier for media outlets to collect users' personal data. For this reason, he makes strategic use of Firefox Focus as a browser and DuckDuckGo as a search engine to access news sites and read about politics, appreciative that these are less invasive of privacy than Google. He knows, nevertheless, that news sites collect users' data through cookies. Reluctant to subscribe to accredited outlets because this would involve sharing his personal information, he knows, furthermore, that most sites have a paywall, which limits his engagement with news. As he emphasized:

> If I wanted to read the *New York Times* … [*he types the URL of the New York Times into the search bar of Firefox Focus on his smartphone, opening it via DuckDuckGo*] … at some point it will tell me you've run out of free articles … and they do that by putting a cookie on your phone.

Simon is conscious that his reluctance to subscribe, and thereby share his personal information, limits his engagement with news. As a result, he deploys operational skills and knowledge about data tracking and what cookies afford to overcome the paywall on news sites. As he explained: "by deleting the cookie, they think you're a new reader. …and then you go back again, and you get another ten [articles]". Aware that news sites use cookies to track users' engagement with their articles, he frames his strategy to bypass their paywalls as subverting data tracking ("they think you're a new reader") on the basis of "delet[ing]" cookies. In short, his disengagement from news apps is coupled with strategic engagement with news sites to protect his privacy.

The examples above show how experts and advocates deploy functional and critical digital skills and knowledge in different ways to engage in forms of strategic disengagement within civic life that enable them to overcome their privacy concerns about corporate use of their data. Their skills and knowledge include operational skills and an understanding of how their data is collected by internet corporations, as well as by media outlets. Such skills and understanding are deployed in synergy with knowledge of what platforms and cookies afford in terms of data tracking. According to research on data literacy (e.g., Pangrazio & Selwyn, 2019), digital literacy enables users to resist the ways in which their data is collected and commodified. Given this strand of research, it is not surprising that digital literacy allows experts and advocates to overcome their privacy concerns. But what emerged unanticipated was that digital literacy enables them to protect their privacy through forms of strategic disengagement. For experts Monica and Sophia, this translates as social media lurking, which echoes Osatuyi's (2015) proposition that users' privacy concerns online decrease as their lurking increases. Activist Georgia, by contrast, minimizes what she posts about herself. Finally, expert Simon's strategic disengagement relies on avoiding news apps.

7.4.3 Navigating the internet's civic potentials and limitations

While media literacy research has largely approached the critical dimension of digital literacy as the ability to evaluate online content, a few studies have, exceptionally, framed it as incorporating an understanding of the role of the internet in civic life (e.g., Banaji & Buckingham, 2013; Fry, 2014). Nevertheless, whether and how critical digital literacy relies on understanding *both* the internet's potentials and its limitations, and whether and how such an understanding underpins civic engagement, have remained under-researched. Furthermore, when also considering political research, two conflicting trends emerge from the literature.

As reviewed in Chapter 3, a few studies within political research have polarized users' positive or negative interpretations of the internet – in relation to its potential for public debate and community life as well as for limited impact and misinformation – as respectively beneficial for or detrimental to their online engagement (e.g., Gustafsson, 2012; B. J. Kim et al., 2011). According to these studies, similarly to a large body of media literacy research, users' negative interpretations lead to online disengagement. This body of work includes research inspired by the New Literacy Studies on users' understanding of digital storytelling and surveillance (e.g., Shresthova, 2016a). In addition, as argued earlier, it consists of studies that have prioritized users' functional digital literacy, with emphasis on their general dispositions towards the internet beyond civic life (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). By contrast, unlike this body of work, media research on social movements, despite hardly drawing on media literacy theory, has provided a more nuanced understanding of how activists' knowledge about the media ecosystem, based on appreciating both its potentials and its limitations, enables them to use both traditional media and digital technologies strategically (e.g., Barassi, 2015b; Cammaerts, 2012; McCurdy, 2011; Treré, 2015). McCurdy (2010), for instance, has found that activists are often aware of the positive and negative implications of

news coverage for their activism, which folds into a "strategic approach" based on the "preferential treatment of 'friendly' journalists" (p. 54).

With these two trends in mind, fieldwork was approached with the idea that applying utopianism/dystopianism to critical digital literacy has the potential to problematize research findings according to which users' negative interpretations of the internet are detrimental to their online engagement. However, given the conflicting evidence in the literature, it was not known whether experts and advocates use the internet in ways that are underpinned in practice by imaginaries of its limitations for civic life in synergy with imaginaries of its potentials. In addition, it was not known whether or how their imaginaries of the internet intersect with imaginaries of civic life and other dimensions of digital literacy. To answer these questions, this subsection examines how experts and advocates deploy different imaginaries of the internet and of civic life in ways that make their civic engagement strategic in dealing with alternative media, the filter bubble, online abuse, visibility and surveillance. An example of each of these, representing the most prominent findings of this study, is presented below.

Alternative media

Progressive librarian Monica feels pessimistic about Western democracy because of right-wing politics and far-right extremism. As she emphasized: "there's very few people who have experienced fascism … so people … don't think that … democracy could crumble". Framing democracy as potentially falling apart ("could crumble"), she places responsibility for underestimating this problem on the younger generations, who have not "experienced" far-right politics (hyperbolized as "fascism"). Her civic dystopianism intersects with utopianism/dystopianism about the internet. She thinks it has the "potential" to contribute to "informed citizen[s]" by providing access to not just mainstream but also alternative media. At the same time, she worries about its implications for misinformation and extremism, since it enables users to produce content that can be "racist or wrong".

Supportive of an anti-fascist pressure group that she follows on Facebook, Monica has joined one of their anti-US-President-Trump rallies, conscious that they post articles from mainstream sources like the *Guardian* along with alternative content that they produce themselves. Mindful of the potentials and limitations of alternative media in ways that reflect her utopian/dystopian imaginary of the internet, she engages with alternative content only in balance with mainstream media. Asked how the two differ, she replied:

> A small organization like [the pressure group] might be willing to say something that was wrong, but … also share information that was more current and quicker and … more extreme... [But] they might talk about things that the *Guardian* didn't think was important… So, I would be willing to look at it … only in balance with other sources.

Concerned about far-right politics, Monica is aware of the internet's utopian/dystopian potential for promoting a well-informed citizenry as well as for spreading misinformation and extremism. Relatedly, she is conscious of the potentials and limitations of alternative media, as discussed by Downey and Fenton (2003) and by Starbird (2017). While she uses these in ways that underpin her resistance to right-wing and far-right politics, she compensates strategically for their limitations by also using mainstream media.

As argued earlier in this thesis, except for research on how activists produce alternative media in order to combat dominant representations (e.g., Feria-Galicia, 2011), research on social movements has rarely engaged with notions of media literacy. Interested in activists' understanding of the media ecosystem, McCurdy (2010) has found that they often see mainstream and alternative media "as each having their strengths and limitations", which is why they make strategic use of both to "compensate for the[ir] shortcomings" (pp. 56-57). How Monica deploys her skills and knowledge suggests that digital literacy is essential for strategically navigating mainstream and alternative content.

The filter bubble

Media activist Amanda works for an organization rooted in conservatism, which campaigns for children's safety from harmful content. Her vision of social change focuses on government regulation, which is based on digital utopianism. She hopes "to see long-term … a digital industry that […puts] children's wellbeing and protection … at the heart of what it does". Her utopian imaginary of internet safety ("wellbeing and protection") prescribes how the "digital industry" should operate. Inasmuch as she lobbies for internet regulation, she values its potential for a more "direct link to parliamentarians and policymakers", as advocated by E. J. Lee and Shin (2014). But she is aware of its dystopian limitations for making political debate "polarizing", as discussed by Sunstein (2007).

Amanda knows that the problem of polarization is exacerbated by the filter bubbles that internet corporations create through their algorithms, as discussed by Vaidhyanathan (2018). Talking about Facebook, she explained:

> Amanda: They use your likes […to] suggest things that you also might like and
> […create a] personalized feed for you…, [which] is problematic because
> we do end up just hearing the same things and … might not consider
> other points of view …
> Researcher: Do you ever do anything to somehow minimize this problem? …
> Amanda: … I've liked news channels … of the opposite view … to mine, so that I
> … get an opposite … view of things.

Not only does Amanda's imaginary of civic life, which is inherently digital, drive her support for internet regulation, but it is also intertwined with awareness of the internet's utopian/dystopian potential for politics. She values it for connecting with policymakers. But, being knowledgeable about how internet corporations operate, she understands its implications for polarization, which strategically underpins her engagement with news outlets that provide opposite views to hers. This finding

resonates with information science research, which has emphasized that users need digital literacy in order to understand search engine algorithms and engage beyond their own filter bubbles (Dillahunt et al., 2015; Johnson et al., 2012; Spratt & Agosto, 2017; Valentine & Wukovitz, 2013). How Amanda deploys her digital skills and knowledge suggests that digital literacy is crucial for diversifying exposure to news.

Online abuse

Having voted for the UK to remain in the European Union, librarian Peter, a Labour supporter, fears that "the first five years of Brexit … will be terrible" because of "social unrest" and "street violence". His civic dystopianism is blended with awareness of the internet's utopian/dystopian implications for democracy, conscious that "it might strengthen […or] weaken it". While he values Twitter for allowing users to express their political opinions, he worries about misinformation and trolling, echoing academic research (e.g., Coleman & Blumler, 2009; Forestal, 2017). As he emphasized: "[the internet] might lead to online misleading … during elections… And you have troll[s] who'[re] undermining democracy".

As a result, Peter deploys operational and social skills along with an understanding of what Twitter affords in terms of blocking trolls and controversial tweets. He once blocked a user who tweeted to him that "those who oppose Brexit aren't British" and that he would be "marginalized". As he explained:

> If they send you abusive texts, this is how you block someone [*he clicks on his profile photo on the Twitter app on his smartphone, then on "profile", "tweets and replies" and, after scrolling down, his reply to a comment*] … then I go here [*he clicks on the small arrow next to the comment*] … "block" [*pointing at the "block" option*].

Intersecting with civic dystopianism about Brexit, Peter's utopian/dystopian imaginary of the internet is grounded in its potential to facilitate political expression but also misinformation and trolling. Along with digital skills and knowledge of digital

affordances, his imaginary underpins his ability to strategically overcome online abuse when engaging in political debate.

This finding can be explained by drawing on Nagle's (2018) approach to "critical social media literacy" as incorporating "the ability to mute or block users" and report anything from misogyny to racial violence (p. 92). How Peter deploys his digital skills and knowledge suggests that digital literacy enables users to overcome hate speech online. This is why the concept of digital literacy can overlap with that of digital resilience, which is generally understood as the ability to cope with and react to negative experiences online (Hammond & Cooper, 2015; Third, Forrest-Lawrence, & Collier, 2014). At the same time, there is a thin line between muting or blocking users and welcoming opposing views. We do not know much about how users deploy their digital literacy to navigate this contradiction. Arguably, while digital literacy is essential, as discussed above, for diversifying exposure to information, its potential to overcome online abuse is bound up with what may or may not be considered acceptable speech.

Visibility

Sue is a member of the Conservative Party and right-wing libertarian activist who campaigns for free speech. Concerned about hate speech and the polarization of political debate in the West, she "hope[s] for … people to … have a civil conversation, without personal attacks, without getting offended". As an advocate of free speech and minimal government regulation, she constructs her utopian imaginary of social change by placing responsibility on citizens to debate in "civil" and rational ways ("without getting … offended"). But she constructs her dystopian imaginary as affected by polarization and intolerance towards different opinions. As she emphasized: "I don't want … bigotry to be normalized".

Her civic utopianism/dystopianism intersects with awareness of the internet's utopian/dystopian implications for political debate. She is conscious that it "has a role

in affecting democracy", since "you're reaching a much wider spectrum of people". But she also knows, as discussed by Forestal (2017), that it enables "people … to attack […and] demonize you". Inasmuch as her desire to promote civil and rational speech drives her activism, Sue's utopian/dystopian imaginary of the internet is entangled with knowledge of what platforms afford in terms of reaching different age groups and maximizing online visibility. As she explained:

> Middle schoolers … use … Snapchat and Instagram. …so, if you want to reach younger people, we can't just [use] Facebook… [and] if I want to share an article, I'll make sure [I do so] around lunchtime, around five or six, that's when people are getting off work […so] more people will see it.

On the one hand, Sue's civic dystopianism about polarization is intertwined with awareness of the internet's dystopian implications for hate speech. On the other hand, she is committed to fighting polarization and promoting free speech in line with digital utopianism. Together with knowledge of what social media afford for the targeting of different audiences, her utopian/dystopian imaginary of the internet underpins her ability to use it strategically to maximize visibility.

This finding aligns with political research, beyond the studies reviewed in Chapter 3. Studying activism in Russia, Lokot (2018) has found that activists engage in "strategic visibility", that is, strategies to maximize their online visibility, such as posting information on multiple servers (p. 334). These strategies are based on using "the internet's affordances for real-time reporting and sharing" (p. 334). Similarly, beyond activism, political research has argued that political party candidates need "technical skills" to "create more online visibility" (Strandberg, 2008, 2009; Vergeer & Hermas, 2013, p. 403). How Sue deploys her digital skills and knowledge resonates with these studies in ways that can be bridged with media literacy theory. Her experience suggests that digital literacy is crucial to strategically maximizing online visibility when engaging in civic life.

Surveillance

Green Party candidate and activist Helen "feel[s] very pessimistic" about politics. According to her, "the UK system is just horribly broken and it's leading people to think that they have no agency, which is suppressing voter turnout". Her civic dystopianism is rooted in the concern that "people [lack] power over what happens in their community", which is why she "hope[s] … that politics decentralizes". Underpinned by left-wing libertarianism, her civic utopianism is intertwined with digital utopianism. She knows that "the internet could make it possible for any citizen … to […access] the data that the[ir] council has about how they've been spending". According to Helen, "if you open source […and] allow people to feed into that, … everything will be far more effective". But while she frames the internet as leading potentially to a libertarian utopia of government transparency and efficiency ("effective"), which resonates with the work of Kassen (2013) and O'Hara (2012), she is aware that it can also facilitate surveillance, as discussed by Fuchs (2010) and McChesney (2013). As she put it: "we could be … like in China, where they've got facial recognition and … track citizen's movements, which is terrifying".

Conscious of the internet's dystopian implications for surveillance, Helen is known by a different name online. Not only does her public name allow her to keep her legal name private, but she also uses the latter strategically to disguise her identity as a campaigner, circumventing surveillance. As she explained:

> When I've stood for election, I stood as [Helen's made-up public name]. On social media, it's under [the same name]. … The mayor of [name of area] … has made decisions that I've been campaigning against. …When someone has complained about his behaviour to the council, he's […had] a word with [them] personally. … As a result, when I've made certain communications with the council, I've made sure to use my personal legal name, rather than my public professional name, so that maybe he doesn't realise that it's me. So, he's not going to … beat me up …, because there is video footage of him online … hit[ting] someone … protest[ing] against [him].

Besides using her personal and professional names strategically to avoid surveillance, Helen uses encrypted messaging systems when discussing sensitive issues with fellow campaigners:

> When I'm communicating certain things with certain activists, I will make sure to use encrypted messaging services, rather than Facebook or Twitter or email. …Local councils have used the Regulation of Investigatory Powers Act to get access to people's personal digital data… I've used WhatsApp and … Line and Telegram …, so that if the council were to … get access to my digital prints …, they wouldn't find any of those messages.

Intersecting with dystopianism in relation to citizens' alienation from politics, Helen's utopian/dystopian imaginary of the internet as facilitating decentralization of power but also surveillance underpins her civic engagement. Strategically, as an individual involved in politics and as a campaigner working with fellow activists, she deploys her imaginary to overcome surveillance, knowledgeable about what different messaging systems afford. Her decision not to use certain platforms suggests that digital literacy, as discussed earlier, facilitates civic engagement in ways that can rely on different forms of strategic disengagement.

This finding can be explained by drawing on surveillance studies, according to which users' strategies for resisting internet surveillance, from state surveillance to internet corporations' data tracking, may include self-censorship, the use of proxy servers, reliance on more savvy users, the use of encryption, or the rerouting of information (Dupont, 2008; Shklovski & Kotamraju, 2011). Media research on social movements has addressed how activists appropriate these strategies (e.g., Pickerill, 2003, p. 164; Ziccardi, 2013, p. 250). According to Treré (2015), for instance, the more tech-savvy know how to delete sensitive information (pp. 174–175). As reviewed in Chapter 2, Jenkins and colleagues, inspired by critical pedagogy and the New Literacy Studies, have argued that activists are often aware of internet surveillance, resorting to strategies such as using different networks or self-censorship (Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Shresthova, 2016a; Soep, 2016). Their work suggests that understanding the internet's potential for storytelling or for

surveillance facilitates, respectively, increased or decreased online activism (Shresthova, 2016a, p. 158). By contrast, how Helen deploys her digital literacy to overcome surveillance demonstrates, as with the examples above, that understanding the internet's potentials *and* limitations contributes to active engagement in civic life.

Chapter 5 has argued that conceptualizing critical digital literacy as incorporating a dialectical approach to utopian thinking allows us to disentangle users' imaginaries of the internet from their imaginaries of civic life. Such an approach prescribes that the *critical* in critical digital literacy requires an understanding of the utopian *and* dystopian potentials of the internet. While critical pedagogy has approached users' critique as inherently progressive, this subsection has shown, building on Chapter 5, that experts' and advocates' imaginaries of the internet are not just constructed but also deployed in line with different ideologies. On the one hand, for instance, activist Sue's digital utopianism/dystopianism in relation to the internet's potential for both democracy and for hate speech is blended with civic dystopianism about polarization, all of which underpins her activism in support of free speech in line with right-wing libertarian values. On the other hand, librarian Monica's participation in opposition to far-right politics is driven by civic utopianism aligned with progressive values, which is intertwined with digital utopianism/dystopianism in relation to the internet's potential to contribute to well-informed citizens as well as to misinformation and voter manipulation.

Ultimately, the deployment of both utopian and dystopian imaginaries of the internet, together with the other critical and functional dimensions of digital literacy, is crucial to strategically maximizing its potentials while minimizing its constraints. As we have seen above, this is how librarian Peter, for example, overcomes online abuse by deploying operational and social skills along with not just an understanding of what Twitter affords for blocking trolls and controversial tweets but also digital utopianism/dystopianism with regard to the internet's potential for political debate. This finding invites media literacy research to establish links with media studies on social movements. As argued above, a few studies within political research and a large body of media literacy research have polarized users' positive or negative

interpretations of the internet as leading respectively to online engagement or disengagement (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Gustafsson, 2012; Hakkarainen, 2012; Joyce & Kirakowski, 2015; B. J. Kim et al., 2011; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). By contrast, despite hardly engaging with media literacy theory, media research on social movements has found that activists participate in practices of resistance by adapting to the media ecosystem, being conscious of its potentials and limitations (e.g., Barassi, 2015b; Cammaerts, 2012; McCurdy, 2011; Rucht, 2004; Treré, 2015). Grounded in an understanding of critical digital literacy as incorporating utopianism/dystopianism, this subsection has shown that experts' and advocates' negative interpretations of the internet do not undermine their online engagement within civic life. In fact, they contribute to it, provided they are deployed in concert with positive interpretations.

7.5 Contradictory Engagement

The section above has argued that, often in synergy with functional digital literacy, experts' and advocates' critical digital literacy, based on deploying both utopian and dystopian imaginaries of the internet, makes their civic engagement strategic in pursuing civic opportunities online while overcoming the limitations of the digital environment. Now this section examines what happens when advocates, including media activists who operate at the intersection of activism and expertise, construct both utopian and dystopian imaginaries of the internet but deploy only one or the other. This is something that did not emerge prominently from my fieldwork, with only a handful of advocates deploying either utopianism or dystopianism about the internet, despite their ability to construct both imaginaries. While this is a finding in itself, before reflecting on what it means, here is an example that captures the findings of this study, relating to how Liberal Democrat candidate Mark uses social media.

Asked what vision of social change underpins his support for the Liberal Democrats, Mark replied: "my utopia isn't so revolutionary. …We are quite close. We do live in a

liberal democracy where we do have freedom of expression". But while he frames liberal democracy as a utopia within the present ("we are quite close"), he positions the internet as turning it into a dystopia of surveillance and coercion. He values the internet's potential "to provide a voice for people …, organize protests and … bring people together", but thinks that its benefits do not outweigh "its potential for unscrupulous companies or politicians or governments to use […users' data] to coerce and undermine […their] freedom". Referencing the Cambridge Analytica scandal, he places responsibility on internet corporations, "politicians and governments". As he put it: "social media was part of that utopian direction. …But now, it's just an avenue stream for advertisers and for people to coerce people into buying things or to vote". His dystopianism resonates with Vaidhyanathan's (2018) proposition that social media have economic interests that go beyond facilitating participation in society.

Even though Mark constructs his imaginary of the internet's potential for civic life as both utopian and dystopian, he deploys contradictorily either utopianism or dystopianism in the context of his civic engagement, but not both at the same time. When it comes to his engagement with social media as an ordinary citizen, but not as a Liberal Democrat candidate, his dystopianism prevails over his utopianism. Since the Cambridge Analytica scandal, he has refrained from using his smartphone in order to minimize the extent to which his data is tracked by social media and may be used to target him with political advertising. As he wrote in his diary: the "scandal … has resulted in me […switching] from a smart [to a standard] phone to … limit my location, preferences and personal information being shared to any major tech company". His disengagement from social media, however, is not strategic. It is underpinned by dystopianism about internet surveillance and voter manipulation in ways that intersect with his limited operational skills and knowledge of what his privacy settings afford on Facebook. Even though he has adjusted his settings to share his data only with friends, he is unaware that he can limit the extent to which Facebook shares his data with third parties. As he explained, while navigating Facebook in his computer:

Mark: Only friends can see my posts, only friends of friends can send me requests [*pointing at "who can send you friend request?", which is set on "friends of friends"*] …

Researcher: [And] when it comes to [Facebook] sharing your data with third parties?

Mark: …I can't remember, I haven't been on it for a while [*he hovers the mouse hesitantly for a few seconds*]

Researcher: There is technically an option, which is under "apps and websites" [*He hovers the mouse in search of "apps and websites". He clicks on it and then points at "Apps, websites and games", which is set on "Turned on" to enable Facebook to share his data with apps, websites and games that he logs into via Facebook*]. So, I wonder whether you have ever managed this one?

Mark: No, I have never really done this one, no.

Not only is Mark's disengagement from social media underpinned by limited operational skills and limited knowledge of what his settings afford, but it is also contradictory, since his digital dystopianism prevails over his utopianism only in the context of his own engagement online as an ordinary citizen. When it comes to his civic engagement as a Liberal Democrat candidate, as he wrote in his diary:

Despite my resistance to remain[ing] active in social media in a personal capacity I am aware that it remains a force in political campaigning for now. Over the last few weeks I have continued to produce short animations and promo videos that are then uploaded and boosted to Facebook users … to convince them to vote for my party.

Deploying either his utopian or his dystopian imaginary of the internet, and despite his ability to construct both, Mark uses social media in contradictory ways. On the one hand, he has refrained from using them in his personal life because of dystopianism about data tracking and voter manipulation, together with limited operational skills and knowledge of what his settings afford. On the other hand, he uses them to post ads and target users to vote for his party, conscious that the internet's potential for campaigning aligns with his utopia of liberal democracy. His lack of digital literacy, based on privileging awareness of some of the internet's potentials or limitations,

along with limited functional digital skills and knowledge, makes his civic engagement contradictory.

Like Mark, policy officer Julia uses the internet in contradictory ways which, again, have to do with deploying either utopianism or dystopianism with regard to its potential in terms of democracy and of surveillance respectively. Julia works for an organization that campaigns for online privacy. As a media activist, she works at the intersection of expertise and activism. She is conscious that the internet has the potential to make citizens more informed and more engaged in the political process. At the same time, she is concerned about the privacy implications for democracy inherent in how internet corporation operate, citing the dystopian novel *The Circle* as an example of her "biggest nightmare".[57] On the one hand, she advocates for citizens' right to online privacy as a policy officer who writes briefings on this subject for the UK Parliament. On the other hand, like Mark, when using social media like Facebook as an ordinary citizen, Julia has taken hardly any steps to manage her online privacy. As she put it: "one thing is … writing about [privacy]. And another thing is … your actual life". Beyond her role as a media activist campaigning for online privacy, Julia's engagement with social media as an ordinary citizen is underpinned by utopianism about the internet's potential for increasing participation in institutional politics. As we saw earlier in this chapter, she uses Facebook, for instance, to follow and join protest events. But despite her ability to construct both utopianism and dystopianism about the internet, she has refrained from deploying the latter when using it as an ordinary citizen, withdrawing, in turn, from deploying any strategies to protect her online privacy, including managing her privacy settings.

Mark's and Julia's experience raises questions about the extent to which they may be conditioned by professional pressure, working respectively as a Liberal Democrat candidate and a policy officer. This could explain why they act in contradictory ways

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[57] *The Circle,* a dystopian novel by Dave Eggers (2013), tells the story of a woman who joins a powerful internet corporation. With the excuse of advocating total transparency, this corporation runs its online platform on principles of surveillance and by expecting users to share online everything about their lives.

when we compare how they use the internet as part of their professions with how they use it as ordinary citizens. This finding did not emerge as prominently as the fact that both experts and advocates often construct *and* deploy both imaginaries within civic life, as examined in the previous section. This suggests that these are social categories that largely possess sophisticated critical digital literacy, based on constructing as well as applying consistently within the same context an understanding of the internet's civic potentials *and* limitations. While more research is needed, Mark's and Julia's remarks resonate with research on contradictory behaviour, beyond the literature reviewed before fieldwork.

Research in psychology has emphasized that "paradoxically, risk perceptions are sometimes related positively and sometimes related negatively to risk taking", resulting in contradictory behaviour (B. Mills, Reyna, & Estrada, 2008, p. 432). Within media research, a few studies have argued that internet users' contradictory behaviour depends on the extent to which they weigh the same online risks inconsistently. This explains why users may embellish how they present themselves in online dating even though they may be suspicious of attractive photographs, or why they may disclose information online despite their privacy concerns (Barnes, 2006; Lo, Hsieh, & Chiu, 2013, p. 1756; Maruyama, 2015, p. 135).

Mark's and Julia's experience suggests that their utopianism about the internet facilitates their civic engagement. But deploying utopianism as such is not synonymous with deploying critical digital literacy. Nor, on its own, is deploying dystopianism. Media literacy scholars inspired by critical pedagogy would probably contend otherwise, since users' critique is understood within this tradition as recognizing that media representations, and to a lesser extent the internet, are constrained by power asymmetries (e.g., Kellner & Share, 2007; Pangrazio & Selwyn, 2019). As captured by Mark's experience, deploying dystopianism in isolation from utopianism about the internet, particularly in relation to data tracking, surveillance and voter manipulation, leads to online disengagement. By contrast, subsection 7.4.3 above has argued that experts' and advocates' negative interpretations of the internet

do not necessarily undermine their online engagement with civic life, but actually contribute to it, provided they are deployed in synergy with positive interpretations.

Recent work on digital inequalities has emphasized that limited engagement online can be strategic and is not necessarily problematic, as long as it leads to high-quality outcomes (e.g., Lutz & Hoffmann, 2017; van Deursen & Helsper, 2018). This body of work, however, has generally approached users' negative interpretations of the internet as problematic for their online engagement, under-researching whether and how these intersect with their positive interpretations, and with what implications for their online engagement (e.g., Cushman & Klecun, 2006; Hakkarainen, 2012; Park, 2014; Reisdorf & Groselj, 2017). As argued earlier, this limitation applies also to a considerable number of studies inspired by other traditions of media literacy research as well as to a few studies on political participation (e.g., Chou et al., 2009; Gustafsson, 2012; Joyce & Kirakowski, 2015; B. J. Kim et al., 2011; Meelissen & Drent, 2008; Shresthova, 2016a).

The idea that deploying dystopianism about the internet can lead users to online disengagement is different from the idea that they can resort to forms of online disengagement in order to strategically overcome the limitations of the digital environment. As discussed in the sections above, strategic (dis)engagement is based on critical digital literacy in ways that often intersect with functional digital literacy. By contrast, deploying exclusively either utopianism or dystopianism about the internet is symptomatic of a lack of critical digital literacy. As theorized in Chapter 3, critical digital literacy relies on constructing both utopian *and* dystopian imaginaries of the internet. But, as argued in this section, the inability to deploy *both* imaginaries despite understanding its potentials and limitations amounts, in practice, to a lack of critical digital literacy and, in turn, contradictory engagement in civic life. This finding, which was not anticipated, has implications for how we understand critical digital literacy. It was argued in Chapter 3 that we should not expect critical digital literacy necessarily to translate into civic action. This section has shown that, in practice, the ability to construct utopian and dystopian imaginaries of the internet cannot be fully disentangled from deploying such imaginaries for civic purposes. One may well

understand the internet's potentials and limitations without participating in civic life. But the extent to which users' online (dis)engagement may be underpinned by privileging *de facto* either utopianism or dystopianism about the internet, resulting in contradictory engagement, casts doubts on the value of critical digital literacy unless it is put into practice.

7.6 Discussion

Media literacy research has explored how digital literacy intersects with civic engagement by focusing either on functional digital literacy, as with research on digital inequalities (e.g., Harlow, 2012; Min, 2010), or on users' ability to evaluate online content with little attention to their knowledge about the digital environment, as with research inspired by social psychology or critical pedagogy (e.g., Kahne et al., 2012; Kellner & Share, 2007). By contrast, this chapter has addressed the question of whether and how digital literacy facilitates civic engagement by interrogating how experts and advocates in the UK deploy different functional and critical skills and knowledge about the internet.

This study found that functional digital literacy makes civic engagement instrumental, that is, based on using digital technologies as practical tools for civic purposes. Of all the examples presented above, how policy officer Julia and systems administrator Simon deploy information-navigation, social, operational and creative skills suggests that their digital skills facilitate their civic engagement, from registering online for a protest event to setting up a survey for a residents' association. This finding builds on research on digital inequalities and political participation, as reviewed prior to fieldwork (e.g., Anduiza et al., 2010; Harlow, 2012). In addition, both experts' and advocates' digital skills are often deployed together with knowledge of digital affordances in a way that is underpinned by dispositions towards the internet. Librarian Peter, for instance, uses Twitter to discuss Brexit, conscious of its advantages and affordances for connecting people with similar interests. This finding was not anticipated, given the lack of literature on how users' dispositions towards the

internet intersect with their knowledge of what it affords. Advocates, furthermore, deploy digital skills collectively in ways that depend on how their expertise is distributed. To make sense of this finding, this chapter has drawn on political research according to which gaps in expertise undermine collective participation (Dessewffy and Nagy, 2016, p. 2884).

When it comes to critical digital literacy, fieldwork revealed that knowledge about news media and how they operate, which is central to the ability to evaluate online content and use multiple sources, makes both experts' and advocates' civic engagement trustful, that is, based on relying on trusted sources. This finding contradicts research that has argued that media literacy exacerbates users' negativity about traditional media outlets (e.g., Mihailidis, 2009). By contrast, this chapter suggests that critical digital literacy enhances trust in an age when representative politics, as argued by Blumler and Coleman (2010), is undermined by distrust in news media and in political institutions. Unlike educational research inspired by social psychology (e.g., Kahne et al., 2012; Martens & Hobbs, 2015), this finding shows that critical digital literacy enhances not just the quantity but also the quality of civic engagement, with media professional Whitney relying on accredited media outlets to read news. In addition, beyond the ability to evaluate online content, this study found that understanding the implications of GDPR for online privacy enables experts and advocates to overcome their distrust in internet corporations. Such an understanding has the potential to 1) encourage experts to use online platforms more trustfully for civic purposes, and 2) enable activists to gain trust in the quality of the membership of their campaigning organizations. These findings, which invite political research to explore this subject, were explained by drawing on media research on users' trust (e.g., Y. A. Kim & Ahmad, 2013; Malhotra et al., 2004; Mohallick et al., 2018).

This study found consistently that, besides making their civic engagement trustful, experts' and advocates' critical digital literacy, often together with functional digital literacy, makes it strategic in overcoming both biased/mis- information and their own privacy concerns about the corporate nature of users' data, as well as in navigating the internet's civic potentials and limitations. This discovery is particularly important

because it bridges media literacy research with political research. The former has hardly engaged with notions of strategy, except in research on data literacy (e.g., Pangrazio & Selwyn, 2019). The latter, by contrast, has examined how political campaigners and activists use digital technologies to pursue media strategies when campaigning or building support (e.g., Howard, 2005; Rucht, 2004). Despite hardly using notions of media literacy, media research on social movements has found that activists know how to adapt strategically to the media ecosystem, overcoming its limitations (e.g., Barassi, 2015b; McCurdy, 2011; Rucht, 2004; Treré, 2015)

In order to evaluate online content, advocates, including activists whose practices are based on expertise, deploy digital skills and knowledge of digital affordances. Green Party candidate and activist Helen, for instance, knows how to strategically overcome misinformation by deploying social and information-navigation skills and knowledge of what Google affords for checking the origin of photos that circulate in activist groups on WhatsApp. This finding builds on research that has found that activists are generally cautious about misinformation (e.g., Howard & Hussain, 2013). In addition, it echoes educational research inspired by social psychology, according to which digital literacy facilitates civic engagement (e.g., Kahne et al., 2012; Martens & Hobbs, 2015). At the same time, it invites closer attention to how critical analytical skills intersect with functional digital literacy.

Interestingly, this study found that digital literacy facilitates civic engagement in ways that may rely on forms of strategic disengagement. This is more prevalent among experts, but also applies to advocates. Conscious of what the internet affords in terms of spreading misinformation, user experience designer Anthony, for instance, deploys his knowledge of news media to read news from trusted sources, avoiding individual blogs. To explain this finding, this chapter has drawn, beyond the literature reviewed in Chapters 2 and 3, on political research and on recent work on digital inequalities according to which active non-participation is in itself strategic (i.e. Casemajor et al., 2015; Lutz & Hoffmann, 2017). In so doing, this chapter has challenged the idea that online disengagement is intrinsically a problematic feature of the non-user, as assumed by Olphert and Damodaran (2013).

Knowledge about the political economy of the internet and about digital affordances makes civic engagement strategic in overcoming privacy concerns through forms of online disengagement. This finding resonates with research on users' data literacy and their tactics to protect their privacy (e.g., Pangrazio & Selwyn, 2019). To minimize the tracking of her data, librarian Monica, for example, limits herself to lurking on social media to access political information. Lurking is not an option for activists. Georgia uses social media to campaign, but minimizes what she posts about herself. Systems administrator Simon, however, uses news sites rather than apps in order not to share his personal information, strategically deploying digital skills and knowledge of cookies to bypass their paywalls.

Ultimately, in line with the theoretical contribution of this thesis, this study found consistently that, together with the other critical and functional dimensions of digital literacy, deploying both utopian and dystopian imaginaries of the internet in ways that intersect with different imaginaries of civic life makes civic engagement strategic in maximizing the internet's potentials while minimizing its limitations. This finding problematizes a large body of work, including political research on citizens' participation in institutional politics (e.g., Gustafsson, 2012; B. J. Kim et al., 2011) as well as media literacy research inspired by different traditions. This includes research inspired by the New Literacy Studies as well as – despite a focus on users' individualistic understanding of the internet beyond civic life – research on digital inequalities, educational research inspired by social psychology and research on human-computer interaction (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017; Shresthova, 2016a). According to this body of work, users' negative interpretations of the internet are detrimental to their online engagement. By contrast, the findings of the present study build on media research on social movements, which has argued that activists know how to use the internet strategically insofar as they are conscious of its potentials and limitations (e.g., Cammaerts, 2012; McCurdy, 2011; Rucht, 2004; Treré, 2015). Let us discuss this in more depth.

Chapter 3 has argued that applying utopianism/dystopianism to critical digital literacy prescribes that users need to understand both the potentials and the limitations that the internet presents for civic life. While I had theorized this before my fieldwork, I did not know whether experts and advocates use the internet in ways that are *de facto* underpinned by imaginaries of its potentials *and* limitations. I did not know, furthermore, what their imaginaries would consist of or whether and how these would intersect with imaginaries of civic life and other dimensions of digital literacy. Fieldwork revealed that experts and advocates deploy their imaginaries strategically to pursue online opportunities while dealing with limitations of the digital environment that relate to using alternative media, the filter bubble, online abuse, visibility, and surveillance. To make sense of this finding, this chapter has drawn on research on how users overcome these limitations (e.g., Dillahunt et al., 2015; Johnson et al., 2012; Lokot, 2018; McCurdy, 2010; Nagle, 2018; Shklovski & Kotamraju, 2011; Shresthova, 2016a; Strandberg, 2009; Treré, 2015). Green Party candidate and activist Helen, for instance, feels pessimistic about citizens' alienation from politics. Echoing left-wing libertarianism, her civic utopianism about decentralization of power intersects with an awareness of the internet's utopian/dystopian implications both for government transparency and for surveillance. She uses the internet to campaign for social change, appreciative of its potential. But, to overcome surveillance, she uses her personal and professional names strategically along with different messaging systems, conscious of their affordances.

As theorized in Chapter 3, applying utopianism/dystopianism to critical digital literacy enables us to explore how the latter facilitates institutional and non-institutional engagement in civic life, from reading the news to campaigning, in ways that are blended with different ideologies. As we saw in Chapter 5, the ways in which experts and advocates construct their imaginaries of society in the digital age challenge critical pedagogy, suggesting that critical digital literacy can intersect with, but is not inherently underpinned by, progressive values. What this chapter adds is that their imaginaries are not just constructed but also deployed in line with different ideologies. Librarian Peter, for instance, deploys his imaginary of, and ability to overcome, online abuse when discussing politics on Twitter. His imaginary is

intertwined with dystopianism about Brexit, based on progressive values. Activist Sue, meanwhile, knows how to maximize her visibility online in order to raise awareness about free speech. Conscious of the internet's potentials and limitations for political debate, she uses it in ways that are informed by right-wing libertarian utopianism.

This study's fieldwork suggests that while negative interpretations of the internet are not necessarily problematic for engaging online, they can lead to online disengagement, but only when dystopianism about the internet is not coupled at the same time with utopianism. This is particularly the case among advocates, including media activists. This finding, however, did not emerge prominently. While it needs to be investigated further, once again, it problematizes research that has polarized users' interpretations as positive or negative, under-exploring how these intersect and with what implications for their online engagement (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Gustafsson, 2012; Hakkarainen, 2012; Joyce & Kirakowski, 2015; B. J. Kim et al., 2011; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017; Shresthova, 2016a). More specifically, this chapter has argued that constructing both utopian and dystopian imaginaries of the internet, but deploying only one or the other, is symptomatic of a lack of critical digital literacy that, together with limited functional digital skills and knowledge, shapes civic engagement in contradictory ways. This finding was explained by drawing on research on users' contradictory behaviour, which has examined how they weigh online risks (e.g., Barnes, 2006). Liberal Democrat Mark, for instance, deploys digital utopianism when targeting users on social media with political ads. But in his personal life he deploys dystopianism about voter manipulation, which is why, unaware of what his privacy settings afford, he has refrained from using social media. Chapter 3 has argued that we should not collapse the notion of critical digital literacy into that of civic engagement. This chapter suggests that the extent to which online (dis)engagement in civic life may be underpinned by privileging either utopianism or dystopianism about the internet, despite constructing both, raises questions about the value of critical digital literacy if it is not put to practical use.

This chapter invites new intellectual directions for media research on social movements that has under-researched digital literacy. But it also has implications for political research on citizens' participation in institutional politics. Western liberal democracy suffers from a deficit of participation in formal politics, exacerbated by citizens' dissatisfaction with and distrust in institutions. Media literacy research has emphasized the fact that digital literacy is crucial to participation in democracy (e.g., Hobbs, 2010; Mihailidis & Thevenin, 2013), but the concept of democracy has been approached rather monolithically. Political research and democratic theory, meanwhile, have addressed how citizens' political knowledge varies depending on whether we understand democracy as competitive elitist, pluralistic, participatory or deliberative (e.g., Held, 2006; Rapeli, 2014).[58] This body of work, however, has hardly emphasized the fact that in the digital age democratic participation requires not just political knowledge, which is a dimension of civic literacy, but also digital literacy (e.g., de Vreese & Boomgaarden, 2006; Prior, 2005; Prior & Lupia, 2008).

This thesis is not about political knowledge, even though understanding the internet in ways that intersect with different imaginaries of civic life is inherently political. As explained in Chapter 3, how digital literacy benefits different models of democracy that build on or transcend the representative character of liberal democracy is beyond the scope of this study. Nevertheless, as we reflect on the findings of this chapter, it seems reasonable to suggest that the digital skills and knowledge deployed by experts and advocates in the context of their civic engagement vary, depending on how democracy is assumed. In a competitive elitist democracy that relies on citizens delegating power through voting, digital literacy is essential for trusting accredited sources and strategically overcoming bias and misinformation, as exemplified by activist Jacob's engagement with information from the Conservative Party.

Necessary for a well-informed citizenry, the ability to evaluate online content is crucial to every democratic variant. But in a pluralistic democracy, where citizens engage beyond voting and mainstream politics, digital literacy is key to participating

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[58] Refer to pp. 19-20 above for what these democratic variants consist of.

strategically in both institutional and non-institutional processes, as captured by librarian Monica's use of both mainstream and alternative media. In a participatory democracy, furthermore, digital literacy facilitates participation in decision-making. Citizens need to understand the internet's potential for interacting with policymakers, as discussed by activist Amanda. But they also need to understand its implications for open data and be able, like party candidate and activist Helen, to strategically overcome surveillance when communicating with the government. Finally, as exemplified by systems administrator Simon setting up an online survey within his community, in a deliberative democracy digital literacy is beneficial for participating in decision-making through deliberation.

However limited in scope, this chapter paves the way for future research on how digital literacy benefits different democratic variants. Since this study focuses on two middle-class social categories in the UK, this chapter has raised the question of how elitist engagement with news needs to be in order to be trustful, and of whether high-quality journalism should be accessible free of charge. Further research is needed on how digital literacy facilitates civic engagement among different populations. As explained in Chapter 4, advocates were recruited from across the Left-Right political spectrum. Nevertheless, the decision not to recruit participants holding extreme political views underpinned by sentiments of violence imposes limitations. This chapter has argued that digital literacy facilitates civic engagement and democracy. This argument, however, is limited to how experts and advocates engage in civic life in the UK. As discussed in Chapter 2, recent research in the Global South has found that digital literacy, with emphasis on users' functional skills and knowledge about the internet, has fuelled extremism and violence, including public lynching (i.e. Banaji & Bhat, 2019).

This chapter has shown that digital literacy can facilitate civic engagement regardless of how it intersects with different ideologies. But whether digital literacy, when blended with extremism, still benefits democracy – understood not just as a set of procedures but as a system where human rights and civil liberties should be guaranteed (G. Fox & Nolte, 1995) – is a different issue and one that requires further

attention. Keeping this in mind, this chapter invites media research to explore the interdependence of users' positive and negative interpretations of the internet. Finally, media literacy research should build on this study to interrogate how functional and critical digital skills and knowledge can be deployed within civic life.

Chapter 8 – Conclusions

8.1 Introduction

This thesis interrogates the intersection of digital literacy and civic engagement. As introduced in Chapter 1, the decision to explore this subject was underpinned by the recognition that it is an important one, given the challenges to democracy and participation in society posed by the digital age. The internet is a technology that offers considerable opportunities for institutional and non-institutional civic engagement, from reading news and contacting politicians to organizing and sharing information about protest events. At the same time, recent elections in the UK and the US have shown that the internet amplifies the spread of misinformation, which is exacerbated by the algorithms of online platforms (Vaidhyanathan, 2018). This problem undermines the extent to which democracy, in whichever way it may be understood, requires a well-informed citizenry. The Cambridge Analytica scandal, furthermore, exemplifies how users' data can potentially be (mis)used to sway elections and manipulate voters (Risso, 2018). The internet is often praised for its potential to facilitate deliberation, decentralization of power and better-organized activism. But it can also be used to suppress political dissent through surveillance and censorship. In addition, political debate online is fragmented, polarized and subject to hate speech (Benkler, 2006; Forestal, 2017; Garrett, 2006; Morozov, 2011; Sunstein, 2007).

The potentials and constraints that the internet presents for civic life make it imperative for users to be equipped with digital skills and knowledge that can enable them to navigate the digital environment for civic purposes. What these skills and knowledge consist of and how they can be developed and deployed within civic life are important questions, which is why this study is about digital literacy and civic engagement. But this is not the only reason. While media literacy research has

focused primarily on children, this thesis is rooted in the need for more research on adults and whether and how they understand the digital environment. Furthermore, as explained in Chapter 1, this originated from my desire to bridge media literacy research with utopian studies and political theory, which explains my decision to conceptualize critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age. Inasmuch as utopian thinking can be a powerful force for social change, I argue that critical digital literacy requires an understanding of the internet's utopian and dystopian potentials for civic life. Such an understanding is crucial to pursuing civic opportunities online while overcoming the limitations of the digital environment.

Initially, the media literacy field was approached with the question of how digital literacy and civic engagement shape one another. While reviewing the literature, it became evident that this question is about whether and how civic engagement provides opportunities for learning digital literacy and whether and how the latter, in turn, facilitates civic engagement. With these research questions in mind, this study was driven by three theoretical aims: 1) to conceptualize and explore digital literacy as functional and critical, 2) to conceptualize and explore critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age, and 3) to explore, establishing links with different literatures, how digital literacy intersects with civic engagement.

To achieve these aims, I first reviewed media literacy research, which was categorized into different traditions, in order to conceptualize digital literacy as functional and critical. Afterwards, taking inspiration from utopian studies and political theory, I conceptualized critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age. I then presented a conceptual rationale for focusing empirically on two social categories in the UK: experts (e.g., information, IT and media professionals) and advocates (e.g., community councillors, party candidates and activists). The rationale behind this decision was that the former are digitally savvy, with different levels of civic engagement, while the latter are highly involved in civic life, with different levels of digital literacy. With a view to exploring the intersection of

digital literacy and civic engagement, I first addressed, on the basis of how skilled and knowledgeable experts and advocates are, the sub-question of what digital literacy consists of in practice. In addition, given my approach to critical digital literacy, I addressed the sub-question of how experts and advocates discursively construct their knowledge about the digital environment. To answer my research questions and sub-questions, I employed a mixed qualitative methodology, based on semi-structured interviews with experts and advocates in the UK, enhanced by diary and think aloud methods. Once the data was collected, it was subjected primarily to thematic analysis drawing on elements of critical discourse analysis. Finally, when presenting my findings, I built on different literatures, including, first and foremost, media literacy research and political research.

Section 8.2 below summarizes the key findings of this study, positioning it in the broader field. Section 8.3 delves into its implications for theory and research, while section 8.4 reflects on its practical implications. Finally, after discussing the limitations of this study, the chapter ends with general directions for future research.

8.2 Key Findings

This section summarizes the key findings of this study and how these build on, complement or contradict different literatures. As examined in the empirical chapters, the subsections below provide a recap of what digital literacy is (Chapter 5), how civic engagement provides opportunities for learning digital literacy (Chapter 6), and how digital literacy facilitates civic engagement (Chapter 7).

8.2.1 What is digital literacy?

Media literacy research has under-explored the intersection of functional and critical digital literacy, prioritizing either functional or critical skills and knowledge about the

internet. Research on digital inequalities, research on human-computer interaction and a strand of educational research inspired by social psychology have all focused more on the functional skills and dispositions that users need in order to use digital technologies (e.g., Chou et al., 2009; Feufel & Stahl, 2012; Helsper, 2016; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). By contrast, another strand of educational research informed by social psychology, research inspired by critical pedagogy, and media policy research have all been more interested in the critical dimension of digital literacy, with emphasis on users' ability to evaluate online content in relation to bias, prejudice and trustworthiness (e.g., Frau-Meigs et al., 2017a; Kahne et al., 2012; Kellner & Share, 2007; Martens & Hobbs, 2015).

This study found that functional digital literacy relies on a combination of digital skills, including, as argued and operationalized by van Deursen et al. (2015), information-navigation, operational, social and creative skills. On the one hand, these skills are underpinned by knowledge of digital affordances, particularly in relation to the digital design and interface of search engines and social media. On the other hand, this knowledge is often intertwined with dispositions towards the internet's advantages and disadvantages for social interaction, online shopping or finding information. Despite prioritizing functional digital literacy, digital inequalities research has under-explored how users understand digital affordances (e.g., Helsper, 2016; Reisdorf & Groselj, 2017). As with educational research inspired by social psychology and research on human-computer interaction, that body of work, furthermore, has largely concluded that users' positive or negative dispositions towards the internet are respectively beneficial or problematic for their online engagement (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017). In contrast, I found that experts' and advocates' digital skills and knowledge of digital affordances intersect with both positive and negative interpretations of the internet in ways that facilitate their online engagement. This is true of how they deploy not just broader imaginaries of the internet (as discussed below and, specifically in the context of their civic practices, under subsection 8.2.3), but also more individualistic dispositions towards the internet, and beyond their civic engagement. This includes managing feed preferences

on social media in order to avoid information overload, as well as managing cookies to avoid being overcharged when shopping online.

While media literacy research has often subordinated functional to critical digital literacy (e.g., Buckingham, 2007a; Lankshear & Knobel, 2006), this study discovered that critical digital literacy can only be sophisticated provided it relies on functional digital literacy. Interviewing experts and advocates revealed that information-navigation skills intersect with knowledge about what search engines afford in terms of comparing and contrasting multiple sources, which is key to evaluating information online. In addition, knowledge about the political economy of the internet, with emphasis on *why* internet corporations like Facebook collect users' data, is often blended with an understanding of what their platforms afford for their business models, which in turn relates to *how* these corporations operate through cookies and algorithms. This kind of knowledge is intertwined with imaginaries of the internet's potentials and limitations for civic life, including, for example, an understanding of its potential for democracy and public debate as well as its implications for misinformation, polarization and surveillance. Such knowledge and such imaginaries, which are interwoven with imaginaries of civic life in line with different ideologies, are dimensions of what this thesis refers to as knowledge about the digital environment. The latter, particularly in relation to privacy and to the polarization of public debate, informs the practice of using multiple sources and search engines, shaping, in turn, the ability to evaluate online content.

With a view to unpacking these findings, Tables 8.1 and 8.2 below provide a two-fold framework that captures, in the light of the skills and knowledge of experts and advocates, what digital literacy consists of (Table 8.1) and how its functional and critical dimensions intersect (Table 8.2).

Table 8.1 What digital literacy consists of

Digital Literacy		
Functional Digital Literacy		
FDL1 – Functional digital skills	FDL2 – Knowledge of digital affordances	FDL3 – Dispositions towards the internet

Description: Operational, information-navigation, social and creative skills necessary for using digital technologies	Description: Understanding how digital technologies function and what their technical features afford	Description: Understanding the advantages and disadvantages of the internet for the individual user
Examples: 1. Deploying operational and creative skills to develop the software behind a website 2. Deploying creative and social skills to produce and upload videos on online platforms like YouTube 3. Deploying social skills to interact with other users on social media 4. Deploying information-navigation skills to search for information online	Examples: 1. Understanding what the digital design of websites affords in terms of accessing information 2. Understanding what the digital interface of websites and social media affords in terms of connecting with other users	Examples: 1. Understanding the internet's advantages for connecting with other users, but also its disadvantages in terms of internet addiction 2. Understanding the internet's advantages for online shopping, but also its disadvantages in terms of financial safety

Critical Digital Literacy

CDL1 – Ability to evaluate online content	**CDL2 – Knowledge about the political economy of the internet**	**CDL3 – Utopian/dystopian imaginaries of society in the digital age**
Description: Ability to assess the reliability of online content in terms of bias and trustworthiness	Description: Understanding how internet corporations operate and what their business models consist of	Description: Constructing imaginaries of civic life (i.e., projecting visions of social change grounded in a critique of the present in line with different ideologies) in synergy with imaginaries of the potentials and limitations of the internet for civic life
Examples: 1. Reflecting on the nature and origin of information online (e.g., who is the author? what is the message? what is the target audience? any omissions? is the language extreme?) 2. Deploying contextual knowledge (e.g., do I know enough about the topic? what is the socio-political context behind a news story? what are the biases of traditional media outlets?)	Examples: 1. Understanding that internet corporations like Facebook and Google rely on advertising to make a profit 2. Understanding that online advertising relies on practices of data collection and tracking by internet corporations	Examples: 1. Constructing ideals of liberal democracy or left-wing participatory democracy in synergy with an understanding of the internet's potential for e-voting as well as its implications for data security 2. Constructing progressive ideals of social justice or right-wing libertarian ideals of free speech in synergy with an understanding of the internet's potential for interacting with politicians or for activism, as well as of its implications for the

		spread of hate speech and amplification of far-right politics
3. Using multiple sources online to compare and contrast information		

Table 8.2 How the functional and critical dimensions of digital literacy intersect

Functional and Critical Digital Literacy		
FDL1 – Functional digital skills • Enhanced by knowledge of digital affordances (**FDL2**) – *see examples 1 and 2 below* • Necessary for evaluating online content (**CDL1**) – *see examples 5 and 7 below* • Underpinned by utopian/dystopian imaginaries of society in the digital age (**CDL3**) – *see example 7 below*	**FDL2 – Knowledge of digital affordances** • Enhances digital skills (**FDL1**) – *see examples 1 and 2 below* • Enhances digital skills (**FDL1**) in ways that are underpinned by dispositions towards the internet (**FDL3**) – *see examples 3 and 4 below* • Intersects with knowledge about the political economy of the internet (**CDL2**) – *see example 6 below* • Enhances digital skills (**FDL1**) as well as the ability to evaluate online content (**CDL1**) in ways that require knowledge about the political economy of the internet (**CDL2**) and that are underpinned by utopian/dystopian imaginaries of society in the digital age (**CDL3**) – *see example 7 below*	**FDL3 – Dispositions towards the internet** • Intersects with knowledge of digital affordances (**FDL2**) in ways that enhance digital skills (**FDL1**) – *see examples 3 and 4 above* • Intersects with utopian/dystopian imaginaries of society in the digital age (**CDL3**) – *see example 7 below*
CDL1 – Ability to evaluate online content • Relies on digital skills (**FDL1**) – *see example 5 below* • Relies on both digital skills (**FDL1**) and knowledge of digital affordances (**FDL2**) in ways that are underpinned by utopian/dystopian imaginaries of society in the digital age (**CDL3**) – *see example 7 below*	**CDL2 – Knowledge about the political economy of the internet** • Intersects with knowledge of digital affordances (**FDL2**) – *see example 6 below* • Intersects with utopian/dystopian imaginaries of society in the digital age (**CDL3**) in ways that require knowledge of digital affordances (**FDL2**) and that underpin both digital skills (**FDL1**) and the ability to evaluate online content	**CDL3 – Utopian/dystopian imaginaries of society in the digital age** • Intersects with dispositions towards the internet (**FDL3**) in synergy with knowledge about the political economy of the internet (**CDL2**) and about digital affordances (**FDL2**) in ways that underpin digital skills (**FDL1**) as well as the ability to evaluate online content (**CDL1**) – *see example 7 below*

	(**CDL1**) – *see example 7 below*	

Examples:

1. Understanding the digital interface of social media (**FDL2**) in ways that enhance the social and information-navigation skills (**FDL1**) necessary for connecting with other users and for following up on hashtags on Twitter
2. Understanding what the internet affords in terms of coding (**FDL2**) in ways that enhance the operational and creative skills (**FDL1**) necessary for designing a website
3. Understanding the internet's advantages for online shopping but also its disadvantages in terms of financial safety, as well as the extent to which companies can overcharge consumers (**FDL3**). Appreciating, in synergy with such an understanding, what search engines afford for online shopping and how cookies work (**FDL2**) in ways that underpin the information-navigation and operational skills (**FDL1**) necessary for making online purchases on search engines while managing cookies in order to avoid being overcharged
4. Understanding the internet's advantages for accessing information but also its disadvantages in terms of information overload (**FDL3**). Appreciating, in synergy with such an understanding, what social media afford in terms of finding information and managing feed preferences (**FDL2**) in ways that underpin the social, information-navigation and operational skills (**FDL1**) necessary for finding information on social media while prioritizing some posts over others through managing feed preferences
5. Using multiple sources to compare and contrast information (**CDL1**) by deploying information-navigation skills (**FDL1**) (e.g., checking information on Google)
6. Understanding that online advertising (**CDL2**) relies on the use by internet corporations of algorithms and cookies, and what these afford (**FDL2**) in terms of the collection and tracking of users' data for commercial purposes
7. Constructing progressive ideals of social justice, right-wing libertarian ideals of the free market or conservative ideals of collective security, in synergy with an understanding of the internet's potential for democracy and public debate as well as its implications for misinformation, polarization and surveillance (**CDL3**). Appreciating, in synergy with such an understanding, the internet's advantages for finding information online (**FDL3**) as well as how internet corporations operate (**CDL2**) and what their algorithms afford (**FDL2**) in terms of the creation of filter bubbles and the tracking of users' data. Constructing such an understanding in ways that underpin the digital skills (**FDL1**) necessary for using the internet (e.g., to discuss politics on social media) as well as the ability to evaluate online content (**CDL1**). Deploying such an ability in ways that rely on the social and information-navigation skills (**FDL1**) necessary, along with knowledge of the affordances of search engines and online platforms (**FDL2**), for checking information across multiple search engines, including those that are less invasive of privacy, and for following on social media individuals with opposing views

The tables above suggest that digital literacy should be understood as an ensemble of different skills and knowledge, from the ability to engage both functionally and critically with online content to knowledge about digital affordances and the broader digital environment. That these skills and this knowledge may be important for digital literacy was theorized in Chapter 3. But it was not known whether interviewing experts and advocates would reveal this to be the case. Nor was it known whether or how these skills and this knowledge intersect. As discussed earlier in this section, and as shown in the tables above, experts' and advocates' imaginaries of society in the digital age underpin the other dimensions of their digital literacy. Their digital skills are

enhanced by knowledge of digital affordances, which intersects not only with dispositions towards the internet but also with an understanding of internet corporations. Such an understanding, in turn, is blended with their imaginaries of the internet's potentials and limitations for civic life. At the same time, together with their knowledge of digital affordances and practical digital skills, it informs their ability to evaluate online content by using multiple sources.

It follows that digital literacy should be approached without privileging either its functional or its critical dimensions, examining, rather, how these dimensions intersect. Relatedly, the ways in which critical digital literacy intersects with functional digital literacy invite us to rethink the role of the latter. Media literacy research has underplayed its importance because of frustration with policymakers and pedagogical initiatives that promote functional over critical digital literacy. When it comes to public policies across Europe, this is reflected in the tendency among ministries of economics and telecommunications to prioritize users' digital skills in order to boost employment and the economy (Frau-Meigs et al., 2017a). It is fair to expect policy initiatives to make more efforts to promote critical digital literacy. But in perpetuating such an expectation, media literacy research has lost sight of the importance of functional digital literacy for critical digital literacy.

That functional digital literacy is necessary for critical digital literacy echoes Sharpe and Beetham's (2010) pyramid model of digital literacy. As discussed in Chapter 2, their model incorporates both functional and critical elements, from basic digital skills to the more sophisticated ability to use digital technologies creatively and, ultimately, to make informed choices online. Nevertheless, it is limited to framing functional digital literacy as a less developed form of digital literacy, one that is a precondition for critical digital literacy. By contrast, the framework proposed above, as conveyed in particular in Table 8.2, shows how these intersect, and in ways that incorporate, unlike their model, knowledge about the digital environment. Research inspired by information science as well as by research on human-computer interaction have focused on users' ability to evaluate online content, placing emphasis on how information-navigation skills can be deployed to search for and compare information

from multiple sources (e.g., Damico & Baildon, 2007; Goad, 2002; Weiner, 2011). A few studies have argued that such an ability requires knowledge of how the algorithms of search engines and social media function (e.g., Johnson et al., 2012; Spratt & Agosto, 2017). These studies, however, have paid little attention to whether the ability to use multiple sources lies at the intersection of functional and critical digital literacy, and with what implications for digital literacy. This thesis, by contrast, as captured by the tables above, sheds light on how these two forms of literacy are intertwined. And not just in relation to evaluating online content but also in terms of understanding the broader digital environment.

This thesis draws on a few studies that have, exceptionally, approached critical digital literacy as incorporating knowledge about the political economy of the internet along with its implications for civic life (e.g., Buckingham, 2007a; Fry, 2014). These studies, however, have under-explored whether functional digital literacy plays any role in the construction or deployment of this kind of knowledge. This thesis builds, rather, on research on data literacy as including *socio-technical* knowledge about the internet (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018) in order to show that understanding how internet corporations operate is interwoven with understanding what algorithms and cookies afford in terms of collecting and tracking users' data. Ultimately, such an understanding shapes the practice of using multiple sources to evaluate online content, from using search engines that are less invasive of privacy to diversifying exposure to information by following different organizations on social media.

We live in a society that is highly mediated by digital technologies. Expecting users to understand the digital environment raises the question of how to disentangle their knowledge about the internet from their understanding of the socio-political system. Media literacy research has under-explored this question. This thesis builds on research inspired by critical pedagogy and by the New Literacy Studies, which has argued that digital literacy needs to be based on civic imagination in order for users to imagine socio-political alternatives (i.e., Jenkins, Shresthova, Gamber-Thompson, & Zimmerman, 2016; Mihailidis, 2018). At the same time, this study draws on utopian

studies and political theory to offer a novel approach to critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age. Such an approach is grounded in an understanding of utopian thinking as a form of imagination which, embedded in realism, relies on projecting utopian possibilities for social change as well as on critiquing the dystopian implications of the present (e.g., Levitas, 2010; Shor, 2010). The dialectic behind utopian thinking, which Jameson (2005, pp. 15, 180) describes as a "negative dialectic", requires utopianism and dystopianism to be played against each other, rather than undergoing a process of synthesis. Applied to critical digital literacy, this kind of dialectic prescribes that the latter, in order to be critical, requires an understanding of both the potentials and the limitations of the internet for civic life. Such an understanding lies at the intersection of rationality and affect, which, constructed as imaginaries, are intrinsic to knowledge (Jaggar, 1989).

On the basis of how experts and advocates understand the digital environment, this study found that conceptualizing critical digital literacy in this way is helpful for disentangling users' imaginaries of the internet from their imaginaries of civic life, which can align with different ideologies. Experts' and advocates' imaginaries of the internet and civic life revolve around democracy, populism, misinformation, surveillance and regulation. Applying utopianism/dystopianism to critical digital literacy problematizes the expectation that users' critique will be inherently progressive, as perpetuated by critical pedagogy (e.g., Kellner & Share, 2007). Instead, what emerged consistently from this study's fieldwork suggests that experts and advocates discursively construct their understanding of the internet in ways that intersect with different visions of social change, which are informed by different ideologies. While some understand the internet's potentials both for democracy and for surveillance as respectively utopian and dystopian in ways that are underpinned by progressive principles of liberty, others worry about the internet's implications for misinformation but, in line with conservative values, frame internet surveillance as a condition for collective security. Similarly, some worry about the power of internet corporations while appreciating the internet's potential for decentralization of power in ways that resonate with left-wing libertarianism. Others, by contrast, value its

potential for diversifying political debate but worry, in line with right-wing libertarian principles of free speech, about its implications for hate speech and extremism.

As argued by research on human-computer interaction as well as on media literacy policy (e.g., Aleixo et al., 2012; Livingstone, 2018), this study found that digital literacy depends on the usability of digital technologies as well as on transparency. These are aspects that condition experts' and advocates' ability to use these technologies and what they can and cannot know about internet corporations. At the same time, we cannot assume that the social categories selected for this study, however ideal for exploring digital literacy and civic engagement, are homogenous in what they know and how digitally skilled they are. On the one hand, experts are generally better equipped with digital literacy than advocates. But not all experts enjoy the same competences, and gaps were noted in how information and even IT professionals master functional digital literacy. On the other hand, while some advocates struggle with the technical side of digital technologies or misunderstand how internet corporations operate, many others, and especially those such as digital campaigners who are both experts and advocates, have digital skills and knowledge that are particularly sophisticated.

8.2.2 How civic engagement provides opportunities for learning digital literacy

Media literacy research has explored how users develop functional and critical digital skills and knowledge through formal and/or informal learning, but only occasionally in the context of their civic engagement. My study found that informal learning is particularly important for developing digital literacy within civic life through social interaction, information seeking mediated by digital technologies, and experience in using these. Before delving into how experts and advocates learn both functional and critical digital literacy, and with what differences, we should underline that this finding builds on multiple traditions of media literacy research, regardless of whether these have paid attention to users' participation in civic life. The idea that socialization and experience of using digital technologies are key to developing digital literacy resonates

with recent work on digital inequalities (e.g., Eynon & Geniets, 2016; Helsper, 2017), research in information science (e.g., Meyers et al., 2013) and, specifically in relation to users' civic engagement, research inspired by the New Literacy Studies (e.g., Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016). In addition, the idea that information seeking represents a valuable practice for developing digital literacy builds on information science research which, despite prioritizing formal education, has argued that this practice is important for learning, irrespective of the subject (e.g., Limberg & Alexandersson, 2009; Limberg & Sundin, 2006).

Civic engagement enables experts and advocates to learn digital literacy through social interaction in different ways. When social interaction takes the form of help and guidance from colleagues working within the same campaigning organizations, this is how advocates and experts professionally committed to activism – that is, individuals who work at the intersection of expertise and advocacy – learn operational, social and creative skills as well as knowledge about how to use online platforms for campaigning. By contrast, social interaction in the form of talking to family and friends can be beneficial for learning critical digital literacy, often in synergy with functional digital literacy. On the one hand, discussing news within family settings provides experts with opportunities for learning about current affairs, which is a form of civic literacy, and, especially when growing up, about media bias, which is helpful for evaluating online content. On the other hand, talking about the algorithms of social media to friends involved in politics can be valuable for activists to gain an understanding of how these can be used to target different social groups. In addition, interacting with their supporters can enable activists to refine their imaginaries of the internet's potential for mobilization but also its limited impact, along with gaining an understanding of what this affords for raising awareness and maximizing online visibility. Nevertheless, while the New Literacy Studies has largely praised the potential of social interaction for learning digital literacy (e.g., Brown, 2015; Lankshear & Knobel, 2003), an unanticipated finding of the present study is that it can also be detrimental. Talking to friends involved in politics, and relying on what they might or might not know, can lead activists to misunderstand how internet corporations operate.

Besides social interaction, this study found that experience using digital technologies within civic life is not just important for learning digital literacy, but also intersects with experience in civic life. This was found to be prevalent among advocates, whose exposure to civic life is professional and long-standing. What stood out from their civic practices suggests that digital literacy is often developed in tandem with civic literacy, that is, in synergy with the skills and knowledge necessary to participate in civic life. Given the gaps in the literature, the extent to which these two sets of competences were found to be intertwined, which builds on a few studies on civic learning (e.g., Bennett et al., 2009; Lund & Carr, 2008), was not expected. Indeed, media literacy research and political research have largely under-explored their intersection (e.g., de Vreese & Boomgaarden, 2006; Kellner & Share, 2007; Martens & Hobbs, 2015; Prior & Lupia, 2008). Experience of campaigning and exposure to political events can enable activists, including digital campaigners whose practices are rooted in expertise, to learn digital skills, including operational, social and creative skills, as well as dispositions towards internet connectivity and procrastination. At the same time, experience of using digital technologies provides them with opportunities for learning how to campaign by using digital technologies. This kind of experience, furthermore, can be beneficial to their understanding of the internet's potential, and of what it affords, for mobilizing or suppressing action.

Besides experience of using digital technologies, this study found that seeking information, for example by following on social media organizations involved in media activism, provides experts with opportunities for refining their understanding of how internet corporations operate in relation to users' privacy, as well as of how to manage their own privacy settings. Given the nature of their professions, experts are keen to read about the internet. But this does not mean that advocates do not also benefit from information seeking. This study found that reading news stories about the Cambridge Analytica scandal had made it possible for both experts and advocates to gain civic literacy, in the form of learning about current affairs, along with digital literacy. This is how many of them have developed a better understanding of how internet corporations run their platforms and what the latter afford for tracking users'

data, with emphasis on privacy and political advertising. Because of the gaps within media literacy research, it was not anticipated that information seeking within civic life would be found to be valuable for learning digital literacy in tandem with civic literacy. This finding builds on a few strands of research. First, it aligns with research on information science, according to which information seeking is beneficial to learning, regardless of the subject matter (e.g., Limberg & Alexandersson, 2009; Limberg & Sundin, 2006). Second, it echoes political research, which has argued that information seeking enables citizens to develop political knowledge (e.g., Xenos & Becker, 2009). Third, it resonates with media policy research on the role of media activism and traditional media outlets in raising awareness about the media and promoting media literacy among adults, who are hard to reach via the education system (e.g., del Mar Grandío et al., 2017, p. 124; Livingstone, 2011).

While informal learning plays a more considerable role than formal learning in developing digital literacy within civic life, this study found that there are also, although to a lesser extent, opportunities for formal training within civic life that may support the learning of digital skills and knowledge in tandem with civic literacy. Considering the literature, this finding was unforeseen. On the one hand, research on digital inequalities as well as information science research and librarianship studies have praised the potential of public libraries for providing digital training that can reach different segments of society (e.g., Dudziak, 2007; Helsper & van Deursen, 2015; Jaeger et al., 2012; Real et al., 2014). This training, however, is generally more functional than critical. On the other hand, media policy research has prioritized training by civil society organizations that promote media education, targeting predominantly media educators (e.g., Kanižaj, 2017; McDougall et al., 2017). While this study provides no evidence of the role of public libraries, it found that the digital training provided by campaigning organizations, wherever available and regardless of what they advocate, can be beneficial for reaching adults beyond media educators. These can include, for example, women receiving training on what to do when confronted with hate speech online, as well as activists. When it comes to the latter, training in digital campaigning has the potential to enable them to learn how to use the internet to raise awareness and build support, developing digital skills and

knowledge of what social media afford for reaching different age groups as well as imaginaries of the internet's potential for campaigning. Alongside formal training, furthermore, informal training in the form of receiving advice from colleagues or reading emails about Cambridge Analytica can enable activists to gain awareness of the internet's implications for trolling as well as of how users' data can be (mis)used on platforms like Facebook.

Once we take a moment to reflect on the implications of these findings, we note that, unlike advocates, whose professions are inherently civic, experts develop digital skills and knowledge within civic life in ways that generally transcend their professions. Information, IT and media professionals represent collectivities that enjoy relatively sophisticated skills and knowledge about the internet, developed prior to and as a result of their professions. But, except for librarians or journalists who identify their work as a form of civic engagement, these are professions not necessarily rooted in civic life. However digitally literate experts may already be, what this study found suggests that civic engagement beyond their professions enables them to refine their expertise. This is especially the case in relation to discussing news within family settings, which is particularly prevalent among media professionals. As discussed above, this practice can be beneficial for learning, from a young age, about media bias, which enhances their ability to evaluate online content, and about current affairs, thus developing critical digital literacy along with civic literacy. Furthermore, given their interest in digital technologies, experts are not only keen to read about the internet, but can do so in the context of their civic practices. Regardless of their expertise, they may refine their understanding of how internet corporations operate by following organizations that campaign for users' privacy or by engaging with news when it has to do with the digital environment.

By contrast, advocates are in professions that are intrinsically civic, including community councillors, party candidates and activists. Participation in civic life provides them with opportunities for developing digital skills and knowledge of digital affordances as well as an understanding of how internet corporations operate and imaginaries of the internet's potentials and limitations for raising awareness and

organizing action. Given the nature of their professions, they often gain digital literacy by interacting with colleagues and friends involved in politics. Their experience of civic life is beneficial to their development of digital literacy as well as civic literacy, particularly in the context of campaigning. This is especially the case for digital campaigners who are both experts and advocates, whose experience of using digital technologies is intertwined with their experience in civic life. Like experts, furthermore, advocates have improved their understanding of the digital environment by reading news stories about Cambridge Analytica. Arguably, however, they represent collectivities that have more to learn about the internet, with more interest in following news in general than in reading about the internet. Finally, wherever available, formal and informal training in the context of their professional involvement with their campaigning organizations enables activists to gain both digital and civic literacy, with emphasis, again, on learning how to use the internet for campaigning.

8.2.3 How digital literacy facilitates civic engagement

Media literacy research has explored how digital literacy intersects with civic engagement by focusing more on functional digital literacy, as with research on digital inequalities (e.g., Harlow, 2012; Min, 2010) or on users' ability to evaluate online content, yet often in isolation from their knowledge about the digital environment, as with research inspired by social psychology or critical pedagogy (e.g., Kahne et al., 2012; Kellner & Share, 2007). This study found that functional digital literacy facilitates civic engagement by making it instrumental, that is, based on using digital technologies as practical tools for civic purposes. This applies to both experts and advocates, who deploy, for example, both the social and information-navigation skills necessary for searching and signing up for protest events on Facebook and the operational and creative skills necessary for setting up surveys at the community level. This finding echoes research on digital inequalities as well as political research according to which users' digital skills are crucial to participating in civic life (e.g., Anduiza et al., 2010; Harlow, 2012; Min, 2010). This study found that digital skills play this role in ways that are often intertwined with knowledge of digital affordances and

dispositions towards the internet. Activists are often aware of the affordances of their campaigning platforms, which enables them to use these for building e-actions, such as launching online petitions. In addition, an understanding of the internet's advantages for connectivity underpins how Twitter can be used and customized by experts to connect with users with similar political interests.

This study found that critical digital literacy, often in concert with functional digital literacy, makes civic engagement trustful. The ability to evaluate online content relies on trust in accredited media outlets, which facilitates engagement with news. One might think that activists will be more inclined to rely on alternative media (Lievrouw, 2011), but this finding applies to both experts and advocates, with many trusting news media like the *Guardian* and the BBC. Their reliance on trusted sources problematizes educational research inspired by social psychology according to which media literacy leads to negativity about traditional media outlets (e.g., Mihailidis, 2009), reinforcing distrust in an age when liberal democracy is afflicted by alienation from institutions and scepticism about the media (Coleman, 2013; Coleman & Blumler, 2009; Newman et al., 2019). Considering this literature, this finding was not anticipated. In addition, what emerged from this study's fieldwork suggests that understanding GDPR enables both experts and advocates to overcome their distrust in how internet corporations handle their data, encouraging experts who are not very civically active to use online platforms more trustfully for civic purposes. This finding builds on the literature on users' (dis)trust in these corporations, including research according to which users gain trust once they gain control over their data (e.g., Y. A. Kim & Ahmad, 2013; Mohallick et al., 2018; Turel et al., 2008). Knowledge about GDPR, furthermore, can enable activists to engage more trustfully with their supporters. According to some, its implementation has indeed reduced the membership of their organizations, but those remaining, consisting of those willing to be contacted, are more active supporters.

Ultimately, this study found that experts' and advocates' critical digital literacy, often in synergy with functional digital literacy, makes their civic engagement strategic in overcoming bias, misinformation and privacy concerns as well as navigating the internet's civic potentials and limitations. This discovery is particularly important

because it bridges media literacy research with political research. On the one hand, except for research on data literacy (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018), media literacy research has hardly engaged with notions of strategy. On the other hand, political research, despite rarely drawing on media literacy theory, has emphasized that political campaigners and activists know how to use traditional media and digital technologies to pursue media strategies in the context of their civic practices (e.g., Cammaerts, 2012; Howard, 2005; LaMarre & Suzuki-Lambrecht, 2013; McGregor et al., 2016; Rucht, 2004). According to media research on social movements, activists, in particular, know how to adapt strategically to the media ecosystem inasmuch as they understand its potentials and limitations (e.g., Cammaerts, 2012; Rucht, 2004; Treré, 2015).

Building on these strands of research, this study found that the ability to evaluate online content enables experts and advocates to strategically, and in different ways, overcome bias and misinformation. Advocates, including digital campaigners whose practices sit between advocacy and expertise, deploy such ability, along with knowledge of what search engines afford for verifying sources, to assess political content and the information they share. This finding builds on media research on social movements (e.g., Howard & Hussain, 2013). Experts, meanwhile, often rely on forms of strategic disengagement from sites and platforms. This finding, which applies also to advocates, but to a lesser extent, was unforeseen. Some experts and advocates minimize their exposure to misinformation by avoiding individual blogs or social media commentary, engaging only with accredited news outlets. Others, conscious of how online platforms operate and function, engage in strategic disengagement to overcome their privacy concerns about their own data. To minimize the tracking of their data, some experts use news sites rather than apps. Others engage with political content on social media by limiting themselves to lurking. This practice is not an option for activists, who use the internet to raise awareness about their own activism and may rely on alternative forms of strategic disengagement, such as minimizing how much personal information they post on social media. These findings build on research on data literacy (e.g., Pangrazio & Selwyn, 2019; Selwyn & Pangrazio, 2018). The idea of strategic disengagement resonates, furthermore, with political research,

according to which abstaining from online engagement can be in itself a form of participation (e.g., Casemajor et al., 2015). Such an idea problematizes the assumption, largely perpetuated by digital inequalities research (e.g., Olphert & Damodaran, 2013), that online disengagement is intrinsically a problematic feature of the non-user.

As mentioned above, a large body of media literacy research has argued that users' positive or negative interpretations of the internet facilitate, respectively, online engagement or disengagement. This body of work comprises studies interested in functional digital literacy beyond civic life – including research on digital inequalities, educational research inspired by social psychology, and research on human-computer-interaction – as well as research, inspired by the New Literacy Studies, that is interested in young activists' critical understanding of the internet (e.g., Chou et al., 2009; Cushman & Klecun, 2006; Hakkarainen, 2012; Joyce & Kirakowski, 2015; Meelissen & Drent, 2008; Reisdorf & Groselj, 2017; Shresthova, 2016a). Beyond media literacy research, a few studies on citizens' participation in institutional politics have also polarized their understanding of the internet as positive or negative for their online engagement (e.g., Gustafsson, 2012; B. J. Kim et al., 2011). By contrast, media research on social movements has emphasized that activists are often aware of both potentials and limitations of the media ecosystem, which is why they know how to engage strategically in civic life (e.g., Cammaerts, 2012; McCurdy, 2011; Treré, 2015).

In line with this strand of research, this study found that deploying both utopian and dystopian imaginaries of the internet, often along with other critical and functional dimensions of digital literacy, enables both experts and advocates, when using the internet, to maximize its potentials while minimizing its limitations. That applying utopianism/dystopianism to critical digital literacy problematizes research on users' interpretations of the internet as positive or negative for their online engagement was theorized in Chapter 3. But it was previously not known whether this would happen in practice. This study found that experts and advocates deploy utopian/dystopian imaginaries of the internet to pursue different civic opportunities while strategically overcoming limitations of the digital environment that relate to using alternative

media, the filter bubble, online abuse, visibility, and surveillance. Some know how to strategically block hateful comments when discussing Brexit on social media in line with progressive values. Others use social media to follow up protest events against far-right politics, engaging with both traditional and alternative media because of their potentials and limitations. Some use the internet to campaign about media regulation in line with conservative values. At the same time, conscious of its implications for the polarization of political debate, they follow news outlets with views opposed to their own. Others, meanwhile, campaigning for Green politics and decentralization of power, appreciate the internet's utopian/dystopian potential both for government transparency and for surveillance, and therefore strategically use different names and messaging systems.

Noting that experts' and advocates' imaginaries of the internet intersect with different imaginaries of civic life and ideologies, this thesis argues that conceptualizing critical digital literacy as incorporating utopianism/dystopianism problematizes research inspired by critical pedagogy. This has not only approached users' critique as inherently progressive, but also collapsed their critique into progressive action (e.g., Feria-Galicia, 2011; Kellner & Share, 2007). When advocates, including media activists who are both advocates and experts, construct both utopian and dystopian imaginaries of the internet but deploy only one or the other, along with limited functional digital literacy, they may engage in civic life in ways that are contradictory. For example, they may be concerned professionally about internet surveillance but take no measures to protect their online privacy as ordinary citizens, privileging utopianism about the internet's potential for political participation. Alternatively, if they privilege dystopianism about data tracking, they may end by refraining from using social media as ordinary citizens, while continuing to use them for targeting voters as part of their campaigning practices. This finding, which did not emerge prominently, invites further research. On the one hand, it resonates with research on contradictory behaviour online as underpinned by how users perceive different risks (e.g., Barnes, 2006; Maruyama, 2015). On the other hand, it suggests that constructing both utopian and dystopian imaginaries of the internet but deploying only one or the

other is symptomatic of a lack of critical digital literacy, which raises questions about the value of such literacy if it is not put into practice.

Even though this study is not about whether or how digital literacy benefits different models of democracy, Chapter 7 has sketched how the digital skills and knowledge that experts and advocates deploy to participate in civic life vary, depending on how democracy is normatively understood. While political research has under-explored how citizens' digital literacy varies on the basis of whether democracy is approached as competitive elitist, pluralistic, participatory or deliberative, this study argues that it benefits democracy regardless of how the latter is understood. In a competitive elitist democracy, digital literacy is essential for being able to trust accredited sources and strategically overcome bias and misinformation. In a pluralistic democracy, it is crucial to participating strategically in both institutional and non-institutional processes, as is using both mainstream and alternative media. In a participatory democracy, digital literacy facilitates participation in decision-making, which is why users need to understand the internet's potential for interacting with policymakers along with its implications for open data but also for surveillance. Finally, in a deliberative democracy, digital literacy is essential for participating in decision-making through deliberation.

It is worth reflecting on the implications of these findings for how experts and advocates, as different social categories, deploy digital literacy. Unlike advocates, whose civic practices are inherently professional and more collective, experts deploy digital skills and knowledge more individualistically within civic life. Except when they deploy advanced functional digital literacy within their own communities, for instance to set up online surveys, IT and information professionals often deploy their knowledge of digital affordances to customize their news apps or social media accounts to connect with users with similar political interests. When it comes to reading news, they trust accredited media outlets, with media professionals being particularly conscious of how these operate. Not all experts, however, are civically active. Their knowledge about and confidence in GDPR has the potential to make them more inclined to use online platforms for civic purposes. Regardless of their

expertise, experts, furthermore, deploy their knowledge about the digital environment by often relying on forms of strategic disengagement, be these avoiding blogs in order to avoid misinformation or lurking on social media because of privacy concerns about their own data. At the same time, they know how to deploy an understanding of the internet's potentials and limitations to engage in civic life. Informed by such an understanding, their practices, which are comparatively more individualistic, range from strategically overcoming online abuse on social media to using both mainstream and alternative media.

Advocates, by contrast, are professionally involved in civic life, which shapes how they deploy their digital literacy. Civic engagement, for them, is inherently more collective, since they work with colleagues on community councils or in political parties or campaigning organizations. This is reflected in how they deploy their functional digital literacy, using campaigning platforms to launch initiatives and e-actions. Their digital skills and knowledge of digital affordances depend on how their expertise is distributed, which is why they often rely on the expertise of colleagues. Like experts, they also rely on accredited media outlets and not just alternative media. When it comes to GDPR, they are conscious of its implications for their organizations. In addition, activists and digital campaigners who are both experts and advocates deploy functional and critical digital literacy to overcome misinformation when communicating with fellow activists. Like experts, but to a lesser extent, they also rely on forms of strategic disengagement. But since they use social media for campaigning, strategic disengagement for them does not mean lurking, but may result in posting limited personal information because of privacy concerns. Strategically, activists know how to deploy both utopian and dystopian imaginaries of the internet to maximize, their online visibility while overcoming surveillance, for instance by using different messaging systems. This is particularly the case for digital campaigners, whose digital literacy is more sophisticated than that of most activists. At the same time, not all advocates deploy both utopian and dystopian imaginaries of the internet, often privileging either one or the other in relation to its potential for campaigning or for surveillance, respectively, which results in contradictory engagement in civic life. Given the nature of their civic engagement, unlike experts, party candidates and

activists may become caught up in a tension between using the internet as ordinary citizens and as professionals.

8.3 Implications for Theory and Research

The section above has summarized the key findings of this study, positioning it within the broader field. This section delves further into its implications for theory and research. As set out theoretically, I have explored 1) digital literacy as functional and critical, 2) critical digital literacy as incorporating utopian/dystopian imaginaries of society in the digital age, and 3) how digital literacy intersects with civic engagement. The subsections below reflect on the implications of this thesis for different literatures, including the different traditions of media literacy research reviewed in Chapter 2. With a view to pushing the field forward, each subsection includes specific reflections on future research directions.[59] The traditions discussed below are not independent of each other, which means that the recommendations that follow can be taken up by scholars conducting interdisciplinary research. At the same time, since each tradition has been grappling with different sets of questions, the recommendations are specific to their interests and priorities.

8.3.1 Research on digital inequalities

This strand of research has been more interested in functional than in critical digital literacy (e.g., Harlow, 2012; Helsper, 2016; Min, 2010; Reisdorf & Groselj, 2017; van Deursen et al., 2015). What follows from the present study is that this tradition could benefit from focusing not just on users' digital skills and dispositions towards the internet but also on their knowledge of digital affordances, given the ways this knowledge enhances experts' and advocates' skills and dispositions. Possible

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[59] See section 8.7, pp. 300-304, for this study's final reflections and general directions for future research.

questions to address within this tradition are whether and to what extent there are inequalities in knowledge of digital affordances and whether and how this shapes online engagement, particularly among vulnerable communities. Relatedly, to what extent are gaps in knowledge of digital affordances gendered or classed? Recent developments within this tradition show that vulnerable groups such as homeless women rely on their phones to be in touch with their families and look for jobs, but struggle because of their limited affordances, including poor battery life, which makes it hard for them to use phones (e.g., Faith, 2018). We need more research to build on this line of work, but not just in relation to whether the materiality of digital technologies exacerbates structural inequalities. Research is needed on whether and how disenfranchised communities develop and deploy an understanding of digital affordances in synergy with digital skills and dispositions towards the internet.

Beyond functional digital literacy, this strand of research could build on my study to approach digital literacy more comprehensively as also including critical skills and knowledge about the internet. Recent work on digital inequalities has emphasized that, "if we want to avoid larger inequalities" (Helsper & Smirnova, 2019, p. 180), we need policy interventions to ensure that youths from lower socio-economic backgrounds learn not just technical but also critical digital skills. To push this promising line of enquiry forward, research within this tradition could explore whether and how the functional and critical digital skills and knowledge conceptualized here intersect within different vulnerable communities. As to whether and how these communities develop digital literacy, research on digital inequalities could draw on this study to address whether and how social interaction and experience of using digital technologies, which are valued within this tradition (e.g., Dutton & Shepherd, 2006; Eynon & Geniets, 2016; Ferro et al., 2011; Helsper, 2017), play a role in the informal learning of digital literacy within civic life. Finally, given the findings of this study, this strand of research should examine more closely whether and how users' negative interpretations of the internet intersect with their positive interpretations in ways that do not necessarily, as largely concluded by this body of work (e.g., Cushman & Klecun, 2006; Hakkarainen, 2012; Park, 2014; Reisdorf & Groselj, 2017), undermine their online engagement, but actually contribute to it. In so

doing, research on digital inequalities should build on this study as well as on recent research within this tradition (e.g., van Deursen & Helsper, 2018) to problematize the idea that limited engagement online is intrinsically problematic.

8.3.2 Educational research inspired by social psychology

As with research on digital inequalities, the strand of this tradition that has been more interested in functional digital literacy, particularly among children (e.g., Cazan et al., 2016; Dündar & Akçayır, 2014; Meelissen & Drent, 2008; Oliemat et al., 2018), should pay more attention to their knowledge of digital affordances and whether and how this intersects with their digital skills and dispositions towards the internet. Besides drawing on the present study, this strand could build on research on e-learning which, sitting between the New Literacy Studies and research on human-computer interaction, has focused on children's understanding of the materiality of digital technologies in relation, for instance, to digital reading and writing (e.g., Bhatt & de Roock, 2013). Furthermore, while this strand has polarized children's dispositions as beneficial or detrimental to their online engagement, with emphasis on age and gender as explaining factors, we need more research on whether and how children deploy both positive and negative interpretations of the internet when using it for learning, socializing and entertainment. Recent studies within this strand suggest that students tend to have more positive than negative dispositions towards the internet, perpetuating the idea that the latter undermine their willingness to use it (e.g., Des Armier & Bolliger, 2019; Schlebusch, 2018). By contrast, future research should address whether and to what extent children engage online as a result of understanding the internet in both positive and negative terms. This line of inquiry may be beneficial for exploring whether and how they know how to navigate both online risks and online opportunities.

The strand of this tradition that has prioritized children's critical over their functional digital literacy (e.g., Ashley et al., 2017; Duran et al., 2008; Kahne et al., 2012; Martens & Hobbs, 2015) could build on this study's approach to critical digital literacy as

incorporating not just the ability to evaluate online content but also knowledge about the broader digital environment. This strand, furthermore, should explore whether and how functional skills and knowledge about the internet enhance such ability, as was found here. This question is still under-researched, considering recent developments within this tradition (e.g., Bonnet & Rosenbaum, 2020). In addition, while this strand has examined whether students learn media literacy within formal educational settings in ways that facilitate their civic engagement (e.g., Ashley et al., 2017; Kahne et al., 2012; Martens & Hobbs, 2015), future research could draw on this study to interrogate whether civic engagement, in turn, provides formal and informal learning opportunities for developing digital literacy. Finally, we need more research within this tradition in order to corroborate whether media literacy leads to scepticism about traditional media outlets, as suggested by Mihailidis (2009), or, as argued here, actually facilitates civic engagement by enhancing trust in these. Recent work within this strand of research points to the latter conclusion, having found that internet users "with higher […news literacy tend to seek] news from … trusted sources" (Vraga & Tully, 2019, p. 11). Indeed, as argued by Friesem (2018), teaching students about media bias does not mean teaching that there is no truth or that any form of authority should be rejected.

8.3.3 Research inspired by critical pedagogy and cultural studies

This tradition has often subordinated functional to critical digital literacy, focusing predominantly on children (e.g., Buckingham, 2007a). Given its interest in users' alternative media production in response to dominant media representations (e.g., Feria-Galicia, 2011; Kellner & Share, 2007), research within this tradition could draw on my study to explore whether and how this practice is underpinned by both critical and functional skills and knowledge about the internet, with emphasis on how functional digital literacy enhances critical digital literacy. This line of inquiry should be pursued in relation to how users evaluate online content as well as how they understand the broader digital environment. Recent research inspired by critical pedagogy has argued that the concept of *critical media literacy* needs to be expanded

to incorporate not just knowledge about how online platforms operate but also an understanding of how they function, particularly in relation to "the affordances and constraints of […their] algorithms" (Jiang & Vetter, 2020, p. 89). This kind of research is promising and resonates with work on data literacy within this tradition (e.g., Pangrazio & Selwyn, 2019).

As to how users develop digital literacy, besides focusing on formal education (e.g., Dierdre, 2000; Kellner & Share, 2007; Morrell et al., 2013), this strand of research should focus more closely on informal learning not just in general, as, exceptionally, Buckingham has done (2003, 2007b), but also, more specifically, in the context of their civic engagement. Recent developments inspired by critical pedagogy have continued to prioritize formal education (e.g., Moorhouse & Brooks, 2020), which invites future research to fill this gap. In addition, this study's novel approach to critical digital literacy as incorporating utopian thinking may be particularly valuable to this tradition. Building on the contribution of a few studies that have framed users' critique as including knowledge about the digital environment (e.g., Buckingham, 2007a; Fry, 2014), such an approach would enable future research to disentangle how users' imaginaries of the internet are blended with imaginaries of civic life. Possible questions to address include whether and to what extent they deploy an understanding of the internet's potentials and limitations in order to participate in civic life in ways that intersect with different visions of social change. In line with recent critiques of critical pedagogy as restrictively imposing progressive values (e.g., Brayton & Casey, 2019), social change would need to be understood in ways that go beyond left-wing politics. Indeed, this strand of research could draw on my conceptualization of critical digital literacy to resist the collapse of users' critique into action viewed as inherently progressive, suggesting that critical digital literacy can intersect with different ideologies.

8.3.4 Research inspired by the New Literacy Studies

Except for research at the intersection of critical pedagogy and the New Literacy Studies (e.g., Black, 2009; Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016; Mihailidis & Cohen, 2013), the latter has generally overemphasized users' multimodal production over their critical reflections, particularly in relation to children (e.g., Bulfin & North, 2007; Hartley et al., 2008; Jewitt, 2008). Recent developments within this tradition signal that this is still the case, with studies focusing on how children deploy knowledge of digital affordances primarily as a functional practice to create multimodal content (e.g., B. Zheng, Yim, & Warschauer, 2018), as opposed to research that is interested in how this practice enables children to develop and express their critical voices (e.g., Cannon, Potter, & Burn, 2018). To overcome this distinction, this strand of research could draw on the conceptualization here of digital literacy as both functional and critical in order to address more coherently whether and how children's creative engagement online is underpinned by functional skills and knowledge about the internet in synergy with critical reflections on online content and on the digital environment. This tradition, furthermore, could build on my study to explore not just whether and how young activists learn digital literacy informally through social interaction and experience using digital technologies within online communities, as addressed by Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al. (2016), but also whether and how they gain digital skills and knowledge through information seeking.

More research is needed, furthermore, on whether and how social interaction can be negative for learning digital literacy. Future research within this tradition could address, for instance, whether and how users' negative interactions within online communities, including, for instance, the exchange of negative comments, shape how the members of such communities develop and share functional and/or critical skills and knowledge about the internet. Recent work within this strand of research is promising, having examined how children with autism, when playing online games, engage in digital literacy practices in ways that are underpinned by both positive and negative interactions with other players (i.e. Stone, Mills, & Saggers, 2019). Finally, as explained in Chapter 2, this thesis builds on a few studies inspired by the New Literacy Studies and by critical pedagogy, according to which digital literacy should be based

on civic imagination (e.g., Jenkins, Shresthova, Gamber-Thompson, & Zimmerman, 2016; Mihailidis, 2018). As a result, my approach to critical digital literacy as incorporating utopianism/dystopianism may be particularly valuable to future research within this tradition. Such an approach would encourage this strand of research to distinguish between users' imaginaries of the internet and their imaginaries of civic life, without imposing the expectation that their engagement will necessarily be progressive. In addition, instead of polarizing their positive or negative interpretations of the internet as leading, respectively, to increased or decreased activism (e.g., Shresthova, 2016a), such an approach would serve as a lens through which to explore whether and how their interpretations intersect in ways that may be beneficial to their civic engagement.

8.3.5 Information science and librarianship studies

Inasmuch as a few studies within this tradition have argued that the ability to evaluate online content relies on information-navigation skills and on the practice of using multiple sources (e.g., Goad, 2002; Weiner, 2011), this body of work could draw on my study to interrogate how functional digital literacy intersects with and enhances such an ability. Amid concerns about the spread of online misinformation, recent work within this strand of research has argued that it is important for users not only to compare and contrast information across multiple sources but also to understand how the algorithms of online platforms shape their exposure to information, considering the implications of the filter bubble for making informed decisions (e.g., Cooke, 2018). This kind of work builds on previous research within this tradition, including studies that have, exceptionally, approached notions and variants of information literacy as incorporating an understanding of the wider socio-political, economic, ethical and legal context within which information circulates in the digital age (e.g., Gregory & Higgins, 2013; Johnson et al., 2012; Secker & Morrison, 2016; Spratt & Agosto, 2017). To expand this line of inquiry, future research within this tradition could use the conceptualization here of digital literacy to explore how different populations, including students, educators and librarians, evaluate online content and understand

the digital environment, with emphasis on how their critical skills and knowledge about the internet are intertwined with their functional digital literacy. Based on some of the findings of this thesis, possible empirical questions for future research include: to what extent is the practice of using different search engines and multiple sources shaped by knowledge about internet corporations, including privacy concerns about how they operate? And to what extent does users' understanding of the filter bubble shape their ability to diversify their exposure to information?

As to how users learn digital literacy, this tradition could find my study beneficial for examining the role of information seeking not just in learning in general, as addressed by Limberg and Alexandersson (2009), but also in gaining, more specifically, knowledge about the digital environment. Research with this tradition, furthermore, could build on this thesis in synergy with previous studies (e.g., Harding, 2008; McDonald, 2015; Widdowson & Smart, 2015) to address whether public libraries are equipped to provide both formal and informal training for different adult populations in ways that enable them to develop digital literacy, as conceptualized here. An empirical question for future research is whether and how public libraries constitute spaces where users can formally and informally develop not just functional and/or critical skills about the internet but also imaginaries of its potentials and limitations in ways that intersect with their imaginaries of civic life. Relatedly, what role do librarians play in the construction of such imaginaries? This question speaks closely to a long-standing debate within this tradition, which has to do with whether public librarians should perform their professions and promote information literacy, given its importance for democracy, by taking a political stance, or whether neutrality, by contrast, is an endorsement of the *status quo* (e.g., Foskett, 1962; Stilwell, 2018). Finally, research at the intersection of information science and critical pedagogy would benefit from this study's approach to critical digital literacy to problematize the assumption that *critical information literacy*, as understood within this strand of research (e.g., Elmborg, 2006; Gregory & Higgins, 2013; Jacobs & Berg, 2011), should necessarily be underpinned by progressive values, with little attention to different ideologies.

8.3.6 Research on human-computer interaction

This tradition has focused primarily on the usability of digital technologies, placing emphasis on users' digital skills, knowledge of digital affordances and, to a lesser extent, dispositions towards the internet (e.g., Feufel & Stahl, 2012; Hayes et al., 2016; Joyce & Kirakowski, 2015; Railean, 2017; Zhao et al., 2013). This study may be particularly valuable to this body of work with a view to problematizing the idea that users deploy their dispositions in ways that are either positive or negative for their online engagement. The way this tradition is progressing suggests that such an idea is still prevalent, with research approaching users' negative interpretations of the internet – in relation, for instance, to finding information or to financial safety – as an intrinsic deterrent to their online engagement (e.g., Steelman & Tislar, 2019). By contrast, similarly to research on digital inequalities and educational research inspired by social psychology, future research within this tradition should draw on this study to address whether and how users deploy both positive and negative interpretations of the internet in ways that enable them to pursue online opportunities.

Insofar as research on e-learning within this tradition has focused on how students evaluate online content by using multiple sources (e.g., Damico & Baildon, 2007), this strand of research could build on my thesis to interrogate also whether and how they assess the trustworthiness of content by relying on functional digital literacy as well as on knowledge about the digital environment. Recent work within this tradition is promising, having found that users' perceptions of the trustworthiness of information on social media is positively associated with positive dispositions towards the usefulness of social media, which predict their online engagement (i.e. Rauniar, Rawski, Salazar, & Hudson, 2019). This kind of work represents a step forward. But future research should address whether and how users' perceptions of the trustworthiness of information are explained by interpretations not just of the usefulness of social media but also of how the latter function and operate as corporations. This tradition, furthermore, could find the present study valuable for exploring whether and how social interaction and experiential learning, based on

interacting with digital technologies, are beneficial for developing digital literacy not just within formal educational settings, as researched by a few studies (e.g., Angros et al., 2002; Bhatt & de Roock, 2013; Nunes et al., 2015; Yantaç, 2013), but also beyond classroom and training settings, while also paying more attention to its critical dimension. Finally, future research on human-computer interaction should focus on civic engagement and explore whether and how digital literacy, as conceptualized here, depends on the usability of digital technologies. Possible questions to address include: in what ways, if any, does the usability of digital technologies shape how users construct their imaginaries of the internet and civic life? And to what extent do their imaginaries shape their understanding of usability?

8.3.7 Policy research on media literacy

This body of work has perpetuated an understanding of digital literacy and media literacy as respectively functional and critical, promoting the latter against policies that prioritize the development of digital skills for improving the economy as opposed to participation in society (e.g., Frau-Meigs et al., 2017a). This tradition could draw on my study to problematize such an understanding and explore the intersection of functional and critical digital literacy, focusing on how to promote the latter as relying on functional skills and knowledge about the internet. Mapping exercises should be conducted to shed light on whether and to what extent national and international digital literacy initiatives are effective at promoting both functional and critical digital skills and knowledge. In the UK, a mapping exercise commissioned by the Department for Digital, Culture, Media and Sport (DCMS) is currently under way to assess the effectiveness of digital literacy initiatives across the country (UK Government, 2019b). Future policy research in the UK should build on the outcomes of this exercise, in concert with this study, to inform policy decisions on how to promote digital literacy as incorporating both functional and critical dimensions, focusing on how these intersect.

Relatedly, more efforts should be made, both within and beyond the UK, to establish a unified framework that does not polarize functional and critical digital literacy, as happens across Europe, respectively, in ministries of economics and telecommunications, on the one hand, and in ministries of education, on the other (Frau-Meigs et al., 2017a). Concerted efforts are necessary, rather, from different actors including researchers, civic society and different government departments, to promote digital literacy as both functional and critical. Expanding on a few studies within this tradition (e.g., del Mar Grandío et al., 2017; Livingstone, 2011), more research is needed, furthermore, on the potential of media activism and news reporting to promote awareness of the media, as argued here. Finally, while policy research on media literacy has largely focused on the training of media educators provided by civil society organizations (e.g., Kanižaj, 2017; McDougall et al., 2017), this body of work should build on this study to explore whether and to what extent different campaigning organizations promote digital literacy by providing training for different adult populations, including activists.

8.3.8 Beyond media literacy research

This study invites research to explore how experts develop and deploy their expertise beyond their own professional context, with emphasis on their civic engagement, which has remained under-researched (e.g., Buckingham, 2014; Burnett, 2009; Dewdney & Ride, 2006; Stocchetti & Kukkonen, 2011). An assessment of recent work on information, IT and media professionals suggests that this is still the case (e.g., Ihlebæk & Larsson, 2018; Semeler, Pinto, & Rozados, 2019; Wingreen & Blanton, 2018). In addition, when it comes to citizens and advocates, from political campaigners and party candidates to activists, the present thesis invites political research to engage with notions of media literacy. This body of work includes studies on citizens' participation in institutional politics as well as media research on activism and social movements. As reviewed in Chapter 3, the latter, despite under-researching media literacy theory, has offered valuable insights into how activists develop knowledge about the media ecosystem through their own experience of civic life (e.g.,

McCurdy, 2011; Treré, 2012). This strand of research, furthermore, has examined how activists deploy digital skills and knowledge in order to adapt strategically to such an ecosystem, being conscious of its potentials and limitations (e.g., Cammaerts, 2012; McCurdy, 2011; Rucht, 2004; Treré, 2015).

Recent developments within political research include studies that have continued to pay little attention to media literacy theory, despite their interest in how citizens and activists draw on their digital skills or understanding of internet corporations to participate in civic life (e.g., Barassi & Zamponi, 2020; Bastien, Koop, Small, Giasson, & Jansen, 2020). Future research on citizens' participation in formal politics should build on this thesis in ways that resonate with media research on social movements to problematize the idea that their positive or negative interpretations of the internet lead necessarily to online engagement or disengagement, respectively. Beyond the studies reviewed in Chapter 3 (i.e. Gustafsson, 2012; B. J. Kim et al., 2011), such an idea has been pushed forward by recent political research (i.e. Sipos, 2018). This thesis, however, shows otherwise, inviting further research. On the one hand, it conceptualizes critical digital literacy as incorporating utopian thinking by building on a few studies on how activists construct digital utopianism (e.g., Postill, 2013; Treré, 2019). On the other hand, in accordance with media studies on social movements (e.g., Cammaerts, 2012; McCurdy, 2011; Rucht, 2004; Treré, 2015), it suggests that critical digital literacy is essential for using the internet strategically within civic life, provided this is based on an understanding of both its potentials and its limitations. Political research should draw on the present study to explore how different populations deploy digital literacy within civic life, and whether and how their digital literacy intersects with civic literacy. Finally, this strand of research should build on recent work grounded in this thesis (i.e., Polizzi, 2020b) to address whether and how digital literacy benefits different democratic variants, thereby further exploring what kinds of digital skills and knowledge citizens need, depending on how we understand democracy.

8.4 Practical Implications

Besides having implications for theory and research, this study has practical implications, particularly for how to promote digital literacy. It provides evidence of how digital literacy facilitates civic engagement, which makes it imperative to promote digital literacy in ways that can reach the general public. As discussed in Chapter 1, because of concerns about the spread of misinformation during the 2016 US general election and the Brexit referendum, policymakers in the UK have been keen to promote digital literacy. In 2019, the UK Government (2019b) issued a white paper on how to tackle online harms, including misinformation. One of its objectives is to develop a media literacy strategy that can reach the British population and ensure that citizens are equipped with the skills and knowledge they need to navigate the digital environment safely and critically.

First, on the basis of how experts and advocates engage in civic life, this study has shed light on how civic engagement, understood as involvement in community and political life, can be beneficial for learning digital literacy both formally and informally. This means that we can promote adults' digital literacy through their civic practices. At the same time, inasmuch as we live in societies where not everyone is civically active, this study invites policy interventions reflecting on how to promote civic engagement and civic literacy in tandem with digital literacy. One way of doing this is by relying on traditional media to educate the general public, not just through educational initiatives or public campaigns but also through news coverage, when this relates to the digital environment. This study found that reading news stories about the Cambridge Analytica scandal had been an opportunity for many experts and advocates to refine their understanding of current affairs and of how internet corporations operate. Arguably, this is likely to have been the case for other segments of society, beyond experts and advocates, as long as they were keeping abreast of news. As a result, this finding raises the question of whether we need to ensure that more coverage of the internet, its political economy and role in civic life is available to the public, besides reporting on scandals like Cambridge Analytica. We need research into how extensively news outlets like the BBC have covered over the years how social

media like Facebook and Twitter run their platforms, with emphasis on their business models. Expecting these outlets to intensify their coverage of this subject may require them to adjust their news agendas. To facilitate this process, journalists' unions and professional bodies should support newsrooms with guidelines and advice on the importance of covering this subject for the general public.

In addition, we need to think more deeply about how we can promote digital literacy by proving opportunities for digital training within civil society that can reach different segments of society beyond primarily media educators. This thesis argues that campaigning organizations have the potential to enable activists to develop civic literacy in tandem with functional and critical digital literacy through training in digital campaigning. This finding, however, did not emerge prominently, which raises questions about the extent to which this kind of training is prevalent within civil society. A few years ago, DCMS (2018) launched a temporary fund to support the digital training of civil society practitioners in the UK. Similarly, the Ministry of Housing, Communities and Local Government (2018) set up a temporary fund to offer digital training to councils across the UK. While research is needed into the effectiveness of these kinds of initiatives, what this study found suggests that it may be reasonable to incentivize them by making such funding permanent.

Finally, this thesis has implications for formal education. Despite its focus on two adult populations, i.e., experts and advocates, this study has identified what functional and critical skills and knowledge are necessary for using digital technologies, and how these intersect, which has implications for how we should expect national curricula and teaching resources to promote digital literacy. As argued earlier in the thesis, reaching children is relatively easier, thanks to the education system, than reaching adults. However, the extent to which children are equipped with the skills and knowledge they need to use digital technologies is doubtful. According to the National Literacy Trust (2018), only 2% of children in the UK showed that they know how to spot false information online by answering correctly all the questions in a quiz about misinformation, with only 28% answering at least four out of six questions correctly. We know from Ofcom (2019b), furthermore, that half of 12- to 15-year-olds find it

hard to tell whether stories on social media are true. More than four out of ten believe that social media provide trustworthy news. And three out of ten aged 8-15 think that "if a website is listed by a search engine it can be trusted" (Ofcom, 2019b, pp. 10–11). I have proposed elsewhere (e.g., Polizzi & Taylor, 2019) that digital literacy should be taught across the school curriculum to ensure that subjects like Computing and Citizenship promote, respectively, practical digital skills and knowledge about the digital environment, with emphasis on how these skills and knowledge should be deployed to evaluate online content. The novel approach of this thesis to digital literacy aligns with this proposition. Some of the findings presented here, furthermore, have informed my recent work on how to draw on the skills and knowledge of experts, in particular, with a view to promoting – via the national curriculum for England – digital literacy as both functional and critical (Polizzi, 2020a).

Recently, after the submission of this thesis, the UK House of Lords Select Committee on Democracy and Digital Technologies (2020) published a report on the spread of misinformation online and the importance of revising the school curriculum. Promisingly, and in ways that resonate with how digital literacy is understood here, the report states that:

> "Digital media literacy" … go[es] beyond, but do[es] include, the functional skills required to use technology. We define digital media literacy as being able to distinguish fact from fiction, including misinformation, understand how digital platforms work, as well as how to exercise one's voice and influence decision makers in a digital context. (p. 108)

Considering the contribution of this thesis, it is essential that digital literacy is promoted in the UK by building on the statement above as well as on the proposition of the Select Committee that "the Department for Education should review the school curriculum to ensure that pupils are equipped with all the skills needed in a modern digital world" (p. 119).

8.5 Reflecting on My Next Steps as a Researcher

While the sections above lay out recommendations in terms of future directions for media literacy research and practice, as well as for political research, in this section I reflect on the ways in which working on this thesis has enabled me to grow, and to position myself, as a researcher. This study was approached with the intention of mapping out different literatures in order to identify how, and with what gaps and limitations, these have researched digital literacy and its intersection with civic engagement. Such a mapping exercise was fruitful not only for making sense of a field that is both vast and messy, but also for positioning myself as a researcher, since I had never researched digital literacy before. More specifically, it is through the process of engaging critically with the media literacy field as well as with political research that I have developed an understanding of where I position myself academically and in terms of future research.

Working on this project has enabled me to realize the extent to which I am interested in the intersection of media and education research and practice. This is best captured by an academic article that I wrote while working on – and drawing on some of the findings of – this thesis (Polizzi, 2020a). Considering how the experts interviewed engage with and evaluate online content, this article, as mentioned earlier, explores what digital literacy consists of and, accordingly, how to ensure that it is embedded within the national curriculum for England. While this thesis has implications for different academic communities, I value my work on digital literacy particularly in relation to the critical pedagogy and New Literacy Studies traditions. The idea of researching and promoting digital literacy as both functional and critical is relevant to the focus on users' critique and creativity that characterizes some of the research on formal and informal learning within these traditions (e.g., Cannot et al., 2018; Jenkins, Shresthova, Gamber-Thompson, Kligler-Vilenchik, et al., 2016). At the same time, my conceptualization of critical digital literacy as incorporating utopianism/dystopianism not only builds on a few studies inspired by critical pedagogy and by the New Literacy Studies (e.g., Mihailidis, 2018), but also invites future researchers within these

traditions to research and promote digital literacy in ways that can align not only with progressive but also with other ideologies.

It is in the context of these traditions that I would be eager to research in the future whether and how different populations – and especially children, who are the pioneers of, and most vulnerable in, the digital age – develop and deploy digital literacy, as conceptualized here, within formal and/or informal learning environments. Furthermore, a line of inquiry that I wish to pursue concerns whether and how digital literacy intersects with digital resilience, which, as defined earlier in the thesis, refers to the ability to cope with and react to negative experiences online. Potential research questions to address include: what kind of digital skills and knowledge do children need in order to be able to deploy such an ability? Relatedly, what should policymakers and educationalists do in order to equip children with the skills and knowledge they need in order to become digitally resilient?

Finally, another line of inquiry concerns whether and how both digital literacy and digital resilience intersect with digital citizenship. The latter is a concept that is contested between those, on the one hand, who understand it to be the responsible use of digital technologies (e.g., Ribble, 2007) and those, on the other, who frame it primarily as active participation in civic life (e.g., Emejulu & McGregor, 2019). Taking a more comprehensive approach, I would frame digital citizenship as relying on the expectation that users' online behaviour should be guided not only by moral and civic virtues such as respect for others and altruism, but also by a commitment to actively participating in society in ways that are mediated by digital technologies. Such an approach has implications for the roles of character and of civic education in the digital age. Possible research questions include: what is the place of digital citizenship in the school curriculum? To what extent do children deploy moral and civic values in synergy with digital skills and knowledge in order to participate in civic life? In what ways, if any, do children develop digital resilience within formal and/or informal learning environments, and in ways that enable them to thrive as citizens of the digital age?

8.6 Limitations

This section begins with the challenges and limitations of this study, as discussed in Chapter 4, and goes on to reflect more generally, in the light of its findings, about what limits this thesis both conceptually and methodologically.

The qualitative nature of this study comes with intrinsic weaknesses, from the inability to make numerical claims about experts and advocates as different populations to the risk of overinterpreting the data. As discussed earlier, my background as a non-native English speaker lacking professional expertise with digital technologies and activism was used to my advantage to encourage the participants to clarify their responses. Nevertheless, as acknowledged in Chapter 4, not only did the use of video equipment make data collection and analysis particularly labour intensive, but it was also challenging to ensure that the participants would commit to writing their diaries. Finally, this thesis is limited by the choice of focusing empirically on experts and advocates, two social categories that in the UK are predominantly middle-class. While these categories are conceptually ideal for exploring the intersection of digital literacy and civic engagement, they are quite homogenous in terms of educational level and socio-economic status, which casts some doubt on the applicability of this study's findings to different segments of society.

This thesis has shed light on how civic engagement can provide opportunities for learning digital literacy. But to promote digital literacy through civic engagement is intrinsically exclusionary, as not everyone is civically active. And while advocates were recruited from across the Left-Right political spectrum, the decision not to recruit participants holding extremist views rooted in sentiments of violence or discrimination has had repercussions for what the study has achieved. I have argued that digital literacy facilitates civic engagement and benefits democracy. As discussed in Chapter 6, this argument, however, is limited to the UK context, where fieldwork was conducted. Recent research in India has found that functional digital literacy enables users to spread misinformation, fuelling, in turn, extremism and violence, including

public lynchings (Banaji & Bhat, 2019). This thesis offers theoretical and analytical tools for exploring how digital literacy intersects with different ideologies in ways that potentially facilitate civic engagement, including, however concerning this may sound, civic action underpinned by extremist ideologies. Whether digital literacy benefits democracy even when deployed in the service of extremism is a question that goes beyond whether it facilitates civic engagement, as explored here. This question requires further investigation and can only be answered in ways that are dependent on how we understand democracy.

8.7 Conclusions

This thesis has explored the intersection of digital literacy and civic engagement. Based on how experts and advocates in the UK develop and deploy their digital skills and knowledge, it has addressed the questions of whether and how civic engagement provides opportunities for learning digital literacy and whether and how the latter, in turn, facilitates civic engagement. To answer these questions, semi-structured interviews were conducted with experts and advocates in the UK, enhanced by think aloud and diary methods. Afterwards, the data collected was subjected primarily to thematic analysis, drawing on elements of critical discourse analysis.

My study found that digital literacy relies on functional and critical digital skills and knowledge, focusing on how they intersect. These include digital skills, knowledge of digital affordances and dispositions towards the internet as well as the ability to evaluate online content, knowledge of the political economy of the internet and, in line with the theoretical contribution of this thesis, utopian/dystopian imaginaries of society in the digital age. What emerged from fieldwork suggests that advanced critical digital literacy requires functional digital literacy, which problematizes media literacy research that has under-explored their relationship and placed the latter in a marginal position.

When it comes to how experts and advocates develop digital literacy in the context of their civic engagement, this study found that, while there are gaps and differences in their digital skills and knowledge, social interaction, information seeking and experience of using digital technologies are particularly valuable for their informal learning of digital literacy. In addition, campaigning organizations have the potential to provide formal training opportunities that are beneficial for promoting digital literacy, reaching different segments of the adult population including, first and foremost, activists. The implications of these findings have been discussed in the context of different literatures, focusing, for instance, on the New Literacy Studies and its emphasis on informal learning as well as on how to reach adults beyond media educators via digital training within civil society, which has remained under-explored within policy research on media literacy.

This study found that digital literacy, in turn, facilitates civic engagement. Albeit in different ways, advocates' and experts' functional digital literacy makes their civic engagement instrumental insofar as it is based on using digital technologies as practical tools. Their critical digital literacy, often together with functional digital literacy, facilitates their civic engagement by enhancing their trust in accredited media outlets while overcoming distrust in internet corporations. Having both functional and critical digital literacy, furthermore, makes their civic engagement strategic in overcoming bias and misinformation as well as their own privacy concerns about the corporate nature of their data. Finally, based on how they deploy their imaginaries of the internet, it makes their civic engagement strategic in navigating the internet's civic potentials and limitations.

More specifically, on the basis of how experts and advocates understand the digital environment and engage in different ways in civic life, this study found that constructing both utopian and dystopian imaginaries of the internet, but deploying only one or the other, is symptomatic of a lack of critical digital literacy, which makes civic engagement contradictory. By contrast, deploying both utopian and dystopian imaginaries is crucial to maximizing the internet's potentials, including its advantages for campaigning and organizing action, while minimizing its limitations in relation, for

example, to the filter bubble and to internet surveillance. The implications of these findings have been discussed in relation to different traditions of media literacy research as well as to political research. Relatedly, the idea of strategic engagement, as advanced here, has been presented as bridging media literacy research with media studies on social movements.

This study has argued that approaching critical digital literacy as incorporating utopianism/dystopianism, as theorized here, enables us to disentangle users' imaginaries of the internet from their imaginaries of civic life, which can align with different ideologies. Indeed, I found that experts' and advocates' critical digital literacy is constructed discursively in ways that intersect with different ideologies. This challenges research inspired by critical pedagogy, according to which users' critique will be inherently progressive. As prescribed by a dialectical approach to utopian thinking, critical digital literacy requires users to understand both the potentials and the limitations that the internet presents for civic life. This finding problematizes a large body of media literacy research as well as a few studies within political research that have polarized users' positive or negative interpretations of the internet as respectively crucial or detrimental to their online engagement. By contrast, this study has argued that understanding the internet's limitations for civic life is crucial to pursuing civic opportunities online, provided such an understanding is coupled with an understanding of its potentials.

As argued at the beginning of this thesis, we live in an age where the representative character of liberal democracy is affected by a deficit in citizens' participation and by their distrust in formal politics. On the one hand, the internet offers considerable opportunities for revitalizing democracy, contributing to both institutional and non-institutional forms of civic engagement. On the other hand, it poses challenges to the political process and to how citizens engage in civic life, from facilitating misinformation and data misuse to contributing to polarization and surveillance. Expecting the public to gain digital literacy should not be the only solution for societies facing these challenges, which is why the possibility of regulating internet corporations is another avenue to explore. But, as this thesis shows, such an

expectation is certainly worth pursuing. Not only can civic engagement provide considerable opportunities for learning how to use digital technologies both practically and critically for civic purposes, but digital literacy also contributes to civic engagement, which is a crucial condition for democracy, however differently the latter may be understood. In order for users to take up civic opportunities online, we should expect them to deploy both functional and critical skills and knowledge about the internet, including an understanding of both its potentials and its limitations for civic life. This thesis has shown that utopian thinking not only represents a useful lens through which to examine the implications of the internet, but is also a powerful force that can be deployed in different ways, and in concert with different ideologies, to enable participation in society.

In terms of future research, section 8.3 has offered specific recommendations for different literatures, including the different traditions of media literacy research and political research. As a whole, media literacy research should build on this study to approach digital literacy as both functional and critical, with emphasis on users' critique of the digital environment. Relatedly, it should draw on this study to approach critical digital literacy as incorporating utopianism/dystopianism. This applies to research cutting across different traditions and epistemologies, focusing not just on civic life but also on different social domains. More specifically, media literacy research is needed within different contexts with a view to exploring how different populations beyond experts and advocates develop and deploy digital literacy, as understood here. Quantitative research should be conducted to measure the extent to which users construct utopian/dystopian imaginaries of society in the digital age in ways that correlate with their online engagement. In order to do this, new measures and survey items should first be created and tested. Qualitative research, furthermore, is needed in order to explore how different populations construct, develop and deploy their utopian imaginaries as part of contextually situated practices.

In the field of education, media literacy research is needed within different countries so as to explore whether and to what extent digital literacy, as conceptualized in this

thesis, is promoted via school curricula and teaching resources. In addition, besides media literacy research, political research should draw on this study to engage with notions of digital literacy. We need further research on how civic literacy intersects with digital literacy. And we need more research on how the digital skills and knowledge required in order to participate in democracy vary depending on how the latter is normatively understood. Research could build on this study to interrogate civic engagement, both institutional and non-institutional in character, mapping its intersection with digital literacy and different assumptions of democracy. Alternatively, a case study methodology could be employed, based on case studies that exemplify different democratic variants. Finally, this study invites new intellectual directions not just for media literacy research and political research but also for utopian studies. Insofar as it suggests that understanding the digital environment is crucial to reimaging society in the digital age through utopian thinking, this thesis advances the idea that critiquing the internet is crucial to participation in society in the digital age, regardless of whether social change requires participation in formal politics or practices of resistance. This kind of critique relies on imagining potentialities in synergy with realism, and regardless of the ideological direction of one's utopianism.

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Appendices

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE ■

Gianfranco Polizzi
London School of Economics and Political Science
Department of Media and Communications
G.Polizzi@lse.ac.uk

Information for participants

Thank you for agreeing to take part in my research!

This leaflet tells you about my research and provides you with my contact information.

Who am I and what is my project about?
I am a PhD researcher in the Department of Media and Communications at the London School of Economics and Political Science (LSE).
I am conducting doctoral research that seeks to understand how people use and think about the internet and digital media, in general and in relation to civic/political engagement. I am specifically focusing on two social categories:

- individuals whose professions revolve around information and media technologies
- individuals involved in formal politics and/or advocacy/pressure/community groups

Who is funding my research?
My research is funded by the Economic and Social Research Council (ESRC).

Who will be taking part in the project?
I am inviting individuals whose professions revolve around information and media technologies and individuals involved in various social and political causes from across London and beyond. I plan to conduct interviews with a wide range of people on the basis of age, ethnicity, background, interests and media use.

What will happen during the research?
I will be delighted to arrange two interviews with you. These could be at your work, home or at a convenient location. The second interview will take place 2-4 weeks after the first. Please bring along any of your digital communication devices (e.g., laptop, tablet, mobile phone) to both interviews. I hope you will show me during the interviews how you engage online, while we discuss your use and your views of the internet and digital media. Between the first and second interviews I will ask you to write weekly diaries about how you have engaged civically or politically. The interviews will be audio-recorded and last around one hour each. For part of each interview I would like to video how you use your device and will ask you to wear a subcam mounted on a pair of glasses, which I will provide you with.

Do you have to take part?
You are free to leave the research at any point. You are also free not to answer specific questions. I will ask you to confirm that you are willing to take part and to be audio-/video-recorded by signing a consent form which I will provide you with.

How will you know what happens with the research?
I will let you know about the progress of my research. You can also contact me at any stage of the research. The results will be reported in academic publications. Research participants will always be kept anonymous.

Could there be problems for you if you take part?
No. I will make sure that everything you say to me is kept anonymous and confidential. I will change your name in publications based on this research. No identifiable information will be linked in any way to your name. If you disclose anything that suggests you are at real risk of harm, I will take advice from the appropriate authorities on whether I must disclose this information. I will tell you if I feel I need to do this.

I know that taking part in the research will take a fair amount of time and I want to say thank you for this. As a sign of appreciation, every participant will receive £50 after the second interview.

How will I store your information?
All recordings, diaries and interview transcripts will be kept on a secure computer server at the LSE. No information with identifiable details will be shared with anyone. Transcripts and diaries will be anonymized to remove identifiable information. Audio/video recordings will be destroyed by the end of the project. Anonymized/unidentifiable data such as interview transcripts will be archived, and made available for future research, on ReShare – the UK Data Service's online research data repository. All reports and publications of the research will be anonymized.

The project has been reviewed and approved by the LSE's Research Ethics Committee.

Please feel free to contact me at any time if you have any questions or if there is anything that you would like to add or clarify with respect to the interview/s, your diaries or your participation in the research.

Thank you

Gianfranco Polizzi: G.Polizzi@lse.ac.uk – 07393 387487
Department of Media and Communications, LSE
Houghton Street, London WC2A 2AE
0207 955 6490 (James Deeley, Research Manager)

Appendix 2: Consent Form

THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■

Gianfranco Polizzi (Researcher)
London School of Economics and Political Science
Department of Media and Communications
G.Polizzi@lse.ac.uk

Consent form

You are about to participate in a study looking at how people use and think about the internet and digital media in general and in relation to civic/political engagement. I am specifically focusing on:

- individuals whose professions revolve around information and media technologies
- individuals involved in formal politics and/or advocacy/pressure/community groups

To show that you understand the conditions under which you are participating in this research project please sign and complete the form below.

I was told what the research project is about and I have read the information sheet	☐ (please tick)
I have had the opportunity to ask questions	☐ (please tick)
I agree to be interviewed and for the interviews to be audio-recorded	☐ (please tick)
For part of each interview I agree to wear a subcam mounted on a pair of glasses to video how I use my digital communication device/s	☐ (please tick)
I understand that only the researcher, Gianfranco Polizzi, will have access to my audio/video recordings and identifying information. I also understand that my interview transcripts and diary entries, once anonymized and made unidentifiable, will be archived, and made available for future research, on ReShare – the UK Data Service's online research data repository	☐ (please tick)
I am aware that the findings of this study may be reported in future publications and conference presentations, and that identifying information, such as my name, will be anonymized	☐ (please tick)
I declare that I am participating voluntarily	☐ (please tick)

Name: _____

Signature: _____ **Date**: _____

Appendix 3: Topic Guide Used with Experts

"Information Communication Technologies"? Access, where? How important is it for you to use the internet? Why? Ever wanted to use it? **What do you do most frequently online?** What is the internet useful for in your life?
Where/how did you learn? Asked for help? Someone taught you anything? How comfortable about using ICTs? What do you find easy/difficult? What does it mean to be an information, digital expert in the digital age? (civic) responsibilities, challenges? First-hand experiences?

"Civic/political engagement"? How engaged in your life? In what ways? Important? Why? How does the internet fit? What do you do online? What is the internet useful for? *TA1: show me/talk me through your last online civic/political activity – Easy/difficult to do this? Any issues? How did you come around them? Benefits/limitations for society of using the internet to do this? Do the internet's technical features, its design or how it functions play a role? Any risks in how social media platforms and corporations running the internet are owned and operate? What made you realise this? Constraints – Can these issues be overcome? How? What should be done? Did any of these issues affect how you used the internet to do this? How did you deal with them? Was it important to deal with them? Why? How optimistic/pessimistic about 1) the internet and 2) the political system? What made you realise this? How did you develop these perspectives?*

Has the internet changed people's lives? What areas? Advantages/disadvantages? How safe is the internet (e.g. in terms of content appropriateness/financial security/privacy)?
Advantages/disadvantages of the internet's technical features, how it is designed, how it functions/operates?

In what ways would you imagine that using the internet may be relevant to or affect 1) democracy; 2) news production/consumption; 3) content consumption/creation; 4) elections/campaigns; 5) civil society; 6) government information gathering; 7) authoritarianism in the long run?
How optimistic/pessimistic about democracy and the political landscape in the UK and in the West? (In relation to how you engage), what is your vision of social change, if any? What kind of social change do you hope for or are you concerned about? Has this changed in the last few years? Where do you position the internet? If you were to imagine a better/worse society, what would it look like? How far/close are we?

Any challenges when consuming online content? Ever felt it may be subject to bias, prejudice, misrepresentation? How confident about assessing accuracy, trustworthiness? *TA2: show me/talk me through how you 1) consume news online – Easy/difficult? How do you get around issues? Benefits/limitations for society in using the internet to consume news? Any risks in how social media platforms and corporations running the internet are owned/operate? Constraints – Can these issues be overcome? How? What should be done? Do any of these issues affect how you do this? How do you deal with them? How do you assess veracity? Does familiarity with the internet's technical features come in handy? Is it important to deal with these issues? Why? How optimistic/pessimistic about 1) the internet and 2) the political system? How did you develop these perspectives? – or 2) perform any activity mentioned (use TA1 questions above)*

How familiar with who owns search engines, platforms and social media? How are they funded? BBC website? Does it matter? Why? Any risks in the ways social media platforms, browsers and corporations that run the internet are owned and operate? Need for regulation? What kind? Why? What made you realise this? How did you develop these perspectives?

Access, motivation
mobile phone, tablet etc.; home, work
Types of online engagement

FDL – technical, social, creative skills
(sending/receiving messages, using SNS, creating/posting content, finding information, using services online, managing privacy settings etc.) Differences in how men/women use digital media, in terms of abilities/expertise? First-hand experiences? Recognition of men's/women's digital skills/expertise? What should be done?

Civic/political engagement
(community, voluntarism, charity, fundraising, government services, news/information, reposting/*liking*/creating/sharing/commenting on content, contacting politicians/parties, (e)petition, boycotting, campaign/demonstration, alternative media, virtual sit-ins/email bombings, information about demonstrations) What does being a citizen mean to you? Is this reflected in how you engage in civic/political life? How confident about engaging? How familiar with civic/political matters and the political system in the UK and beyond? Is this knowledge important? Why? Is your voice as a citizen listened to? In what ways? By whom?

FDL – dispositions towards the internet
(escapism, connectivity, finding jobs, online shopping, privacy risks, financial security, identity theft). Any of these issues ever affected how you engage civically/politically? In what situation? How did you deal with them? Was it important to deal with them? Why?
FDL – understanding digital affordances
(digital interfaces, social media's (privacy) settings, character of networks, algorithm, a/synchronicity) How did you learn this? In what situation?
CDL – imaginaries of society in the digital age What made you say so? How optimistic/pessimistic? Do the internet's technical features, its design or how it functions play a role? Does the way in which the social media platforms and corporations that run the internet operate play a role? What made you realise this? Constraints – Can these issues be overcome? How? What should be done? Has any of these issues ever affected how you engage civically/politically? In what situation? How did you deal with them? Was it important to deal with them? Why? Is it useful to know this in relation to how you engage? How did you develop these perspectives? In what situation? Has interaction with family/friends/colleagues played a role?

CDL – evaluating online content
What do you need to know when consuming content? Target audience, construction techniques, points of view, omitted info? How did you learn? Do the internet's features/design/how it functions play a role? How about how social media/internet corporations operate? Does familiarity with how the internet functions and/or the role of corporations come in handy? In what ways? What do you do when confronted with biased/misrepresented content? Ever come across misinformation? Consume/produce alternative content or use alternative platforms? In what situation?

CDL – understanding socio-economic issues
(ownership, funding, advertising, economic surveillance, regulation – content, market, corporations, advertising) Any risks reinforced by the internet's features/design or how it functions? What kind of ads do you see on Facebook and/or Google and how do they know what you might like? Do you need to be logged in on Facebook for your activities on other websites to be tracked by Facebook? Familiar with Facebook Exchange/Pixel? Do you read T&C? Ever managed cookies, history, settings? Ever used DuckDuckGo, ad blockers? Familiar with how they work? Why is DuckDuckGo less invasive of privacy? Familiar with how Google's and Facebook's algorithms work? Cookies? Geolocation? Are Google's results the same for everyone? Any platforms that you value as more secure than others? Why?

Appendix 4: Topic Guide Used with Advocates

"Information Communication Technologies"? Access, where? How important is it for you to use the internet? Why? Ever wanted to use it? **What do you do most frequently online?** What is the internet useful for in your life?

"Civic/political engagement"? How engaged in your life? In what ways? Important? Why? How does the internet fit? What does it mean to be an activist in the digital age? (civic) responsibilities, challenges? First-hand experiences? What do you do online? What is the internet useful for? *TA1: show me/talk me through your last online civic/political activity – Easy/difficult to do this? Any issues? How did you get around them? Benefits/limitations for society of using the internet to do this? Do the internet's technical features, its design or how it functions play a role? Any risks in how the social media platforms and corporations that run the internet are owned and operate? What made you realise this? Constraints – can these issues be overcome? How? What should be done? Did any of these issues affect how you used the internet to do this? How did you deal with them? Was it important to deal with them? Why? How optimistic/pessimistic about 1) the internet and 2) the political system? What made you realise this? How did you develop these perspectives?*
Has the internet changed people's lives? What areas? Advantages/disadvantages? How safe is the internet (e.g. in terms of content appropriateness/financial security/privacy)?
Where/how did you learn? Asked for help? Someone taught you anything? How comfortable about using ICTs? What do you find easy/difficult? Differences in how men/women use digital media, in terms of abilities/expertise? First-hand experiences? Adequate recognition of men's/women's digital skills/expertise? What should be done?
Advantages/disadvantages of the internet's technical features, how it is designed, how it functions/operates?

In what ways would you imagine that using the internet may be relevant to or affect 1) democracy; 2) news production/consumption; 3) content consumption/creation; 4) elections/campaigns; 5) civil society; 6) government information gathering; 7) authoritarianism in the long run?
How optimistic/pessimistic about democracy and the political landscape in the UK and in the West? (In relation to how you /your organization engage), what is your vision of social change, if any? What kind of social change do you hope for or are you concerned about? Has this changed in the last few years? Where do you position the internet? If you were to imagine a better/worse society, what would it look like? How far/close are we?
Any challenges when consuming online content? Ever felt it may be subject to bias, prejudice, misrepresentation? How confident about assessing accuracy, trustworthiness? *TA2: show me/talk me through how you 1) consume news online – Easy/difficult? How do you come around issues? Benefits/limitations for society in using the internet to consume news? Any risks in how social media platforms and corporations running the internet are owned and operate? Constraints – Can these issues be overcome? How? What should be done? Do any of these issues affect how you do this? How do you deal with them? How do you assess veracity? Does familiarity with the internet's technical features come in handy? Is it important to deal with these issues? Why? How optimistic/pessimistic about 1) the internet and 2) the political system? How did you develop these perspectives? – or 2) perform any activity mentioned (see TA1 questions above)*
How familiar with who owns search engines, platforms and social media? How are they funded? BBC website? Does it matter? Why? Any risks in the ways social media platforms, browsers and corporations that run the internet are owned and operate? Familiar with what/how these corporations collect and track? (likes, location, searches, purchases, facial recognition data) Need for regulation? What kind? Why? What made you realise this? How did you develop these perspectives?

Access, motivation
mobile phone, tablet etc.; home, work
Types of online engagement

Civic/political engagement
(community, voluntarism, charity, fundraising, government services, news/information, reposting/*liking*/creating/sharing/commenting on content, contacting politicians/parties, (e)petition, boycotting, campaign/demonstration, alternative media, virtual sit-ins/email bombings, information about demonstrations) What does being a citizen mean to you? Is this reflected in how you engage in civic/political life? How confident about engaging? How familiar with civic/political matters and the political system in the UK and beyond? Is this knowledge important? Why? Is your voice as a citizen listened to? In what ways? By whom?

FDL – dispositions towards the internet
(escapism, connectivity, employment, shopping, privacy risks, financial security, identity theft). Any of these issues ever affected how you engage civically/politically? In what situation? How did you deal with them? Was it important to deal with them? Why?
FDL – technical, social, creative skills
(sending/receiving messages, using SNS, creating/posting content, finding information, using services online, managing privacy settings etc.)

FDL – understanding digital affordances
(digital interfaces, social media's (privacy) settings, character of networks, algorithm, a/synchronicity) How did you learn this? In what situation?
CDL – imaginaries of society in the digital age What made you say so? How optimistic/pessimistic? Do the internet's features/design/how it functions play a role? Does the way in which social media/internet corporations operate play a role? What made you realise this? Constraints – Can these issues be overcome? How? What should be done? Has any of these issues affected how you engage civically/politically? In what situation? How did you deal with them? Was it important to deal with them? Why? Is it useful to know this in relation to how you engage? How did you develop these perspectives? In what situation? Has interaction with family, friends, colleagues played a role?

CDL – evaluating online content
What do you need to know when consuming content? Target audience, construction techniques, points of view, omitted info? How did you learn? Do the internet's features/design/how it functions play a role? How about how social media/internet corporations operate? Does familiarity with how the internet functions and/or the role of corporations come in handy? In what ways? What do you do when confronted with biased/misrepresented content? Ever come across misinformation? Consume/produce alternative content or use alternative platforms? In what situation?

CDL – understanding socio-economic issues
(ownership, funding, advertising, economic surveillance, regulation – content, market, corporations, advertising) Any risks reinforced by the internet's features/design or how it functions? What kind of ads do you see on Facebook and/or Google and how do they know what you might like? Do you need to be logged in on Facebook for your activities on other websites to be tracked by Facebook? Familiar with Facebook Exchange/Pixel? Do you read T&C? Ever managed cookies, history, settings? Ever used DuckDuckGo, ad blockers? Familiar with how they work? Why is DuckDuckGo less invasive of privacy? Familiar with how Google's and Facebook's algorithms work? Cookies? Geolocation? Are Google's results the same for everyone? Any platforms that you value as more secure than others? Why?

Appendix 5: Weekly Diary Entry Form

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Gianfranco Polizzi
Department of Media and Communications
London School of Economics and Political Science
g.polizzi@lse.ac.uk
07393387487

Weekly Diary Entry

Diarist's name _____

Week no. _____

Date _____

Please kindly write in the box below how you have engaged this week civically or politically both online and offline. Feel free to reflect and report on what you did, the context, what it means to you, and whether and why you did this online. You may specify dates and time, if you like. As there is no requirement on the length, please write as much as you like. You may fill in this form either electronically or by hand. At the end of each week, please return this form to Gianfranco Polizzi by emailing it to g.polizzi@lse.ac.uk. If you have any questions, do not hesitate to contact Gianfranco.

Thank you

Please continue over the page if you wish
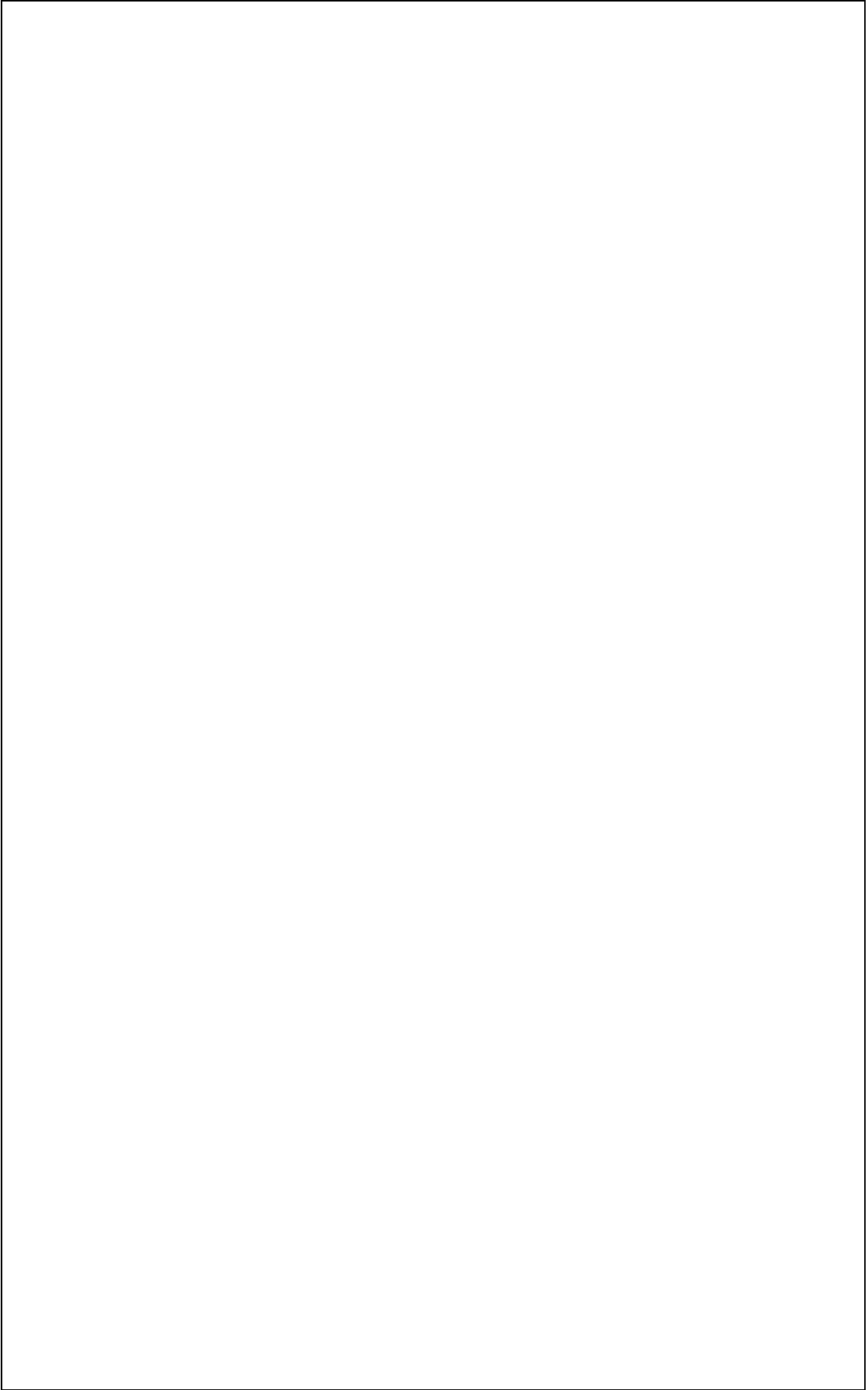
Appendix 6: NVivo *Node 1* – "What is Digital Literacy?": Deductive Sub-Nodes and Inductive Codes and Themes (FDL = functional digital literacy; CDL = critical digital literacy)

Deductive sub-nodes	Inductive codes	Inductive themes	Examples
FDL1 – Digital skills	1. Deploying operational and creative skills 2. Deploying creative and social skills 3. Deploying operational skills but struggling with social skills 4. Deploying social skills but struggling with creative skills 5. Platforms are user-friendly, requiring digital skills that are not advanced 6. The lack of digital skills depends on the technical features of digital technologies	1-2. Advanced digital skills require a combination of skills 3-4. Limited digital skills entail a lack of skills 5-6. Digital skills depend on the usability of digital technologies	1. Expert Chloe deploys operational and creative skills to develop the software behind the website of her company 2. Expert Anthony deploys creative and social skills to produce and upload videos on YouTube 3. Expert George is confident deploying operational but not social skills 4. Advocate Jacob knows how to deploy social skills to interact with other users on social media but not how to deploy creative skills to create multimodal content 5. Michael does not need advanced digital skills as platforms are easy to use 6. Simon's inability to use his digital skills results from the unreliability of networked services and bad digital design
FDL2 – Knowledge of digital affordances	1. Deploying social and information-navigation skills along with an understanding of the interface of social media 2. Deploying operational and creative skills along with an understanding of what the internet affords for coding	1-2. Knowledge of digital affordances enhances digital skills 3. Limited knowledge of digital affordances makes digital skills limited	1. Advocate Helen deploys social and information-navigation skills on Instagram to check who likes her posts and follow up on hashtags, conscious of what its interface affords 2. Expert Anthony deploys operational and creative skills to

	3. Deploying operational skills but struggling with information navigation skills because of a limited understanding of digital design		design websites, conscious of how to use the internet for coding 3. Expert Sophia knows how to deploy operational skills to open different posts on Reddit, but struggles to find downvoted posts, unaware of how Reddit is designed
FDL3 – General dispositions towards the internet	1. Appreciating the internet's advantages and disadvantages for accessing information and connectivity 2. Appreciating the internet's advantages and disadvantages for online shopping and financial safety 3. Appreciating the internet's advantages for online shopping along with an understanding of what search engines afford for online shopping 4. Appreciating the internet's disadvantages for online shopping along with an understanding of how cookies work 5. Appreciating the internet's disadvantages for information overload along with an understanding of what social media afford for managing feed preferences	1. Social interaction 1, 6. Access to information 2. Online shopping and financial safety 3-5. Dispositions coupled with knowledge of digital affordances	1. Advocate Amanda values the internet for accessing information and connecting with other users, but is concerned about losing connectedness offline 2. Expert Oscar values the internet for enabling users to use services like Amazon for shopping, but is concerned about financial fraud online 3. Expert Rosie values the internet for online shopping, conscious of how Goole organizes its results for online shopping 4. Advocate Patrick is concerned about the internet providing companies with opportunities to overcharge consumers, but knows how to deploy an understanding of what his cookies afford for making online purchases 5. Expert Rosie is concerned about the internet providing access to too much information, but knows how deploy an understanding of what her Facebook settings afford for

			managing her feed preferences, prioritizing posts over others
CDL1 – Ability to evaluate online content	1. Reflecting on the language, evidence, author and source behind information 2. Using multiple sources in synergy with trust in accredited media outlets 3. Deploying knowledge of topic, socio-political system and media bias to assess information 4. Deploying knowledge about how websites are designed along with information-navigation skills to assess their reliability 5. Deploying knowledge of what search engines and websites afford along with information navigation skills to use multiple sources and evaluate online content 6. Deploying knowledge of how internet corporations operate, with what implications for privacy and what their platforms afford, to use different search engines in synergy with information-navigation skills to compare and evaluate online content 7. Deploying knowledge about the internet's potentials and limitations for political debate along with information-navigation skills and knowledge of what social media afford to check different	1. Reflecting on the nature and origin of information 2. Using multiple sources 3. Contextual knowledge 4-5. Evaluating online content in synergy with functional digital literacy 6-8. Evaluating online content in ways that are underpinned by knowledge about the digital environment in synergy with functional digital literacy	1. Expert Monica asks herself whether the language is extreme or whether the author can be trusted 2. Expert George uses multiple news apps, appreciative of accredited media outlets 3a. Expert George does not understand news articles about finance because not familiar with the subject 3b. Expert Adam understands news stories about Syria because familiar with socio-political context, but his familiarity depends on what is reported by the media 3c. Expert Christian understands how media outlets like Fox News operate, conscious of its biases 4. Expert Christian reflects on whether information online is badly written or whether websites are badly designed 5a. Advocate Helen compares and contrasts information on Google 5b. Advocate Julia checks the origin of photos across multiple sources by using Google Reverse Image Search 5c. Expert Shawn uses the hyperlink to follow up on sources 6. Expert Carol compares and contrasts information on multiple search

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	sources and evaluate online content 8. Deploying knowledge about the internet's potentials and limitations for political debate, along with social skills, knowledge of how internet corporations operate and what social media afford to diversify exposure to information and evaluate online content		engines, using DuckDuckGo because it is less invasive of privacy than Google 7. Expert Peter knows how search for tweets coming from reliable sources on Twitter, concerned about the internet's potential for undermining political debate by amplifying misinformation, hate speech and irrelevant content 8. Expert Abby diversifies her exposure to information by following Twitter accounts of people with opposing views to hers, conscious of the problem of the filter bubble
CDL2 – Knowledge about the political economy of the internet	1. Understanding that internet corporations profit through advertising 2. Online advertising negatively affects traditional media outlets 3. Online advertising benefits businesses 4. Understanding that internet corporations collect users' data for online advertising purposes and what their platforms afford for their business models 5. Not understanding what online platforms afford for collecting users' data, despite understanding that they profit through online advertising 6. Impossible to fully understand how internet corporations operate	1-5. Online advertising 4. Understanding how internet corporations operate in synergy with functional digital literacy 5. Understanding how internet corporations operate in synergy with limited functional digital literacy 6. Understanding how internet corporations operate depends on their transparency	1. Expert Peter knows Facebook and Google rely on online advertising to make profits 2. Expert Frank blames online advertising for undermining the profits of traditional media outlets 3. Expert Sophia sees online advertising as an opportunity for businesses 4. Expert Sophia knows that Google relies on online advertising, which is based on collecting users' data through the use of cookies 5. Advocate Jacob knows Google and Facebook profit through online advertising. But does not know that they use cookies 6. Advocate Adam does not know how Twitter operates

			because they are not transparent about their business models
CDL3 – Imaginaries of society in the digital age	1. Concerns about the failure of liberal democracy along with appreciation of the internet's potential for e-voting as well as data security risks 2. Hoping for a more progressive participatory democracy along with appreciation of the internet's potential for participation in decision-making as well as for elitism 3. Hoping for left-wing libertarian decentralization of power along with appreciation of the internet's potential for democratic participation as well as corporate power, given how internet corporations operate 4. Concerns about populism in line with progressive values along with appreciation of the internet's potential for interacting with politicians as well as reinforcing populism 5. Concerns about polarization in line with right-wing libertarian values along with appreciation of the internet's potential for connecting people with different opinions as well as facilitating hate speech and far-right politics 6. Concerns about the implications of misinformation for	1-3. Democracy 3. Imagining democracy along with an understanding of how internet corporations operate 4-5. Populism 6-8. Misinformation 6. Understanding the internet's potential for (mis)information in synergy with positive disposition towards its advantages for accessing information 7. Understanding the internet's potential for misinformation along with understanding of how internet corporations operate and what their platforms afford 9-13. Surveillance 9. Understanding the internet's implications for surveillance in synergy with understanding of how internet corporations operate and what their platforms afford for data tracking 10-11. Misunderstanding Cambridge Analytica 14-17. Internet regulation 15-16. Understanding internet regulation in synergy with understanding of how internet corporations operate and what their platforms and algorithms afford	1. Advocate Julia worries about the failure of the representative character of liberal democracy, conscious of the internet's potential for e-voting but also for undermining data security 2. Expert David hopes for more left-wing participatory democracy, conscious of the internet's potential for participation but also for reinforcing elitism 3. Advocate Andrew hopes for decentralization of power in line with left-wing libertarian values, conscious of the internet's potential for participation but also, given how internet corporations operate, for corporate power 4. Advocate Michael worries about populism in context of Brexit in line with left-wing values, conscious of the internet's potential for making politicians more accessible but also for facilitating far-right politics 5. Advocate Sue worries about polarization of political debate in line with right-wing libertarian values of free speech, conscious of the internet's potential for connecting users

	civic life along with appreciation of the internet's potential for a well-informed citizenry, underpinned by positive disposition towards its advantages for accessing information, as well as its implications for enabling users to express their opinions without taking responsibility 7. Appreciating the internet's potential for diversifying the political debate as well as amplifying misinformation, reinforced by how internet corporations operate and what their platforms afford for creating filter bubbles 8. Exempting internet corporations from taking responsibility for misinformation, in line with right-wing libertarian values about the free market 9. Hoping for equity and justice in line with left-wing libertarian values along with appreciation of the internet's potential for transparency as well as surveillance and corporate power, given how internet corporations operate and what their platforms afford for data tracking 10. Concerns about Cambridge Analytica, despite failing to dispute its effectiveness in manipulating users, along with awareness of the internet's		with people with different opinions but also for amplifying the voices of far-right trolls 6. Expert Christian worries about living in a post-truth world, conscious of the internet's advantages for accessing information and, relatedly, its potential for contributing to a well-informed citizenry but also for enabling users to express their views without taking responsibility 7. Expert Chloe appreciates the internet's potential for discovering the opinions of minority groups but also for amplifying misinformation, conscious of how platforms operate and how their algorithms work, creating filter bubbles, exposing users to misleading information 8. Advocate Patrick thinks internet corporations should take no responsibility for misinformation in line with his vision of the free market, underpinned by right-wing libertarian values 9. Advocate Roger hopes for equity and justice in line with left-wing libertarian values, conscious of the internet's potential for transparency. But

	implications for surveillance, given how internet corporations operate 11. Misunderstanding Cambridge Analytica as well as role of Facebook and how they use their algorithms 12. Surveillance is essential for ensuring collective security 13. Government surveillance and internet corporations' data tracking are not a problem if you have nothing to hide 14. Hoping for government regulation against how internet corporations operate in line with vision of liberal democracy 15. Hoping that GDPR will empower users over their own data along with appreciation of how internet corporations operate and what their platforms afford for protecting users' privacy 16. Relying on the potential of AI to filter online content and avoid regulation along with awareness of the risks of bias inherent in AI and how its algorithms work 17. Government regulation of online content means giving up on freedom of speech		also worries, given how internet corporations operate and what their platforms afford for data tracking, about implications for surveillance and corporate power 10. Advocate Mark is concerned about Cambridge Analytica, despite failing to dispute its effectiveness in manipulating users, conscious of the internet's implications for surveillance, given how internet corporations operate 11. Advocate Alex thinks government supported Cambridge Analytica and Facebook in manipulating users by using certain algorithms 12. Advocate Jacob thinks government has the right to monitor what citizens do to ensure their collective security 13. Expert Oscar thinks how social media operate in terms of data tracking is not a problem if you have nothing to hide, and neither is the fact that government can access information about you through social media 14. Advocate Mark thinks government regulation of how internet corporations operate is essential for making sure that we live in a liberal democracy

			15. Expert Shawn hopes GDPR will give users more control over their data, conscious of what it entails for how internet corporations operate and what their platforms afford for protecting users' privacy
			16. In line with right-wing libertarian values, advocate Sue thinks online content should not be regulated by government. Concerned that this kind of regulation would undermine freedom of speech
			17. Expert Rosie thinks AI has the potential to filter online content in ways that require no regulation. However, conscious of risks inherent in what its algorithms afford for reinforcing bias

Appendix 7: NVivo *Node 2* – "Whether and How Civic Engagement Provides Opportunities for Learning Digital Literacy": Inductive Codes and Themes

Inductive codes	Inductive themes	Examples
1. Improving digital skills thanks to help of colleagues within the same community/campaigning organization	1-6. Learning digital literacy informally through social interaction within civic life	1a. Expert Linda, who works for organization promoting media education, improved operational, social and creative skills thanks to help of colleagues
2. Improving digital skills along with knowledge of digital affordances thanks to help of colleagues within the same community/campaigning organizations	1-2. Learning functional digital literacy informally through social interaction within civic life	1b. Advocate Jacob improved social skills thanks to help of fellow activists
3. Learning about current affairs and media bias, which enhances the ability to evaluate online content, by discussing news within family settings	3. Learning critical digital literacy informally in tandem with civic literacy through social interaction within civic life	2. Advocate Moana improved operational skills and understanding of what campaigning platforms used by her organization afford thanks to help of fellow activists
4. Learning about how internet corporations operate and what their algorithms afford for campaigning and targeting users with ads by talking to friends involved in politics	4-5. Learning functional and critical digital literacy informally through social interaction within civic life	3. From a young age, expert Frank developed interest in news and understanding of current affairs as well as understanding of news outlets and their biases by discussing news within family settings
5. Developing an imaginary of the internet's potentials and limitations, and what it affords for campaigning, by talking to people supporting the same civic causes	6. Social interaction can be negative for learning functional and critical digital literacy within civic life	4. Advocate Sue refined understanding of how social media like Facebook operate and what its algorithms afford for campaigning and targeting audiences by talking to friends involved in politics
6. Misunderstanding how internet corporations operate and what their algorithms afford for their business models as a result of talking to friends involved in politics		5. Advocate Mary refined understanding of the internet's potential for mobilization but also limited impact, as well as an understanding of what it affords for raising awareness and maximizing online visibility, by talking to supporters of her organization
		6. As a result of talking to friend involved in politics, advocate Robert came to conjecture mistakenly that Google's results are algorithmically biased

		because of corporate agenda supported by government
1. Learning how to manage privacy settings along with understanding of how internet corporations operate and what cookies afford for their business models by following organizations campaigning for privacy on social media 2. Learning about current affairs as well as how internet corporations operate and what their platforms afford for collecting and tracking users' data by reading news stories about the Cambridge Analytica scandal	1-2. Learning functional and critical digital literacy informally through information seeking and engagement within civic life 2. Learning functional and critical digital literacy informally in tandem with civic literacy through information seeking within civic life	1. Expert Carol refined ability to manage privacy settings as well as understanding of how internet corporations profit and what cookies afford for collecting users' data by following organizations that campaign for online privacy on social media 2. Expert Anthony learned about current affairs and refined understanding of how social media like Facebook manage and can misuse users' data, along with understanding of what their platforms afford for collecting and tracking users' data, by reading news stories online about Cambridge Analytica
1. Developing digital skills and knowledge about digital affordances through experience using digital technologies for civic purposes 2. Developing knowledge about digital affordances along with positive dispositions towards the internet through experience using digital technologies for civic purposes 3. Developing negative dispositions towards the internet through experience using digital technologies for civic purposes 4. Developing ability to campaign online along with imaginaries of the internet's potentials and limitations, and what it affords for campaigning	1-4. Learning digital literacy informally through experience using digital technologies within civic life 1-3. Learning functional digital literacy informally through experience using digital technologies within civic life 4. Learning functional and critical digital literacy informally through experience using digital technologies within civic life 4. Learning digital literacy informally in tandem with civic literacy through experience using digital technologies within civic life	1. Advocate Alex learned operational, social and creative skills along with understanding of what online platforms like SoundCloud afford for uploading socially conscious music, which he produces using digital technologies, through long-standing experience in the music industry for civic purposes 2. Advocate Moana learned what the internet affords for campaigning and reaching young people, along with understanding of its advantages for connecting with this age group, through experience using digital technologies for campaigning 3. Advocate Adele learned about the internet's distracting potential through experience using it when working for campaigning organization abroad

		4. Through experience using digital technologies for campaigning, advocate Roger developed ability to campaign online along with imaginary of the internet's potential for mobilizing but also repressing action. At the same time, he gained an understanding of what social media afford for campaigning, while also appreciating that the internet's potential for social change depends on the social context.
1. Civil society organizations provide media educators with formal training 2. Campaigning organizations promote awareness about the internet by providing formal training 3. Learning through formal training within campaigning organizations about how to use the internet as well as its potential and affordances for campaigning 4. Learning about how internet corporations operate and the internet's implications for civic life through informal training within campaigning organizations	1-4. Learning digital literacy through training within civic life 1-3. Learning digital literacy through formal training within civic life 4. Learning digital literacy through informal learning within civic life	1. Expert Linda works for civil society organization that provides media educators with training about how to teach media studies 2. Advocate Georgia works for campaigning organization that raises awareness about hate speech online by training women about what to do when receiving hateful comments online 3. Advocate Moana learned how to use the internet along with understanding of its potential, and what it affords for campaigning and targeting different audiences by taking part in seminar recommended by her campaigning organization 4. Advocate Moana learned about Cambridge Analytica and how users' data can be misused along with the internet's implications for online trolling by receiving emails and advice from senior members of the Conservative Party

Appendix 8: NVivo *Node 3* – "Whether and How Digital Literacy Facilitates Civic Engagement": Inductive Codes and Themes

Inductive codes	Inductive themes	Examples
1. Digital skills facilitate civic engagement, enhancing ability to use digital technologies as practical tools for civic purposes	1-9. Functional digital literacy facilitates civic engagement, on basis of using digital technologies as practical tools	1a. Advocate Julia relies on social and information navigation skills to search for and sign up to protest events on Facebook
2. No need for advanced digital skills when relying on colleagues with digital expertise within campaigning organizations	2-3. Extent to which digital skills facilitate civic engagement at the collective level depends on how they are distributed	1b. Expert Simon relied on operational and creative skills to set up survey for community organization addressing problems in local area
3. Relying on colleagues with limited skills within same community organization undermines collective participation	4-5. Digital skills facilitate civic engagement in synergy with knowledge of digital affordances	2. Advocate Richard does not need advanced digital skills because he can rely on colleagues with expertise within his campaigning organization
4. Deploying knowledge of digital affordances along with digital skills in ways that enhance engagement with news	6. Limited knowledge of digital affordances along with limited digital skills undermine civic engagement	3. Advocate Miriam relies on colleagues with limited digital skills, which undermines their work on a participatory budgeting initiative
5. Digital skills and knowledge of digital affordances facilitate use of campaigning platforms within campaigning organizations	7. Use of campaigning platforms within campaigning organizations depends on how they are designed	4. Expert George deploys operational and information navigation skills, conscious of what his news apps afford, to customise apps and keep abreast of news
6. Limited digital skills and knowledge of digital affordances undermine ability to discuss politics online	8. Deploying positive dispositions towards the internet along with knowledge of digital affordances facilitates civic engagement	5. Advocate Robert has limited operational and creative skills which, coupled with limited understanding of what WordPress affords, undermine ability to keep a blog about his political views
7. When campaigning platforms are designed in ways that do not require advanced digital skills, they hinder use for campaigning within campaigning organizations	9. Deploying negative dispositions towards the internet does not undermine civic engagement	6. Advocate Laura and colleagues within same organization deploy digital skills and knowledge of what their campaigning platforms afford to design e-actions and launch e-petitions
8. Deploying positive disposition towards the internet along with digital skills and knowledge of digital affordances facilitates use of social media for discussing politics		7. Advocate Laura thinks her campaigning platform does not require her and colleagues to have and
9. Negative dispositions towards the internet do not undermine but reconfigure civic engagement		

		deploy more advanced digital skills, hindering how much they accomplish when using it
		8. Expert Peter deploys positive disposition towards the internet's advantages for connecting with other users along with understanding of what Twitter affords for customizing his profile in ways that enhance use to discuss Brexit with users interested in same subject
		9a. Advocate Adele's negative disposition towards internet procrastination underpins decision to use only Facebook Messenger and not Facebook account, while appreciative of advantages for staying in touch with family and friends, including friends involved in politics
		9b. Expert Simon's negative disposition towards internet overuse reconfigured his civic engagement online. His disposition underpins decision to minimize use of Twitter for reading about politics, privileging accredited media outlets.
1. Trust in accredited media outlets in synergy with awareness of how they operate, which is necessary for evaluating online content, enhances civic engagement with news	1-4. Digital literacy facilitates civic engagement by enhancing trust	1a. Advocate Roger trusts accredited media outlets like the *Guardian*, which he reads online – why he subscribed to it
	1. Critical digital literacy facilitates civic engagement by enhancing trust in accredited media outlets	1b. Expert Whitney trusts accredited media outlets like the *New Yorker*, which she reads online – why she subscribed to it
2. Trusted media outlets should not be available free of charge, so that people can distinguish what is reliable from what is not	2. Critical digital literacy facilitates civic engagement by enhancing trust in accredited media outlets in ways that are elitist	2. Expert Frank thinks trusted media outlets like the *Guardian* should not make most online content available free of charge, which makes it hard for many people to distinguish what information is reliable online from what is not. Instead, they should put content behind paywall
3. Knowledge about GDPR, along with awareness of what it entails in relation to what online platforms afford for protecting users' privacy, has potential to facilitate civic engagement	3. Critical and functional digital literacy facilitates civic engagement by enabling experts and advocates to overcome distrust in internet corporations	

by enabling experts to overcome distrust in how internet corporations operate 4. Not only does knowledge about GDPR enable advocates to overcome distrust in internet corporations but it also enhances their trust in quality of support within campaigning organizations	4. Critical digital literacy facilitates civic engagement by enabling advocates to overcome distrust in internet corporations, while also enhancing trust in quality of support	3. Expert Shawn knows what GDPR entails for how internet corporations operate and what platforms afford in terms of protecting users' privacy. His knowledge enables him to overcome distrust in these corporations, making him more willing to use platforms for civic purposes 4. Advocate Laura thinks GDPR represents opportunity for her campaigning organization to engage with supporters who are more active and trustworthy. Knows that her organization needs to obtain consent of members before contacting them, resulting in reduction in the quantity, but not in quality of their support.
1. Ability to evaluate online content along with digital skills and knowledge of digital affordances is beneficial for strategically overcoming bias and misinformation when engaging with political content 2. Strategically avoiding sources while privileging others to overcome misinformation when engaging with political content 3. Deploying knowledge about how internet corporations operate along with knowledge of digital affordances facilitates civic engagement by enabling experts and advocates to lurk, and strategically minimize what they post, on social media 4. Deploying understanding of corporate nature of users' data, along with knowledge of what cookies afford, facilitates engagement with news in	1-5. Digital literacy makes civic engagement strategic in overcoming limitations of digital environment 2-4, 5e. Digital literacy makes civic engagement strategic in overcoming limitations of digital environment in ways that rely on forms of strategic disengagement 1-2. Critical and functional digital literacy makes civic engagement strategic in overcoming bias and misinformation 2. Critical and functional digital literacy makes civic engagement strategic in overcoming bias and misinformation by relying on forms of strategic disengagement 3-4. Critical and functional digital literacy makes civic engagement strategic in overcoming privacy concerns about corporate nature of users' data by relying on forms of strategic disengagement	1a. Advocate Jacob identifies bias when engaging with political content by deploying information-navigation skills along with knowledge of what Google affords for using multiple sources 1b. Advocate Helen deploys social and information-navigation skills along with understanding of what Google affords for checking origin of photos when communicating with fellow activists on WhatsApp 2a. Expert Anthony avoids reading blogs, relying instead on accredited media outlets online, to strategically minimize exposure to misinformation, conscious of what their design affords for spreading misinformation 2b. Advocate Moana avoids reading commentaries on politics on social media, preferring to stream these from accredited media

ways that rely strategically on news sites rather than apps 5. Deploying utopian and dystopian imaginaries of the internet along with digital skills and knowledge of digital affordances to strategically navigate the internet's potentials and limitations for civic life.	5. Critical and functional digital literacy makes civic engagement strategic in navigating the internet's civic potentials and limitations	outlets, to minimize her exposure to misinformation, conscious of what social media afford for spreading misinformation 3a. Concerned about privacy implications inherent in how internet corporations operate, expert Monica limits herself to lurking on social media to access political content, conscious of its affordances for accessing information about politics 3b. Concerned about privacy implications inherent in how internet corporations operate, advocate Georgia minimizes what she posts on social media. Conscious that Facebook uses algorithms to profile users, she avoids adding personal information to her profile 4. Expert Simon is concerned about corporate nature of his data. So he prefers news sites to apps, which make it easier for media outlets to collect information about him, conscious of how cookies work 5a. Advocate Amanda deploys her imaginary of the internet's potentials and limitations for participation and polarization to follow channels with views opposed to hers on social media, conscious of what they afford for creating filter bubbles 5b. Conscious of the internet's potentials and limitations for political debate, misinformation and trolling, expert Peter deploys operational and social skills along with understanding of what Twitter affords for blocking trolls and controversial tweets

		5c. Expert Monica is aware of the internet's potential for a well-informed citizenry as well as misinformation and extremism in context of mainstream and alternative media. So she uses both to compensate for their limitations
		5d. Advocate Sue deploys her imaginary of the internet's potentials and limitations for both democracy and hate speech to campaign for free, civil and rational speech by reaching different age groups and maximizing online visibility, conscious of what social media afford for campaigning.
		5e. Advocate Helen is aware of the internet's potential for participation and open data as well as surveillance. So she uses the internet to campaign, but uses a different name online. When communicating with fellow activists, she avoids certain messaging systems, using others instead, conscious of what they afford
1. Constructing both utopian and dystopian imaginaries of the internet but deploying only one or the other, in synergy with limited digital skills and knowledge of digital affordances, makes civic engagement contradictory	1. Inability to deploy critical digital literacy, along with limited functional digital literacy, makes civic engagement contradictory.	1a. Advocate Mark has refrained from using social media as an ordinary citizen because his dystopianism about the internet prevails, which has to do with data tracking and voter manipulation, along with limited operational skills and knowledge of what privacy settings afford. On the other hand, he uses them to post ads and target users to vote for his party, privileging his awareness of the internet's potential for campaigning
		1b. Advocate Julia campaigns for right to online privacy as a policy officer. But when using social media like Facebook as an

		ordinary citizen, she hardly manages her privacy settings. Her engagement with social media as an ordinary citizen is underpinned by awareness of the internet's potential for participation in institutional politics. Meanwhile, refrained from deploying understanding of the internet's implications for privacy and surveillance