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## The Digitization of Government and Digital Exclusion

Ranchordás, Sofia

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# THE DIGITIZATION OF GOVERNMENT AND DIGITAL EXCLUSION:

SETTING THE SCENE

[WORKING VERSION]

FORTHCOMING IN

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Sofia Ranchordás

## Abstract

Governments in both developed and developing countries have made in the past decades significant investments in the digitalization of public services. E-government and digital-government tools have the potential to deliver significant savings and optimize the delivery of public services. Nevertheless, even in developed countries, there are still citizens who do not have equal access to digital technology or are not competent users. Filing taxes or applying for social welfare benefits online are far from obvious tasks for many citizens throughout the world. The digitization-by-default of public services is currently leaving many individuals behind. As new digital divides emerge, digital inequality is not only reproducing longstanding socioeconomic inequalities but it is also placing itself as a standalone source of exclusion. While there is abundant humanities literature on the digital divide and digital citizenship, recent legal scholarship has overlooked the legal implications of the unequal access and usage of digital government. This exploratory paper discusses the legal implications of current policies and principles of digital government for the digital exclusion of citizens. It argues that digital exclusion may amount to the unequal treatment of citizens and it offers a preliminary discussion of more inclusive approaches to digital government.

Keywords: digital government; digital exclusion; digital divide; unequal treatment; e-government

## Introduction

In the first semester of 2020, the benefits of the digitalization of public and private services became particularly visible when the worldwide public health crisis caused by the rapid spread of the coronavirus, resulted in the total or partial lockdown of a large number of countries and the

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· Professor of Law, Chair of European and Comparative Public Law, Faculty of Law, University of Groningen, The Netherlands. Contact details: [s.h.ranchordas@rug.nl](mailto:s.h.ranchordas@rug.nl). I would like to thank my research assistant Ana Costov for her assistance.

temporary replacement of physical services by online alternatives.<sup>1</sup> Despite the potential downsides of working from home and home confinement, remote working and online-learning are privileges that are not equally available to all citizens.<sup>2</sup> According to the Federal Trade Commission, 23 million Americans do not have access to the Internet and many more are only connected through their mobile phones which does not guarantee adequate access to multiple digital services such as remote learning.<sup>3</sup> In developing countries, the situation is far more dramatic.<sup>4</sup> Even in India, which has a growing number of Internet subscribers (more than 630 million), for every Internet user that can potentially use online services, there is another one (often in rural areas) who is excluded.<sup>5</sup> In most countries where the population is at the time of writing on lockdown, digital exclusion means not only that children from low-income families will once again be at disadvantage but also that many citizens may struggle to access government services, locate public amenities or apply for the promised Covid-19 relief loans.<sup>6</sup> Indeed, the coronavirus crisis has exposed an issue that few legal scholars in the last decade have devoted sufficient attention to: nearly half of the world population is currently excluded from the digital revolution.<sup>7</sup> While some are excluded because they do not have access to the Internet, others are

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<sup>1</sup> BERNARD MARR, 'How the COVID-19 Pandemic Is Fast-Tracking Digital Transformation in Companies', Forbes (March 17, 2020), available at <https://www.forbes.com/sites/bernardmarr/2020/03/17/how-the-covid-19-pandemic-is-fast-tracking-digital-transformation-in-companies/#7506e153a8ee> (last accessed on April 2nd, 2020).

<sup>2</sup> NICOL TURNER LEE, 'What the Coronavirus Reveals about the Digital Divide between Schools and Communities' Brookings Institute (March 17, 2020), available at <https://www.brookings.edu/blog/techtank/2020/03/17/what-the-coronavirus-reveals-about-the-digital-divide-between-schools-and-communities/> (last accessed on April 1st, 2020).

<sup>3</sup> Federal Trade Commission, 2019 Broadband Report (2019), <https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2019-broadband-deployment-report> (last accessed on March 30, 2020).

<sup>4</sup> UNESCO, 'COVID-19 Educational Disruption and Response', UNESCO, <https://en.unesco.org/covid19/educationresponse> (last accessed on April 2nd, 2020).

<sup>5</sup> SMRIT PARSHEERA, 'India's on a Digital Sprint that is Leaving Millions Behind', BBC News (October 17, 2019), <https://www.bbc.com/news/world-asia-india-49085846>.

<sup>6</sup> For a general analysis of school exclusion of low-income children, see FRANCESCA ASHURST / COUZE VENN, *Inequality, Poverty, Education: A Political Economy of School Exclusion* (Palgrave Macmillan 2014).

<sup>7</sup> United Nations, 'Nearly Half of World's Population Excluded from "Benefits of Digitalization", Speaker Stresses as Second Committee Debates Information Technology for Development', United Nations (October 18, 2019) available at <https://www.un.org/press/en/2019/gaef3523.doc.htm> (last accessed on April 20, 2020).

excluded because they do not have the technical and social skills to use digital technology.<sup>8</sup> This exclusion may have an impact on their ability to exercise fundamental rights and receive the public services they are entitled to.<sup>9</sup>

Digital exclusion is particularly problematic in the context of digital government. Ongoing digitalization policies often overlook citizens' individual needs as well as the fact that citizens who cannot use digital services tend not to have alternative service providers that can offer more user-friendly alternatives.<sup>10</sup> Moreover, access to public services is based on legal entitlements which means that for example citizens with low digital skills should not experience a direct or indirect disadvantage in this context. Moreover, governments should play a leading role in ensuring that citizens are not left behind in the digital revolution, can easily apply online for the benefits they are entitled to, can participate in different aspects of their national or local public administration processes, and can communicate with public bodies remotely regardless of their literacy levels.<sup>11</sup>

Existing legal scholarship on law and technology has thus far offered critical insights on the implications of automated systems in digital government for privacy, surveillance, transparency, accountability, due process, and equal treatment.<sup>12</sup> Nevertheless, the study of the

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<sup>8</sup> ELLEN JOHANNA HELSPER & REBECCA EYNON, 'Distinct Skill Pathways to Digital Engagement' (2013) 28 (6) *European Journal of Communication* 696.

<sup>9</sup> Recent legal scholarship on the analysis of the digital divide includes KATHARINE V. MACY, 'Digital Divide Challenges Access to E-Government' (2014) *DttP* XLII 36-40; DANIEL A. LYONS, 'Narrowing the Digital Divide: A Better Broadband Universal Service Program' (2018) *U.C. Davis Law Review* LII 803-853.

<sup>10</sup> BURAT ERKUT, 'From Digital Government to Digital Governance: Are We There Yet?' (2020) 12 *Sustainability* 860, 861.

<sup>11</sup> ANDREEA STOICIU, 'The Role of e-Governance in Bridging the Digital Divide', *United Nations-UN Chronicle*, available at <https://www.un.org/en/chronicle/article/role-e-governance-bridging-digital-divide> (last accessed on April 4, 2020).

<sup>12</sup> See, for example, PAUL SCHWARTZ, 'Data Processing and Government Administration: The Failure of the American Legal Response to the Computer' (1992) *Hastings L.J.* XLIII 1321-1389, p. 1322; DANIELLE KEATS CITRON, 'Open Code Governance' (2008) *University of Chicago Legal Forum* MMVIII 355-387, pp. 371-81;

legal implications of digital exclusion in the context of digital-by-default policies has remained overlooked. This paper aims to offer a first attempt to fill this gap. It offers an exploratory analysis of some of the most relevant legal and non-legal implications of digital exclusion in digital government.<sup>13</sup> In this paper, I argue that the digitization of public services should ensure that more inclusive systems and policies are adopted to guarantee that citizens are not deprived of the exercise of their rights and duties because they are not able to fully engage with technology.<sup>14</sup>

This paper aims to contribute to different strands of literature: first, to the study of digital government by providing interdisciplinary insights on the inclusive design of public services; second, to the emerging field of research on digital citizenship by drawing attention to the skills required to engage with digital government; and third, to the understanding of new digital divides.

This exploratory paper does not have the ambition to offer in-depth comparative evidence on the legal dimension of digital exclusion. Instead, it offers examples from both the North and South to show its broad societal importance. This paper is organized as follows. The first section provides an overview of the current policies in the field of digital government and

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DANIELLE KEATS CITRON, 'Technological Due Process' (2008) *Washington University Law Review* LXXXV 1249-1313, pp. 1301-13; SOLON BAROCAS / ANDREW D. SELBST, 'Big Data's Disparate Impact' (2016) *California Law Review Civ*, 6710732; VIRGINIA EUBANKS, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor* (St. Martin's Press 2018), pp. 180-188; J. COBBE, 'Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making' (2019) *Legal Studies* XXXIX 636-655.

<sup>13</sup> See also OLASENI MURITALA OKUNOLA / JENNIFER ROWLEY / FRANCES JOHNSON, 'The Multi-Dimensional Digital Divide: Perspectives from an E-government Portal in Nigeria' (2017) *Government Information Quarterly* XXXIV-2 329-339.

<sup>14</sup> This approach draws inspiration on existing privacy-by-design perspectives, see MIREILLE HILDEBRANDT, 'Legal Protection by Design: Objections and Refutations' (2011) 5 (2) *Legisprudence* 223.

the principles guiding the switch to online public services.<sup>15</sup> The second section delves into the meaning and complexities of the new digital divide that results from the lack of technical or social capital. The third section discusses some of the legal implications of digital exclusion and potential solutions. The fourth section concludes with some research questions for future research.

## 1. The Digitization of Government

### 1.1. E-Government and Digital Government: Background and Definitions

Governments throughout the world have made in the past two decades significant investments in the digitization of information, the automation of several public services and administrative decisions, and the integration of services.<sup>16</sup> Digital technology has promised—and delivered—large savings in the emission of simple bulk decisions, the optimization of public services, the reshaping of communication between citizens and public bodies, and it has allowed governments to become overall more efficient.<sup>17</sup> Automation is also praised for its capacity to reduce common human mistakes in data entry and safeguard the impartiality of government.<sup>18</sup> In Northern

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<sup>15</sup> IDA LINDGREN / CHRISTIAN MADSEN / ULF MELIN, 'Close Encounters of the Digital Kind: A Research Agenda for the Digitalization of Public Services' (2019) *Government Information Quarterly* XXXVI-3 427-436.

<sup>16</sup> CEM DILMEGANI / BENGI KORKMAZ / MARTIN LUNDQVIST, 'Public-sector Digitization: A Trillion-Dollar Challenge' McKinsey (December 2014), available at <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/public-sector-digitization-the-trillion-dollar-challenge> (last accessed on March 30, 2020).

<sup>17</sup> EUROPEAN COMMISSION, *Study on eGovernment and the Reduction of Administrative Burdens* (European Commission, 2014); European Commission, *EU eGovernment Action Plan 2016-2020: Accelerating the Digital Transformation of Government*, COM (2016) 179 final (EU eGovernment Action Plan); MOHAMED MAHMOOD / VISHKANT WEERAKHODY / WEIFENG CHEN, 'The Role of Information and Communication Technology in the Transformation of Government and Citizen Trust' (2019) *International Review of Administrative Sciences* 1-20.

<sup>18</sup> ELIN WIHLBORG, *Digital Government as Guardian of Impartiality (?) Automated Public E-Services and Its Implications for the Quality of Government*, Conference Paper presented at EGPA (2015), available at <http://liu.diva-portal.org/smash/get/diva2:849243/FULLTEXT01.pdf>.

Europe (Sweden, Estonia, Finland, and Denmark), 90% of Internet users (aged 16-74 years) choose government online portals when requesting public services.<sup>19</sup>

Beyond the European borders, there is also a growing interest in the digitalization of public services. For many developing countries the efficient implementation of digital government requires overcoming many political, public trust, economic, and technological hurdles.<sup>20</sup> However, several emerging economies (in particular the BRICs) are currently following the tendency observed in the last decades in Europe to digitize government and shift to online-only public services. In Asia, ‘Digital India’, for example, aims to transform this country in ‘a digitally empowered society and knowledge economy’ and is building digital infrastructure to provide a number of online services to citizens (*e.g.*, direct benefit transfer of financial benefits and subsidies, central registration databases, IT training).<sup>21</sup> Brazil has also started implementing a number of digital policies that already allows citizens to improve their mobility, have access to multiple online public services, and provide or receive online information in different sectors.<sup>22</sup> Despite these developments and the multitude of advantages of digital government, the implementation of digital government has encountered numerous challenges, particularly in developing countries.<sup>23</sup>

In the last years, the concept of digital government has undergone a significant evolution, evolving from the introduction of technology in government (*e.g.*, the digitization of documents)

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<sup>19</sup> EUROPEAN COMMISSION, Digital Public Services, Digital Economy and Society Index Report (2019), available at <https://ec.europa.eu/digital-single-market/en/desi>.

<sup>20</sup> SUBHAJIT BASU, ‘E-government and developing countries: an overview’ (2004) International Review of Law, Computers & Technology XVIII-1 109-132.

<sup>21</sup> For more information on ‘Digital India’, see <https://digitalindia.gov.in/content/it-jobs> (last accessed on 13 February 2020).

<sup>22</sup> For more information on ‘Governo Digital’ see <https://www.gov.br/governodigital/pt-br> (last accessed on 13 February 2020).

<sup>23</sup> HATEM ELKADI, ‘Success and Failure Factors for E-Government Projects: A Case from Egypt’ (2013) Egyptian Informatics Journal XIV-2 165-173.

to policy-driven electronic governance. It has also shifted from the use of technology solely for internal affairs to the partial or full automation of administrative decisions or communication with citizens.<sup>24</sup> This evolution has been characterized by growing complexity and specialization as well as by a shift from the term ‘e-government’ to the concept of ‘digital government’. The OECD defines e-government as ‘the use of ICTs, and particularly the Internet, to achieve better governance’ but often without significantly changing traditional structures and back-office processes.<sup>25</sup> E-government has been the dominant term used in European policymaking. However, more recently, the literature has slowly started to replace it by ‘digital government’. The latter expands the scope of online public services and it translates better the blurring of boundaries between the digital and physical worlds thanks to the leveraging of digital data and the integration of public services. The concept of digital government does not refer merely to the digitization of documents and systems that were once based on paper trails.<sup>26</sup> Rather, it includes the creation of a collaborative community between public authorities, businesses, and citizens.<sup>27</sup> The term ‘digital government’ which is used throughout this paper refers thus to a new stage of maturity in the transition to online services.

The OECD defines digital government as ‘the use of digital technologies as an integrated part of governments’ and the implementation of modernization strategies to create public value

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<sup>24</sup> TOMASZ JANOWSKI, ‘Digital Government Evolution: From Transformation to Contextualization’ (2015) *Government Information Quarterly* XXXII-3 221-236.

<sup>25</sup> OECD, *Recommendation of the Council on Digital Government Strategies*, OECD Publishing (2014) available at [www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf](http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf). (last accessed on March 20, 2020) (Recommendation of the Council).

<sup>26</sup> WIM VOERMANS / WELMOED FOKKEMA / REMCO VAN WIJK, ‘Free the Legislative Process of its Paper Chains: IT-Inspired Redesign of the Legislative Procedure Cycle’ (2012) *The Loophole* XIV-1 54-73.

<sup>27</sup> RON DAVIES, ‘E-Government: Using Technology to Improve Public Services and Democratic Participation’, European Parliament Research Service (September 2015), available at [https://www.europarl.europa.eu/RegData/etudes/IDAN/2015/565890/EPRS\\_IDA\(2015\)565890\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2015/565890/EPRS_IDA(2015)565890_EN.pdf) (last accessed on March 22, 2020).



and swift to digital public services by design.<sup>28</sup> This concept relies on a digital government ecosystem comprised of government actors, non-governmental organizations, businesses, citizens' associations and individuals which supports the production of and access to data, services and content through interactions with the government.”<sup>29</sup> The concept of ‘digital government’ includes therefore the shift to user-centered and user-driven approaches to services that aim to foster the digital transformation and enable government service delivery. While e-government refers primarily to the transition of services from the offline to the online world dimension, digital government involves new approaches as to how public services are conceived. Moreover, this includes the use of digital technologies to increase the transparency of government and develop more open and user-driven approaches to public services to meet the users’ needs.<sup>30</sup>

Drawing on existing scholarship, digital public services in this paper refer to ‘public services provided using internet-based technologies wherein a citizen's interaction with a public organization is mediated partly or completely by an IT-system.’<sup>31</sup> While the digitization of public services is expanding throughout the world, not all public administrations and sectors are at the same stage of development of online public services: while some local public authorities are still in the first phase of cataloguing or digitizing documents, others already offer multiple online services and governmental websites, a reasonable level of open government and online collaboration at local or national levels or even full horizontal integration of public services

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<sup>28</sup> OECD, ‘Digital Government’ in OECD, *Broadband Policies for Latin America and the Caribbean: A Digital Toolkit*, OECD, 2016, <https://www.oecd-ilibrary.org/docserver/9789264251823-15-en.pdf?expires=1585829524&id=id&accname=guest&checksum=4F29299F8C99EE7755803C66C2CECDD3>

<sup>29</sup> Recommendation of the Council (n 25).

<sup>30</sup> OECD, ‘Strengthening Digital Government’, OECD (March 2019), available at <https://www.oecd.org/going-digital/strengthening-digital-government.pdf> (last accessed on March 12, 2020).

<sup>31</sup> IDA LINDGREN / GABRIELLA JANSSON, ‘Electronic Services in the Public Sector: A Conceptual Framework’ (2013) *Government Information Quarterly* XXX-2 163-172.

allowing citizens to use governmental website as one-stop-shops (for example, in Estonia).<sup>32</sup> The term digital government encompasses thus the process of changing the way in which governments deliver public services (from analog to digital), the shift to data-driven decisions and enactment of evidence-based policies, and policies that seek to improve the transparency of public administration.

## 1.2. Principles of Digital Government

The process of developing a digital government is guided by a number of key features or principles. The OECD Digital Government toolkit consists of twelve principles that aim to support the development and implementation of digital government strategies and bring governments closer to citizens and businesses.<sup>33</sup> These principles include a number of well-known principles of good administration such as openness, transparency, legality, citizen engagement and participation, and equality.<sup>34</sup> However, some of the principles highlighted by the OECD are specific to the challenges of developing digital government. We start with the principles that refer to the functioning of digital government (self-service, one-stop-shop, digital by default) and then turn to the principles that seek to guarantee the protection of citizens' rights (inclusiveness and accessibility, protection of privacy and security).

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<sup>32</sup> KAREN LAYNE / JUNGWOO LEE, 'Developing Fully Functional E-Government: A Four Stage Model' (2001) *Government Information Quarterly* XVIII-2 122-136, p. 123; For more information on the evolutionary approach to e-government and digital government, see J. RAMON GIL-GARCIA, *Enacting Electronic Government Success: An Integrative Study of Government-wide Websites, Organizational Capacities, and Institutions* (Springer 2012), pp. 5-7.

<sup>33</sup> OECD, 'Digital Government –Toolkit: Twelve Principles' (2018) OECD, available at <https://www.oecd.org/governance/digital-government/toolkit/12principles/> (last accessed March 30, 2020).

<sup>34</sup> On the principles of good administration, see THEODORE FORTSAKIS, 'Principles Governing Good Administration' (2005) *European Public Law* XI-2 207-217; MIRLINDA BATALLI / ARTAN FEJZULLAHU, 'Principles of Good Administration under the European Code of Good Administrative Behavior' (2018) *Pecs Journal of International and European Law* I 26-35.

### 1.1.1. The functioning of digital government

In the past two decades, public administrations have implemented multiple techniques to increase their efficiency. In this context, the functioning of digital services is required to observe a number of principles. Despite the attempt to make digital government more user-friendly, digital forms are still regarded as cumbersome as many citizens still find it challenging to provide the required information in order to obtain the public service they are entitled to.<sup>35</sup> The idea of designing digital government as a ‘one-stop-shop’ emerged in this context. One-stop-shop refers to the creation of ‘a single point of access to electronic services and information offered by different public authorities.’<sup>36</sup> With the creation of ‘one-stop-shops’, citizens should only have to provide information once and only to a public administration. This is thought to increase citizen satisfaction, reduce corruption, and promote greater efficiency.<sup>37</sup> From the citizen perspective, government citizens appear to be integrated in one portal that allows individuals to only fill in information once. The internal re-use of information by the public administration should nonetheless abide by data protection rules.<sup>38</sup>

The one-stop-shop-principle has also been connected to the principle of ‘digital by default’ which requires public administrations to prioritize the online delivery of services so that citizens

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<sup>35</sup> HENDRIK SCHOLTA *et al.*, ‘From One-stop-shop to No-stop shop: An e-government stage model’ (2019) *Government Information Quarterly* XXXVI-1 11-26, p. 12.

<sup>36</sup> MARIA A. WIMMER, ‘A European Perspective towards Online One-stop Government: The eGov Project’ (2002) *Electronic Commerce Research and Applications* I 92-103.

<sup>37</sup> COLIN KNOX / SALTANAT JANENOVA, ‘Public Management Reforms: One-Stop Shops to Digital Government’ (2019) *Oxford Research Encyclopedia of Politics* 1-20.

<sup>38</sup> JEFFREY ROY, ‘Digital Government and Service Delivery: An Examination of Performance and Prospects’ (2017) *Canadian Public Administration* LX-4 538-561.

see digital government as the default means of engaging with government.<sup>39</sup> Digital by default is in itself a strategy that should translate in the attractive and accessible design of public services so that every citizen who has the ability to use online public services, will indeed use them and avoid costly channels such as face-to-face interaction in an office. The 2014 UK government's digital strategy report estimated that by going digital by default, the government could save between £1.7 and £1.8 billion each year.<sup>40</sup>

The principle 'digital-by-default' does not exclude the maintenance of other offline channels for citizens who are disconnected because they wish to remain partially offline or because they cannot afford to be connected for other reasons. Nevertheless, behavioral studies have shown that citizens tend to follow the default options which can generate the risk that, when such default options become widespread, this could result in the underfunding or oversight of traditional channels of communication.<sup>41</sup> While moving public services will deliver large savings, a significant number of citizens in developed countries still requires an 'assisted digital service' in order to be able to use digital governments.<sup>42</sup> Moreover, 'digital by default' has been particularly criticized in the context of the digitization of welfare services. In the United Kingdom, the Universal Credit which merges a number of out-of-work benefits and in-work support, is designed as 'digital-by-default' and beneficiaries are indeed expected to apply for and manage their benefits through an online portal. This fundamental change in Britain's welfare

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<sup>39</sup> EU eGovernment Action Plan (n 17) pp. 2-3.

<sup>40</sup> Cabinet Office, Government Digital Strategy (2013), U.K., available at <https://www.gov.uk/government/publications/government-digital-strategy/government-digital-strategy> (last accessed on April 1st, 2020) (Government Digital Strategy).

<sup>41</sup> See, for example, AMOS TVERSKY / DANIEL KAHNEMAN, 'The Framing of Decisions and the Psychology of Choice' (1981) Science CCXI-4481 453-458; RICHARD THALER / CASS SUNSTEIN, *Nudge* (Yale University Press 2008); KAREN YEUNG, 'The Forms and Limits of Choice Architecture as a Tool of Government' (2016) Law & Policy XXXVIII-3 186-210.

<sup>42</sup> Government Digital Strategy (n 40).

system creates a more efficient and leaner system.<sup>43</sup> However, offline means of applying for benefits have been reduced. The United Nations Special Rapporteur on Extreme Poverty and Human Rights has criticized this ‘gradual disappearance of the British welfare state behind a webpage and an algorithm’.<sup>44</sup> Human Rights Watch has also highlighted that digital aspirations of governments are coming at the expense of the exercise of the rights of the country’s most vulnerable people as the UN report on extreme poverty revealed that several claimants of the Universal Credit do not have the required digital literacy or cannot afford internet access at home.<sup>45</sup> Existing assistance to support ‘digital-by-default’ systems are at the time of writing still found to be inadequate which begs the question of how this principle should be interpreted.

Another important feature of digital government which is often inherent to digital government is self-service. Self-service is not exclusive to digital government but it is inherent to the digital age: thanks to the widespread digitalization of the public and private sectors, a growing number of citizens has access to information and can thus function more independently from the government.<sup>46</sup> Citizens should be able to have access to public services using information technology means from their home or, if possible, anywhere where they are connected. Self-service and easy-to-implement technological solutions allow individuals to fill in forms by themselves and initiating several administrative processes with minimal or simply

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<sup>43</sup> Department for Work and Pensions, ‘Universal Credit: Welfare that Works’ (2010), available at [www.dwp.gov.uk/universal-credit](http://www.dwp.gov.uk/universal-credit) (last accessed on March 30, 2020).

<sup>44</sup> United Nations, Report of the Special Rapporteur on extreme poverty and human rights: Visit to the United Kingdom of Great Britain and Northern Ireland (April 23, 2019), United Nations, available at <https://undocs.org/en/A/HRC/41/39/Add.1>

<sup>45</sup> AMOS TOH, ‘The Disastrous Roll-out of the UK’s Digital Welfare System is Harming those Most in Need’, Human Rights Watch (June 10, 2019), available at <https://www.hrw.org/news/2019/06/10/disastrous-roll-out-uks-digital-welfare-system-harming-those-most-need> (last accessed on April 5, 2020).

<sup>46</sup> KAI ERIKSSON, ‘Self-service Society: Participative Politics and New Forms of Governance’ (2012) Public Administration XC-3 685-698, p. 691.

mediated governmental interference.<sup>47</sup> In order to be efficient, self-service solutions should be customer-oriented way and designed with individual citizens and their activity in mind. However, we also notice that these technological solutions often set aside more traditional and patronizing ways of helping citizens (for example, civil servants that help older or illiterate citizens fill in their forms).

### 1.1.2. Protection of citizens

The European Commission considers inclusiveness and accessibility important principles of digital government.<sup>48</sup> This principle requires public administrations to design digital services that are ‘inclusive by default and cater for different needs such as those of the elderly and people with disabilities’.<sup>49</sup> Technology has indeed the potential to increase the accessibility of services to people who have limited mobility or disabilities for which they need special assistance. In the last years, a number of good practices and systems have been developed to address the accessibility of online services, particularly for children with disabilities.<sup>50</sup>

The protection of privacy and security of citizens and their data is another important pillar of digital government. Public administrations face a perennial challenge when it comes to balancing the need to promote openness and transparency of government and preserving the privacy of

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<sup>47</sup> See JORN VON LUCKE, ‘Portal for the Public Sector’ in Ari-Veikko Anttiroiko / Matti Mälkiä, *Encyclopedia of Digital Government* (Idea Group Reference 2007) 1328-1333, p. 1329.

<sup>48</sup> EU eGovernment Action Plan (n 17) pp. 2-3.

<sup>49</sup> *ibid.*

<sup>50</sup> MERYL ALPER / GERARD GOGGIN, ‘Digital Technology and Rights in the Lives of Children with Disabilities’ (2017) *New Media & Society* XIX-5 726-740.

citizens.<sup>51</sup> While the integration of administrative data can be a valuable resource in the generation of evidence-based policy and regulations, the existence of privacy and data protection concerns may limit—and often rightly so—the underlying potential of these services. Compliance with existing legal frameworks on personal data protection and privacy and security and the design of user-friendly digital public services promotes nevertheless the public trust of citizens in digital government. More than a decade ago the literature underlined that the success of e-government depended not only on its accountability, transparency, and the ability to provide efficient government operations but also on the ability of citizens to trust in digital government and engage with digital technology. It is important to underline that digital government tools were originally developed to ensure that citizens would have an additional channel to interact with public administration.<sup>52</sup> These tools were thus perceived as tools to increase citizens' trust in their governments and not all to reduce the costs of public administration.<sup>53</sup>

Finally, the OECD has underlined that the development of digital government strategies also requires the updating of legal, regulatory and government frameworks in order to safeguard citizens' digital rights and ensure that existing legal frameworks assimilate the specificities of online services.<sup>54</sup> In other words, switching to digital government goes beyond the digitization of information and processes, governments are required to adapt existing frameworks so that citizens have the same or more rights as they did in the offline world. Instead of simply digitizing

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<sup>51</sup> FARRAH STONE GRAHAM / SUSAN T. GOODEN / KASSEY J. MARTIN, 'Navigating the Transparency-Privacy Paradox in Public Sector Data Sharing' (2016) *The American Review of Public Administration* XLVI-5 569-591.

<sup>52</sup> W. E. EBBERS / W.J. PIETERSON / H.N. NOORDMAN, 'Electronic Government: Rethinking Channel Management Strategies' (2008) *Government Information Quarterly* XXV-2 181-201.

<sup>53</sup> D. M. WEST, 'E-government and the Transformation of Service Delivery and Citizen Attitudes' (2004) *Public Administration Review* LXIV-1 15.

<sup>54</sup> OECD, 'Strengthening Digital Government', OECD (March 2019), available at <https://www.oecd.org/going-digital/strengthening-digital-government.pdf> (last accessed on March 12, 2020).

information, digital government should ensure that information is presented in a more accessible way so as to guarantee that citizens can use it on equal terms.

## 2. Digital Divides and Digital Exclusion

### 2.1. Introduction

Filing in tax returns online, using governmental smartphone applications to apply for allowances, and using social media to communicate with public authorities are common practices for young and educated citizens and most certainly for anyone reading this paper. Nevertheless, according to the European Commission, 80 million Europeans never use the Internet because “they do not have a computer (or another connected device) or because it is too expensive (...) or they find it too difficult”.<sup>55</sup> As this section explains, limited digital literacy or low literacy, financial challenges, and lack of accessibility remain problematic for millions of citizens throughout the world. While for many private services that have been automated, citizens can choose not to use them or stay with traditional analog options, it is more challenging not to go along with the digitization of public services. While some European governments (for example, United Kingdom, Denmark) have tried to develop assistance programs to help senior citizens and individuals with limited literacy skills, many will not make use of them. A 2012 study conducted by the European Commission on the switch of public services to digital by default concluded that the main reasons for European citizens for not using e-Government channels when addressing public administrations, included the lack of willingness to use; lack of

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<sup>55</sup> EUROPEAN COMMISSION, “Digital Inclusion for a Better Society”, European Commission- Digital Single Market, 19 June 2019, available at <https://ec.europa.eu/digital-single-market/en/digital-inclusion-better-eu-society>



ability to use; lack of awareness and lack of trust in the use of online public services.<sup>56</sup> The emergence of a new and more complex form of digital divide underlies the phenomenon of digital exclusion. In this section, we delve into the meaning of digital divide, explain how it differs from the traditional gap between citizens who do not have access to the Internet and computers and those who do.

## 2.2. Digital Divides

The digital divide refers to the study of discrepancies between individuals, businesses, and countries regarding their access to ICT-facilities and communication tools.<sup>57</sup> Manuel Castells defined it as the ‘inequality of access to the Internet’.<sup>58</sup> Indeed, at the very beginning of the Internet age, the digital divide was primarily associated with the lack of access to Internet infrastructure. This type of inequality of access to ICT-facilities still exists nowadays in both developed and developing countries and it marginalizes some regions of the world (for example, Africa), preventing them from having access to new forms of wealth production.<sup>59</sup> However, in the last decades, the digital divide has been increasingly criticized. As the Internet has become an crucial tool for the effective production of wealth, communication, and for the realization of different fundamental rights, new debates on digital rights and the possible recognition of the human right to have access and use the Internet also emerged.<sup>60</sup>

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<sup>56</sup> PUBLIC SERVICES ONLINE, ‘Digital by Default or by Detour?’ Assessing User Centric eGovernment performance in Europe – eGovernment Benchmark 2012” (DG Connect), available at <https://op.europa.eu/en/publication-detail/-/publication/23d5089b-4910-4cc5-b950-aeca2ffc4f8e> (last accessed on April 5, 2020).

<sup>57</sup> OECD, ‘Understanding the Digital Divide’ (OECD, 2001), available at <https://doi.org/10.1787/236405667766> (last accessed on March 20, 2020)

<sup>58</sup> MANUEL CASTELLS, *The Internet Galaxy* (Oxford University Press, 2002) 248.

<sup>59</sup> CHRISTIAN FUCHS & EVA HORAK, ‘Africa and the Digital Divide’ (2008) 25(2) *Telematics and Informatics* 99.

<sup>60</sup> PAUL DE HERT & DARIUSZ KLOZA, ‘Internet (Access) as a New Fundamental Right. Inflating the Current Right Framework?’ (2012) 3(2) *European Journal of Law and Technology*, available at <http://ejlt.org/article/view/123/268>.

According to Article 19 of the UN Declaration of Human Rights, ‘everyone has the right to (...) seek [and] receive (...) information and ideas through any media and regardless of frontiers’. The Internet Right and Principle Charter stipulates that ‘everyone has the right to access to, and make use of, the Internet’. In international law, the right to internet access is not regarded as an autonomous right but as part of the right of all citizens to participate in the information society.<sup>61</sup> As such, in this section, I investigate the digital divide not only as an inequality that impedes individuals from having access to digital technology but also as a more complex discrepancy that is explained by more than the mere access to infrastructure. Having access to the Internet is nevertheless a precondition to being able to use digital services and this precondition is not yet at the reach of every single citizen.

In 2013, the Royal Geographical Society reported that 5.9 million adults in the UK had never used the Internet, including 4.1 million adults who were offline.<sup>62</sup> In developed countries, the digital divide affects mostly the elderly and less well-educated or poorer individuals.<sup>63</sup> Senior citizens are the most likely to suffer digital exclusion in developed countries, particularly those at the oldest ages.<sup>64</sup> In the United States, low-income households may have access to the Internet but they struggle with frequent periods of disconnection and unstable access to the Internet.<sup>65</sup> Developing countries continue to face greater challenges such as the high level of inequality, underdeveloped IT infrastructures (in particular in rural areas), and a lack of willingness or

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<sup>61</sup> ORESTE POLLICINO, ‘The Right to Internet Access. Quid Iuris?’ in Andreas von Arnould & Kerstin von der Decken (eds), *The Cambridge Handbook of New Human Rights* (Cambridge University Press, 2020) 263, 265.

<sup>62</sup> ROYAL GEOGRAPHICAL SOCIETY, ‘Digital Divide in the UK’ <https://21stcenturychallenges.org/what-is-the-digital-divide/>

<sup>63</sup> RAMON TIRADO-MORUETA, ANGEL HERNANDO-GOMEZ & J. IGNACIO AGUADED-GOMEZ, ‘The Capacity of Elderly Citizens to Access Digital Media in Andalusia (Spain)’ (2016) 19 (10) *Information, Communication & Society* 1427.

<sup>64</sup> KATEY MATTHEWS, JAMES NAZROO & ALAN MARSHALL, ‘Digital Inclusion in Later Life: Cohort Changes in Internet Use over a Ten-Year Period in England’ (2019) 39 *Ageing & Society* 1914.

<sup>65</sup> AMY GONZALES, ‘The Contemporary US Digital Divide: from Initial Access to Technology Maintenance’ (2016) 19(2) *Information, Communication & Society* 234.

financial capacity of governments to invest in technology.<sup>66</sup> Although the degree of connectivity has increased significantly in both developed and developing countries, the traditional digital divide in the form of inequality of access reflects existing inequalities in society in terms of income, rural/urban location, immigration status, and education.<sup>67</sup> For example, research has shown that in Canada recent immigrants and women have lower levels of online activity than born residents and men.<sup>68</sup> In other words, the rapid increase in Internet penetration does not yet translate itself into equal Internet utilization and the digital divide reproduces longstanding socioeconomic inequalities.

While several countries still struggle with limited coverage, the digital divide has acquired a new and particular meaning in the last years: Internet usage does not yet mean that individuals have acquired the required digital skills to use technology on equal terms. As José Van Dijk and Kenneth Hacker have highlighted, there is not one but multiple digital divides: digital inequalities can be explained by the lack of mental access, material access in the sense of lack of access to computers, digital illiteracy, and a lack of meaningful opportunities to use and engage with technology.<sup>69</sup> The digital divide caused by digital illiteracy is particularly important as it is associated with different factors such as the motivations underlying the refusal or inability to use digital technology and the lack of digital skills. This divide is particularly complex as several individuals with low literacy but who have access to the Internet and thus digital public services, may be overlooked by government initiatives to ensure widespread connectivity. Also,

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<sup>66</sup> OLASENI MURITALA OKUNOLA, JENNIFER ROWLEY & FRANCES JOHNSON, 'The Multi-Dimensional Digital Divide: Perspectives from an E-government Portal in Nigeria' (2017) 34(2) *Government Information Quarterly* 329, 330.

<sup>67</sup> COURTENAY HARRIS, LEON STRAKER & CLARE POLLOCK, 'A Socioeconomic Related 'Digital Divide' Exists in How, Not If, Young People Use Computers' (2017) 12(3) *PLoS One* e0175011, doi: [10.1371/journal.pone.0175011](https://doi.org/10.1371/journal.pone.0175011)

<sup>68</sup> MICHAEL HAIGHT, ANABEL QUAN-HAASE & BRADLEY A. CORBETT, 'Revisiting the Digital Divide in Canada: The Impact of Demographic Factors on Access to the Internet, Level of Online Activity, and Social Networking Site Usage' (2014) 17(4) *Information, Communication & Society* 503.

<sup>69</sup> JOSE VAN DIJK & KENNETH HACKER, 'The Digital Divide as a Complex and Dynamic Phenomenon' (2011) *The Information Society* 315.

these individuals may be ashamed to admit their lack of digital skills and may be prone to making mistakes inadvertently or use digital technology in an insecure way.

“Digital literacy” has been defined as “having the knowledge and skills to use a wide range of technological tools in order to read and interpret various media messages across different platforms. Digitally literate individuals possess critical thinking skills and are able to use technology in a strategic way to search, locate, filter, and evaluate information; to connect and collaborate with others in online communities and social networks; and to produce and share original content on social media platforms”.<sup>70</sup> The digital divide caused by the lack of digital skills also translates itself in a different Internet usage: individuals that fall behind because of low digital literacy are less likely to use Internet for political purposes, for example, to discuss political views, understand political or social realities, and seek further information about it.<sup>71</sup> Low digital literacy creates thus a democratic digital divide between the Internet users that are for example skilled with social media and can use it to convey their opinions and those that can only be passive listeners, if at all.

In the algorithmic age, digital literacy (or ‘algorithmic literacy’) means that individuals are also aware of the influence that personalized advertisement and political targeting can have on their consumer and political decisions.<sup>72</sup> Besides the democratic dimension of this type of digital divide, the lack of digital literacy can also have wider socioeconomic repercussions. It is beyond the scope of this paper to seek to understand all the factors that explain the different

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<sup>70</sup> DIMITRA DIMITRAKOPOULOU, ‘Digital Literacy’ in Laurie A. Schintler and Connie L. McNeely (Eds.), *Encyclopedia of Big Data* (Springer Link, 2018), [https://doi.org/10.1007/978-3-319-32001-4\\_72-1](https://doi.org/10.1007/978-3-319-32001-4_72-1).

<sup>71</sup> SEONG-JAE MIN, ‘From the Digital Divide to the Democratic Divide: Internet Skills, Political Interest, and the Second-Level Digital Divide in Political Internet Use’ (2010) 7 *Journal of Information Technology & Politics* 22.

<sup>72</sup> LEE RAINIE & JANNA ANDERSON, ‘The Need Grows for Algorithmic Literacy, Transparency, and Oversight’, *Pew Research Center* (February 8, 2017), available at <https://www.pewresearch.org/internet/2017/02/08/theme-7-the-need-grows-for-algorithmic-literacy-transparency-and-oversight/> (last accessed on April 20, 2020).

types of digital divide and in particular, digital literacy. Nevertheless, it is important to highlight the importance of taking into account different factors such as the social networks of individuals, *i.e.*, their social capacity together with their individual technological capacity. As Melissa Gilbert suggests, where someone lives, the people with whom she interacts, her jobs and educational histories are part of a constellation of power relations that can help explain why that person has a certain technological capacity.<sup>73</sup> Digital inequality is a multidimensional form of inequality that affects individuals in different areas of their lives, from access to education to health care or welfare benefits.<sup>74</sup> Having access to a smartphone or a social media account does not amount to a competent use of government online portals that allows citizens to file taxes, apply for benefits, or have a voice in local political affairs.

To sum up, Internet access is increasingly regarded as a right that allows citizens to express themselves and communicate online. However, as digital technology becomes more complex and more important in our societies and economies, granting access to infrastructure is not enough. Existing digital divides have become difficult to solve with mere open and universal access to the Internet. Online public services require not only basic internet access and skills but also more advanced digital literacy skills.

### 2.3. Digital Citizenship and Exclusion by Design in Digital Government

As automated systems become more pervasive in developed countries, we observe that a larger number of individuals is at risk of being left out. Digital government services often assume that

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<sup>73</sup> MELISSA GILBERT, 'Theorizing Digital and Urban Inequalities: Critical Geographies of 'Race', Gender and Technological Capital' (2010) 13(7) *Information, Communication & Society* 1000.

<sup>74</sup> LAURA ROBINSON ET AL., 'Digital Inequalities and Why They Matter' (2015) 18 (5) *Information, Communication & Society* 569.

citizens have digital skills and online services are increasingly being designed for so-called ‘digital citizens’.<sup>75</sup> This concept plays an important role in the analysis of digital inequalities and digital rights in the context of digital government. Although it is clear that the concept of ‘digital citizenship’ refers to the ability to use the Internet regularly in a skilled, critical, and secure way, two strands of scholarship have analyzed digital citizenship differently.<sup>76</sup>

The first strand focuses on the position of the digital citizen in the educational system. According to Unesco, ‘digital citizenship is a set of skills that enables citizens to access, retrieve, understand, evaluate and use, to create as well as to share information and media in all formats, using several tools, in a critical, ethical and effective way to participate and engage in personal, professional and social activities’.<sup>77</sup> UNESCO sees digital citizenship as a priority for young citizens and promotes educational programmes that seek to guarantee that children, parents, and educators engage with ICT in a secure, privacy-friendly, and responsible way.<sup>78</sup> Civil society organizations that seek to educate young citizens to improve their digital skills also try to make them aware of their digital rights, familiarizing individuals with technological innovations and their implications and making them aware of their right to privacy.<sup>79</sup>

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<sup>75</sup> JANNICK SCHOU & MORTEN HJELHOLT, ‘Digital Citizenship and Neoliberalization: Governing Digital Citizens in Denmark’ (2018) 22 (5) *Citizenship Studies* 507.

<sup>76</sup> KAREN MOSSBERGER, CAROLINE J. TOLBERT & RAMONA S. MCNEAL, *Digital citizenship: The Internet, Society and Participation* (MIT Press, 2008) 2-3.

<sup>77</sup> UNESCO, *Guidelines for Inclusion: Ensuring Access to Education for All* (2005), UNESCO, Paris, available at: <http://unesdoc.unesco.org/images/0014/001402/140224e.pdf>.

<sup>78</sup> UNESCO, ‘Fostering Digital Citizenship through Safe and Responsible Use of ICT: A Review of Current Status in Asia and the Pacific as of December 2014’ (2015) UNESCO, available at [https://en.unesco.org/sites/default/files/sru-ict\\_mapping\\_report\\_2014.pdf](https://en.unesco.org/sites/default/files/sru-ict_mapping_report_2014.pdf) See also COUNCIL OF EUROPE, *Digital Citizenship Education Handbook* (2019), available at <https://rm.coe.int/digital-citizenship-education-handbook/168093586f>

<sup>79</sup> EFRAT DASKAL, ‘Let’s Be Careful Out There....: How Digital Rights Advocates Educate Citizens in the Digital Age’ (2018) 21(2) *Information, Communication & Society* 241.

The second strand of literature approaches the concept of ‘digital citizen’ from more political, participatory, and societal integration perspectives.<sup>80</sup> This notion of digital citizenry refers also to the empowerment given by ICT-tools and facilities which allow individuals to participate on different levels of society. Access to Internet bandwidth or basic digital skills are thus insufficient to qualify someone as ‘a digital citizen’.<sup>81</sup> Digital citizens are expected to have the capacity to connect online, have sufficient skills and knowledge to engage with ICT (such as thorough proficiency in the use of computers and other Web-accessible devices) so that they engage critically and competently with both private and public organizations online. Digital citizenship is thus seen as a fundamental concept for modern democracies.<sup>82</sup> This concept is not limited to the analysis of the digital tools that are added to democratic participation and typical corollaries of traditional citizenship (for example, the right to vote) but it extends to the analysis of the impact of digital technology on a wider civic culture.<sup>83</sup>

In 2014, Neelie Kroes brought the two perspectives together, defining digital citizens as “people with greater access to information, people empowered to shape the world around them. More able to learn and participate”<sup>84</sup> For the sake of this paper, digital citizens are viewed as those who are able to take advantage of the potential of new technology in a digital environment, connect with government online and make use of

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<sup>80</sup> KAREN MOSSBERGER, CAROLINE J. TOLBERT & RAMONA S. MCNEAL, *Digital citizenship: The Internet, Society and Participation* (MIT Press, 2008).

<sup>81</sup> For a thorough analysis of the complexity of digital citizenship in terms of digital skills, see Moonsun Choi, Michael Glassman & Dean Cristol, ‘What It Means to Be a Citizen in the Internet Age: Development of a Reliable and Valid Digital Citizenship Scale’ (2017) 107 *Computers & Education* 100.

<sup>82</sup> ROXANNE MISSINGHAM, ‘Encouraging the Digital Economy and Digital Citizenship’ (2009) 58(4) *The Australian Library Journal* 386.

<sup>83</sup> NICK COULTRY ET AL. ‘Digital Citizenship? Narrative Exchange and the Changing Terms of Civic Culture’ (2014) 18 (6) *Citizenship Studies* 615.

<sup>84</sup> STEVE SAXBY, ‘The 2014 CLSR-LSPI Lisbon Seminar on the ‘Digital Citizen’ (2015) 31 (2) *Computer Law & Security Review* 163.

digital services. Moreover, digital citizens are also aware of the rights associated with digital environment (for example, public information access and personal data protection rights). Government can only deliver digital transformation if their citizens are able to fully engage with technology. This includes on the one hand the mentioned digital literacy skills. It is important to note that, unlike traditional citizenship, the concept of ‘digital citizen’ is not defined as a form of membership of a nation-state. Instead, more theoretical scholarship on this issue claims that digital citizens acquire this status through their performance in cyberspace and the exercise of their digital rights (for example, by participating in online discussions).<sup>85</sup>

Solving the literacy or democratic digital divide is crucial to give every citizen access to government services, including government benefits. However, the design of these public services cannot be thought only with digital citizens in mind. This is particularly the case for digital assistance services in the context of social welfare that are becoming increasingly automated and often may be led by biased perceptions or stereotypes or that may not be fully or critically understood by a citizen with limited digital skills.<sup>86</sup>

### 3. Implications of Digital Exclusion

The digitalization of public services offers great potential for the optimization of public administrations. However, the existence of different and multidimensional digital divides has the risk of creating new forms of social exclusion or reinforcing existing ones. Moreover, in the presence of digital divides, digital government initiatives are bound to fail or at least fail to be

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<sup>85</sup> See ENGIN ISIN & EVELYN RUPPERT, *Being Digital Citizens* (Littlefield International 2015).

<sup>86</sup> SORA PARK & JUSTINE HUMPHRY, ‘Exclusion by Design: Intersections of Social, Digital, and Data Exclusion’ (2019) 22 *Information, Communication & Society* 934.



inclusive.<sup>87</sup> This section offers an overview of the legal implications of digital inequalities in the context of digital government.

### 3.1. Digital Exclusion and Unequal Treatment

Current digital exclusion has thus far been an overlooked side-effect of ongoing strategies to digitize government and other public services provided by public bodies. Individuals that are less likely to have regular access and ability to use the Internet effectively are also those that are the most likely to only have high school education or less.<sup>88</sup> In other words, digital exclusion reproduces existing socioeconomic cleavages, biases, and other forms of discrimination. Digital inequalities result in the exclusion of citizens from opportunities and public services which ultimately translates itself in the inability to exercise fundamental rights (for example, right to education, due process).

Digital exclusion is a novel form of inequality which affects both connected and disconnected individuals. In the last decade, digital inequality started being added to the existing list of causes underlying is explained by a wide array of factors such as race, class, and gender.<sup>89</sup> The unequal treatment in these cases results first from the lack of assistance to those that cannot use online services by themselves, the design of online services that is not accessible to citizens with low literacy or digital literacy skills, and the absence of training programmes that can ensure that those citizens feel more included. Equitable access to digital government requires public administrations to rethink their educational programmes on digital literacy, the provision

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<sup>87</sup> MICHAEL PARENT, CHRISTINE VANDEBEEK & ANDREW GEMINO, 'Building Citizen Trust through e-Government' (2004) Proceedings of 37th Annual Hawaii International Conference on System Science, IEEE, DOI: [10.1109/HICSS.2004.1265304](https://doi.org/10.1109/HICSS.2004.1265304)

<sup>88</sup> KAREN MOSSBERGER, CAROLINE J. TOLBERT & RAMONA S. MCNEAL, *Digital citizenship: The Internet, Society and Participation* (MIT Press, 2008) 141.

<sup>89</sup> See, for example, LAURA ROBINSON ET AL., "Digital Inequalities and Why They Matter" (2015) 18(5) *Information, Communication & Society* 569.

of more kiosks and computers in public places with assistance, and the design of more intuitive and user-friendly systems.<sup>90</sup>

Second, unequal treatment in digital government may result from different features of automation, data collection, and algorithmic processing that add new layers of potential discrimination and exclusion to citizens that are already marginalized.<sup>91</sup> Algorithmic processing analyzes data by assigning categories to data that has been previously collected or that is provided by users. This can happen for example during a conversation with a ‘chatbot’.<sup>92</sup> In Australia, empirical research on the automation of welfare payments revealed the challenges of the automation of a range of processes that required individuals to enter their own data and update information about their income.<sup>93</sup> One of the key controversies resulted from the design features of automatic procedures initiated as a result of the inaction of welfare recipients: When a welfare client would not engage with social welfare services online or in person or if there in gaps in the database, the system would fill the gaps with a fortnightly income figure from the national taxation office, further penalizing individuals who were unable to respond due to lack of access to Internet, with low literacy skills or citizens who inadvertently made mistakes because they did not know how to insert information in the system.<sup>94</sup>

Third, individuals with more limited digital skills may also have limited awareness of the presence of algorithms in digital government, their behavior in the filtering of information and how they make decisions. This awareness can help individuals navigate digital government more

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<sup>90</sup> THAWAR T. ARIF, ‘E-Government and the Digital Divide’ (2008) 18 *Journal of Baghdad College of Economic Sciences* 302.

<sup>91</sup> SORA PARK & JUSTINE HUMPHRY, ‘Exclusion by Design: Intersections of Social, Digital, and Data Exclusion’ (2019) 22 *Information, Communication & Society* 934, 935.

<sup>92</sup> PARK & HUMPHRY *supra* note 90 at 938.

<sup>93</sup> *Id.* at 941.

<sup>94</sup> AUSTRALIAN OMBUDSMAN, *Centrelink’s automated debt raising and recovery system. A report about the Department of Human Services’ Online Compliance Intervention System for Debt Raising and Recovery* (2017) Australian Commonwealth.

consciously and securely and understand better beforehand how algorithms will process their requests. Moreover, a general lack of awareness of how algorithms operate can reinforce the unequal participation of certain groups of citizens in public life and democracy.<sup>95</sup>

In order to guarantee more equal access and usage of digital services, governments in the United Kingdom and Denmark have started developing the concept of ‘assisted digital’. This term is used to describe a wide range of inclusive developments, practices, and strategies that aim to ensure that citizens are not left behind in the switch to digital government.<sup>96</sup> In the United Kingdom, Assisted Digital is different from other approaches to digital inclusion which provide for multichannel access to public services (e.g., telephone, face to face contact with a civil servant). Instead, Assisted Digital takes a step forward and assumes that services are already digital by default and thus helps citizens that cannot use digital services independently, get online and use online public services in a way that is suitable for them.<sup>97</sup> Considering that not every citizen has the ability to use digital services independently, governments should design strategies to ensure that citizens are better able to understand digital services and help citizens who are not online. Guidelines for Assisted Digital include writing the content for government websites in plain language, creating an EasyRead version, that is, a format that uses pictures to support the meaning of text, increasing the accessibility of information for individuals that require sign language.<sup>98</sup>

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<sup>95</sup> ANNE-BRITT GRAN, PETER BOOTH & TAINA BUCHER, ‘To Be or Not to Be Algorithm Aware: A Question of a New Digital Divide’ (2020) Information, Communication & Society, <https://doi.org/10.1080/1369118X.2020.1736124>

<sup>96</sup> Digital Engagement Team, ‘An Introduction to Assisted Digital’, Government Digital Service (July 28, 2011), available at <https://gds.blog.gov.uk/2011/07/28/an-introduction-to-assisted-digital/> (last accessed on April 2nd, 2020).

<sup>97</sup> Digital Engagement Team, ‘An Introduction to Assisted Digital’, Government Digital Service (July 28, 2011), available at <https://gds.blog.gov.uk/2011/07/28/an-introduction-to-assisted-digital/> (last accessed on April 2nd, 2020).

<sup>98</sup> <https://gds.blog.gov.uk/2018/09/13/accessibility-advice-when-creating-a-uk-government-consultation/>

### 3.2. Digital Literacy, Fair Trial, and the Right to Make Mistakes

The literature on digital government tends to be more focused on the provision of public services than on the protection of fundamental rights such as the right to fair trial, equality of arms, and due process. Nevertheless, an individual's online conduct during the administrative phase of a procedure can have important implications for the judicial one. For example, when welfare benefits are provided on the basis of information incorrectly provided by a citizen, she might be found guilty of fraud.<sup>99</sup> Nevertheless, when welfare recipients have limited digital literacy and are not be aware of the types of data and computational analysis that are possible, they may also provide incriminating data without knowing what it may be used for.<sup>100</sup> In a report on the *Troubled Families programme* in the United Kingdom, it was revealed that while many families sign a form regarding the sharing of their data, "they do not know fully what they have consented to and are not making informed decisions."<sup>101</sup> Moreover, these individuals may not be able to contest the correlations made by automated systems due to their limited perception of these technologies and limited digital literacy.

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<sup>99</sup> VALERY GANTCHEV, 'Data protection in the age of welfare conditionality: Respect for basic rights or a race to the bottom?' (2019) 21(1) *European Journal of Social Security* 3. For an extensive analysis of the implications of automating administrative tasks and delegating them to private technology companies, see Sofia Ranchordas & Ymre Schuurmans, 'Outsourcing the Welfare State: The Role of Private Actors in Welfare Fraud Investigations' (2020) 7(1) *European Journal of Comparative Law & Governance* 5.

<sup>100</sup> On digital literacy and low-income communities, see, e.g., Alison Powell, Arnelia Bryne & Dharma Dailey, *The Essential Internet: Digital Exclusion in Low-Income American Communities*, 2 *POL'Y & INTERNET* 161 (2010).

<sup>101</sup> Data Justice Lab, *Digital Technologies and the Welfare State*, Sep. 14, 2018, available at <https://www.ohchr.org/Documents/Issues/Epoverty/UnitedKingdom/2018/Academics/DataJusticeLabCardiffUniversity.pdf>. On profiling, see Mireille Hildebrandt, *Profiling: From Data to Knowledge*, 30 *DATENSCHUTZ UND DATENSICHERHEIT* 548 (2006) Available at: <https://link.springer.com/content/pdf/10.1007%2Fs11623-006-0140-3.pdf>

The adoption of a more ‘trial-and-error’ approach to digital government or the adoption of the so-called ‘right to make a mistake’ could help reduce certain digital inequalities, particularly regarding groups with low levels of literacy who do not fully understand the functioning of technology. This includes the adoption of policies or legislative measures that promote administrative leniency towards citizens who are not digitally literate as well as asking feedback from citizens to improve the accessibility of public services and promote a better dialogue between the citizenry and public authorities. This approach was adopted in France in 2018 in the context of a program on the modernization of public services.<sup>102</sup> Two well-known specific measures are the creation of the website [oups.gov.fr](http://oups.gov.fr) and the right to make a mistake in good faith (e.g., a mistake filling in a tax returns form). The former is a website of the French government where common administrative mistakes are published and explained in very simple terms and information is given on how to fill in forms. The ‘right to make a mistake’ allows citizens to make one administrative mistake in their lives without any legal implications. The insertion of this right was explained by the need to take into account the challenges faced by different citizens when using digital public services.<sup>103</sup> This right also helps harmonize existing practices to forgive first administrative mistakes and reinforce the trust of citizens in public bodies so that individuals feel comfortable to rectify mistakes and try digital services.<sup>104</sup> The right to make a mistake is presented as the symbol of the dynamic nature of administrative action and as a way of ensuring that citizens see public administrations as agents at the service of public policies and not merely as sanctioning agents.<sup>105</sup> Furthermore, in the context of the modernization of public administration, the French legislator has asked citizens to provide

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<sup>102</sup> LOI n° 2018-727 du 10 août 2018 pour un Etat au service d'une société de confiance, Article 2.

<sup>103</sup> Etude d'impact, Project de loi pour un Etat au service d'une société de confiance, NOR: CPAX1730519L/Bleue2

<sup>104</sup> Etude d'impact, Project de loi pour un Etat au service d'une société de confiance, NOR: CPAX1730519L/Bleue2

<sup>105</sup> Exposé des motifs, LOI n° 2018-727 du 10 août 2018 pour un Etat au service d'une société de confiance

feedback on new digital services in order to improve the trust of citizens in public authorities.<sup>106</sup> Although it is still too early to assess the ability of these measures to address the problem of digital exclusion, this lenient approach could be beneficial for individuals that experience difficulties navigating the complex administrative system, particularly in the online world.

### 3.3. Automation, Good Administration and the Lack of Meaningful Contact with the Public Administration

In the last few years, new objections have been raised against the digitization of government. While it is efficient to employ automated systems to allow citizens to fill in forms at their own convenience, digital technology is dehumanizing the contact between citizens and government and putting at stake the meaning of ‘good administration’.<sup>107</sup> In addition, one of the key pillars of administrative law is administrative discretion which includes the ability to take into account the specific needs of citizens, weigh different options and interests, and decide accordingly. Public bodies are provided with leeway to decide on citizens’ requests and receive their trust in doing so because they are thought to have some degree of expertise to decide on the grounds of specific circumstances.<sup>108</sup> At the same time, the need to constrain administrative discretion is also explained by the assumption that individuals exercising public functions will be driven by selfish interests.<sup>109</sup> In other words, the perception and limits of administrative discretion have been

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<sup>106</sup> Id.

<sup>107</sup> RAAD VAN STATE [Dutch Council of State], Ongevraagd advies over de effecten van de digitalisering voor de rechtsstatelijke verhoudingen

<sup>108</sup> DANIELLE K. CITRON & RYAN CALO, ‘The Automated Administrative State: A Crisis of Legitimacy’ (2020) Available at: [https://scholarship.law.bu.edu/faculty\\_scholarship/838](https://scholarship.law.bu.edu/faculty_scholarship/838)

<sup>109</sup> THEODORE LOWI, ‘Legitimizing Public Administration: A Disturbed Dissent’ (1993) 53(3) Public Administration Review 261, 262.

thought for human discretion. However, discretion is increasingly being placed in the hands of automated systems which may have more difficulties in providing a ‘human side’ to public administration.<sup>110</sup> Moreover, an automated system is open to any set of values, motives and goals that are introduced as input.<sup>111</sup> This ties in with the classical debate on the role of personal values and interests in administrative decision-making. It could be argued that the digitalization of services and administrative decision-making will improve the rationality of decisions, reduce mistakes and biases. However, automated systems may not make ‘human’ exceptions to the law on the grounds of personal experience, compassion or a ‘hunch’ that the citizen may deserve a differentiated treatment considering her personal situation (*e.g.*, low literacy level).<sup>112</sup> At the same time, automated systems are also prone to amplify existing biases, producing unfair outcomes.

A related matter refers to the trust of citizens in digital government. The current wave of digitization of public services focuses on technical aspects of technology and sets aside the fact that (digital) government is primarily a social and political phenomenon which requires cultural changes, new skills, and the acceptance of citizens.<sup>113</sup> When these human and social elements are not taken into account, a significant percentage of citizens might not be able to exercise their rights adequately, have access to public services and hence lose trust in government and its representatives can be put at stake.

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<sup>110</sup> DANIELLE K. CITRON & RYAN CALO, ‘The Automated Administrative State: A Crisis of Legitimacy’ (2020) Available at: [https://scholarship.law.bu.edu/faculty\\_scholarship/838](https://scholarship.law.bu.edu/faculty_scholarship/838)

<sup>111</sup> THOMAS J. BARTH & EDDY ARNOLD, ‘Artificial Intelligence and Administrative Discretion: Implications for Public Administration’ (1999) 29(4) *American Review of Public Administration* 332, 337.

<sup>112</sup> THOMAS J. BARTH & EDDY ARNOLD, ‘Artificial Intelligence and Administrative Discretion: Implications for Public Administration’ (1999) 29(4) *American Review of Public Administration* 332, 337

<sup>113</sup> RANIA FAKHOURY, ‘Digital Government isn’t working in the developing world. Here’s why’, *The Conversation* (September 11, 2018), available at <http://theconversation.com/digital-government-isnt-working-in-the-developing-world-heres-why-94737> (last accessed on 13 February 2020).

A possible solution to increase the acceptance and uptake of digital technology is community-led design. It is crucial to involve people in the design of technology that is supposed to benefit them, and to do so at all stages of the design process.<sup>114</sup> This could allow individuals to contribute to the design of technology with their diverse concerns and inform systems regarding their needs. Social media platforms also have the potential to render the communication between public administration and citizens more informal and user-friendly, if used responsibly and in strict pursuit of the public interest.<sup>115</sup>

## **Conclusion**

A growing number of public services is becoming digital. However, at the time of writing, not all citizens in either developed or developing countries have the literacy, financial means or the physical or mental capacity to engage with digital technology in the same way. This concern is particularly visible among vulnerable groups of citizens who mistrust digitization and the growing dehumanization of public services and public law. Existing approaches to digital government are in fact amplifying longstanding political issues and socioeconomic inequalities.<sup>116</sup>

This paper discussed digital government from the perspective of digital inequality and digital exclusion. It showed that the design of digital government is not yet fully inclusive, leaves out many citizens and fails to address new forms of digital divide. Modern discrepancies in the

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<sup>114</sup> SASHA COSTANZA-CHOCK ET AL. & THE T4SJ PROJECT, #MoreThanCode: Practitioners reimagine the landscape of technology for justice and equity. Research Action Design & Open Technology Institute. Available online at <https://morethancode.cc..>

<sup>115</sup> ALBERT JACOB MEIJER & RENE TORENVLIED, 'Social Media and the New Organization of Government Communications: An Empirical Analysis of Twitter Usage by the Dutch Police' (2016) 46(2) *American Review of Public Administration* 143.

<sup>116</sup> M. BAPTISTA, 'E-Government and State Reform: Policy Dilemmas for Europe' (2005) 3(4) *Electronic Journal of E-Government* 167, 170.



structure of access and use of ICT are difficult to grasp.<sup>117</sup> While many citizens simply are not connected to the Internet, others do not have meaningful access to it, do not have the (digital) literacy to be fully able to embrace its potential and engage with the growing number of digital public services or are not willing to uptake digital technologies.<sup>118</sup> With the growing trend to digitize information and automate public services, public administrations often forget that not every single citizen has the ability to engage with technology in an effective and critical way. In fact, citizens should have the right to have access to public services without having to engage with technology as long as it remains proportionate to demand an offline alternative to online services. It is important to underline that digital government is not an end in itself, it is a means to render government more transparent, efficient, accessible, and inclusive. As long as citizens keep being excluded from public services they are entitled to, because of the lack of technical and social skills, digital government cannot be regarded as an alternative to offline services. Future research should continue delving into the legal implications of the digital divide for the exercise of fundamental rights (for example, the right to education), the legitimacy of the automation of certain public services with social functions, and new and more inclusive approaches to digital citizenship that also comprise citizens who are at the moment excluded from participating in the information society.

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<sup>117</sup> CHRISTOPH LUTZ, 'Digital Inequalities in the Age of Artificial Intelligence and Big Data' (2019) 1(2) *Human Behavior and Emerging Technologies* 141.

<sup>118</sup> ALISON ROGERS, 'Building the Superhighway for Information and Commerce: How the E-Government Can Save Money by Building Bridges across the Digital Divide' (2016) *Michigan Journal Race & Law* XXII 163-185. For an analysis of the broader problems regarding the inability of citizens to use technological means and be self-sufficient, see WRR, *Weten is geen doen: Een realistisch perspectief op redzaamheid* (Wetenschappelijke Raad voor het Regeringsbeleid 2017).