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AUTOMATED GOVERNMENT FOR VULNERABLE CITIZENS: INTERMEDIATING RIGHTS

Sofia Ranchordás* and Luisa Scarcella**

ABSTRACT

Filing tax returns or applying for unemployment benefits are some of the most common government transactions. Yet interacting with tax and social security authorities is for many a source of government anxiety. Bureaucracy, regulatory delays, and the complexity of the administrative legal system have been regarded for decades as the key reasons for this problem. Digital government promised a solution in the shape of simplified forms, electronic filing, and better communication with citizens. In the United States, privately developed software systems such as TurboTax and MiDAS emerged as intermediaries between citizens and digital government, selling convenience and efficiency. These systems help citizens comply with their government obligations and apply for benefits. But they also allow governments to identify fraud on a large scale. This Article argues that automations, particularly when intermediated by private technology companies, are double-edged swords for different reasons.

First, they help reinforce tax enforcement systems that typically target vulnerable citizens (e.g., low-income, underrepresented communities). Second, the price of the convenience offered by automation is different, depending on who you are. For average, middle to high-income, tech-savvy citizens who can interact with digital government without assistance, automation is a convenient alternative to the traditional bureaucracy. However, for vulnerable citizens who do not have access to stable Internet or a computer, or are unable to interact with technology, automation has failed to promote equalitarian access to public services and government decision-making. Existing scholarship has primarily focused on the discriminatory effects of big data, and the opacity and biases of algorithms without delving into the problem of the broader design of digital government and automation and how it leaves vulnerable citizens behind.

This Article addresses this issue by exploring how the interaction between bureaucracy, digital technology, and power asymmetries can have dehumanizing

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effects for vulnerable citizens. This Article's contribution to the literature is twofold: First, it explores how technological intermediaries (both privately and publicly developed) operate and reshape the relationship between citizens and governments; second, it demonstrates how technology has deepened existing vulnerabilities and what needs to be reformed in this context.

INTRODUCTION

We are connected to government from cradle to grave: all citizens, regardless of their socioeconomic status, income, and skills should be able to connect to government on a regular basis, for example, to request a birth certificate, register property, get married or divorced, file their taxes, and apply for the social welfare benefits they are entitled to.¹ In the digital age, government transactions have become dematerialized with paperless forms, government websites, smartphone applications, and digital identities.² At the same time, budget cuts have forced governments to seek higher efficiency through technologies which enable them to automate tasks, combat tax and welfare fraud more effectively, and reduce personnel costs.³ The transition to digital government services is guided by the assumptions that citizens wish to embrace digitization and that regardless of their age, education, and experience, they can perform a multitude of government transactions merely with the assistance of technological intermediaries (e.g., TurboTax, a well-known software for tax return preparation).⁴ Furthermore, the shift to digital government with unsupervised digital intermediation—but more information online—is thought to help simplify administrative procedures, improve public communication, and ensure that citizens will be better connected to government.⁵ However, these assumptions are flawed on many accounts.

¹ DANIEL SOLOVE, THE DIGITAL PERSON 127–32 (Jack M. Balkin & Beth Simone Noveck eds., 2004) (discussing the proliferation of data flows and in particular, the multiplication of public records). *See generally* Subhajit Basu, *E-Government and Developing Countries: An Overview*, 18 INT'L REV. L. COMPUT. & TECH. 109, 110 (2004) (defining e-governance and discussing the application of e-government and its increasing importance in citizens' lives, comparing its implementation in developed countries to developing countries).

² *See, e.g.*, Fernanda Paula Oliveira & Carla Machado, *Papers, My Friend, Are Blowing in the Wind: Towards a Paperless Administration*, 7 PERSPS. L. & PUB. ADMIN. 1, 1–7 (2018) (discussing the shift to a paperless public administration which was designed to advance administrative simplification and modernization).

³ *See* Marvin van Bekkum & Frederik Zuiderveen Borgesius, *Digital Welfare Detection and the Dutch SyRI Judgment*, 23 EUR. J. SOC. SEC. 323, 323–25 (2021) (discussing how SyRI was used to detect fraud in welfare beneficiaries).

⁴ *See* Jay A. Soled & Kathleen DeLaney Thomas, *Regulating Tax Return Preparation*, 58 B.C. L. REV. 151, 163–68 (2017) (criticizing the limited regulation of tax return preparation software and proposing reflections for a comprehensive tax preparation process reform).

⁵ *But see, e.g.*, Florian Pethig, Julia Kroenung & Markus Noeltner, *A Stigma Power Perspective on Digital Government Service*, 38 GOV'T INFO. Q. 101545 1, 1 (2021) (discussing the avoidance of digital government services among citizens with disabilities in Germany).

This Article argues that in our current digital society, there are three phenomena that simultaneously connect and disconnect citizens from government and impede millions of individuals from exercising their rights on equal terms: bureaucracy, technology, and power asymmetries.⁶ This Article discusses the relationship between these three phenomena and explains why technology, as an intermediary between citizens and governments, has enhanced longstanding power asymmetries and affected the ability of vulnerable citizens to have equal access to administrative justice. This Article does not limit the support of its analysis to U.S. law and legal scholarship. Rather, since these phenomena have socioeconomic or cultural dimensions and are already present in Western countries implementing digital government, this Article—without being strictly comparative—relies on interdisciplinary literature (e.g., public policy, public administration, and communication sciences) and comparative legal scholarship, referring to relevant international examples from which U.S. law can draw lessons. This argument proceeds in three steps.

First, scholars have studied for decades the impact of bureaucracy on citizens' ability to exercise their rights when contacting public authorities: red tape, delays, inconsistent rules, incomprehensible language, and procedures regularly confuse citizens and dissuade them from requesting services they are entitled to.⁷ Contrary to Kafka's novel *The Castle*, which offers a critique of public administrations of his time, nowadays, administrative tyranny is no longer defined by paper trails and the power conferred by paper-based bureaucracy.⁸ The tyranny of paper has been replaced by digital trails which have failed to deliver the promise of a "transformational digital government" with fewer bureaucratic hurdles and more transparency.⁹ Digital

⁶ See, e.g., Joshua Burraway, *Nobodies and Somebodies: Power, Bureaucracy, and Citizenship in a London Rehousing Hub*, 10 HAU: J. ETHNOGRAPHIC THEORY 130, 132 (2020) (exploring the use of bureaucracy technologies as mediators in housing policies for homeless citizens and discussing how these technologies enhance already existing asymmetrical power relations between the homeless and local housing authorities); BENJAMIN ROSETH & ANGELA REYES, WAIT NO MORE: CITIZENS, RED TAPE AND DIGITAL GOVERNMENT 6 (2018) (analyzing government transactions and how their complexity impedes citizens from exercising their rights, with special focus on Latin America and the Caribbean).

⁷ See Barry Bozeman, *A Theory of Government "Red Tape"*, 3 J. PUB. ADMIN. RSCH. & THEORY 273, 278–79 (1993) (discussing the concept of red tape and the negative implications of bureaucratic rules, in particular how certain rules may help some citizens but hurt others); WENDY WAGNER, INCOMPREHENSIBLE! 4–6 (2019) (analyzing how the U.S. legal system fosters incomprehensible language). Specifically, on bureaucracy and the adversarial treatment of citizens on welfare, see INSA KOCH, PERSONALIZING THE STATE: AN ANTHROPOLOGY OF LAW, POLITICS, AND WELFARE IN AUSTERITY BRITAIN 216–17 (Kyle Treiber & Loraine Gelsthorpe eds., 2018) (exploring the relationship between stigmatized citizens and government and discussing how state control can be regarded as adversarial).

⁸ Carlos Santiso, *The Digital Revolution and Better Public Policy*, 2019 POLITIQUE ÉTRANGÈRE 131, 137–39 (analyzing the transition to a paperless public administration and its effect on the advancement of the transparency and efficiency of government).

⁹ MIRIAM LIPS, DIGITAL GOVERNMENT: MANAGING PUBLIC SECTOR REFORM IN THE

government services remain politically tainted, procedures are still path-dependent and, in some cases, there is a cumulation of digital and analogue obligations for citizens (e.g., fill in forms online, then print, sign, and mail them).¹⁰ Few countries across the globe have built digital governments from scratch.¹¹ This point brings us to the second step of our argument: technology has not reduced administrative burdens but it has become, for many citizens, an additional layer of bureaucracy that can only be navigated with access to a computer, stable Internet, and digital skills. Millions of citizens throughout the United States still lack these conditions or require human assistance when engaging with digital government services (e.g., applying for welfare benefits, filing taxes online).¹² The digital divide, now commonly defined as different levels of unequal participation in the digital society, is alive and well. Still, its effects on access to digital government transactions have been overlooked.¹³ The

DIGITAL ERA 4–8 (2019) (discussing the evolution of digital government). Public policy literature has further demonstrated that the success of digital government and the ability to generate citizen trust requires a “transformational” type of digitization of public services rather than the simple digitization and web enabling of processes. See Mohamed Mahmood et al., *The Role of Information and Communications Technology in the Transformation of Government and Citizen Trust*, 86 INT’L REV. ADMIN. SCI. 708, 709–10 (2019).

¹⁰ During the pandemic, on August 28, 2020, the IRS announced that it would temporarily allow the use of digital signatures on certain forms that cannot be filed electronically. IRS, *IRS Adds Six More Forms to List That Can Be Signed Digitally; 16 Now Available* (Sept. 10, 2020), <https://www.irs.gov/newsroom/irs-adds-six-more-forms-to-list-that-can-be-signed-digitally-16-now-available> [<https://perma.cc/EC5V-BBJJ>] (showing that the number of fully digital forms remains limited).

¹¹ Estonia is the key example of a digital government which was built from scratch and does not rely on pre-existing systems and procedures. See Velko Lember et al., *Technological Capacity in the Public Sector: The Case of Estonia*, 84 INT’L REV. ADMIN. SCI. 214, 216–17 (2018).

¹² Andrew Perrin & Sara Atske, *7% of Americans Don’t Use the Internet. Who Are They?*, PEW RSCH. CTR. (Apr. 2, 2021), <https://www.pewresearch.org/fact-tank/2021/04/02/7-of-americans-dont-use-the-internet-who-are-they/> [<https://perma.cc/DT82-RAQK>] (explaining Internet non-adoption on the grounds of a survey conducted in early 2021. According to the survey, non-adoption is explained by a number of demographic variables such as age, education, and household income.); see also Emily A. Vogels, *Digital Divide Persists Even as Americans with Lower Incomes Make Gains in Tech Adoption*, PEW RSCH. CTR. (June 22, 2021), <https://www.pewresearch.org/fact-tank/2021/06/22/digital-divide-persists-even-as-americans-with-lower-incomes-make-gains-in-tech-adoption/> [<https://perma.cc/46SJ-L23W>] (showing that broadband adoption and smartphone ownership have not reduced the inequality between Americans with lower and higher incomes. While high-income Americans are more likely to own multiple devices and be able to go online more often, 13% of low-income adults do not have access to any of these technologies).

¹³ There is abundant literature on the digital divide and its different degrees. See ELLEN J. HELSPER, *DIGITAL DISCONNECT: THE SOCIAL CAUSES AND CONSEQUENCES OF DIGITAL INEQUALITIES* (2021); Joanna Goode, *The Digital Identity Divide: How Technology Knowledge Impacts College Students*, 12 NEW MEDIA & SOC’Y 497, 498 (2010); Ellen J. Helsper & Bianca C. Reisdorf, *The Emergence of a “Digital Underclass” in Great Britain and Sweden: Changing Reasons for Digital Exclusion*, 19 NEW MEDIA & SOC’Y 1253, 1253–55 (2016);

design of digital government assumes—often wrongly—that citizens are self-reliant, have access to technology, and have enough time, mental capacity, and average digital skills to engage critically with new digital tools.¹⁴ While the number of citizens who benefit from the automation and digitalization of government services has increased, many equally deserving citizens living in remote areas, belonging to older generations, immigrant communities and other underrepresented minorities, have been left behind.¹⁵ For example, during the pandemic, millions of senior citizens encountered problems registering for their COVID-19 vaccines and obtaining trustworthy information about them.¹⁶

The technological intermediation of government transactions is not only burdensome and likely to disadvantage vulnerable citizens, but it also has significant legal implications for the administrative system (e.g., it reduces the legitimacy of public authorities due to the delegation of agency expertise to software) and the exercise of rights.¹⁷ The third step of our argument is thus focused on the legal implications of the unequal exercise of rights before digital government and how this translates itself into the harsher enforcement of law for vulnerable citizens.¹⁸ Contrary to a

Alexander van Deursen & Karen Mossberger, *Any Thing for Anyone? A New Digital Divide in Internet-of-Things Skills*, 10 POL'Y & INTERNET 122, 122–24 (2018) (discussing the digital divide from a skills perspective with regard to the development of Internet-of-Things); Christoph Lutz, *Digital Inequalities in the Age of Artificial Intelligence and Big Data*, 1 HUM. BEHAV. & EMERGING TECH. 141, 141–42 (2019).

¹⁴ See ANNE-GREET KEIZER ET AL., *WHY KNOWING WHAT TO DO IS NOT ENOUGH: A REALISTIC PERSPECTIVE ON SELF-RELIANCE* 7, 29 (Corien Prins & Frans Brom eds., 2019) (analyzing the importance of limited mental capacity and the gap between “knowing” what one’s rights are and what procedures need to be followed and what needs to be done to exercise them. This book discusses the concept of “self-reliance”).

¹⁵ See Goode, *supra* note 13, at 498–99 (discussing that gender, race, socioeconomic status, primary language, geographical location, disability status, education level, and generational characteristics indicate disparate use of technology); van Deursen & Mossberger, *supra* note 13, at 133–34 (highlighting a survey that showed differences in understanding of complex internet systems based on certain factors).

¹⁶ Francesco Bronzino et al., *Mapping the Digital Divide: Before, During, and After COVID-19*, TPRC48: THE 48TH RESEARCH CONFERENCE ON COMMUNICATION, INFORMATION AND INTERNET POLICY (2021) (discussing the inequities in broadband Internet access as well as citizens’ ability to develop themselves).

¹⁷ On the problem of intermediaries in e-government, see Marijn Janssen & Bram Klievink, *Do We Need Intermediaries in E-Government? Intermediaries to Create a Demand-Driven Government*, 220 AMCIS 2008 PROCS. (2008). On digital government and legitimacy, see Danielle J. Citron & Ryan Calo, *The Automated Administrative State: A Crisis of Legitimacy*, 70 EMORY L.J. 797, 798 (2021) (offering a thorough analysis of the legitimacy deficit of the automation of government). For an extensive analysis of the use of automation in government, see DAVID FREEMAN ENGSTROM ET AL., *GOVERNMENT BY ALGORITHM: ARTIFICIAL INTELLIGENCE IN FEDERAL ADMINISTRATIVE AGENCIES* 6, 21, 22 (2020); David Freeman Engstrom & Daniel E. Ho, *Algorithmic Accountability in the Administrative State*, 37 YALE J. ON REGUL. 800 (2020).

¹⁸ On the values and models of administrative justice, see JERRY MASHAW, *BUREAUCRATIC*

sheet of paper, technological intermediaries used in the automation of government services are not neutral.¹⁹ Digital technology is a paradoxical intermediary between citizens and governments: at first sight, technology conveys the appearance of convenience and simplicity leading to the reduction of human assistance, the automation of services and rights, and the growing deference of courts to technological evidence.²⁰ In reality, simplified online interfaces, particularly in the tax realm, have proven to be double-edged swords and sources of inequality, especially when technology is developed by private companies whose interests and values are not aligned with those of the public.²¹ Simplified online government interfaces without complementary human assistance require citizens to fully trust them and the way in which they interpret the law.²² This is problematic from a legal perspective for three reasons. First, the failure to engage critically with digital government can mean that citizens do not fully exercise their rights.²³ Second, a poor understanding of digital government and their underlying administrative rules and procedures can lead to flawed results.²⁴ Third, as citizens have unequal control over what data is generated, processed and for what purposes, when technology is used to verify the eligibility for benefits and detect fraud, citizens who do not fully understand the functioning of the system may be placed in an unfair and unequal position with important consequences.²⁵

Digital government worsens the position of disadvantaged citizens not only because of the potential biases of the data upon which it bases its data, but also

JUSTICE 23–25 (1983); see also generally Jerry Mashaw, *Models of Administrative Justice*, in THE OXFORD HANDBOOK OF ADMINISTRATIVE JUSTICE (Joe Tomlinson et al. eds., 2021).

¹⁹ See, e.g., Abe Chauhan, *Towards the Systemic Review of Automated Decision-Making Systems*, 25 JUD. REV. 285, 285–89 (2020) (discussing the role of automated decision-making in the United Kingdom and presenting algorithms as biased products of human creation which evade legal scrutiny because of technical features, propriety interests, or issues of scale).

²⁰ See Joshua D. Blank & Leigh Osofsky, *Automated Legal Guidance*, 106 CORNELL L. REV. 179 (2020) (explaining how online tools are used to oversimplify complex law and arguing that governments should prevent automated legal guidance from widening the gap between access to legal advice enjoyed by high-income and by low-income individuals). The phenomenon of “simplicity” had been detected earlier by the same authors in the context of the shift to “plain language” in written communication with the public. See Joshua D. Blank & Leigh Osofsky, *Simplicity: Plain Language and the Tax Law*, 66 EMORY L.J. 189, 204, 205–07 (2017).

²¹ For a general discussion of how automation challenges administrative law values, see Carol Harlow & Richard Rawlings, *Proceduralism and Automation: Challenges to the Values of Administrative Law*, in THE FOUNDATIONS AND FUTURE OF PUBLIC LAW 1–2, 21 (Elizabeth Fisher et al. eds., 2020).

²² Joshua D. Blank & Leigh Osofsky, *Automated Legal Guidance*, 106 CORNELL L. REV. 179, 242–43 (2020).

²³ See *id.* at 195–201.

²⁴ See *id.* at 227–28, 230–31.

²⁵ For a thorough discussion of the problem of data inequality, see generally Angelina Fisher & Thomas Streinz, *Confronting Data Inequality* (N.Y.U. Sch. L. Pub. L. Working Paper, Paper No. 21-22, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3825724 [<https://perma.cc/WM2L-4G55>].

because of the way in which technology operates as an asymmetric intermediary of rights.²⁶ It processes data according to categories that fit primarily average citizens, uses statistical data without accounting for its historical meaning, and builds risk profiles that reinforce discriminatory stereotypes. Also, there rarely is an opt-out option for digital government, particularly when it comes to fraud detection, as the choice of specific tools remains, in many countries, within the scope of a public authority's discretionary powers.²⁷ Once technology has delivered certain results, it is sometimes almost impossible to obtain access to reconstruct the path that was once followed to reach a decision.²⁸ Citizens' accidental mistakes are thus difficult to distinguish from intended fraud.

An example of this problem, which has drawn great attention throughout the world, is the Dutch childcare benefit scandal.²⁹ Over the last decade, 26,000 Dutch families were victims of the mentioned triumvirate (bureaucracy, technology, power asymmetries) as they were wrongfully accused of fraud, their childcare benefits were cancelled, and they were requested to return thousands of euros with interest. Many of these families who were already struggling to make ends meet, were driven into situations of homelessness, bankruptcy, and some even lost to their children to the system due to the psychological and financial stress they faced.³⁰ More than half of these families had immigrant or vulnerable backgrounds which were identified by algorithmic systems designed to detect large-scale fraud.³¹ Most of these citizens were caught in the system due to their inability to navigate the complex administrative system: They had made administrative mistakes due to their misunderstanding of legal requirements, digital illiteracy, or, when accused of fraud, they were unable to offer evidence that they had not committed it.³² In 2021, after a parliamentary

²⁶ See Sandra G. Mayson, *Bias In, Bias Out*, 128 YALE L.J. 2218, 2221–26 (2019); Andrew D. Selbst, *Disparate Impact in Big Data Policing*, 52 GA. L. REV. 109, 115 (2017); James A. Allen, *The Color of Algorithms: An Analysis and Proposed Research Agenda for Detering Algorithmic Redlining*, 46 FORDHAM URB. L.J. 219, 221–24 (2019) (explaining how the big data processed by modern algorithms perpetuates longstanding inequalities and can lead to biased results that disadvantage people of color and people from low- and moderate-income communities).

²⁷ See *Cahoo v. Fast Enters.*, 508 F. Supp. 3d. 138, 144 (E.D. Mich. Dec. 22, 2020) (Plaintiffs, former claimants in Michigan's unemployment compensation system, claimed in this suit that their "constitutional right to due process of law was infringed when the defendants designed, built, and implemented an automated system to detect and punish individuals who submitted fraudulent unemployment insurance claims.").

²⁸ Hannah Bloch-Wehba, *Access to Algorithms*, 88 FORDHAM L. REV. 1265, 1295–1300 (2020) (acknowledging the problem of opaque algorithmic governance in the public sector and investigating the importance of the Freedom of Information Act and other state equivalents as avenues to obtain access to algorithms).

²⁹ See JESSE FREDERIK, ZO HADDEN WE HET NIET BEDOELD (2021) (in Dutch).

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

report showed that tax authorities had wrongfully accused these citizens and the courts' judicial reviews were inadequate, the Dutch government resigned over this scandal.³³ The Dutch Prime Minister apologized for this injustice, acknowledging that "innocent people [had] been criminalized and their lives ruined."³⁴ Despite the promises of financial compensations for the victims of this scandal, tax authorities remained largely unaccountable for this situation and this scandal has not yet led to significant reforms of the way in which digital government operates in the Netherlands.³⁵

As this Article aims to show, the Dutch childcare benefit scandal example is not an isolated case across Western countries. In the United States, the automation of government, particularly in the tax and social security areas, has equally resulted in unequal access to administrative justice. TurboTax, a tax preparation software, and the Michigan Integrated Data Automated System (MiDAS), a fraud detection system, are examples of this.³⁶ These tax and fraud detection software systems introduce an additional dimension to the problem of the critical digitization of government functions and services: they are technological tools developed by private actors which are implemented for specific purposes. For example, MiDAS' sole goal was to generate new fraud cases and it did.³⁷ MiDAS, much like the Dutch childcare benefit scandal, was difficult to rebut, even though the state of Michigan was frequently unable to support MiDAS' fraud accusations.³⁸ The system was kept in place for more than two years, resulting in thousands of wrongful accusations and the seizing of millions of dollars in wages and tax returns.³⁹ Despite the evident flaws of this system, the judicial battle for legal redress was burdensome for many citizens. Notwithstanding these circumstances, several other states, cities, and towns, pressured by budget cuts, have in the meanwhile embraced automated systems to detect eligibility for unemployment and other benefits.⁴⁰

This Article adds to existing legal scholarship on algorithmic biases, the automation of government, algorithmic accountability and transparency of digital government,

³³ *Id.*

³⁴ Anna Holligan, *Dutch PM Rutte Government Resigns Over Child Welfare Fraud Scandal*, BBC NEWS (Jan. 15, 2021), <https://www.bbc.com/news/world-europe-55674146> [<https://perma.cc/LYK5-6CYE>].

³⁵ *See id.*

³⁶ Justin Elliott & Paul Kiel, *Inside TurboTax's 20-Year Fight to Stop Americans From Filing Their Taxes for Free*, PROPUBLICA (Oct. 17, 2019, 5:00 AM), <https://www.propublica.org/article/inside-turbotax-20-year-fight-to-stop-americans-from-filing-their-taxes-for-free> [<https://perma.cc/2PS9-MVM7>] (discussing TurboTax as a tax preparation product); Alejandro De La Garza, *States' Automated Systems Are Trapping Citizens in Bureaucratic Nightmares with Their Lives on the Line*, TIME (May 28, 2020, 2:24 PM), <https://time.com/5840609/algorithm-unemployment/> [<https://perma.cc/TZD9-NF42>] (explaining MiDAS as a way to detect fraud).

³⁷ *See* De La Garza, *supra* note 36.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

and discrimination.⁴¹ This Article is organized as follows. Part I explains how the automation of government has evolved in the last decades and how the digitization and automation of services have inevitable benefits and costs that are not always accounted for. Part II delves into three examples that illustrate the digitization and automation of tax and social security services: TurboTax, MiDAS, and the Dutch Childcare benefits scandal. In Part III, this Article discusses some of the key legal issues raised by digitization and automation of government on citizens' rights before government. Part IV reflects upon how the digitization and automation of government and law enforcement should be adapted to meet the needs of vulnerable citizens.

I. THE AUTOMATION OF GOVERNMENT

This Part offers a brief overview of the evolution of the digitization of government and the switch to automated public services. As a growing number of government resources and services are transitioning to the digital realm in the United States as well as in many other countries of the world, citizens are required to engage with online government services.⁴² This Part also briefly addresses the problem of unequal access to digital government.⁴³

A. Digitization of Government

Over the past decades, governments across the globe have invested in the digitization of information, the development of governmental portals and digital identities, the automation of several public services and administrative decisions, and the integration of services.⁴⁴ The dominant narrative regarding digital government presents

⁴¹ See Paul Schwartz, *Data Processing and Government Administration: The Failure of the American Legal Response to the Computer*, 43 HASTINGS L.J. 1321, 1322–23 (1992); Danielle Keats Citron, *Open Code Governance*, 2008 U. CHI. L.F. 355, 358–59; Danielle Keats Citron, *Technological Due Process*, 85 WASH. U. L. REV. 1249, 1251–52 (2008); Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 102 CAL. L. REV. 671, 674 (2016); VIRGINIA EUBANKS, *AUTOMATING INEQUALITY: HOW HIGH-TECH TOOLS PROFILE, POLICE, AND PUNISH THE POOR* 180–88 (2018); Jennifer Cobbe, *Administrative Law and the Machines of Government: Judicial Review of Automated Public-Sector Decision-Making*, 39 LEGAL STUD. 636, 637 (2019).

⁴² See generally Basu, *supra* note 1 (addressing how engagement with e-government impacts citizens of different backgrounds).

⁴³ See Katharine V. Macy, *Digital Divide Challenges Access to E-Government*, 42 DTTP: DOCUMENTS TO THE PEOPLE 36, 36 (2014) (discussing how the digital divide impacts the access to e-government).

⁴⁴ Cem Dilmegani, Bengi Korkmaz & Martin Lundqvist, *Public-Sector Digitization: A Trillion-Dollar Challenge*, MCKINSEY (December 2014), <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/public-sector-digitization-the-trillion-dollar-challenge> [<https://perma.cc/U4C4-6GVF>].

it as the process of changing how governments deliver public services, draw on collected data to make data-driven decisions and enact evidence-based policies, improve the transparency of public administration, and leverage technology to improve public services.⁴⁵ Digital technology can automate time-consuming processes, allowing for large savings in the emission and enforcement of simple bulk decisions.⁴⁶ Also, reliance on technology has improved the availability of public information as well as the way in which governments communicate with citizens.⁴⁷ To illustrate, during the pandemic, governments employed social media platforms to disseminate information and pandemic measures which, in some cases, enhanced citizens' trust in government.⁴⁸

The digitization of government is, nonetheless, not a result in itself but a process with several stages. The digitization of government started with the introduction of technology in public offices (e.g., the digitization of paper documents) and it slowly shifted from the internal use of technology for policy purposes to the partial or full automation of public services.⁴⁹ This evolution was accompanied by mounting complexity and specialization, as well as by a shift from the term "e-government" to the concept of "digital government."⁵⁰ In the United States, e-government has been defined as "[t]he use of informational and computer technology (ICT) to facilitate interaction between, on the one hand, a public authority and, on the other hand, individual citizens, businesses, or non-governmental organizations."⁵¹ At the international level, the Organisation for Economic Co-operation and Development (OECD), which has played an important role in the dissemination of best practices in e-government, defines it as "the use of ICTs, and particularly the Internet, to achieve better governance" but often without significantly changing traditional structures and back-office processes.⁵² In the United States, public authorities at both federal and local levels started the digitization of government with the development of websites, online filling of forms, and the creation of new avenues for the communication

⁴⁵ See, e.g., Citron, *Technological Due Process*, *supra* note 41, at 1251–53 (highlighting how technology can lead to efficiency and transparency with procedural due process); Cobbe, *supra* note 41, at 636–37 (discussing automated decision-making systems).

⁴⁶ See Citron, *Technological Due Process*, *supra* note 41, at 1251–52 (discussing how increased digitization leads to cuttings staffing and costs).

⁴⁷ See *Study on eGovernment and the Reduction of Administrative Burdens*, COM (2014); *EU eGovernment Action Plan 2016–2020: Accelerating the Digital Transformation of Government*, COM (2016) 179 final (Apr. 19, 2016); Mahmood et al., *supra* note 9, at 709–10.

⁴⁸ See generally Mahnaz Mansoor, *Citizens' Trust in Government as a Function of Good Governance and Government's Agency's Provision of Quality Information on Social Media during COVID-19*, 38 GOV'T INFO. Q. 101597 1, 3 (2021) (discussing how social media communications enhanced trust during COVID-19).

⁴⁹ See LIPS, *supra* note 9, at 6–9.

⁵⁰ See *id.* at 6–14.

⁵¹ John C. Reitz, *E-Government*, 54 AM. J. COMP. L. 733, 733 (2006).

⁵² OECD, *BROADBAND POLICIES FOR LATIN AMERICA AND THE CARIBBEAN* 361 (2016) (ebook).

between governments and citizens.⁵³ Nowadays, most public authorities have moved beyond this stage and currently use digital technology to reform not only the way in which information is presented but also the essence of government transactions. This second stage refers to the concept of “digital government.”⁵⁴

Digital government does not refer merely to the digitization of documents and systems that were once based on paper trails.⁵⁵ Rather, it includes the creation of a collaborative community between public authorities, businesses, and citizens. 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” and swift to digital public services by design.⁵⁶ This concept relies on a digital government ecosystem consisting of government actors, non-governmental organizations, businesses, citizens’ associations and individuals supporting the production of data, services and content through interactions with the government.⁵⁷ The concept of “digital government” includes therefore the transition to user-centered and user-driven approaches to services that aim to advance the digital transformation and enable government service delivery.⁵⁸ Furthermore, digital government also relies on ICT to increase the transparency of government and develop more open and user-driven approaches to public services to meet the users’ needs.⁵⁹ It is in this context that “digital public services” arise as services which are provided to citizens using internet-based technologies which mediate a citizen’s interaction with a public organization.⁶⁰

B. The Automation of Government

Automation is currently used both in the public and the private sector: from retirement funds and the banking sector to welfare benefits, automated systems have

⁵³ See, e.g., Macy, *supra* note 43, at 36 (discussing the increasing amount of government resources and processes transitioning to “e-government”); see also William A. Fenwick & Robert D. Brownstone, *Electronic Filing: What Is It? What Are Its Implications?*, 19 SANTA CLARA COMPUT. & HIGH TECH. L.J. 181, 182 (2002) (explaining the process of e-filing); John G. McNutt, *Electronic Government, the Internet, and Disasters: An Emerging Relationship*, 34 DTPP: DOCUMENTS TO THE PEOPLE 17, 17 (2006).

⁵⁴ See Tomasz Janowski, *Digital Government Evolution: From Transformation to Contextualization*, 32 GOV’T INFO. Q. 221, 223 (2015) (discussing the evolution of “digital government” towards a “more transactional and integrated presence of government on the Internet”).

⁵⁵ See *id.* at 227; Wim J.M. Voermans et al., *Free the Legislative Process of Its Paper Chains: IT-Inspired Redesign of the Legislative Procedure Cycle*, 14 THE LOOPHOLE 54, 58–63 (2012) (explaining how technology has reformed the paper-based legislative process).

⁵⁶ OECD, RECOMMENDATION OF THE COUNCIL ON DIGITAL GOVERNMENT STRATEGIES 6 (2014).

⁵⁷ *Id.* at 6–7.

⁵⁸ *Id.* at 2.

⁵⁹ *Id.* at 6.

⁶⁰ See Claudia Elena Marinica, *Digitization—The Key for Adapting Good Administration to a Better Governance*, 8 ACAD. J.L. 111, 115 (2020).

become ubiquitous in decision-making.⁶¹ In the United States, a recent report revealed that 45% of the largest federal agencies in the country use or have experimented with artificial intelligence (AI) and machine-learning related tools.⁶² The need to decide “in bulk” and within a short period of time are the common denominators of these fields where written rules and policies can easily be translated into code to determine whether an applicant fulfills all the requirements for an administrative request.⁶³

The terms “automation” and “automated systems” refer to information technologies designed either to produce measurements or assessments regarding a particular case or to make an administrative decision in lieu of a civil servant.⁶⁴ These systems employ algorithms, that is, sets of defined steps so as to produce a certain output and optimize tasks that would otherwise require extensive financial or human resources (e.g., determine eligibility for a benefit based on a long list of requirements).⁶⁵ While some areas of decision-making (e.g., tax systems throughout the Western world) are indeed being automated thanks to AI, a large number of public services rely on more simple legal tech systems.⁶⁶ The majority of public authorities rely on support expert systems that provide data, rankings, indexes, and other types of preliminary analyses so as to inform a human decision-maker. “Human-in-the-loop-systems” are made thus by a government employee with the support of AI.⁶⁷ An important and common

⁶¹ For a critical discussion of the use of automation in these sectors, *see generally* FRANK PASQUALE, *THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION* (2015). *See also* Kevin C. Desouza et al., *Designing, Developing, and Deploying Artificial Intelligence Systems: Lessons from and for the Public Sector*, 63 *BUS. HORIZONS* 205, 205–06 (2020) (noting the use of A.I. in both public and private sectors).

⁶² ENGSTROM ET AL., *supra* note 17, at 6.

⁶³ *See* Markku Suksi, *Administrative Due Process When Using Automated Decision-Making in Public Administration: Some Notes from a Finnish Perspective*, 29 *A.I. & L.* 87, 98 (2020) (“A public authority that wishes to speed up decision-making in matters it is in charge of, in particular mass decisions, . . . decides by means of its own measures that the process of decision-making will take place through ADM” but “decisions made by collegial bodies . . . are not easy to transform into ADM, and thus that part of the constitutional provision on collegiate accountability remains largely unaffected by ADM.”).

⁶⁴ Makoto Hong Chang & Hui Choon Kuen, *Towards a Digital Government: Reflections on Automated Decision-Making and the Principles of Administrative Justice*, 31 *SING. ACAD. L.J.* 875, 878 (2019).

⁶⁵ Rob Kitchin, *Thinking Critically about and Researching Algorithms*, 20 *INFO., COMM’N & SOC’Y* 14, 14–15 (2017). *See generally* Tarleton Gillespie, *The Relevance of Algorithms*, in *MEDIA TECHNOLOGIES: ESSAYS ON COMMUNICATIONS, MATERIALITY, AND SOCIETY* 167 (Tarleton Gillespie, et al. eds., 2014) (discussing the function and impact of algorithms on public discourse).

⁶⁶ *See* Bart Verheij, *Artificial Intelligence as Law: Presidential Address to the Seventeenth International Conference on Artificial Intelligence and Law*, 28 *A.I. & L.* 181, 184–86 (2020) (outlining the current use of legal technology that does not amount to AI).

⁶⁷ Ross P. Buckley et al., *Regulating Artificial Intelligence in Finance: Putting the Human in the Loop*, 43 *SYDNEY L. REV.* 43, 66 (2021).

distinction refers to the distinction between rules-based systems which apply sets of pre-existing rules and employ decision-trees, and systems which rely on machine learning.⁶⁸ The latter is applied to more complex procedures as it enables algorithms to learn from historical datasets, detect patterns, and make predictions.⁶⁹ Contrary to expert-based systems that are written as “if-then” rules, systems powered by machine learning can result in inscrutable and non-intuitive outputs.⁷⁰ In the public sector, most automated systems drawing on machine learning are supervised, that is, the learning algorithm is shown what a public authority aims to predict or classify and learns thus by demonstration.⁷¹ A machine-learning system can be retrained using new data to ensure that models can be adapted and corrected to changes.⁷² While the possibility to keep learning from data can potentially improve the objective decision-making, it may be detrimental to its procedural guarantees.⁷³ The constant flow of new data into a machine learning system is likely to make it impossible to recreate the conditions necessary to interrogate an earlier decision because the model does not offer the required stability to be assessed.⁷⁴ Public sector rules require nonetheless that information regarding updates of any system or logbook are archived so that they can be made public and scrutinized.⁷⁵ More recently, automation started being used in social policy areas such as immigration law (identification of verification of identity, processing of asylum requests), social welfare (eligibility for benefits), and social housing.⁷⁶

Despite the growing number of AI applications for government, the public sector continues to lag behind the private sector in many different ways. Public authorities still need to further develop their AI capabilities in order to deploy AI technologies effectively to achieve their goals.⁷⁷ For local public authorities, the development and deployment of AI applications still involves significant financial investments that

⁶⁸ Claire Hall, *Challenging Automated Decision-making by Public Bodies: Selected Case Studies from Other Jurisdictions*, 25 JUD. REV. 8, 8 (2020).

⁶⁹ *Id.*

⁷⁰ ENGSTROM ET AL., *supra* note 17, at 11.

⁷¹ Reuben Binns, *Algorithmic Decision-making: A Guide for Lawyers*, 25 JUD. REV. 2, 3 (2020).

⁷² *Id.* at 5.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ Bloch-Wehba, *supra* note 28, at 1268–69.

⁷⁶ *See id.* at 1275; Anil Kalhan, *Immigration Policing and Federalism Through the Lens of Technology, Surveillance, and Privacy*, 75 OHIO ST. L.J. 1105, 1108 (2013) (discussing the government’s use of automation for identifying immigration status).

⁷⁷ Patrick Mikalef et al., *Enabling AI Capabilities in Government Agencies: A Study of Determinants for European Municipalities*, 38 GOV’T INFO. Q. 101593 1, 2 (2021) [hereinafter Mikalef et al., *Enabling AI Capabilities in Government Agencies*]; *see* Patrick Mikalef & Manjul Gupta, *Artificial Intelligence Capability: Conceptualization, Measurement Calibration, and Empirical Study on Its Impact on Organizational Creativity and Firm Performance*, 58 INFO. & MGMT 103434 1, 2 (2021) (defining the concept of AI capabilities).

are not always compatible with local budgets.⁷⁸ Moreover, the employment of AI applications by the public sector are also constrained by citizens' perceptions and the limited digital training of civil servants.⁷⁹ Furthermore, digital government projects often start with unspecified goals, limited stakeholder engagement, and reduced attention to their social implications.⁸⁰ In the case of tax authorities, digitization was from the start designed to optimize bulk decision-making, facilitate tax return calculation, and improve the combat against tax evasion and fraud.⁸¹

C. Digitization of Tax Administration

Over the last two decades, technology was the primary driver for the modernization of tax returns. The first technology-driven improvement offered the possibility to submit tax returns electronically.⁸² Electronically submitted tax returns facilitated taxpayers' submission, reducing costs for tax administrations while providing them with data directly intelligible to fraud detectors.⁸³ Following this first step, based on the data available through previously submitted tax returns and third-parties reporting, tax authorities started developing and providing taxpayers with pre-populated tax returns.⁸⁴ Pre-filled tax returns are generally available through the tax administration's smart portals, where taxpayers can access, check and eventually correct their tax returns.⁸⁵ The digitalization of tax administrations aimed to reduce costs while meeting

⁷⁸ See Mikalef et al., *Enabling AI Capabilities in Government Agencies*, *supra* note 77, at 4 (noting public organizations' budgets may not allow for implementing new technologies).

⁷⁹ See *id.* at 4–5 (discussing citizen perception of municipal AI capabilities and the associated costs).

⁸⁰ See Luis Felipe Luna-Reyes et al., *Sensemaking and Social Processes in Digital Government Projects*, 38 GOV'T INFO. Q. 101570 1, 1–2 (2021) (identifying issues that impact digital government including ambiguous goals and complex stakeholder networks).

⁸¹ Bloch-Wehba, *supra* note 28, at 1267.

⁸² See INTERNAL REVENUE SERV., IRS E-FILE: A HISTORY 1 (2011) (reviewing the drive towards e-filing tax returns).

⁸³ IOTA, PRE-FILLED AND ELECTRONIC INCOME TAX RETURNS 6 (2008).

⁸⁴ See OECD, USING THIRD PARTY INFORMATION REPORTS TO ASSIST TAXPAYERS MEET THEIR RETURN FILING OBLIGATIONS—COUNTRY EXPERIENCES WITH THE USE OF PRE-POPULATED PERSONAL TAX RETURNS 4 (2006) [hereinafter OECD, USING THIRD PARTY INFORMATION] (describing the use of information held by revenue bodies to create “pre-populated returns”). The first use of pre-populated returns can be traced back to Denmark in 1988 and has been quickly followed by other northern countries like Sweden and afterward by many other countries around the world. *Id.* at n.1.

⁸⁵ With the advancement of the digital age, legislators are also facilitating the collection of new types of information for the benefit of revenue agencies. For instance, many administrations are adopting a “life event approach” to service provision. This approach groups and connects government services (tax authorities included) around key life events of the taxpayer or their family, such as entering a relationship, the birth of a child, the registration of a company, commencing school or tertiary study, starting employment, buying a home,

taxpayers' expectations for more convenient, seamless, personalized and effective interaction with tax authorities and tackling tax evasion and fraud more efficiently.⁸⁶

The second area where digitalization has played a predominant role is tax enforcement, particularly in the design of fraud detector systems. Following the financial crisis of 2008–2009, the need to maximize revenue spending and advance new technologies drove further the digitalization of tax services and the automation of tasks carried out by tax administrations.⁸⁷ Algorithmic fraud detector systems can automatically match data deriving from different sources, create risk-based profiles, and flag possible discrepancies.⁸⁸ By quickly analyzing thousands of tax returns and data coming from other sources, algorithmic fraud detectors have been at the core of the tendency adopted by governments in the area of enforcement, which Professor de la Feria has described as “selective enforcement.”⁸⁹ Tax enforcement is costly for public administrations and its costs are directly proportional to the complexity of the fraud.⁹⁰ For this reason, tax administrations have been intensively investing in fraud

retirement, or the death of a family member. In this way, tax authorities will be directly receiving relevant data from other authorities. *See* OECD, *TECHNOLOGIES FOR BETTER TAX ADMINISTRATION: A PRACTICAL GUIDE FOR REVENUE BODIES* 26 (2016). At the same time, through the adoption of tax policies recognizing tax benefits only depending on the use of traceable electronic payments and the use of electronic health/ID cards, tax authorities will be easily fueled by additional information on the taxpayer. This has, for instance, been recently introduced in Italy, where certain expenses can be deducted only if payments were made with electronic means of payment. *See Italy: An Evolving Payment Landscape*, EUR. PAYMENTS COUNCIL (Jan. 10, 2019), <https://www.europeanpaymentscouncil.eu/news-insights/insight/italy-evolving-payment-landscape> [<https://perma.cc/87CV-BDVP>] (summarizing an interview with Rita Camporeale, Head of Payments Systems, Italian Banking Association). This type of information will also be directly included in the pre-filled tax return. Both cases raise important concerns in the area of data protection, which, however, in this case, lie outside the scope of this Article.

⁸⁶ INTERNAL REVENUE SERV., *COMPREHENSIVE CUSTOMER SERVICE STRATEGY* § 1101 (2021).

⁸⁷ The increasing digitalization of revenue agencies and of tax services and functions has been welcomed by international organizations such as the OECD, IOTA, IMF and the World Bank. Over the years, several reports were published highlighting the milestones reached by some revenue agencies around the world, foreseeing the future of tax administrations 3.0. *See, e.g.*, OECD, *TECHNOLOGIES FOR BETTER TAX ADMINISTRATION: A PRACTICAL GUIDE FOR REVENUE BODIES* (2016); OECD, *TECHNOLOGY TOOLS TO TACKLE TAX EVASION AND TAX FRAUD* (2017); OECD, *TAX ADMINISTRATIONS 3.0* (2019) [hereinafter OECD, *TAX ADMIN.*].

⁸⁸ *Cf.* Esperanza Huerta et al., *Framing, Decision-Aid Systems, and Culture: Exploring Influences on Fraud Investigations*, 13 INT'L J. ACCT. INFO. SYS. 316, 317 (2012) (discussing the increased use of automated systems in fraud detection because they have the ability to analyze large amounts of data, and identify concerns based on patterns).

⁸⁹ Rita de la Feria, *Tax Fraud and Selective Law Enforcement*, 47 J.L. & SOC'Y 240, 266–69 (2020).

⁹⁰ *Id.* at 248 (“[T]he share of revenue lost within the EU to VAT fraud is considerable. This is also supported by evidence of the increased scale of fraud, with some individual instances of fraud so massive as to account in isolation for a significant amount of revenue loss.”).

assessment instruments fulfilling the promises of a cost-benefit analysis.⁹¹ Technological solutions represent the perfect blend of lower administrative costs and human resources, enabling tax administrations to center their tax enforcement activity towards tackling the “low-hanging fruit” *vis-à-vis* improving their performance statistics.⁹²

D. Unequal Access to Digital Government

The rapid development of digital government has encountered an important challenge: the digital divide. In the early days of the Internet, the digital divide amounted to not having any kind of access to the Internet.⁹³ Nowadays, there is not one but multiple digital divides which are caused by the lack of access to fast broadband, limited access to computers, digital illiteracy, and a lack of meaningful opportunities to use and engage with technology.⁹⁴ For example, empirical research on access to fast broadband in Los Angeles County based on data collected by the California Public Utilities Commission has established that competition and fiber-based services are less likely to be available in low-income areas and minority communities.⁹⁵ This phenomenon is particularly visible in areas that combine poverty and a large share of Black residents.⁹⁶

In developed countries, the digital divide affects mostly the elderly and less well-educated or poorer individuals.⁹⁷ Senior citizens are the most likely to suffer digital exclusion in developed countries, particularly those at the oldest ages.⁹⁸ In the United States, low-income households may have access to the Internet but there are accounts of periodic struggles with its affordability as well as with the quality of broadband. 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 financial capacity of governments to invest in

⁹¹ *Id.* at 266 (noting that fraud assessment instruments “are based solely on cost-benefit analyses”).

⁹² *Id.*

⁹³ Peter K. Yu, *Bridging the Digital Divide: Equality in the Information Age*, 20 CARDOZO ARTS & ENT. L.J. 1, 2 (2002).

⁹⁴ See Daniela Ferreria et al., *The Three Levels of the Urban Digital Divide: Bridging Issues of Coverage, Usage and Its Outcomes in VGI Platforms*, 124 GEOFORUM 195, 196–97 (2021) (discussing levels of digital divide that include access, ability, and use).

⁹⁵ Hernan Galperin et al., *Who Gets Access to Fast Broadband? Evidence from Los Angeles County*, 38 GOV. INFO. Q. 101594, 1 (2021).

⁹⁶ *Id.*

⁹⁷ See Carol C. McDonough & David Kingsley, *The Impact of Mobile Broadband on the Digital Divide Affecting Older Adults*, 22 INT’L TELECOMMS. POL’Y REV. 27, 36 (2015) (noting that age, education, and income have a significant effect on internet use); see also Yu, *supra* note 93, at 16 (“In low-income neighborhoods, rural areas, and the less developed countries, basic literacy creates an even more significant barrier to digital participation.”).

⁹⁸ McDonough & Kingsley, *supra* note 97, at 30–31 (“[A]fter age 75, internet and broadband use drops off significantly.”).

technology.⁹⁹ 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.¹⁰⁰

These shortcomings are problematic as digital governments rely on the principle of self-service, that is, the idea that citizens should be able to function more independently from the government and do not rely on human assistance when exercising their rights. Citizens should be able to have access to public services using information technology from their home or, if possible, anywhere where they are connected. In order to be efficient, self-service solutions should be customer-oriented and designed with individual citizens and their activity in mind. However, many of these technological solutions often set aside more traditional, patronizing (albeit necessary) ways of helping citizens (for example, civil servants that help older or illiterate citizens fill in their forms).¹⁰¹

II. DIGITALIZING TAX ADMINISTRATIONS' TASKS AND SERVICES

In this Part, three case studies on the digitization of tax law will be explored. These examples serve three functions. First, they illustrate how the pursuit of efficiency and fraud detection with the help of digital government can easily overlook constitutional and administrative guarantees.¹⁰² Second, these cases also demonstrate that in the context of digitalizing tax administrations' tasks and services, technology is ultimately employed at the detriment of the most vulnerable citizens, low-income taxpayers that do not have the means to seek professional or other form of legal assistance.¹⁰³ Third, one of these cases (TurboTax) illustrates well the impact of relying on private companies when safeguarding public interests and how this reliance on private technology companies can result in accountability and legitimacy deficits.¹⁰⁴

⁹⁹ Cf. Yu, *supra* note 93, at 17–18 (discussing the lack of capacity in sub-Saharan Africa to benefit from the information revolution including spotty and antiquated equipment, bureaucratic delay, state-owned monopolies, poverty, and unavailable power distribution in rural areas).

¹⁰⁰ Cf. *id.* at 35 (“There are a lot of different divides, and the digital divide is only one of them . . . Moreover, solutions to the digital divide and other, more traditional divides can work together to reinforce each other.”).

¹⁰¹ Cf. Bloch-Wehba, *supra* note 28, at 1269 (discussing government reliance on “sophisticated decision-making technologies . . . engender[s] potent critiques of the credibility, fairness, and due process implications of decision-making by algorithms significant for our understanding of how automation might jeopardize individuals’ civil rights and liberties”).

¹⁰² See discussion *infra* Sections II.A, II.B, II.C.

¹⁰³ See discussion *infra* Sections II.A, II.B, II.C.

¹⁰⁴ See Elliott & Kiel, *supra* note 36.

A. TurboTax

In 2021, contrary to many developed countries, in the United States, taxpayers still cannot file their tax returns online through a platform run and administered by the federal government.¹⁰⁵ To fill in and electronically submit their tax returns, taxpayers are referred to industry websites and software applications.¹⁰⁶ Currently, more than forty percent of taxpayers file their tax returns online and 40 million individuals in the United States use a private software commonly known as TurboTax.¹⁰⁷ This software, provided by the company Intuit, allegedly aims to facilitate taxpayers to navigate the complexities of the tax system and submit their tax returns. Taxpayers are thus required to rely on a service provided by a private company and incur costs to fulfil their tax obligations (file their tax returns).¹⁰⁸

The complexity of filing tax returns which justifies the existence of TurboTax is not unavoidable. In the past, different legislative proposals have sought to simplify the tax return filing for taxpayers. Some of them never saw the light of Congress.¹⁰⁹ Others were successfully dismissed following Intuit's active lobbying efforts, which for years has been fighting and lobbying against some of the projects that have been developed at the State level.¹¹⁰ Indeed, over the past two decades, Intuit has tirelessly lobbied to block any government initiative designed to create a free government filing system and pre-filing systems.¹¹¹ For example, the commercial strategy adopted by Intuit in 1999 already offered free tax preparation to the poorest filers in an attempt to show that government intervention was unnecessary.¹¹² Nonetheless, the start of

¹⁰⁵ For all taxpayers, the IRS offers a Free File Program. For incomes less than \$72,000, taxpayers can utilize commercial platforms to file their tax returns for free as a part of public-private partnership between the IRS and private tax preparation companies. For taxpayers with incomes exceeding \$72,000, the IRS does not provide a platform to file their taxes but does provide an electronic form for them to fill out and e-file. *Free File: Do your Federal Taxes for Free*, INTERNAL REVENUE SERV., <https://www.irs.gov/filing/free-file-do-your-federal-taxes-for-free> [<https://perma.cc/K7ZM-VV6U>].

¹⁰⁶ *Id.*

¹⁰⁷ Elliott & Kiel, *supra* note 36.

¹⁰⁸ *Id.* (noting that TurboTax's free software did not include commonplace tax forms requiring taxpayers to upgrade to paid versions).

¹⁰⁹ For instance, two proposals were discussed in 2016. One was a data-retrieval return system and the other a pro forma return system. These were debated also at the academic level. See Joseph Bankman & James Edward Maule, *Point & Counterpoint: Perspectives on Two Proposals for Tax Filing Simplification*, 35 AM. BAR ASS'N TAX TIMES 9, 10, 16 (2016).

¹¹⁰ Dennis J. Ventry, Jr., *Intuit's Nine Lies Kill State E-Filing Programs and Keep 'Free' File Alive*, STATE TAX NOTES 555, 556 (2010). In its analysis, the author identifies and offers counterarguments to the claims made by Intuit at the detriment of free filing systems at the state level. *Id.* at 558–64 (identifying and disproving the “nine most egregious falsehoods” Intuit made during its lobbying campaign).

¹¹¹ Elliott & Kiel, *supra* note 36.

¹¹² *Id.*

Intuit's active anti-encroachment strategy can be traced back to 2003, a moment of crisis for the company that ultimately turned into a victory, thanks to the conclusion of an agreement with the federal government.¹¹³ According to this agreement, the IRS agreed to not “compete with the [Free File Alliance] in providing free, online tax return preparation and filing services to taxpayers.”¹¹⁴ The agreement required Intuit and a consortium of other companies to offer a “bare-bones version” of their products to taxpayers with low incomes for free.¹¹⁵ The current eligibility for free filing is set at an adjusted gross income below \$72,000.¹¹⁶

However, the agreement on the free filing only required the companies to offer free federal returns.¹¹⁷ This meant they could still charge for other products with the free version of TurboTax (called “Free Edition”), which is filled with set-ups that are designed to push customers to subscribe and pay for additional services.¹¹⁸ The choice of the colors, words, and other system features are also based on the company's pursuit to maximize the number of paying customers, independently of their eligibility for the free version.¹¹⁹ Thanks to the use of so-called “dark patterns,”¹²⁰ Intuit's design nudges users to use services and engage in actions that are not necessary to file for tax returns.¹²¹ At the core of the company's strategy there is a key insight,

¹¹³ *Id.*

¹¹⁴ The Free File Alliance was a collection of seventeen companies (another company is, for instance, TaxAct). However, Intuit represents the major company active in the field. Elliott & Kiel, *supra* note 36.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Recently, Intuit has dropped the IRS Free File Program. However, its Free Edition, including the dark patterns described in this subsection, is still present on the market. Celine Castronuovo, *TurboTax leaving IRS Free File Program*, THE HILL (July 16, 2021, 3:27 PM), <https://thehill.com/policy/finance/563442-turbotax-leaving-irs-free-file-program> [<https://perma.cc/PU5Q-3RW8>]; Sarah Szczypinski, *TurboTax drops IRS Free File program. What that means for you*, CNET (July 22, 2021, 7:47 AM), <https://www.cnet.com/personal-finance/taxes/turbotax-drops-irs-free-file-program-what-that-means-for-you/> [<https://perma.cc/6QDZ-MMJK>].

¹¹⁸ Intuit's Free Edition has been at the core of the company's growth which has massively advertised it, created a “free free free free” campaign, and even included a crossword puzzle in The New York Times in which the answer to every clue was “f-r-e-e”. Elliott & Kiel, *supra* note 36. In the meantime, a class action suit against Intuit has also started where the plaintiffs alleged that the company duped eligible free filing taxpayers into using its paid services, paying about \$100 a year between 2015 to 2020. Aysha Bagchi, *Intuit \$40 Million Proposed Settlement Rejected as Unfair (2)*, BLOOMBERG TAX (Mar. 6, 2021, 7:46 AM), <https://news.bloomberglaw.com/daily-tax-report/40-million-intuit-proposed-settlement-rejected-as-insufficient> [<https://perma.cc/YV8P-X54S>].

¹¹⁹ Elliott & Kiel, *supra* note 36.

¹²⁰ Dark patterns were documented by ProPublica. *Id.*

¹²¹ This use of dark patterns to trick customers to pay for services that they do not need also emerges from claims made by former employees of Intuit. The state return was the most common service offered, but the Free File Alliance companies could also pitch loans, “audit defense,” or even products that had nothing to do with taxes. The concerns arising from

which is technically known as “government anxiety.”¹²² Taxpayers’ anxiety around tax filing is so overwhelming that ultimately, even if asked to pay, they will do it rather than start the entire process anew and risk any possible contention with the IRS.¹²³ These companies capitalized on taxpayers’ anxiety and bureaucratic frustration since filing a tax return is required by law, and the non-compliance with this obligation can even result in jail sentences. Indeed, taxpayers find it easier, faster, and more convenient to file their taxes electronically than to use the traditional paper filing, the former option being facilitated by the industry’s services of online tax preparers.¹²⁴ At the same time, tax compliance software, like TurboTax, seems to comply with substantive tax law by simplifying complex cases in different ways and making rules more intelligible to users.¹²⁵ In cases that are naturally simple, they often incorporate government guidance verbatim, while in complex cases, they seem to prefer to interpret the law in a way that minimizes the risk of an audit.¹²⁶ This different behavior can be explained through market incentives. Since these companies

“free” websites offered by the industry as their part of the commercial strategy were also addressed in an exhaustive 2006 report by the Taxpayer Advocate. The report documents inaccuracies in the free software provided to low-income taxpayers and documents a history of upselling in the program. As it emerges from the report, upgrades offered by Intuit’s site included \$20 for a more complete product, \$50 for a professional review, and \$35 for an “audit defense,” which covers only the cost of representation, not the cost of amounts due on audit. In addition to these fees, there were additional costs for “processing fees,” which in reality were disguised forms of high interest refund anticipation loans. Even though the eighth version of the Memorandum of Understanding to the Free File Agreement in its current version includes a list of requirements to be respected by tax filing companies such as faithfully directing taxpayers to free software instead of upselling, ProPublica’s investigations show that tax filing companies have been breaching the agreement and several class action lawsuits on the alleged breach of contract, violation of consumer protection, false advertising and unfair competition law have started. *Id.* The MOU specifically refers to an obligation to “clearly list their free customer service options” through their landing page, and in the case of a taxpayer ineligible for a provider’s Free File alternative, the taxpayer shall be redirected back to the IRS Free File landing page so that the taxpayer can immediately consider other Free File offers. Eighth Memorandum of Understanding on Service Standards and Disputes Between the Internal Revenue Service and Free File, Incorporated, §§ 4.15.4, 4.19.2(iii). Susan C. Morse, *Do Tax Compliance Robots Follow the Law?*, 16 OHIO ST. TECH. L. J. 278, 286 (2020). Similarly, the Los Angeles City Attorney has filed two lawsuits, one against H&R Block and one against Intuit, asserting violations of California’s unfair competition statute. *Id.*

¹²² See generally Zeila Gallo & Insa Koch, *Personalizing the State: An Anthropology of Law, Politics, and Welfare in Austerity Britain*, *Clarendon Studies in Criminology*, Oxford, 83 MOD. L. REV. 237 (2019).

¹²³ Joseph Bankman, Mr. Smith Gets an Education: Why It Is So Hard to Get Easy Tax Filing (Nov. 19, 2019) (unpublished manuscript) (N.Y.U. Tax Policy Colloquium) [hereinafter Bankman, Mr. Smith Gets an Education].

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ Morse, *supra* note 121, at 280.

are trying to sell peace of mind and lower the possibilities of being subjected to audits, adopting the safest legal interpretation minimizes the chances of being subject to a tax audit while profit-maximizing. Differently, more aggressive legal interpretations could damage the software's reputation in case of tax audits. While TurboTax would not be directly liable for these flaws, the company aims to avoid bad publicity.¹²⁷ In practice, this conservative legal interpretation means that taxpayers may be paying more taxes than what is due per the legal requirements. The company's assumption is that the mistake might go unnoticed by the taxpayer, and that the government will not object to an error in their favor.¹²⁸

Another concern is that taxpayers who have a very simple tax return to submit but which is above the threshold individuated for lower-income taxpayers' free filing, will still be required to pay for the service for the online submission regardless. Since the government will not accept returns unless they come through a tax preparation company, taxpayers are unable to submit their tax return online without paying for an online tax preparation company's service.¹²⁹ The refusal to accept any but industry-prepared returns could only be justified if it were prohibitively expensive for the government to accept electronic returns. However, it is in the government's interest to accept electronic returns instead of paper returns, as this allows for a rapid match of the returns with already existing data at the IRS for the sake of detecting eventual discrepancies.¹³⁰

It is important to mention that some taxpayers still rely on paid professional and human tax preparers. However, many taxpayers cannot afford to hire a tax adviser which is significantly more expensive than the paid version of TurboTax.¹³¹

A final question that is often raised pertains to the liability for possible mistakes made in the tax returns submitted through a tax software. There is already copious case law and scholarly work on whether TurboTax can be considered as comparable to a tax preparer.¹³² Nonetheless, the main question that persists is: Why can't the U.S. government pre-fill forms and send out a tentative tax return? As in many other countries, the U.S. government already has the wage and interest income on which the return is based and uses that information for its own calculations of tax liability,

¹²⁷ *Id.* at 302–05.

¹²⁸ See Bankman, Mr. Smith Gets an Education, *supra* note 123, at 61–62.

¹²⁹ *Id.*

¹³⁰ On the importance of simplifying tax filing for both taxpayers and tax administration see Joseph Bankman, *Using Technology to Simplify Individual Tax Filing*, 61 NAT'L TAX J. 773, 773–75 (2008).

¹³¹ *Id.* at 774.

¹³² Kacey Marr, *You're Only as Good as Your Tax Software: The Tax Court's Wrongful Approval of the Turbotax Defense in Olsen v. Commissioner*, 81 U. CIN. L. REV. 709, 714–15 (2013); see, e.g., Paul L. Caron, *Tax Court Rejects Geithner/Turbo Tax Defense*, TAXPROF BLOG (Nov. 25, 2011), http://taxprof.typepad.com/taxprof_blog/2011/11/for-firsttime.html [<https://perma.cc/UF8L-A7FL>]; see also Blank & Osofsky, *supra* note 22, at 239–40.

against which it checks the numbers on the taxpayer's return.¹³³ This solution would facilitate taxpayers' life while simplifying the IRS assessment of the effective declared income.¹³⁴ While issues in terms of digital and tax literacy of the taxpayers filing the tax return will not be simply solved by introducing a pre-filled online tax return administered by the IRS, its implementation would still represent a more equitable improvement of the current situation.¹³⁵

B. MiDAS

The story behind Michigan Integrated Data Automated System (MiDAS) fits well with the recent trend to automate the welfare state.¹³⁶ After the financial crisis struck and revenues started to fall rapidly, states decided to enhance their fraud detection systems. This included acquiring a \$47 million unemployment algorithmic decision-making system, "MiDAS."¹³⁷ Initially, this system had three main aims: first, to ensure that unemployment checks were distributed only to eligible individuals; second, to increase the Unemployment Insurance Agency's (UIA) efficiency and responsiveness to unemployment rising claims; third, to reduce UIA's operation costs by eliminating more than 400 workers, which at the time was one-third of the agency's staff.¹³⁸

¹³³ See Bankman, Mr. Smith Gets an Education, *supra* note 123, at 4–5.

¹³⁴ *Id.*

¹³⁵ At the political level, there has been a renovated interest in the matter. For instance, Senator Elizabeth Warren has been very vocal on this issue in the past years and together with other Senators reintroduced in 2019 the Tax Filing Simplification Act to ease the tax filing process. This act was first introduced in 2016 by Senator Warren and reintroduced in 2017. Moreover, a way forward could also be the simplified tool launched in 2020 by the IRS to help families access their relief payments even if they were not required to file their taxes. This tool was then used in 2021 for the new child tax credit expansion. Even though this system presents some downfalls and it's not hosted on a government website, we agree with the authors that if redesigned as a government-run, simplified tax-filing system just requesting the needed information to issue IRS anti-poverty benefits, it could facilitate easy access to benefits for low-income families and over time, be used to generate pre-filled tax returns. Cassandra Robertson & Gabriel Zucker, *The IRS Is the Nation's Largest Anti-Poverty Benefits Administrator*, SLATE (Aug. 11, 2021, 5:50 AM), <https://slate.com/technology/2021/08/irs-anti-poverty-benefits-administrator-child-tax-credit.html> [<https://perma.cc/RSN8-F6PD>].

¹³⁶ For a general reflection on the automation of the welfare state, see EUBANKS, *supra* note 41; for a specific analysis of MiDAS in the context of the assessment of administrative discretion, see Doaa Abu Elyounes, "Computer Says No!": *The Impact of Automation on the Discretionary Power of Public Officers*, 23 VAND. J. OF ENT. & TECH. L. 451, 455–58 (2021).

¹³⁷ Matthew B. Seipel, *Robo-Bureaucrat and the Administrative Separation of Powers*, 2020 CARDOZO L. REV. DE•NOVO 99, 105 (2020).

¹³⁸ *Id.*; Editorial, *State Will Pay For Cutting Corners with Unemployment System Automation*, TRAVERSE CITY REC. EAGLE (Dec. 7, 2019), https://www.record-eagle.com/opinion/editorials/editorial-state-will-pay-for-cutting-corners-with-unemployment-system-automation/article_6794c522-192b-11ea-9df2-676c5450b875.html [<https://perma.cc/56DM-LYBC>]; Robert N. Charette, *Michigan's MiDAS Unemployment System: Algorithm Alchemy Created*

Soon after MiDAS' introduction, the number of persons suspected of unemployment fraud grew fivefold compared to the average number found using the old system.¹³⁹ Consequently, the new algorithmic decision-making system generated an unprecedented amount of revenue for the UIA.¹⁴⁰ Nonetheless, despite the alleged benefits in terms of efficiency, Michigan's implementation of MiDAS turned out to be catastrophic, as it resulted in over 34,000 false accusations of unemployment fraud.¹⁴¹ The financial stress and pressure on the accused individuals caused a series of personal tragedies, ranging from evictions to divorces, to credit score destruction, to homelessness, and to bankruptcies.¹⁴² If the individuals failed to make the repayments—that reached a maximum of \$187,000—the state could immediately garnish a person's wages, seize federal and state income tax refunds, and start a criminal referral against them.¹⁴³

MiDAS clearly shows how automated systems can exacerbate already existing structural issues. Lawyers and advocates representing accused fraudsters discovered that many wrong fraud accusations were generated algorithmically with no human intervention or secondary review of the accusation, leading to 93% margin of error.¹⁴⁴ Even in the many cases which included a “human-in-the-loop,” the system still showed a 44% error rate.¹⁴⁵ The system received incomplete data, made no distinction between fraud and mistakes made in good faith, and drafted computer-generated notices in such a way that recipients would inadvertently admit to fraud.¹⁴⁶ Often, the errors consisted of small mistakes or inconsistencies that were not attributable to the claimants but that nonetheless, triggered fraud determinations.¹⁴⁷

Lead, Not Gold, IEEE SPECTRUM (Jan. 24, 2018), <https://spectrum.ieee.org/michigans-midas-unemployment-system-algorithm-alchemy-that-created-lead-not-gold> [<https://perma.cc/5PV4-F9VU#toggle-gdpr>].

¹³⁹ TRAVERSE CITY REC. EAGLE, *supra* note 138; Charette, *supra* note 138.

¹⁴⁰ The harsh penalties of 400% on the claimed amount of fraud also contributed to the sharp rise. Charette, *supra* note 138.

¹⁴¹ *Id.*

¹⁴² MICHELE GILMAN & MARY MADDEN, DIGITAL BARRIERS TO ECONOMIC JUSTICE IN THE WAKE OF COVID-19 (DATA & SOC'Y 2021); Ryan Felton, *Criminalizing the Unemployed*, DETROIT METRO TIMES (July 1, 2015), <https://www.metrotimes.com/detroit/criminalizing-the-unemployed/Content?oid=2353533&storyPage=2> [<https://perma.cc/4K2G-DQ6T>].

¹⁴³ *See* Felton, *supra* note 142.

¹⁴⁴ A study found that from October 2013 to September 2015, MiDAS robo-adjudicated 40,195 cases with no human involvement, and those had an 85% error rate. Charette, *supra* note 138.

¹⁴⁵ *Id.*

¹⁴⁶ GEORGE WENTWORTH, CLOSING DOORS ON THE UNEMPLOYED: WHY MOST JOBLESS WORKERS ARE NOT RECEIVING UNEMPLOYMENT INSURANCE AND WHAT STATES CAN DO ABOUT IT 13 (Nat'l Emp. L. Project 2017).

¹⁴⁷ Among the glitches and flaws of MiDAS, the system flagged fraud workers that stated a reason of separation different from the one given by a former employer, or if their earnings were in the same calendar quarter in which they were paid unemployment insurances. *Id.*

MiDAS also flagged claimants through an “income spreading” formula.¹⁴⁸ According to this formula, MiDAS calculated a claimant’s income in a fiscal quarter and averaged the claimant’s weekly earnings, even if the claimant did not make any money in a given week.¹⁴⁹ Furthermore, if the employees reported no income for any week during a quarter in which they earned income, MiDAS automatically determined that the claimant had engaged in fraud.¹⁵⁰ Additionally, notifications were sent to old addresses or through dormant online accounts that workers no longer checked since they had long stopped receiving those benefits.¹⁵¹ The agency also did not take any additional steps (such as emails, mail, or phone calls) to notify the claimants and failed to answer more than 90% of the calls to its “Help Line.”¹⁵² Consequently, there was the possibility that by the time the workers received the subsequent notification, the thirty-day period to contest or appeal the fraud determination had already passed.¹⁵³ Claimants were also not informed about the basis for fraud suspicion, and MiDAS did not allow fact-based adjudication, but automatically sent them multiple-choice questionnaires.¹⁵⁴ These questionnaires included questions and possible answers that were insufficiently clear and possibly self-incriminating.¹⁵⁵

MiDAS also exemplifies the risks arising from delegating authority to software developers without safeguarding administrative discretion.¹⁵⁶ For the design and implementation of MiDAS, the UIA relied on outside contractors. In the appeals, Michigan civil rights lawyers claimed that those contractors were entrusted with government duties and were therefore responsible for any constitutional violations brought on by MiDAS’ wrongful allegations.¹⁵⁷ A recent opinion by Judge David Lawson opened the possibility for individuals who had been falsely accused of fraud to proceed with their lawsuit against not only the UIA but also against the private companies involved in the design and implementation of the robo-adjudication system.¹⁵⁸ Indeed, according to the Opinion of Judge David Lawson, “because FAST and CSG worked hand-in-hand with the UIA in developing and managing the MiDAS system (which included the deficient notice procedures), the plaintiffs’ alleged injuries are fairly traceable.”¹⁵⁹

¹⁴⁸ Cahoo v. SAS Analytics Inc., 912 F.3d 887, 892–93 (6th Cir. 2019).

¹⁴⁹ *Id.* at 893–94.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.* at 894. Out of the last 50,000 calls the “Help Line” received before the Auditor General conducted the audit, “not a single one had been answered or returned.” *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 893.

¹⁵⁵ *Id.*

¹⁵⁶ Sarah Valentine, *Impoverished Algorithms: Misguided Governments, Flawed Technologies, and Social Control*, 46 FORDHAM URB. L.J. 364, 372–74 (2019).

¹⁵⁷ De La Garza, *supra* note 36.

¹⁵⁸ Cahoo v. Fast Enters., 508 F. Supp. 3d. 138, 162 (E.D. Mich. 2020).

¹⁵⁹ *Id.*

C. The Dutch Childcare Benefits Scandal

In January 2021, the Dutch Prime Minister resigned following the publication of a report on what is commonly referred to as the “Childcare Benefit Scandal.”¹⁶⁰ The crux of the matter was the illegal recovery of social benefits which forced many benefit recipients into financial ruin.¹⁶¹ According to the Dutch welfare systems, parents are eligible for a state contribution toward the costs of daycare, which can add up to ninety percent of the actual costs for low-income families.¹⁶² In order to receive these benefits, parents must either work or study, and register their children at a licensed kindergarten.¹⁶³ These benefits are paid every month to the account of the recipient and it is meant to help parents pay for the kindergarten fees.¹⁶⁴ The amount of the benefit is primarily dependent on the parents’ income.¹⁶⁵ Even though this amount is subject to a preliminary automatic calculation on the Dutch tax authorities’ website, the requesting and complying with all legal requirements is the parents’ responsibility.¹⁶⁶ Consequently, in the case of a wrongfully paid out allowance (for example, the child stayed at home with a relative and was not sent to the kindergarten), recipients would have to pay the benefit back.¹⁶⁷

Following several infamous and highly mediatic benefit fraud scandals involving Bulgarian and Turkish immigrants, Dutch tax authorities were under pressure in the last decade to increase their scrutiny. To prevent fraud, an ICT system was first introduced in 2011 and later improved to conduct checks on a larger scale.¹⁶⁸ However, the systems meant to detect the undue receipt of benefits ultimately mislabeled over 26,000 parents as fraudsters, with a disproportionate emphasis on citizens with an immigrant background.¹⁶⁹ The Report of the Parliamentary Questioning Committee (*Commissie Van Dam*) released in December 2020, concluded that more than 26,000 families were on the verge of bankruptcy.¹⁷⁰ Hunted down, forced to pay back undue amounts and denied future applications, the courts systematically delayed and ignored these families’ appeals.¹⁷¹

¹⁶⁰ *Eindverslag onderzoek kinderopvangtoeslag overhandigd*, TWEDE KAMER (Dec. 17, 2020), <https://www.tweedekamer.nl/nieuws/kamernieuws/eindverslag-onderzoek-kinderopvangtoeslag-overhandigd> [<https://perma.cc/J3LF-SLES>].

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

In some cases, the reclaim of benefits was due to minor errors,¹⁷² while in other cases, families were singled out by automated risk selection systems.¹⁷³ As it results from a report of the Dutch Data Protection Authority on this scandal, the classification of the benefit claims was delegated to a self-learning algorithm which operated as a first filter.¹⁷⁴ Based on risk classification models using a dozen indicators, the system flagged specific welfare recipients as possible fraudsters.¹⁷⁵ The Dutch Data Protection Authority established in its report that at least from March 2016 to October 2018, there was improper discriminatory processing based on the nationality of the applicants.¹⁷⁶ The selected beneficiaries were then subjected to a second manual scrutiny by the tax officials, which rarely corrected the results presented by the algorithm.¹⁷⁷ As recognized in December 2020 in the report of the Parliamentary Questioning Committee, certain claims by parents with double citizenship and foreign-sounding surnames were systematically identified by the algorithm as high-risk and hastily marked by the officials, showing how institutional racism was an inherent element of the audit practices.¹⁷⁸ On January 7, 2021, the Netherlands Public Prosecution Service announced that no criminal investigation would be initiated against the Dutch tax authorities for their unlawful and discriminatory administrative

¹⁷² For example, a missing signature or one missing two-hundred euro payment would be flagged as fraud, and consequently would have led to parents having to pay back the whole amount of benefits received for the entire year. *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Werkwijze Belastingdienst in strijd met de wet en discriminerend*, AUTORITEIT PERSOONSGEGEVENS [Dutch Data Protection Authority] (July 17, 2020), <https://autoriteitpersoonsgegevens.nl/nl/nieuws/werkwijze-belastingdienst-strijd-met-de-wet-en-discriminerend> [<https://perma.cc/5CJS-ECTC>] (in Dutch).

¹⁷⁵ Jon Henley & Robert Booth, *Welfare Surveillance System Violates Human Rights, Dutch Court Rules*, THE GUARDIAN (Feb. 5, 2020, 8:18 PM), <https://www.theguardian.com/technology/2020/feb/05/welfare-surveillance-system-violates-human-rights-dutch-court-rules> [<https://perma.cc/7FQK-YQPD>].

¹⁷⁶ *Belastingdienst/Toeslagen De verwerking van de nationaliteit van aanvragers van kinderopvangtoeslag*, AUTORITEIT PERSOONSGEGEVENS [Dutch Data Protection Authority] (July 17, 2020), https://autoriteitpersoonsgegevens.nl/sites/default/files/atoms/files/onderzoek_belastingdienst_kinderopvangtoeslag.pdf [<https://perma.cc/YX87-S6QP>].

¹⁷⁷ As reported by commentators, the tax authority admitted that at least 11,000 parents were selected for an extensive inspection because of their ethnic origin or dual nationality and alarming references by the tax authority officials to parents as a “nest of Antilleans” (nest van Antillianen) were found in internal communications. See Nani Jansen Reventlow, *Automated Racism: How Tech Can Entrench Bias*, POLITICO (Mar. 2, 2021, 4:05 AM), <https://www.politico.eu/article/automated-racism-how-tech-can-entrench-bias/> [<https://perma.cc/8MFB-YM8M>].

¹⁷⁸ See Parlementaire Ondervragingscommissie, *Ongekend Onrecht [Unprecedented Injustice]*, TWEDEKAMER (Dec. 17, 2020), https://www.tweedekamer.nl/sites/default/files/atoms/files/20201217_eindverslag_parlementaire_ondervragingscommissie_kinderopvangtoeslag.pdf [<https://perma.cc/5YAQ-UFJ3>]; see also Dutch Committee Issues Scathing Report into Benefit System, A.P. (Dec. 17, 2020), <https://apnews.com/article/mark-rutte-netherlands-europe-f56f7f76b3d96537bfd93e595914730e> [<https://perma.cc/D58N-FPEF>].

actions.¹⁷⁹ The victims of this scandal were promised a “handsome” financial compensation but in the first half of 2021, most families had not yet received it.¹⁸⁰ At the time of writing, the dissatisfaction with proposed solutions remains. For thousands of parents who lost their homes, jobs, and, even in the case of a law student who was wrongfully accused of fraud, their children to the system, this compensation is insufficient. The Judicial Division of the Dutch Council of State (the Dutch Supreme Court for a number of administrative cases) acknowledged that the judicial system also failed these families, that too much trust had been placed on the actions of public authorities and their procedures, and that too little consideration had been given to the difference between the law and its enforcement. A reflection and possible reform of these aspects of judicial review has been promised by the President of this court.

III. LEGAL IMPLICATIONS

“Administrative justice—the process through which the [S]tate makes decisions about [their citizens,] is increasingly affected by technology.”¹⁸¹ Nonetheless, technology, when used to address bureaucracy, deteriorates the position of citizens before government and courts. This is particularly true for the most vulnerable citizens in our societies.

This Part reflects first on the key values of administrative law that should be respected in the shift to digital government and automated decision-making. It then focuses on the role played by technology in what has been described as “selective enforcement” and on the backlashes of private actors’ involvement in the development of digital government.

A. Key Values of Administrative Justice in the Digital Sphere

Traditionally, the key values of administrative justice include openness; confidentiality when privacy, trade secrets or national security are at stake; transparency; fairness; accountability; consistency; participation; rationality; equity; and equal treatment.¹⁸² However, an open question remains: “How [are] these values effectively

¹⁷⁹ *Geen strafrechtelijk onderzoek naar Belastingdienst* [No Criminal Investigation into the Tax Authority], OPENBAAR MINISTERIE [The Netherlands Public Prosecutor] (Jan. 7, 2021), <https://www.om.nl/actueel/nieuws/2021/01/07/geen-strafrechtelijk-onderzoek-naar-belastingdienst> [<https://perma.cc/BWW8-QZVH>].

¹⁸⁰ *Childcare Benefit Scandal Victims to Get €30,000 Compensation*, DUTCHNEWS.NL (Dec. 23, 2020), <https://www.dutchnews.nl/news/2020/12/childcare-benefit-scandal-victims-to-get-e30000-compensation/> [<https://perma.cc/DC63-ZXW8>].

¹⁸¹ JOE TOMLINSON, *JUSTICE IN THE DIGITAL STATE* at ix (2019). See generally MASHAW, *BUREAUCRATIC JUSTICE*, *supra* note 18 (discussing issues in administrative justice more generally).

¹⁸² Martin Partington, *Restructuring Administrative Justice? The Redress of Citizens’ Grievances*, 52 *CURRENT L. PROBS.* 173, 179–84 (1999); see also Harlow & Rawlings, *supra* note 21, at 5.

[safeguarded] in the digital sphere?”¹⁸³ In tax law, it is important to understand whether these values operate in the digital dimension differently than they do in the analogical world.¹⁸⁴ The detrimental effects of an increased digitalization of the tax administration recounted in Part II raise questions regarding fairness, consistency, and equal treatment.

1. The Price of Simplification

In theory, the process of digitalization of tax returns aims to increase simplification, which on paper should contribute to the fulfilment of the mentioned values. However, tax law is notoriously complex¹⁸⁵ and includes numerous detailed provisions interacting with each other.¹⁸⁶ Against this backdrop, the uncertainties—sometimes also concerning basic tax law questions—persist, and they will reflect in the ability of the taxpayer to calculate their own tax liability, particularly in countries applying a “voluntary compliance” system.¹⁸⁷ Thus, the current *status quo* entails that many taxpayers might find themselves in the situation of not being able to fully understand their tax obligations. Indeed, this situation only highlights the benefit from free, pre-filled tax returns prepared by governments with the data already at their disposal.¹⁸⁸ Moreover, even if in the past, scholars have described tax

¹⁸³ See TOMLINSON, *supra* note 181, at 55.

¹⁸⁴ In general, tax law is not considered exceptional but only different compared to other legal fields. See generally Alice G. Abreu & Richard R. Greenstein, *Tax: Different, Not Exceptional*, 71 ADMIN. L. REV. 663 (2019); Alice G. Abreu & Richard R. Greenstein, *Tax as Everylaw: Interpretation, Enforcement, and the Legitimacy of the IRS*, 69 TAX LAW. 493, 493 (2016) [hereinafter *Abreu & Greenstein, Tax as Everylaw*]. More specifically, in the latter, they have argued that separating “tax from the legitimacy shared by law generally, but has rendered obscure, mysterious, and potentially illegitimate, decisions by tax administrators that would be readily explainable and justifiable if seen through the lens of ordinary principles of administrative law.” See Alice G. Abreu & Richard K. Greenstein, *The U.S. Taxpayer Bill of Rights: Window Dressing or Expression of Justice?*, 4 J. TAX ADMIN. 25, 34 (2018). In this sense, the Taxpayer Bill of Rights (TBOR) would officially acknowledge how both the executive and legislative branches of government recognized that the tax system holds itself subject to principles of procedural justice—thereby aligning it with other fields of law while at the same time disregarding the idea of tax exceptionalism. See *id.* at 34–35.

¹⁸⁵ On how the level of complexity associated with tax law has even led to understanding this legal field as exceptional, see Abreu & Greenstein, *Tax as Everylaw*, *supra* note 184, at 497–98.

¹⁸⁶ On the interaction between norms, see David A. Weisbach, *Formalism in the Tax Law*, 66 U. CHI. L. REV. 860, 871 (1999).

¹⁸⁷ Such as the United States, as pointed out by Joshua D. Blank & Leigh Osofsky, *Legal Calculators and The Tax System*, 15 OHIO ST. TECH. L.J., 73, 76 (2019) [hereinafter *Blank & Osofsky, Legal Calculators*].

¹⁸⁸ See OECD, USING THIRD PARTY INFORMATION, *supra* note 84, at 13 (detailing the benefits and successes of using pre-filled tax returns).

software companies as selling the simplification of the Tax Code,¹⁸⁹ as pointed out by Professor Lawsky, tax preparation programs are unable to encode and simplify the law.¹⁹⁰ Instead, these systems encode tax forms that are prepared by the government itself.¹⁹¹ Hence, the coding activity starting from what the law prescribes is still performed by the government: tax forms only turn law into algorithms applicable by the taxpayers.¹⁹²

However, the translation of law to the online world is not always fully neutral, particularly when privately developed software companies are involved. Based on market incentives, private tax preparation software can still affect the way taxpayers comply with their obligations.¹⁹³ Taxpayers are first obliged to determine their tax legal situation against the complexity of the system. However, there is still the risk that they fall prey to the practices adopted by the industry, which are designed to convince taxpayers to contract unnecessary services or which prefer conservative legal interpretations which mean that taxpayers do not receive the tax returns they are entitled by law.¹⁹⁴ Differently, in other countries where pre-filled tax returns are designed and made available by the government itself, the intermediary layer in the taxpayer-government interaction represented here by a private company tax software is bypassed.¹⁹⁵ The requirements of the law are integrated into the computer code and form simultaneously.¹⁹⁶

2. Balancing Values: Fairness vs. Distributive Justice

In relation to fraud detectors, the values of fairness, accountability, and equal treatment should also play a fundamental role. Although these values should be easier to achieve through digital systems, the persisting risk is that the technological solution itself might ultimately undermine them. Government employees without digital skills and training may be tempted to blindly trust the technology or use it to confirm their biases.¹⁹⁷ At the same time, the lack of explanation of the reasons why they have been flagged by the system can induce taxpayers to assume that the system is correct in identifying an error or mistake.¹⁹⁸ Moreover, as we move to online

¹⁸⁹ J.B. Ruhl & Daniel Martin Katz, *Measuring, Monitoring, and Measuring Legal Complexity*, 101 IOWA L. REV. 191, 196 (2015).

¹⁹⁰ See Sarah Lawsky, *Form as Formalization*, 16 OHIO ST. TECH. L.J. 114, 116 (2020).

¹⁹¹ See *id.*

¹⁹² See *id.*

¹⁹³ See Morse, *supra* note 121, at 279; see also *supra* Section II.A.

¹⁹⁴ See *supra* Section II.A.

¹⁹⁵ See generally IOTA, *supra* note 83.

¹⁹⁶ Cf. Sarah B. Lawsky, *A Logic for Statutes*, 21 FLA. TAX REV. 60, 78–79 (2017) (noting that formalizations that track statutory language may be of great utility).

¹⁹⁷ See, e.g., Cobbe, *supra* note 41, at 641 (noting that one “should not assume . . . that machines make decisions which are free from human biases”).

¹⁹⁸ See *supra* Section II.B, which considered algorithmically generated fraud accusations where the taxpayer would admit to the fraud the system suggested.

notifications through government platforms, the digital divide will widen the discrepancies, impacting the possibility of challenging the decision if taxpayers are not given timely digital notification.¹⁹⁹ Indeed, in the tax context, the public interest to fight tax evasion and fraud might hamper the need for transparency of the automated system deployed by the tax administration. Revenue agencies might be reluctant to provide too much information on the functioning of a fraud detector system, worrying that fraudsters will be able to circumvent it, should their design be revealed.²⁰⁰ It becomes then fundamental to strike the right balance between how much, or how little, if any, of the functioning of a system can be disclosed. This is increasingly relevant as tax authorities continue exploring the use of artificial intelligence.²⁰¹ Thus, when confronted with outcomes deriving from black boxes, both revenue agency's employees and taxpayers might not be in the position to syndicate that result and assess possible errors.

The challenge of striking the right balance between different values in public administration is already visible in legislative acts and proposals adopted in the European Union. For instance, Article 23 of the General Data Protection Regulation (GDPR), prescribes that “the scope of the obligations and rights provided for in Articles 12 to 22 and Article 34, as well as Article 5” (in so far as its provisions correspond to the rights and obligations provided for in Articles 12 to 22) can be restricted in certain areas, including taxation. Consequently, for tax purposes, individuals can be subject to automated decision making and profiling.²⁰² Lack of clarity regarding the possible use of artificial intelligence and high-risk algorithms by tax authorities for tax enforcement also emerges from the new EU proposal for a so-called Artificial Intelligence.²⁰³ Finally, backlashes from this concern have already

¹⁹⁹ The notification in the online portal that was no longer checked by the alleged fraudster because he stopped receiving the unemployment benefit, in relation to the MiDAS Scandal, is a good example. *See supra* Section II.B. In that case the term to challenge the automated decision had expired. *Id.*

²⁰⁰ *Cf.* OECD, ENDING THE SHELL GAME: CRACKING DOWN ON THE PROFESSIONALS WHO ENABLE TAX AND WHITE COLLAR CRIMES (2021) (summarizing the principle that knowledge and expertise of the inner workings of a tax code can enable fraud).

²⁰¹ *See* OECD, TAX ADMIN., *supra* note 87, at 56 (noting the potential of using Artificial Intelligence in tax administration).

²⁰² Even though the GDPR establishes some level of protection by requiring a legal basis containing the information listed in Article 23 (2) and demands that measures interfering with the privacy rights are proportional and necessary in a democratic society while respectful of the essence of the fundamental rights and freedoms, it still leaves room for interpretation on how much shall be revealed of an automated system. Tina Ehrke-Rabel, *Big Data in Tax Collection and Enforcement*, in TAX AND THE DIGITAL ECONOMY: CHALLENGES AND PROPOSALS FOR REFORM 283, 297–98 (Werner Haslehner et al. eds. 2019); Tina Ehrke-Rabel & Karl Franzens, *Profiling im Steuervollzug*, 101 FINANZRUNDSCHAU 45, 45–48 (2019) (Ger.). *See generally* Luisa Scarcella, *Tax Compliance and Privacy Rights in Profiling and Automated Decision Making*, 8 INTERNET POL'Y REV. 1, 5–7 (2019).

²⁰³ In particular, recital n.38 of the proposal states that “AI systems specifically intended

emerged, such as in the case of the Dutch risk-profile system called System Risk Indication (SyRI), which was scrutinized by the District Court of The Hague.²⁰⁴ In its decision, the Court considered the fraud detector to be illegal on the ground of its disproportionate interference with citizens' privacy rights.²⁰⁵ In this case, the government refused to disclose the risk model and the underlying risk indicators, arguing that citizens could adjust their conduct accordingly.²⁰⁶ Even though examples like MiDAS and the Dutch Childcare Benefits scandals (Part II) show that automation primarily intensifies existing risks, the approach used in taxation to protect fundamental rights remains contorted.

B. "Low-Hanging Fruit" or "Selective" Enforcement

As Professor de la Feria has described, we are currently witnessing the rise of "low-hanging fruit" or "selective" enforcement.²⁰⁷ Selective enforcement is the outcome of anti-fraud policy choices following the 2008–2009 financial crisis that privileged "minimizing the revenue costs of tax fraud or maximizing revenue, rather than [] combating tax fraud itself."²⁰⁸ The more organized and complex fraud is, the more costly it becomes to enforce tax law and build a solid case against it.²⁰⁹ Therefore, tax administrations throughout the world have been designing their administrative actions based on the costs of enforcement rather than fully optimizing tax administration.²¹⁰ In other words, social security and tax agencies tend to focus on the low-hanging fruit cases, that is, those that are easy to detect and thus increase their revenue without

to be used for administrative proceedings by tax and customs authorities should not be considered high-risk AI systems used by law enforcement authorities for the purposes of prevention, detection, investigation and prosecution of criminal offences." PROPOSAL FOR A REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL LAYING DOWN HARMONISED RULES ON ARTIFICIAL INTELLIGENCE (ARTIFICIAL INTELLIGENCE ACT) AND AMENDING CERTAIN UNION LEGISLATIVE ACTS, EUR. PARL. DOC. (COM 2021/206) 27–28. Nonetheless, seeing the impact on individuals' rights as it emerged in the cases of the Dutch childcare benefit scandal, SyRI, and MiDAS, it is questionable whether this limitation in scope is justified.

²⁰⁴ See generally van Bekkum & Zuiderveen Borgesuis, *supra* note 3, at 12–15 (discussing the ruling of a Dutch court which held that SyRI legislation violated the right to privacy ensured by the European Convention of Human Rights).

²⁰⁵ See *id.* at 12–13.

²⁰⁶ Case 09/550982, NCJM v. The Netherlands, ECLI:NL:RBDHA:2020:1878 (Feb. 5, 2020). Previously, the government has also refused to give information to the Dutch Parliament, fearing that the information would become public and that potential fraudsters could use that information to escape algorithms' risk analyses. See Bekkum & Zuiderveen Borgesuis, *supra* note 3, at 6 (summarizing the statements of the Dutch State Secretary on this matter).

²⁰⁷ de la Feria, *supra* note 89, at 266, 269.

²⁰⁸ *Id.* at 269.

²⁰⁹ See *id.* at 245 (discussing the costs of organized tax fraud).

²¹⁰ Michael Keen & Joel Slemrod, *Optimal Tax Administration* (Int'l Monetary Fund, Working Paper No. WP/17/8, 2017) at 18–22, <https://www.imf.org/en/Publications/WP/Issues/2017/01/20/Optimal-Tax-Administration-44555> [<https://perma.cc/ZAG8-PGFY>].

requiring high administrative costs.²¹¹ This praxis is even more incentivized when agencies are evaluated on the grounds of performance indicators.²¹²

The focus on enforcement activities that are less costly, but revenue-maximizing, has clear practical consequences. As it has emerged by a ProPublica investigation, Earned Income Tax Credits (EITC) claimants are audited at a rate roughly equal to the top-earning Americans (1.4 percent versus 1.6 percent).²¹³ The increasing attention given to low-income taxpayers seems to find its motivation in the typical features of what constitutes “selective enforcement.”²¹⁴ Unlike top-earning individuals audits, the IRS argues that EITC claimants are audited frequently because the audits can be automated and are cheaper to conduct without requiring lots of IRS personnel resources and time.²¹⁵ As the IRS is notoriously known for being underfunded,²¹⁶ the increasing automatization of fraud detectors seems inevitable. Notwithstanding, in the long run, these audits were of little help in reducing the alleged tax fraud and the error rate on EITC claims remains high due to the complexity of the system.²¹⁷

²¹¹ VALERIE A. BRAITHWAITE, *DEFIANCE IN TAXATION AND GOVERNANCE: RESISTING AND DISMISSING AUTHORITY IN A DEMOCRACY* 200 (2009); DECLAN ROCHE, *REGULATORY INSTITUTIONS NETWORK*, AUSTRALIAN NATIONAL UNIVERSITY, *TAX OFFICE PROSECUTIONS: FIRM AND FAIR REGULATORY ENFORCEMENT* 9 (2006); Magdalena Malecka, *Not Your Business but Your Liability: New VAT Third-Party Liability in Poland*, 2 *WORLD J. OF VAT/GST L.* 253, 260 (2013).

²¹² See de la Feria, *supra* note 89, at 266; see also David Garland, *The Limits of the Sovereign State: Strategies of Crime Control in Contemporary Society*, 36 *BRIT. J. CRIMINOLOGY* 445, 458 (1996).

²¹³ Paul Kiel, *It's Getting Worse: The IRS Now Audits Poor Americans at About the Same Rate as the Top 1%*, *PROPUBLICA* (May 30, 2019, 10:16 AM), <https://www.propublica.org/article/irs-now-audits-poor-americans-at-about-the-same-rate-as-the-top-1-percent>; Paul Kiel & Jesse Eisinger, *Who's More Likely to Be Audited: A Person Making \$20,000—or \$400,000?*, *PROPUBLICA* (Dec. 18, 2018, 5:00 AM), <https://www.propublica.org/article/earned-income-tax-credit-irs-audit-working-poor> [<https://perma.cc/V827-H2KA>] (noting also that “EITC recipients were audited at twice the rate of taxpayers with income between \$200,000 and \$500,000”).

²¹⁴ In the past, Professor Book has highlighted the IRS’s vigorous compliance effort toward lower-income taxpayers and the problem regarding the scope of low-income taxpayers’ compliance. Leslie Book, *The Poor and Tax Compliance: One Size Does Not Fit All*, 51 *KAN. L. REV.* 1145, 1156–59, 1163–65 (2003); see also Leslie Book, *The IRS’s EITC Compliance Regime: Taxpayers Caught in the Net*, 81 *OR. L. REV.* 351 (2002).

²¹⁵ Dorothy A. Brown, *The IRS Is Targeting the Poorest Americans*, *THE ATLANTIC* (July 27, 2021), <https://www.theatlantic.com/ideas/archive/2021/07/how-race-plays-tax-policing/619570/> [<https://perma.cc/P4KL-VWCJ>].

²¹⁶ Recently “[I]awmakers dropped plans to pay for a roughly \$1 trillion infrastructure package in part by boosting tax-collecting enforcement at the Internal Revenue Service.” Kristina Peterson & Sarah Chaney Cambon, *Senate Infrastructure Bill Drops IRS Funding, Raising Pressure for New Revenue*, *WALL ST. J.* (July 18, 2021, 6:01 PM), <https://www.wsj.com/articles/senate-infrastructure-bill-drops-irs-funding-raising-pressure-for-new-revenue-11626627260?page=1> [<https://perma.cc/4XM9-FGLA>].

²¹⁷ *TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION, U.S. TREASURY DEP’T,*

Furthermore, the replacement of human street-level bureaucrats by automated systems raises “the likelihood of an even more detached, possibly despotic, administrative government.”²¹⁸ Automated systems did not eliminate the bias of public officials. Instead, they “traded the possibility of human bias for the guarantee of systemic bias.”²¹⁹ The blind trust of governmental officials in the correctness of the technology used will ultimately forge a selective enforcement system based on biases without anyone questioning the underlying basis. When the automated system is based on a wrong formula or has been trained with a biased dataset, the risks of tragic outcomes, especially at the detriment of the most vulnerable groups, surge. Indeed, there is a vast body of evidence on racial biases in algorithmic sentencing and risk assessment processes.²²⁰ Consequently, the opacity of these systems, combined with the risk of bias resulting from decisions taken at the design stage and the data used to train automated systems, can reproduce or intensify inequalities already existing in our society. This risk can emerge in the context of tax audits as well. As explained in the work of Professor Jeremy Bearer-Friend,²²¹ the lack of consideration of race in the IRS audit statistics does not permit precise data on whether the IRS is currently conducting race-bias selective enforcement.²²² From a digitalization of tax

2021-40-036 IMPROPER PAYMENT RATES FOR REFUNDABLE TAX CREDITS REMAIN HIGH 3–4 (2021) (noting that twenty-four percent of EITC payments in FY 2020 were improper); see also Brown, *supra* note 215.

²¹⁸ Cary Coglianese & David Lehr, *Regulating by Robot: Administrative Decision Making in the Machine-Learning Era*, 105 GEO. L.J. 1147, 1153 (2017); see NAT’L TAXPAYER ADVOC., ANNUAL REPORT TO CONGRESS 247 (2015); see also Leslie Book, *Bureaucratic Oppression and the Tax System*, 69 TAX LAW. 567, 569 (2015) (In relation to the tax system and the double role of the IRS which is on one hand a revenue collector and on the other hand a benefits administrator, Leslie Book has both criticized and called on the IRS “in administering the EITC to recognize some of the characteristics of low income taxpayers, including low literacy rates, less access to internet and technology generally, and an inability to readily secure documentation that the Service may request in response to correspondence relating to eligibility.”).

²¹⁹ Ryan Calo & Danielle Keats Citron, *The Automated Administrative State: A Crisis of Legitimacy*, 70 EMORY L.J. 797, 819 (2021).

²²⁰ Sonja B. Starr, *Evidence-Based Sentencing and the Scientific Rationalization of Discrimination*, 66 STAN. L. REV. 803, 838 (2014); J. Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> [<https://perma.cc/V2NT-66HM>]; Heidi Ledford, *Millions of Black People Affected by Racial Bias in Health-Care Algorithms*, NATURE (Oct. 24, 2019), <https://www.nature.com/articles/d41586-019-03228-6> [<https://perma.cc/E3CX-8BDX>]; CTR. FOR DATA ETHICS AND INNOVATION, INDEPENDENT REPORT: REVIEW INTO BIAS IN ALGORITHMIC DECISIONMAKING (2020) (UK).

²²¹ Jeremy Bearer-Friend, *Colorblind Tax Enforcement*, 97 N.Y.U. L. REV. (forthcoming 2022), <https://ssrn.com/abstract=3890361> [<https://perma.cc/93U7-PA7M>].

²²² See Brown, *supra* note 215 (A first step was taken on January 20, 2021, when President Joe Biden signed an executive order on racial equity requiring data sets collected by the federal government to be disaggregated by race. As pointed out by Professor Dorothy A. Brown and Professor Bearer-Friend, it is necessary that the government starts tracking

authorities' enforcement activities, the lack of this data can have severe, dramatic consequences. Fraud detector systems fed with data from previous audits lacking information on race-based biases can ultimately lead to the design of a system that inherently includes these biases.²²³ Thus, answering the outcry for more transparency on the audit data on specific communities and based on race is essential from a future-oriented perspective and in relation to how new technologies will be used in tax enforcement in the years to come.

C. Public vs. Private Technology and Procedural Rights

The three cases analyzed in Part II also draw attention to the outsourcing for government functions either to privately or publicly developed technology. Both in the case of fraud detectors and tax preparation software developed by private companies, it can be questioned whether the detection and sanctioning of fraud can be seen as an “inherently governmental task,” that is, a task that should only be exercised by public authorities.²²⁴ Indeed, delimiting the scope of “inherently governmental tasks” evoke the latent and still never outdated debate about the division between the public and private spheres.²²⁵ Traditionally, the concept of inherently governmental tasks has been connected to the idea that some public tasks are designed for the whole community's benefit.²²⁶ Thus, they shall not be delegated to private actors without a detailed legal basis for outsourcing them.²²⁷ As Professor

audits by race to address the biases in the system.); *see also* Bearer-Friend, *supra* note 221, at 39 (stating that the IRS is well positioned to produce statistics on race in tax administration). On the more systematic issues of the racial inequities of the Internal Revenue Code and the U.S. tax system, *see generally* DOROTHY A. BROWN, *THE WHITENESS OF WEALTH: HOW THE TAX SYSTEM IMPOVERISHES BLACK AMERICANS—AND HOW WE CAN FIX IT* (2021) and Francine J. Lipman et al., *U.S. Tax Systems Need Anti-Racist Restructuring*, 168 *TAX NOTES FED.* 855 (2020).

²²³ *Cf.* Mayson, *supra* note 26, at 2263–67 (discussing the concerns about input variables that do not properly account for racial bias).

²²⁴ In the United States this concept has been defined as “a function that it is so intimately related to the public interest as to require performance by Federal Government employees.” 31 U.S.C. § 5015(2)(A). Under the “nature of the function” test, a task will be regarded as “inherently governmental” if it involves “exercising sovereign powers,” depriving someone of liberty in the name of public safety. *See* Fiona O’Carroll, *Inherently Governmental: A Legal Argument for Ending Private Federal Prisons and Detention Centers*, 67 *EMORY L.J.* 293, 297 (2017).

²²⁵ *See* Sofia Ranchordás & Ymre Schuurmans, *Outsourcing the Welfare State: The Role of Private Actors in Welfare Fraud Investigations*, 7 *EUR. J. COMPAR. L. & GOVERNANCE* 5, 31–33 (2020) (describing one side of the debate concerning whether private or public entities are appropriate to certain tasks).

²²⁶ Carol Harlow, “Public” and “Private” Law: *Definition without Distinction*, 43 *MOD. L. REV.* 241 (1980); KATHRYN CHAN, *THE PUBLIC-PRIVATE NATURE OF CHARITY LAW* 181 (Bloomsbury Publ’g 2016).

²²⁷ *See* JOHN R. LUCKEY ET AL., *CONG. RSCH. SERV.*, R0641 *INHERENTLY GOVERNMENTAL*

Rubin alerts, private sector's actors can contribute in their own right to creating barriers to taxpayers and potential program beneficiaries since they are "governed by status differences, stranger relations, institutional pathologies, and divergent incentives."²²⁸ Given the pervasiveness and the way in which fraud detectors implemented through the use of new technologies affect fundamental rights while at the same time pursuing a public interest, this activity seems to inevitably fall into this category.²²⁹ As stated by Professor Steven J. Kelman, "certain activities are regarded as 'inherently governmental' because they involve making policy decisions or rely on the government's monopoly of the legitimate use of violence, and therefore are inappropriate for contracting no matter what the other advantages of contracting might be."²³⁰ This argument could also apply to contracting out IRS tax enforcement and could convincingly be applied to contracting out the operation of prisons or welfare benefit determination decisions.²³¹ Nonetheless, also providing a tax preparation software necessary to comply with tax obligations can be seen as an indispensable service. Online filing options and pre-filled tax returns directly offered by the government help to foster a trustworthy and collaborative relationship between taxpayers and tax authorities.²³²

FUNCTIONS AND DEPARTMENT OF DEFENSE OPERATIONS: BACKGROUND, ISSUES, AND OPTIONS FOR CONGRESS (2009) (discussing the statutory and policy definitions of "inherently governmental function"); cf. Gerdy Jurgens & Frank van Ommeren, *The Public-Private Divide in English and Dutch Law: A Multifunctional and Context-Dependent Divide*, 71 CAMBRIDGE L. J. 172 (2012). See generally PAUL R. VERKUIL, *OUTSOURCING SOVEREIGNTY: WHY PRIVATIZATION OF GOVERNMENT FUNCTIONS THREATENS DEMOCRACY AND WHAT WE CAN DO ABOUT IT* (2007); DAWN OLIVER, *COMMON VALUES AND THE PUBLIC-PRIVATE DIVIDE* (1999).

²²⁸ Edward L. Rubin, *Bureaucratic Oppression: Its Causes and Cures*, 90 WASH. U. L. REV. 291, 342 (2012).

²²⁹ Ranchordás & Schuurmans, *supra* note 225, at 26–31. In support for this conclusion there is a position adopted in 2014 by the Dutch Hight Court for Social Affairs. This position concerned a case involving private detectives and the Court sustained that even though the Dutch Social Welfare Act offered room for the delegation of administrative tasks in general, nonetheless law enforcement and fraud investigations constituted a core task of the public administration which could not be delegated without a specific legal provision. Case 11/6506, Centrale Raad van Beroep, ECLI:NL:CRVB:2014:2947 (Sept. 16, 2014) (Neth.).

²³⁰ Steven J. Kelman, *Contracting*, in *THE TOOLS OF GOVERNMENT: A GUIDE TO THE NEW GOVERNANCE* 307 (Lester M. Salamon ed., 2002).

²³¹ See *id.*

²³² Significant are the reactions by taxpayers which participated in the "ReadyReturn" pilot program. See Bankman, Mr. Smith Gets an Education, *supra* note 123, at 11. Among some "Wow . . . Government doing something to make our lives easier for a change. . . ." See *id.* As Professor Bankman states in his work:

[t]he comments supported my prior belief that the problem with filing wasn't just the time and money involved. Taxpayers don't write those kinds of comments because they save \$40, or a half an hour. They write them because filing fills them with anxiety. Once a year they are made to feel stupid, and frustrated, and this makes them angry and perhaps

1. Due Process and Fraud Detector Systems

In fraud detector systems, private actors carrying out functions for which public bodies are generally in charge raise important questions regarding accountability, transparency, and fairness. Fraud detectors consist in software built to detect fraud and build risk profiles.²³³ When taxpayers are identified as fraudsters, they will consequently be notified.²³⁴ However, to exercise their due process rights, taxpayers will have to be aware of how a particular outcome has been reached.²³⁵ From this perspective, software like MiDAS or the one used in the Childcare Benefits scandal are intermediating the possibility of exercising taxpayers' due process rights. However, as already pointed out by one of the authors of this Article in her previous research, the fact that a system is built by a public agency or by a private company can make a difference for different reasons.²³⁶ First, the contractual relationship between private actors and the government is characterized by uncertainty. The lack of accountability or the challenge of applying public law obligations to private contractors that have traditionally characterized the privatization and outsourcing of public tasks raise issues regarding transparency and fairness of the administrative procedure.²³⁷ Second, the misalignment of public and private interests endangers the pursuit of the public interest that fraud detectors aim to protect.²³⁸ Finally, outsourcing enforcement tasks to private companies can jeopardize the right to due process and the right to non-discrimination of the alleged fraudster.²³⁹ Indeed, outsourcing public tasks can lead to the severe endangerment of fundamental rights through opaque and biased data-driven systems combined with the possible expansion or reduction of discretionary powers beyond the original intent of the legislator.²⁴⁰ Since the interpretation of vague and indeterminate terms is mainly based on past

a little paranoid. Most Americans don't want to hate their government, but having to contend with even the simplest income tax returns pushes a lot them in that direction.

See id.

²³³ *See supra* Section II.B (considering automatic fraud detectors in the MiDAS example).

²³⁴ *See supra* Section II.B (discussing this point and how notification might break down).

²³⁵ More generally, when it comes to taxpayers' rights, how taxpayers are treated by the agency will also have an impact on their voluntary compliance. As noted by the *National Taxpayers Advocate*, "[i]f taxpayers believe they are treated, or can be treated, in an arbitrary and capricious manner, they will mistrust the tax system and be less likely to comply with the laws voluntarily. If taxpayers have confidence in the fairness and integrity of the tax system, they will be more likely to comply." NAT'L TAXPAYER ADVOC., ANNUAL REPORT TO CONGRESS, MOST SERIOUS PROBLEMS: TAXPAYER RIGHTS: THE IRS SHOULD ADOPT A TAXPAYER BILL OF RIGHTS AS A FRAMEWORK FOR EFFECTIVE TAX ADMINISTRATION 20 (2013).

²³⁶ Ranchordás & Schuurmans, *supra* note 225, at 7–8.

²³⁷ *Id.* at 26.

²³⁸ *Id.* at 26.

²³⁹ *Id.* at 24.

²⁴⁰ *Id.* at 31.

data analytics, the ultimate outcomes might be undesirable (e.g., the commission of a crime by an individual belonging to a specific ethnic group that has defrauded the system can lead to the system flagging all individuals belonging to a certain ethnic group combined with other indicators).²⁴¹ These types of issues can, nonetheless, also arise in public automated systems, such as in the Dutch childcare benefit scandal.²⁴² Due to the misalignment of interests and values between public and private parties, the involvement of private companies in carrying out inherently governmental tasks can enhance the risk of unfair, disproportionate, and discriminatory treatment.²⁴³ Thus, under these circumstances, private companies developing automated systems must follow ethical standards and align their technology with public values and rules characterizing public law enforcement.²⁴⁴

In order to safeguard citizens' procedural rights, data-driven systems and opaque strategies should also be made transparent. Also, accountability mechanisms have to be put in place to enable citizens to fully understand how a decision has been made.²⁴⁵ Additionally, the implications of outsourcing of public tasks need to be also considered from a digital divide perspective. Delegating "inherently governmental tasks" to private companies must not be used as an excuse to avoid addressing digital divide concerns in the area of digital government.

2. Tax Preparation Software

In many other countries (e.g., The Netherlands), TurboTax would not be necessary because tax authorities provide taxpayers with pre-filled tax returns which already contain the most relevant income information.²⁴⁶ Nonetheless, the U.S. tax system still largely relies on the market in the form of commercial preparers and software to assist in the submission of the tax return and the application process for benefits.²⁴⁷ Taxpayers acting as consumers can choose to purchase products or services, which, albeit at a cost in terms of fees, enables them to gain access to those benefits.²⁴⁸ Moreover, since the U.S. government only accepts online tax returns if submitted by one of the private companies acting as their partners, these companies

²⁴¹ *Id.* at 31.

²⁴² *Id.* at 12.

²⁴³ *Id.* at 31.

²⁴⁴ *Id.* at 34.

²⁴⁵ See generally Maayan Perel & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement*, 69 FLA. L. REV. 181, 181, 184 (2017) (advocating for public engagement with algorithm systems of online enforcement).

²⁴⁶ Helaine Olen, Opinion: *Americans Spend Hours and Hours Preparing Their Taxes. We Shouldn't Have To.*, WASH. POST (May 15, 2021, 9:00 AM), <https://www.washingtonpost.com/opinions/2021/05/15/americans-spend-hours-hours-preparing-their-taxes-we-shouldnt-have/> [<https://perma.cc/CUM5-6Z56>].

²⁴⁷ Leslie Book, *Bureaucratic Oppression and the Tax System*, 69 TAXLAW. 568, 587 (2016).

²⁴⁸ *Id.*

also represent the only gateway to send a tax return online.²⁴⁹ From this perspective, the software behind TurboTax intermediates taxpayers' compliance to their tax obligations (i.e., submitting their tax returns).²⁵⁰ At the same time, it intermediates access to their rights since they will be entitled to tax refunds depending on the submission of their tax return.²⁵¹ However, this intermediation comes at a cost masqueraded through "dark patterns" even when not due.

Although, as theorized by Professor Lawsky, tax preparation software is merely transposing into computer code the algorithm already codified in tax return forms by the government, and there is case law and scholarly debate on the consequences of mistakes included in the tax return.²⁵² Similarly, it has also been questioned whether taxpayers' reliance on computer tax software may be permitted as reasonable cause in good faith exempting taxpayers from the accuracy-related penalty of section 6662(a) IRC (so-called TurboTax Defense).²⁵³ Moreover, another important aspect in tax returns is how private tax preparation software interacts with the support given through (automated) legal guidance by the IRS itself. Through what Professors Blank and Osofsky indicate as legal calculators (i.e., Interactive Tax Assistant (ITA)), simplicity is delivered more interactively.²⁵⁴ It asks taxpayers simplified questions about underlying facts and provides personalized answers to taxpayers' specific questions.²⁵⁵ Because of the tailored nature of their questions and answers and the illusion of speaking directly with the IRS, taxpayers might be persuaded to directly talk with the IRS and be induced to higher reliance on these services instead of seeking help from professional advisors.²⁵⁶ Nonetheless, when the legal issues underlying the taxpayers' question rely upon factual assumptions or involve ambiguous legal

²⁴⁹ See Rodney P. Mock & Nancy E. Shurtz, *The TurboTax Defense*, 15 FLA. TAX REV. 443, 507 (2014).

²⁵⁰ See *id.* at 463.

²⁵¹ See Francine J. Lipman, *The Working Poor are Paying for Government Benefits: Fixing the Hole in the Anti-Poverty Purse*, in CRITICAL TAX THEORY 276, 276–77 (Anthony C. Infanti & Bridget J. Crawford eds., 2010).

²⁵² See generally Sarah Lawsky, *Form as Formalization*, 16 OHIO ST. TECH. L. J. 115 (2020) (arguing that tax preparation programs do not encode the law but encode the tax forms).

²⁵³ Compare successful uses of the TurboTax defense in *Thompson v. Comm'r*, 94 T.C.M. (CCH) 24, 25 (2007), and *Olsen v. Comm'r*, No. 11658-10S, 2011 BL 399552 (T.C. Nov. 23, 2011), with the majority of cases which have been unsuccessful in asserting a viable TurboTax defense: *Bunney v. Comm'r*, 114 T.C. 259, 267 (2000); *Lam v. Comm'r*, 99 T.C.M. (CCH) 1347, 1349 (2010); *Parker v. Comm'r*, No. 26478-08S, T.C. Summ. Op. 2010-78, 2010 BL 382909; *Au v. Comm'r*, 100 T.C.M. (CCH) 400 (2010); *Anyika v. Comm'r*, 101 T.C.M. (CCH) 1322 (2011). For the academic debate, see Jay A. Soled & Kathleen D. Thomas, *Regulating Tax Return Preparation*, 58 B.C.L. REV. 151, 171–79 (2017), and Rodney P. Mock & Nancy E. Shurtz, *The TurboTax Defense*, 15 FLA. TAX REV. 443, 476–80 (2014).

²⁵⁴ Blank & Osofsky, *Legal Calculators*, *supra* note 187, at 74, 75; see also Blank & Osofsky, *supra* note 22, at 184.

²⁵⁵ Blank & Osofsky, *supra* note 22, at 218; Blank & Osofsky, *Legal Calculators*, *supra* note 187, at 75.

²⁵⁶ Blank & Osofsky, *supra* note 22, at 202.

standards, automated legal guidance systems may provide suggestions at odds with what the law prescribes.²⁵⁷ Thus, the core question is whether taxpayers can rely on the guidance delivered by these services, their legal value, and the consequences of “erroneous advice.” According to the IRS, taxpayers should not be entitled to tax penalty abatement in cases of “erroneous advice” provided by the ITA.²⁵⁸ Furthermore, scholars have already highlighted that even though the taxpayers could try to defend themselves by asserting that the advice received by ITA is a “reasonable cause and good faith” defense against accuracy-related tax penalties, this appears to be a dead-end strategy.²⁵⁹ Moreover, the increasing use of legal calculators is also a reaction to the budget cuts of the IRS, which has reduced the number of customer service agents and thus, impacted taxpayers’ possibility to receive assistance.²⁶⁰ Since wealthy taxpayers can afford counselors and eventually request a private letter ruling behind the payment of a fee directly from the IRS, it derives that middle- and lower-income individuals are the groups who most likely will turn to ITA for help.²⁶¹ For the same reason, they will also be the group primarily using tax preparation software for filling and submitting their tax return electronically. At the same time, complexities and issues pointed out concerning the digital divide when services are digitally provided by governments become relevant also in this context.²⁶²

Free pre-filled tax returns provided by governments and automated legal guidance based on simplicity can be a step forward for lower-income taxpayers who cannot afford a tax advisor.²⁶³ Nevertheless, the lack of clarity regarding the consequences

²⁵⁷ *Id.* 210–17.

²⁵⁸ *Id.* at 234. Unlike private letter rulings issued to specific taxpayers, the IRS does not consider statements by ITA to be written advice upon which taxpayers can rely. Moreover, on the ITA website, the IRS explicitly states that the penalty abatement provision (section 6404(f) IRC), which applies when the IRS provides erroneous advice to taxpayers, does not apply to any statements provided by ITA.

²⁵⁹ *Id.*

²⁶⁰ Press Release, Treasury Inspector General for Tax Administration, TIGTA Report: New Web-based Tool Gets Good Reviews From IRS Taxpayer Assistors (May 10, 2011), https://www.treasury.gov/tigta/press/press_tigta-2011-24.htm [<https://perma.cc/LYX7-JF6Y>]. For the overall risks deriving from the underfunding of the IRS, see generally Leandra Lederman, *The IRS, Politics, and Income Inequality*, 150 TAX NOTES 1329, 1329, 1331–32 (2016).

²⁶¹ *Internal Revenue Service Operations and the President’s Budget for Fiscal Year 2016: Hearing Before the Subcomm. on Fin.*, 114th Cong. 5–8 (2015) (statement of Hon. John A. Koskinen, Comm’r of Internal Revenue).

²⁶² See *supra* Part I.

²⁶³ The revision of government-private industry preparer partnership providing free Internet tax preparation and filing services has been long advised by academic and policy makers as well. See IOTA, *supra* note 83, at 5–6, 10 and also Lipman, *supra* note 251, at 279–80, who in 2003 already recommended a revised government-private industry preparer partnership providing free Internet tax preparation and filing services together with the simplification of applicable tax provisions, an offsetting tax preparation tax credit and government-supported volunteer income tax assistance clinics open all year to assist low-income individuals with tax preparation, filing, correspondence, and other financial education and banking assistance.

of making mistakes due to incorrect automated legal guidance, combined with the issues arising from tax preparation software leaves middle- and lower-income taxpayers in a critical situation. On the one hand, relying on suggestions provided by technological solutions as ITA, they might ultimately be misguided.²⁶⁴ On the other hand, when filling in and submitting their tax returns, their fears get monetized under the payment of a fee for additional services to seek only purported reassurance.²⁶⁵ Consequently, lower-income taxpayers are once again the ones paying the higher price of the implications of the privatization of public functions due to budget constraints.

IV. AUTOMATING LAW FOR NON-AVERAGE CITIZENS

The digitization and automation of government, in particular of tax obligations and social security benefits, have important legal implications: citizens may be unfairly and unequally treated, misled by privately developed software, and fall prey to obscure fraud detection software.²⁶⁶ When this happens, they may also be unable to fully understand how decisions against them were made, and not have full access to administrative justice. Drawing on the cases exposed in Part II and their legal implications (Part III), this Part focuses on the discussion of the overlooked crux of the problem and how to solve it: the failure to design digital government, automation, and law enforcement for all citizens, rather than for the average tech-savvy, middle-income citizen.

Digital government and its respective automated systems are primarily designed for so-called “average citizens” who have access to the Internet, have typical literacy and digital skills, and can thus apply for public services and exercise their rights online without requiring any additional assistance.²⁶⁷ However, law is not designed only for “average citizens.” Instead, in a modern Western legal system guided by the rule of law, law confers rights and obligations to all citizens and in many cases, also to legal residents, regardless of their ethnicity, gender, age, income, and ability to participate in the digital society.²⁶⁸ Digital tools that focus only on average tech-savvy citizens, leaving out millions of citizens who do not fit the technological narrative, generate by definition a situation of inequality.²⁶⁹ This effect was visible in the digital tax cases (Part II) where thousands of citizens were wrongfully “punished” for not being able to navigate both the legal and digital systems. This situation was also the result of the so-called “low-hanging fruit” enforcement (Part III), which targets vulnerable citizens. Even though the law is equal for everyone, the digitization of

²⁶⁴ Blank & Osofsky, *supra* note 22, at 208–09.

²⁶⁵ See Lipman, *supra* note 251.

²⁶⁶ See Ranchordás & Schuurmans, *supra* note 225, at 28–29.

²⁶⁷ Blank & Osofsky, *supra* note 22, at 225.

²⁶⁸ *What is the Rule of Law*, U.N., <https://www.un.org/ruleoflaw/what-is-the-rule-of-law/> [<https://perma.cc/WX9V-ZKGG>].

²⁶⁹ See Blank & Osofsky, *supra* note 22, at 186.

government transactions and fraud detection results in more punishment of the most vulnerable citizens in our society.²⁷⁰ These citizens are in a detrimental position first because they are less well-versed in the use of technology and may thus make mistakes.²⁷¹ Second, these citizens are more easily caught by automated systems that interpret their mistakes or oversights as attempted fraud or risk of committing fraud.²⁷² Automated bureaucracy together with the opacity of systems and the desire to cut costs has thus dehumanizing consequences for non-average citizens. However, tax administrations do not take into account the needs of “vulnerable citizens” because when citizens do not have a documented disability, their challenges are invisible. This Part addresses this gap by delving into the concepts of “vulnerability” and “vulnerable citizens” and providing some insights into how the needs of vulnerable citizens (regardless of the source of their vulnerability) should also be accounted for in the design of digital government.

A. Average vs. Vulnerable Citizens

As Part II showed, the acritical digitization and automation of government has a particularly detrimental impact on vulnerable citizens. In 2019, the UN Special Rapporteur on Extreme Poverty and Human Rights strongly criticized the digitalization and automation of public services, including when applied to welfare benefits.²⁷³ The UN Rapporteur shed light on how instead of ameliorating the services provided to citizens, technology was putting the human rights of the poorest and most vulnerable at risk.²⁷⁴ The lack of transparency and algorithmic biases were among the causes of discrimination and consequent exclusion.²⁷⁵ For the young, middle-class, educated, and tech-savvy citizens, digitalization expanded access to state services. But for senior citizens, low-income individuals, and many invisible minorities, it excluded them. This section explains more in detail how this phenomenon occurs, even when the text of the law seeks to guarantee equality among citizens.

²⁷⁰ See Ranchordás & Schuurmans, *supra* note 225, at 30.

²⁷¹ U.N. Secretary-General, *Report of the Special Rapporteur on Extreme Poverty and Human Rights*, ¶¶ 45–46, 48, U.N. Doc. A/74/48037 (Oct. 11, 2019).

²⁷² See Ranchordás & Schuurmans, *supra* note 225, at 28–29.

²⁷³ See generally U.N. Secretary-General, *Report of the Special Rapporteur on Extreme Poverty and Human Rights*, U.N. Doc. A/74/48037 (Oct. 11, 2019), *World Stumbling Zombie-Like Into a Digital Welfare Dystopia, Warns UN Human Rights Expert*, U.N. HUM. RTS. OFF. HIGH COMM’R (Oct. 17, 2019), <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25156> [<https://perma.cc/BW3R-8W3B>]; Philip Alston (Special Rapporteur on Extreme Poverty and Human Rights), *Amicus Curiae Supporting Petitioners in NJCM c.s./De Staat der Nederlanden (SyRI) before the District Court of The Hague* (case number: c/09/550982/HA ZA 18/388), <https://www.ohchr.org/Documents/Issues/Poverty/Amicusfinalversionsigned.pdf> [<https://perma.cc/C239-XVLS>].

²⁷⁴ U.N. Secretary-General, *Report of the Special Rapporteur on Extreme Poverty and Human Rights* ¶ 53, U.N. Doc. A/74/48037 (Oct. 11, 2019).

²⁷⁵ *Id.* ¶ 77.

The digital technology employed to digitize government services, or make automated decisions, aims to optimize administration. Therefore, it treats all citizens as statistical data or categories: “average citizens” who have a reasonable understanding of the law, have the ability to fill in forms, can understand how government websites work, and can thus use them. These systems simplify the law and the language that is used, but they are not overly patronizing. “Average citizens” can engage independently with technology and require little assistance. Interestingly, it is not easy to support the technological perception of the “average citizen” as a reasonably tech-savvy (male) citizen. The “average citizen” for the technology industry developing software does not necessarily match the statistical reality, especially in racially, ethnically, and income diverse countries like the United States. In 2018, the *Washington Post* ran a profile of the “average citizen” based on Census Bureau data and recent polling and concluded that the average American was a white woman in her fifties, with a Bachelor’s degree, average income, who lives in her own house with her spouse.²⁷⁶

The average citizen does not exist from a legal perspective. It is an implicit category that is supposed to refer to everyone who does not require assistance because of a disability, as established for example, in the Americans with Disabilities Act.²⁷⁷ There is thus the assumption that citizens can either perform the government transactions they are by law required to do or if they cannot and are not disabled, there is something wrong. Since average citizens are indeed the most representative category statistically speaking, automated systems assume that they can fill in the required forms for their needed government transactions or can easily afford and use a tax preparation software like TurboTax. Digital government is designed thus for individuals with average literacy and digital skills. The assumption is that average citizens only leave patterns of mistakes (such as the ones that triggered the MiDAS and the Dutch childcare benefits scandal) if they have the intent to commit fraud. However, not all citizens are “average citizens” or are citizens with special needs that can be legally entitled to permanent assistance in their government transactions. Also, the idea that the “average citizen” has certain skills may be statistically true but it is not sufficiently nuanced and it fails to consider evidence showing that about 130 million Americans lack proficiency in literacy, reading below the equivalent of a sixth-grade level.²⁷⁸ According to the Pew Research Center, America’s digital literacy

²⁷⁶ Philip Bump, *This Is What the Average American Looks Like in 2018*, WASH. POST (Aug. 13, 2018), <https://www.washingtonpost.com/news/politics/wp/2018/08/13/this-is-what-the-average-american-looks-like-in-2018/> [<https://perma.cc/2PLU-XN57>].

²⁷⁷ *What Is the Definition of Disability under the ADA?*, ADA NAT’L NETWORK, <https://adata.org/faq/what-definition-disability-under-ada> [<https://perma.cc/7KS9-52XT>] (last updated Sept. 2021).

²⁷⁸ Michael T. Nietzel, *Low Literacy Levels Among U.S. Adults Could Be Costing the Economy \$2.2 Trillion a Year*, FORBES (Sept. 9, 2020, 7:14 AM), <https://www.forbes.com/sites/michaelt Nietzel/2020/09/09/low-literacy-levels-among-us-adults-could-be-costing-the-economy-22-trillion-a-year/?sh=2b6627c44c90> [<https://perma.cc/LK84-8YLY>].

is also lacking, with about sixty percent of adults failing to demonstrate sufficient digital skills (e.g., ability to detect a phishing scam on social media, website, email or through text messages; or ability to work with a true two-factor authentication system).²⁷⁹ This means that millions of citizens who are not officially entitled to assistance may still find it difficult to engage with digital government.²⁸⁰

In between the categories of “average citizens” and “citizens with special needs,” there are millions of citizens who may commit mistakes due to lack of time, literacy, mental capacity or unwillingness to engage with technology. There is thus the need for a third category that better illustrates the different degrees of capabilities of citizens and their needs.

B. Who Is the Vulnerable Citizen?

According to Martha Fineman, we can all be vulnerable citizens, at some point in life.²⁸¹ Vulnerability can result from a life event (e.g., death of a loved one), it can be entirely situational, and it can affect highly educated citizens at a time when they have less time or mental capacity.²⁸² However, for many citizens, vulnerability is not only temporary. It is a permanent feature of their lives which can result from an individual’s socioeconomic background, ethnicity, education, or income. Vulnerability has many different sources which are not related to disabilities. Existing scholarship shows that ethnic minorities are discriminated by algorithmic decision-making systems that score them negatively, suggest they will commit more often crimes and welfare fraud, and surveil them more closely than other segments of the population.²⁸³ This can generate a feeling of government anxiety, mistrust, and unwillingness to embrace digital technology. Although technology appears to empower women, they still participate less often than men in digital democratic debates, have a more reduced digital capital, and are more often trolled on social media.²⁸⁴ Technology still reproduces existing patriarchal attitudes towards gender which limits the potential of technology to be tools for women’s empowerment.

Also, individuals with low literacy cannot understand how new digital processes work, cannot translate their needs in the most accurate way, consume news that may

²⁷⁹ Emily A. Vogels & Monica Anderson, *Americans and Digital Knowledge*, PEW RSCH. CTR. (Oct. 9, 2019), <https://www.pewresearch.org/internet/2019/10/09/americans-and-digital-knowledge/> [<https://perma.cc/YM2U-XZ95>].

²⁸⁰ See Nina A. Kohn, *Vulnerability Theory and the Role of Government*, 26 YALE J.L. & FEMINISM 1, 3 (2014).

²⁸¹ See Martha Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, 20 YALE J.L. & FEMINISM 1, 8 (2008); Martha Fineman, *The Vulnerable Subject and the Responsive State*, 60 EMORY L.J. 251, 267 (2010).

²⁸² Fineman, *The Vulnerable Subject and the Responsive State*, *supra* note 281.

²⁸³ See Ranchordás & Schuurmans, *supra* note 225, at 29–30.

²⁸⁴ See generally Mary Pat Treuthart, *Connectivity: The Global Gender Digital Divide and Its Implications for Women’s Human Rights and Equality*, 23 GONZ. J. INT’L L. 1 (2019).

not be precise, and cannot convey their views or requests accurately in writing. Because of their reduced digital skills, limited literacy, financial or ethnic background, or mentality, these citizens are not treated equally and experience; the digitalization of public services is limiting their ability to exercise their rights before public bodies. Vulnerability before government thus amounts to the full or partial inability to exercise rights before public authorities and participate in public life on equal terms, citizens may feel excluded and unfairly treated by government.²⁸⁵ Administrative vulnerability may be caused either by exogenous (e.g., socioeconomic conditions) or endogenous factors (e.g., psychological conditions, time, illiteracy).²⁸⁶ It is a reality that does not only affect low-income or marginalized populations, but also, in the context of digital government, it can affect anyone regardless of education or income.²⁸⁷ The design of digital government overlooks this administrative vulnerability. Therefore, this concept that most of us know too well, still does not exist in Western systems of public law that regard the citizen as an individual with the average ability to engage with government and its digital tools.

C. How to Account for Vulnerable Citizens

This section offers some suggestions to accommodate the needs of vulnerable citizens. First, it would be important to ensure that tax preparation software is developed by tax authorities in order to guarantee that citizens do not have to incur into costs so as to comply with their legal obligations. This also ensures that low-income citizens do not have to purchase software they do not need or that gives them the false impression that they are embracing the most advantageous interpretation of the law. If simplicity and efficiency are key goals of digital government, they should be provided directly by governments and not outsourced to private companies who have a financial interest in sustaining “simplicity.” Therefore, if governments wish to protect vulnerable citizens, they should “do it themselves,” rather than trusting private companies to intermediate their transactions with citizens.

Second, the distance between material law and tax enforcement should be equal for every citizen, regardless of whether they are a case of “low-hanging fruit” enforcement (easy to detect, unlikely to litigate, with high revenue for tax authority as result) or a complex case of enforcement, requiring additional investigations. The Dutch childcare benefits scandal demonstrated that targeting vulnerable citizens on the grounds of their immigration background was an uncomplicated way to obtain

²⁸⁵ TOMLINSON, *supra* note 181, at 43–57; Alba Nogueira López & Natalia Paleo Mosquera, *Vulnerabilidad administrativa: los obstáculos administrativos en el acceso a los programas de Vivienda*, in *POLÍTICAS Y DERECHO A LA VIVIENDA: GENTE SIN CASA Y CASAS SIN GENTE* 213, 213–44 (Natalia Paleo Mosquera ed., 2020).

²⁸⁶ TOMLINSON, *supra* note 181, at 57–59.

²⁸⁷ See Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition*, *supra* note 281, at 12.

rapid results by running simple automated checks. The detection of mistakes was not difficult, particularly because many low-income parents did not have the resources to seek professional advice.²⁸⁸ However, this approach to enforcement is unequal and biased. It means that those who can seek professional tax and legal advice will not be as easily targeted, even though they could have committed fraud and if that is the case, they could probably protect their legal positions better. The law is thus not as harshly enforced for the “average middle-income” citizen as it is for the non-average or vulnerable taxpayer. The revision of this tax enforcement strategy may be undesirable from a financial point of view, but it is necessary to guarantee that public law enforcement stays true to the key values of administrative law. As explained in Part III, these values include efficiency but not at the cost of inequality or dehumanization of the contact with citizens.

Third, we support the proposal by Leslie Book, T. Keith Fogg, and Nina E. Olson, on the introduction of a Taxpayer Rights Impact Statement, which is meant to assess current and future IRS systems by conducting a systematic review of the impact of its actions on taxpayer rights.²⁸⁹

Fourth, tax and social security law are complex and highly detailed legal systems. This means that citizens will continue to make mistakes when filling in forms, but digital government and automation are not going to be abolished. On the contrary, it is highly likely that they will be further advanced. In order to accommodate the situation of vulnerable citizens, governments could equate “forgiving” more mistakes or providing additional opportunities for citizens to correct errors in their forms. For example, this option has been established by law in France with the so-called “right to make a mistake” which allows French citizens to make one mistake in good faith once in their lives without any legal consequences.²⁹⁰ The French government also created a website (oops.gov.fr) with common mistakes made by citizens along with checklists on how a citizen, at different moments in life (e.g., moving, birth of a child, unemployment, death of a loved one) should perform certain government transactions.²⁹¹ While this solution is far from perfect, it shows a movement toward more empathy, less harsh and inequalitarian enforcement of law against vulnerable citizens. The creation of public programs of digital assistance is also another way of helping vulnerable citizens comply with their obligations without the intermediation of privately developed technology.

²⁸⁸ See Ranchordás & Schuurmans, *supra* note 225, at 12–13.

²⁸⁹ Leslie Book et al., *Reducing Administrative Burdens to Protect Taxpayer Rights* (Harv. L. Sch. Pub. L. Working Paper No. 21-44 (2021), <https://ssrn.com/abstract=3902570> [<https://perma.cc/GG8F-CB7U>]).

²⁹⁰ Jacques Chevallier, *Trust and the Right to Make Mistakes*, GOV’T ACTION: RSCH. & PRAC., Winter 2019–2020, at 1–2.

²⁹¹ MINISTRY OF TRANSFORMATION & PUBLIC SERVICE, <https://www.oups.gouv.fr/> [<https://perma.cc/6ZB6-CRXD>].

CONCLUSION

The partial or full automation of administrative decision-making in itself is neither good nor bad. Nevertheless, automated systems must remain within the limits of the law, be responsive, and promote the efficiency of public administrations without endangering the rule of law, procedural fairness, and the accountability of public authorities.²⁹² It is important to underline that automated decision-making also addresses some of the issues for which administrative law was created: Public authorities may be tempted to use their discretionary powers for unwarranted purposes or to prioritize personal gains over the public interest, resulting in wrongful and disproportionate decisions. In an ideal world, automation could work as a limiting force to a source of mistakes and incorrect administrative decisions if it is combined with human judgment.²⁹³ Nevertheless, this requires that government officials do not resort to private software intermediaries or design technology themselves that aims to primarily target government efficiencies at the cost of vulnerable citizens.

Automated systems that are intermediated by private technology or are primarily guided by efficiency values place vulnerable citizens in a disadvantageous situation for two reasons. First, citizens that are qualified as being part of an underrepresented group (for example, in the case of the Dutch childcare benefit scandal, Dutch citizens with an Antillean background) are “caught in the system”, given a “negative” ranking or score (e.g., higher risk of welfare fraud) because of their nationality, ethnicity, gender, or socioeconomic status.²⁹⁴ Existing data is interpreted against them, and given the absence of a true critical eye of “the human-in-the-loop,” these citizens are qualified as possible fraudsters.²⁹⁵ Who they are determines who they become in the eyes of the digital system. Second, vulnerable citizens are also excluded by the way in which digital technology is designed and what digital government expects from them in terms of skills, time, and education. A fair and equalitarian automation of government and tax enforcement should ensure that digital government is designed also with the needs of vulnerable citizens in mind. This means enhanced simplification of forms, more information from the side of government, publicly developed software and instructions, more digital or human assistance, and, as it shall be further developed in a companion article, more administrative empathy for mistakes made in good faith.

²⁹² Terry Carney, *Robot-debt Illegality: The Seven Veils of Failed Guarantees of the Rule of Law?*, 44 ALT. L.J. 4, 9 (2019) (discussing the example of the poorly designed Robo-debt by Centrelink in Australia that reversed the burden of proof of welfare recipients); Lord Sales, *Algorithms, Artificial Intelligence and the Law*, 25 JUD. REV. 46, 61 (2020).

²⁹³ Binns, *supra* note 71, at 6–7.

²⁹⁴ *Id.* at 5–6.

²⁹⁵ *Id.* at 6–7.