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AUTOMATED GOVERNMENT FOR VULNERABLE CITIZENS: INTERMEDIATING RIGHTS

Sofia Ranchordás* & 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. It is in this context that 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 automated public services, 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. 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 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.

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“Due to my self-employment, I had to report my income every few months. Earning \$50 extra could make my co-pay at day care go up by the same amount. Sometimes it meant losing my grant altogether...The system kept me locked down, scraping the bottom of the barrel, without a plan to climb out of it.”

Stephanie Land, *Maid: Hard Work, Low Pay, and Mother's Will to Survive* (2019)

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 enforcement 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 127-132 (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 PERSP. 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 Bakkum & Frederik Zuiderveen Borgesius, *Digital Welfare Detection and the Dutch SyRI Judgment*, EUROPEAN J. SOC. SEC. 1, 1-3 (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 analyzes 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 its analysis to US law and legal scholarship. Rather, since these phenomena have socioeconomic or cultural dimensions and are widely disseminated in Western countries implementing digital government, this Article relies on interdisciplinary literature (*e.g.*, public policy, public administration, communication sciences) and comparative legal scholarship. This Article's argument proceeds in three steps.

First, we discuss 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, *eg.*, 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 (Inter-American Development Bank 2018) (analyzing government transactions and how their complexity impedes citizens from exercising their rights, with special focus on Latin American 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 US 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*, I POLITIQUE ÉTRANGÈRE, I, 131, 137-39 (2019) (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 DIGITAL ERA 4-8 (1st ed. 2019) (discussing the evolution of digital government). Public policy literature has further demonstrated that the success of digital government and 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, print and sign it, and mail it).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.¹² Millions of citizens throughout the United States still lack these conditions or require human assistance when engaging with digital government services (*e.g.*, application for welfare benefits, filing taxes online).¹³ The digital divide, now commonly defined as different levels of unequal participation in the digital society, is alive and well. However, its effects on access to digital government transactions have been overlooked.¹⁴ The design of digital government assumes—often wrongly—that

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, Vishanth Weerakkody, & Weifeng Chen, *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> (last visited Aug. 9, 2021) (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, Rainer Kattel, & Piret Tõnurist, *Technological Capacity in the Public Sector: The Case of Estonia*, 84 INT’L REV. ADMIN. SCI. 214, 216-17 (2018)

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¹³ 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/> (last visited Aug. 9, 2021) (explaining Internet non-adoption on the grounds a survey conducted 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/> (last visited Aug. 9, 2021) (showing that broadband adoption and smartphone ownership have not reduced the inequality between Americans with lower and higher incomes. While high-income American 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).

¹⁴ 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-

citizens are self-reliant, have access to technology, have enough time, mental capacity, and average digital skills to engage critically with new digital tools.¹⁵ 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, pertaining to older generations, immigrant communities and other underrepresented minorities, have been left behind.¹⁶ For example, during the pandemic, millions of senior citizens encountered problems registering for their COVID-19 vaccines and obtaining trustworthy information about them.¹⁷

The third step of our argument is focused on the legal implications of the technological intermediation of public services and the unequal exercise of rights before digital government.¹⁸ Contrary to a sheet of paper, technological intermediaries used in the automation of government services are not neutral.¹⁹

55 (2016); 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).

¹⁵ See ANNE-GREET KEIZER, WIL TIEMEIJER & MARK BOVENS, 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 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”).

¹⁶ See Goode, *supra* note 14, 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 14, at 133-34 (highlighting a survey that showed differences in understanding of complex internet systems based on certain factors).

¹⁷ 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).

¹⁸ 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 PROCEEDINGS (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, DANIEL E. HO, CATHERINE M. SHARKEY & MARIANO-FLORENTINO CUÉLLAR, 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).

On the values and models of administrative justice, see JERRY MASHAW, BUREAUCRATIC JUSTICE 23-25 (1983); Jerry Mashaw, *Models of Administrative Justice*, THE OXFORD HANDBOOK OF ADMINISTRATIVE JUSTICE (Joe Tomlinson, Robert Thomas, Marc Hertogh & Richard Kirkham 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-

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 that 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 different reasons. First, the failure to engage critically with digital government can mean that vulnerable citizens may not be fully able to exercise their rights and protect their legal position.²³ Second, a poor understanding of digital government and their underlying administrative rules and procedures can lead to flawed results.²⁴ Citizens who do not fully understand the functioning of automated systems may thus 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 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,

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 “simplexity” 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, *Simplexity: 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, Jeff King & Alison Young, eds., 2020).

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

²³ See Blank & Osofsky, *supra* note 22, 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*, WORD DEVELOPMENT REPORT (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3825724 (last visited Aug. 10, 2021).

²⁶ See Sandra G. Mayson, *Bias In, Bias Out*, 128 YALE L.J. 2218, 2221-2226 (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

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. Instead, 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 almost impossible 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.³⁰ Many of these families who were already struggling to make ends meet, were driven into situations of homelessness, bankruptcy, and some even lost their children due to the psychological and financial stress they faced.³¹ More than half of these families had immigrant or vulnerable backgrounds which were identified by algorithmic systems designed to detect large-scale fraud.³² 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 supporting their innocence.³³ In 2021, after a parliamentary report showed that tax authorities had wrongfully accused these citizens and courts' judicial review was inadequate, the Dutch government resigned over this scandal.³⁴ The Dutch Prime Minister apologized for this injustice, acknowledging that "innocent people [had] been criminalized and their lives ruined."³⁵ Despite the promises of financial compensations for the victims of this

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 For a full account of the underlying facts, see JESSE FREDERIK, *supra* note 29 at 130-148.

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ 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> (last visited Aug. 9, 2021).

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.³⁶

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.³⁷ These tax and fraud detection software systems are technological tools developed by private actors for specific purposes. For example, tax preparation software like TurboTax misdirect taxpayers eligible to file their taxes for free, to purchase additional and unnecessary services.³⁸ As to MiDAS, this software's primary goal was to generate new fraud cases. Not surprisingly, it did find fraud, even when there was limited evidence of it.³⁹ 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.⁴⁰ 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 refunds.⁴¹ 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.⁴²

This Article adds to existing legal scholarship on algorithmic biases, the automation of government, algorithmic accountability and transparency of digital government, and discrimination.⁴³ This Article is organized as follows. Part I

³⁶ See *id.*

³⁷ Justin Elliott & Paul Kiel, *Inside TurboTax's 20-Year Fight to Stop Americans From Filing Their Taxes for Free*, PRO PUBLICA (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> (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/> (last visited Aug. 9, 2021) (explaining MiDAS as a way to detect fraud).

³⁸ Justin Elliott, *The FTC Is Investigating Intuit Over TurboTax Practices*, PRO PUBLICA, (Sept. 8, 2020, 5:00 AM) <https://www.propublica.org/article/the-ftc-is-investigating-intuit-over-turbotax-practices> (reporting that the Federal Trade Commission has started investigating Intuit and its marketing of TurboTax products)

³⁹ See De La Garza, *supra* note 37.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ 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*, U. CHI. L. F., 355, 358-59 (2008); 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

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.⁴⁴ This Part briefly addresses the problem of unequal access to digital government.⁴⁵

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.⁴⁶ The dominant narrative regarding digital government presents 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.⁴⁷ Digital technology can automate time-

(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).

⁴⁴ See generally Basu, *supra* note 1 (addressing how engagement with e-government impacts citizens of different backgrounds).

⁴⁵ See Katharine V. Macy, *Digital Divide Challenges Access to E-Government*, 42 DTP: DOCUMENTS TO THE PEOPLE 36, 36 (2014) (discussing how the digital divide impacts the access to e-government).

⁴⁶ 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> (last visited March 30, 2021).

⁴⁷ See, e.g., Danielle Keats Citron, *Technological Due Process*, 85 WASH. U. L. REV. 1249, 1251-53 (2008) (highlighting how technology can lead to efficiency and transparency with procedural due process); Cobbe, *supra* note 43, at 636-37 (discussing automated decision making systems).

consuming processes, allowing for large savings in the emission and enforcement of simple bulk decisions.⁴⁸ Also, reliance on technology has improved the availability of public information as well as the way in which governments communicate with citizens.⁴⁹ 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.⁵⁰

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.⁵¹ 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."⁵² 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."⁵³ At the international level, the 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.⁵⁴ In the United States, public authorities at both federal and local level started the digitization of government with the development of websites, online filling of forms, and the creation of new avenues for the communication between governments and citizens.⁵⁵ Nowadays, most public authorities have moved beyond this stage and currently use digital technology to reform not only

⁴⁸ See Keats, *supra* note 47, 1251-52 (discussing how increased digitization leads to cuttings staffing and costs).

⁴⁹ See EUROPEAN COMMISSION, *STUDY ON eGOVERNMENT AND THE REDUCTION OF ADMINISTRATIVE BURDENS* (2014); EUROPEAN COMMISSION, *EU eGovernment Action Plan 2016-2020: Accelerating the Digital Transformation of Government*, COM (2016) 179 Final (EU eGovernment Action Plan); Mahmood et al., *supra* note 9, at 709-10.

⁵⁰ 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*, GOV'T INFO. Q. 101597 (2021) (discussing how social media communications enhanced trust during COVID-19).

⁵¹ See Lips, *supra* note 9, at 6-9.

⁵² See *id.* at 6-14.

⁵³ John C. Reitz, *E-Government*, 54 AM. J. COMP. L. 733, 733 (2006).

⁵⁴ OECD, *BROADBAND POLICIES FOR LATIN AMERICA AND THE CARIBBEAN* 361 (2016) (ebook).

⁵⁵ See, *e.g.*, Macy, *supra* note 45, 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 DTTP 17, 17 (2006).

how information is presented but also the essence of government transactions. This second stage refers to the concept of “digital government.”⁵⁶

Digital government does not refer merely to the digitization of documents and systems that were once based on paper trails.⁵⁷ 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.⁵⁸ 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.⁵⁹ 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.⁶⁰ 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.⁶¹ 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.⁶²

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 become ubiquitous in decision-making.⁶³ In the United States, a recent report revealed that 45% of the largest federal agencies in the country use or have

⁵⁶ 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”).

⁵⁷ See *id.* at 227; Wim J.M. Voermans, Welmoed Fokkema & Remco Van Wijk, *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).

⁵⁸ OECD, RECOMMENDATION OF THE COUNCIL ON DIGITAL GOVERNMENT STRATEGIES 6 (2014).

⁵⁹ *Id.* at 6–7.

⁶⁰ *Id.* at 2.

⁶¹ *Id.* at 6.

⁶² See Claudia Elena Marinica, *Digitization – The Key for Adapting Good Administration to a Better Governance*, 8 ACAD. J.L. 111, 115 (2020).

⁶³ 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, Gregory S. Dawson & Daniel Chenok, *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).

experimented with artificial intelligence (AI) and machine-learning related tools.⁶⁴ 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 fulfils all the requirements for an administrative request.⁶⁵

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.⁶⁶ 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).⁶⁷ 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.⁶⁸ 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.⁶⁹ An important and common 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.⁷⁰ The latter is applied to more complex procedures as it enables algorithms to learn from historical datasets, detect patterns, and make predictions.⁷¹ Contrary to expert-based systems

64 DAVID FREEMAN ENGSTROM ET AL., GOVERNMENT BY ALGORITHM: ARTIFICIAL INTELLIGENCE IN FEDERAL ADMINISTRATIVE AGENCIES, REPORT SUBMITTED TO THE ADMINISTRATIVE CONFERENCE OF THE UNITED STATES, at 6 (2020).

65 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.”)

66 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).

67 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, Pablo J. Boczkowski & Kirsten A. Foot eds., 2014) (ebook) (discussing the function and impact of algorithms on public discourse).

68 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).

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

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

71 *Id.*

that are written as “if-then” rules, systems powered by machine learning can result in inscrutable and non-intuitive outputs.⁷² 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.⁷³ A machine-learning system can be re-trained using new data to ensure that models can be adapted and corrected to changes.⁷⁴ While the possibility to keep learning from data can potentially improve the objective decision-making, it may be detrimental to its procedural guarantees.⁷⁵ 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.⁷⁶ 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.⁷⁷ More recently, automation started being used in social policy areas where we observe the most significant asymmetries between public power and citizens. This is the case of immigration law (identification of verification of identity, processing of asylum requests), social welfare (eligibility for benefits), and social housing.⁷⁸

Despite the growing number of AI applications for government, public authorities still need to further develop their AI capabilities in order to deploy these technologies effectively to achieve their goals.⁷⁹ For local public authorities, the development and deployment of AI applications involves significant financial investments which are incompatible with small local budgets.⁸⁰ Moreover, the successful employment of AI applications by the public sector is also constrained

⁷² ENGSTROM *supra* note 64, at 11.

⁷³ Reuben Binns, *Algorithmic Decision-making: A Guide for Lawyers*, 25 JUD. REV. 2, 3 (2020).

⁷⁴ *Id.* at 5.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ Bloch-Wehba *supra* note 28, at 1268-69.

⁷⁸ 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). Valerie Schneider, *Locked out by Big Data, Algorithms and Machine Learning May Undermine Housing Justice*, 52 Colum. Hum. Rts. L. Rev. 253 (2020) (discussing the discriminatory impact of big data and AI in rental housing).

⁷⁹ Patrick Mikalef et al., *Enabling AI Capabilities in Government Agencies: A Study of Determinants for European Municipalities*, GOV’T INFO. Q. 101593, 2 (June 8, 2021) (unpublished article) (on file with Government Information Quarterly); 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, 2 (2021) (defining the concept of AI capabilities).

⁸⁰ See Mikalef, *Enabling AI Capabilities in Government Agencies supra* note 79, at 4 (noting public organizations budgets may not allow for implementing new technologies).

by citizens' perceptions and the limited digital training of civil servants.⁸¹ Furthermore, digital government projects often start with unspecified goals, limited stakeholder engagement, and reduced attention to their social implications.⁸² 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.⁸³

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.⁸⁴ Electronically submitted tax returns facilitated taxpayers' submission, reducing costs for tax administrations while providing them with data directly intelligible to fraud detectors.⁸⁵ 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.⁸⁶ Pre-filled tax returns are generally available through the tax

⁸¹ See *id.* at 4–5 (discussing citizen perception of municipal AI capabilities and the associated costs).

⁸² See Luis Felipe Luna-Reyes et al., *Sensemaking and Social Processes in Digital Government Projects*, 38 GOV'T INFO. Q. 101570, 1–2 (2021) (identifying issues that impact digital government including ambiguous goals and complex stakeholder networks).

⁸³ Bloch-Wehba *supra* note 28, at 1267. In the United States, the National Taxpayer Advocate (NTA) Nina Olson, has been raising concerns in this regard already in her National Taxpayer Advocate's 2015 Annual Report to Congress and less than two years later on the IRS Future State vision which entailed a shift from in person assistance to digital interaction and what could be the implication for low-income taxpayers, highlighting the importance of understanding taxpayer needs and preferences. See National Taxpayer Advocate 2016 Annual Report to Congress, vol. 2, at 1-30 (Research Study: Taxpayers' Varying Abilities and Attitudes Toward IRS Taxpayer Service: The Effect of IRS Service Delivery Choices on Different Demographic Groups); Statement of Nina E. Olson National Taxpayer Advocate, Joint Hearing On IRS Customer Service Challenges Before The Subcommittee On Government Operations And Subcommittee On Health Care, Benefits And Administrative Rules Committee On Oversight And Government Reform (U.S. House Of Representatives March 8, 2017); Concerns were expressed also by different panelists that intervened during a series of public forums organized by the NTA on the IRS Future State, See Leslie Book, *National Taxpayer Advocate Forum on IRS Future State Highlights Challenges in Building A Tax System*, Forbes (Mar 2, 2016 at 1.49 pm EST) <https://www.forbes.com/sites/procedurallytaxing/2016/03/02/national-taxpayer-advocate-forum-on-irs-future-state-highlights-challenges-in-building-a-tax-system/?sh=4dce4c477d77>

⁸⁴ See INTERNAL REVENUE SERV., IRS E-FILE: A HISTORY 1 (2011) (reviewing the drive towards e-filing tax returns).

⁸⁵ IOTA, PRE-FILLED AND ELECTRONIC INCOME TAX RETURNS 6 (2008).

⁸⁶ See OECD, USING THIRD PARTY INFORMATION REPORTS TO ASSIST TAXPAYERS MEET THEIR RETURN FILING OBLIGATIONS— COUNTRY EXPERIENCES WITH THE USE OF PRE-

administration's smart portals, where taxpayers can have access, check and eventually correct their tax returns.⁸⁷ The digitalization of tax administrations aimed to reduce costs while meeting taxpayers' expectations for more convenient, seamless, personalized and effective interaction with tax authorities and tackling tax evasion and fraud more efficiently.⁸⁸

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 revenues spending and advance new technologies drove further the digitalization of tax services and the automation of tasks carried out by tax administrations.⁸⁹ Algorithmic fraud detector systems can automatically match data deriving from different sources, create risk-based profiles, and flag possible discrepancies.⁹⁰ By quickly analyzing thousands of tax returns and data coming from other sources, algorithmic fraud detectors have been

POPULATED PERSONAL TAX RETURNS 4 (2006) (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.

⁸⁷ 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 group 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, 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. 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 paper.

⁸⁸ INTERNAL REVENUE SERV., COMPREHENSIVE CUSTOMER SERVICE STRATEGY (SECTION 1101) (2021).

⁸⁹ 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. In the course of 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).

⁹⁰ *Cf.* Esperanza Huerta, TerryAnn Glandon & Yanira Petrides, *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).

at the core of the tendency adopted by governments in the area of enforcement, which Professor De La Feria has described as "selective enforcement".⁹¹ Tax enforcement is costly for public administrations and its costs are directly proportional to the complexity of the fraud⁹², also bearing a relationship to heavy burden of proof needed to establish fraud. For this reason, tax administrations have been intensively investing in fraud assessment instruments fulfilling the promises of a cost-benefit analysis.⁹³ 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.⁹⁴

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.⁹⁵ 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.⁹⁶ 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.⁹⁷ This phenomenon is particularly visible in areas that combine poverty and a large share of Black residents.⁹⁸

In developed countries, the digital divide affects mostly the elderly and less well-educated or poorer individuals.⁹⁹ Senior citizens are the most likely to suffer

⁹¹ Rita de la Feria, *Tax Fraud and Selective Law Enforcement*, 47 J.L. & SOC'Y 240, 266-69 (2020).

⁹² *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.").

⁹³ *Id.* at 266 (noting that fraud assessment instruments "are based solely on cost-benefit analyses").

⁹⁴ *Id.*

⁹⁵ Peter K. Yu, *Bridging the Digital Divide: Equality in the Information Age*, 20 CARDOZO ARTS & ENT. L.J. 1, 2 (2002).

⁹⁶ 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).

⁹⁷ Hernan Galperin, Thai V. Le, & Kurt Wyatt, *Who Gets Access to Fast Broadband? Evidence from Los Angeles County*, 38 GOV. INFO. Q. 101594, 1 (2021).

⁹⁸ *Id.*

⁹⁹ 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

digital exclusion in developed countries, particularly those at the oldest ages.¹⁰⁰ 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. Moreover, a recently conducted survey has shown that Black and Hispanic adults in the United States remain less likely than White adults to own a traditional computer or have high-speed internet at home.¹⁰¹ 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 technology.¹⁰² 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.¹⁰³

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).¹⁰⁴

Yu, *supra* note 95, at 16 (“In low-income neighborhoods, rural areas, and the less developed countries, basic literacy creates an even more significant barrier to digital participation.”).

¹⁰⁰ McDonough, *supra* note 99, at 30–31 (“[A]fter age 75, internet and broadband use drops off significantly.”).

¹⁰¹ Sara Atske and Andrew Perrin, *Home broadband adoption, computer ownership vary by race, ethnicity in the U.S.*, (July 16, 2021), <https://www.pewresearch.org/fact-tank/2021/07/16/home-broadband-adoption-computer-ownership-vary-by-race-ethnicity-in-the-u-s/>

¹⁰² Cf. Yu, *supra* note 95, 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).

¹⁰³ 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.”).

¹⁰⁴ Cf. Hannah Bolch-Wehba, *supra* note 28, at 1269 (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.”).

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 noncompliance detection with the help of digital government can easily overlook constitutional and administrative guarantees.¹⁰⁵ Second, these cases also demonstrate that in the context of digitalizing tax administrations' tasks and services, technology is ultimately employed at the detriment of most vulnerable citizens, low-income taxpayers that do not have the means to seek professional or other form of legal assistance.¹⁰⁶ 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.¹⁰⁷

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.¹⁰⁸ To fill in and electronically submit their tax returns, taxpayers are referred to industry websites and software applications.¹⁰⁹ Currently, more than 40% of taxpayers file their tax returns online and 40 million individuals in the United States use a private software commonly known as TurboTax.¹¹⁰ 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) unless eligible for free filing, to electronically submit their tax returns.¹¹¹

¹⁰⁵ See discussion *infra* Sections II.A, II.B, II.C

¹⁰⁶ See discussion *infra* Sections II.A, II.B, II.C

¹⁰⁷ See 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>.

¹⁰⁸ 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. INTERNAL REVENUE SERV., FREE FILE: DO YOUR FEDERAL TAXES FOR FREE, <https://www.irs.gov/filing/free-file-do-your-federal-taxes-for-free> (last visited Sep. 2, 2021).

¹⁰⁹ *Id.*

¹¹⁰ Elliott & Kiel, *supra* note 107.

¹¹¹ *Id.* (noting that TurboTax's free software did not include commonplace tax forms requiring taxpayers to upgrade to paid versions).

The complexity of filing tax returns which is supposed to justify the existence of TurboTax is not unavoidable. The same applies to the argument on the impossibility of e-filing without using this software, pay a tax preparer or rely on an IRS Volunteer Income Tax Assistance Program. 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.¹¹² Others were successfully dismissed following Intuit's active lobbying's efforts, which for years has been fighting and lobbying against some of the projects that have been developed at the State level¹¹³. 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.¹¹⁴ 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.¹¹⁵ Nonetheless, the start of 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.¹¹⁶ 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."¹¹⁷ 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.¹¹⁸ The current eligibility for free filing is set at an adjusted gross income below \$72,000.¹¹⁹

However, the agreement on the free filing only required the companies to offer free federal returns.¹²⁰ This meant they could still charge for other products

¹¹² 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 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).

¹¹³ 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 state level. *Id.* at 558–64 (identifying and disproving the "nine most egregious falsehoods" Intuit made during its lobbying campaign).

¹¹⁴ Elliott & Kiel, *supra* note 107.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ The Free File Alliance was a collection of 17 companies (another company is, for instance, TaxAct). However, Intuit represents the major company active in the field. Elliott & Kiel, *supra* note 107.

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ 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 (Jul. 16, 2021 3:27 PM), <https://thehill.com/policy/finance/563442-turbotax-leaving-irs-free-file-program>; Sarah Szczypinski, *TurboTax drops IRS Free File program. What that means for you*, CNET (Jul. 22, 2021, 7:47 AM), <https://www.cnet.com/personal-finance/taxes/turbotax-drops-irs-free-file-program-what-that-means-for-you/>.

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.¹²¹ Concerns around the failure of the free file program have been raised by scholars¹²², commentators and the National Taxpayer Advocate¹²³ who have highlighted that providers are not required to screen Free File eligible taxpayers who enter their websites via any method other than the Member Free File Landing Page and the ignorance about the existence of this service by taxpayer.¹²⁴ Finally, a recent memorandum by staff of the Senate's Permanent Subcommittee on Investigations¹²⁵ even recognized a deficient IRS oversight of the Free File Program that resulted in the inadequacy of the program to meet its objective to provide free tax preparation and e-filing services to economically disadvantaged segments of population.¹²⁶

Intuit's conduct is also perfectly in line with private sector manipulation practices as described by Akerlof and Schiller.¹²⁷ 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.¹²⁸ Thanks to the use of so-called "dark patterns,"¹²⁹ Intuit's design nudges

¹²¹ 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". Elliot & Kiel, *supra* note 107. 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 (March 6, 2021 7:46 AM), <https://news.bloomberglaw.com/daily-tax-report/40-million-intuit-proposed-settlement-rejected-as-insufficient>.

¹²² Dennis J. Ventry, *The Failed Free File Program Should Be Reformed, Not Codified*, Tax Notes, July 16, 2018, p.317, Volume 160, Number 3.

¹²³ Already starting from 2006, Written Statement of Nina E. Olson National Taxpayer Advocate Before the

Committee on Finance, United States Senate Hearing on Tax Return Preparation Options for Taxpayers, April 4, 2006.

¹²⁴ Frank DiPietro and Sarah Taylor, *Rethinking Free File, Procedurally Taxing* (Feb. 19, 2019), <https://procedurallytaxing.com/rethinking-free-file/>.

¹²⁵ Staff of the Permanent Subcommittee on Investigations, *IRS Oversight of the Free File program*

(June 9, 2020) <https://www.portman.senate.gov/sites/default/files/2020-06/90FEC84C7C59179A55F309CD0CA45225.psi-staff-memo-free-file.pdf>

¹²⁶ Evan Phoenix, *Senate Investigation Concludes IRS Free File Program is Not Meeting Eligible Taxpayers' Needs Procedurally Taxing* (Aug. 19, 2020) <https://procedurallytaxing.com/senate-investigation-concludes-irs-free-file-program-is-not-meeting-eligible-taxpayers-needs/>; See also Internal Revenue Service Advisory Council's (IRSAC), *Public Report*, November 202

¹²⁷ George A. Akerlof and Robert J. Shiller, *Phishing for Phools: The Economics of Manipulation and Deception* (Princeton University Press, 2015).

¹²⁸ Elliot & Kiel, *supra* note 107.

¹²⁹ Dark Patterns were documented by ProPublica. *Id.*

users to use services and engage in actions that are not necessary to file for tax returns.¹³⁰ The unfair, fraudulent, and deceptive business practices, even led the Los Angeles city attorney's office to sue (on behalf of the State California) both H&R Block and Intuit (maker of TurboTax) over their implementation of the free file program.¹³¹

At the core of the company's strategy there is a key insight, which is technically known as "government anxiety."¹³² Taxpayers' anxiety around tax filing is so overwhelming that ultimately, even if asked to pay, they will prefer to do it rather than start the entire process anew and risk any possible contention with the IRS.¹³³ These companies capitalized on taxpayers' anxiety and bureaucratic frustration since filing a tax return is required by law, and the non-compliance to 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

¹³⁰ 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 "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 8th 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 direct taxpayers to free software instead of upselling, ProPublica's investigations show that tax filing companies have been breaching the agreement and several class action lawsuit on the alleged breach of contract, violation of consumer protection, false advertising and unfair competition law has 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 redirect 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 the violation of California's unfair competition statute. *Id.*

¹³¹ Keith Fogg, *Suit Against H&R Block for Free File Violations*, *Procedurally Taxing* (March 2, 2020) <https://procedurallytaxing.com/suit-against-hr-block-for-free-file-violations/>.

¹³² 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).

¹³³ Joseph Bankman, *Mr. Smith Gets an Education: Why it is so Hard to get Easy Tax Filing* (Nov. 2019) (unpublished manuscript) (NYU Tax Policy Colloquium) (on file with a

filing, the former option being facilitated by the industry's services of online tax preparers.¹³⁴ 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.¹³⁵ 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.¹³⁶ This different behavior can be explained through market incentives. Since these companies 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.¹³⁷ 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.¹³⁸

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 service.¹³⁹ 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.¹⁴⁰

It is important to mention that some taxpayers still rely on paid professional and human tax preparers. However, these services can be expensive¹⁴¹ and many unlicensed tax preparers charge unconscionable sums for preparation of relatively simple tax returns.¹⁴²

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

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ Morse, *supra* note 130, at 280.

¹³⁷ *Id.* at 302-05.

¹³⁸ See Bankman, *supra* note 133, at 61-62.

¹³⁹ *Id.*

¹⁴⁰ 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).

¹⁴¹ *Id.* at 774.

¹⁴² Patrick Thomas, Commentary: How to Make Sure Your Tax Preparer Is Worth It, *Fortune* (March 24, 2018 2:00 PM GMT+1)

case law and scholarly work on whether TurboTax can be considered as comparable to a tax preparer.¹⁴³

Nonetheless, the main question that persists is: Why is the U.S. Government still relying on the tax preparation industry as “nation’s fiscal gatekeeper” instead of directly pre-filling forms and send out a tentative tax return? ¹⁴⁴ 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, against which it checks the numbers on the taxpayer’s return.¹⁴⁵ This solution would facilitate taxpayers’ life while simplifying the IRS assessment of the effective declared income.¹⁴⁶ 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.¹⁴⁷

B. MiDAS

The story behind Michigan Integrated Data Automated System (MiDAS) fits well with the recent trend to automate the welfare state.¹⁴⁸ After the financial crisis

¹⁴³ 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; see also Blank & Osofsky, *supra* note 20 at 239-40.

¹⁴⁴ Jay Soled and Kathleen DeLaney Thomas, *Regulating Tax Return Preparation*, 58 Boston College Law Review 151 (2017), 153.

¹⁴⁵ See Bankman, *supra* note 133, at 4-5

¹⁴⁶ *Id.* As also shown in the example of pre-populated tax returns adopted in Mexico and reported by Frank DiPietro and Sarah Taylor, *Rethinking Free File, Procedurally Taxing* (Feb. 19, 2019), <https://procedurallytaxing.com/rethinking-free-file/>.

¹⁴⁷ At 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 be an 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>.

¹⁴⁸ For a general reflection on the automation of the welfare state, see Eubanks *supra* note 42; 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*

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”.¹⁴⁹ 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 (UIA)’s 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.¹⁵⁰ Soon after MiDAS’ introduction, the number of persons suspected of unemployment fraud grew fivefold compared to the average number found using the old system.¹⁵¹ Consequently, the new algorithmic decision-making system generated an unprecedented amount of revenue for the UIA.¹⁵² 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.¹⁵³ 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.¹⁵⁴ If the individuals failed to make the repayments – that reached a maximum of \$187,000 – the state could immediately garnish a person’s wage, seize federal and state income tax refunds, and start a criminal referral against them.¹⁵⁵

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

the Discretionary Power of Public Officers, 23 VAND. J. OF ENT. & TECH. L. 451, 455-58 (2021).

¹⁴⁹ Matthew B. Seipel, *Robo-Bureaucrat and the Administrative Separation of Powers*, 2020 CARDOZO L. REV. DE-NOVO 99, 105 (2020).

¹⁵⁰ *Id.*; Editorial: *State Will Pay For Cutting Corners with Unemployment System Automation*, TRAVERSE CITY RECORD 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; Robert N. Charette, *Michigan’s MiDAS Unemployment System: Algorithm Alchemy Created Lead, Not Gold*, IEEE SPECTRUM (Jan. 24, 2018) <https://spectrum.ieee.org/riskfactor/computing/software/michigansmidas-unemployment-system-algorithm-alchemy-that-created-lead-not-gold>.

¹⁵¹ TRAVERSE CITY RECORD EAGLE, *supra* note 150; Charette, *supra* note 150.

¹⁵² The harsh penalties of 400% on the claimed amount of fraud also contributed to the sharp rise. Charette, *supra* note 150.

¹⁵³ *Id.*

¹⁵⁴ 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>.

¹⁵⁵ See Felton, *supra* note 154.

of error.¹⁵⁶ Even in the many cases which included a “human-in-the-loop,” the system still showed a 44% error rate.¹⁵⁷ 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 the fraud.¹⁵⁸ Often, the errors consisted of small mistakes or inconsistencies that were not attributable to the claimants but that nonetheless, triggered fraud determinations.¹⁵⁹ MiDAS also flagged claimants through an “income spreading” formula.¹⁶⁰ 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.¹⁶¹ 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.¹⁶² 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.¹⁶³ The agency also did not take any additional steps (emails, mails or phone calls) to notify the claimants and failed to answer more than 90% of the calls to its “Help Line.”¹⁶⁴ Consequently, there was the possibility that by the time the workers received the subsequent notification, the 30-day period to contest or appeal the fraud determination had already passed. ¹⁶⁵ 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.¹⁶⁶ These questionnaires included questions and possible answers that were insufficiently clear and possibly self-incriminating.¹⁶⁷

MiDAS also exemplifies the risks arising from delegating authority to software developers without safeguarding administrative discretion. ¹⁶⁸ For the design and

¹⁵⁶ A study found out that from October 2013 to September 2015, MiDAS robo-adjudicated 40,195 cases with no human involvement, and those had 85% error rate. Charette, *supra* note 150.

¹⁵⁷ *Id.*

¹⁵⁸ George Wentworth, *Closing Doors on the Unemployed: Why Most Jobless Workers Are Not Receiving Unemployment Insurance and What States Can Do About It*, NAT’L EMP. L. PROJECT, Dec. 2017, at 13.

¹⁵⁹ 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 they earnings in the same calendar quarter in which they were paid unemployment insurances. *Id.*

¹⁶⁰ *Cahoo v. SAS Analytics Inc.*, 912 F.3d 887, 892-93 (6th Cir. 2019).

¹⁶¹ *Id.* at 893-894.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *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.”

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 893.

¹⁶⁷ *Id.*

¹⁶⁸ Sarah Valentine, *Impoverished Algorithms: Misguided Governments, Flawed Technologies, and Social Control*, 46 FORDHAM URB. L.J. 364, 372-74 (2019).

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.¹⁶⁹ 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.¹⁷⁰ 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."¹⁷¹

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."¹⁷² The crux of the matter was the illegal recovery of social benefits which forced many benefit recipients into financial ruin.¹⁷³ According to the Dutch welfare systems, parents are eligible for a state contribution toward the costs of daycare, which can add up to 90 percent of the actual costs for low-income families.¹⁷⁴ In order to receive these benefits, parents must either work or study and register their children at a licensed kindergarten.¹⁷⁵ These benefits are paid every month to the account of the recipient and it is meant to help parents pay for the kindergarten fees.¹⁷⁶ The amount of the benefit is primarily dependent on the parents' income.¹⁷⁷ Even though this amount is subject to a preliminary automatic calculation on the Dutch tax authorities' website, the request and compliance with all legal requirements is the parents' responsibility.¹⁷⁸ 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 as declared), recipients will have to pay the benefit back.¹⁷⁹

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

¹⁶⁹ De La Garza, *supra* note 37.

¹⁷⁰ Cahoo v. Fast Enters., 508 F. Supp. 3d. 138, 162 (E.D. Mich. 2020).

¹⁷¹ *Id.*

¹⁷² *Eindverslag onderzoek kinderopvangtoeslag overhandigd*, TWEDE KAMER (December 17, 2020), <https://www.tweedekamer.nl/nieuws/kamernieuws/eindverslag-onderzoek-kinderopvangtoeslag-overhandigd>.

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

scale.¹⁸⁰ However, the systems meant to detect the undue receipt of benefits ultimately mis-labelled over 20,000 parents as fraudsters, with a disproportionate emphasis on citizens with an immigrant background.¹⁸¹ 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.¹⁸² Hunted down, forced to pay back undue amounts and denied future applications, the courts systematically delayed and ignored these families' appeals.¹⁸³

In some cases, the reclaim of benefits was due to minor errors,¹⁸⁴ while in other cases, families were singled out by automated risk selection systems.¹⁸⁵ 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.¹⁸⁶ Based on risk classification models using a dozen indicators, the system flagged specific welfare recipients as possible fraudsters.¹⁸⁷ The Dutch Data Protection Authority established in its report that at least from March 2016 to October 2018, there was an improper discriminatory processing based on the nationality of the applicants.¹⁸⁸ The selected beneficiaries were then subjected to a second manual scrutiny by the tax officials which rarely corrected the results presented by the algorithm.¹⁸⁹ 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

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ For example, A missing signature or one missing 200-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.*

¹⁸⁵ *Id.*

¹⁸⁶ Autoriteit Persoonsgegevens [Dutch Data Protection Authority], *Werkwijze Belastingdienst in strijd met de wet en discriminerend* (July 17, 2020), <https://autoriteitpersoonsgegevens.nl/nl/nieuws/werkwijze-belastingdienst-strijd-met-de-wet-en-discriminerend> (last visited August 10, 2021) (in Dutch).

¹⁸⁷ 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>.

¹⁸⁸ Autoriteit Persoonsgegevens [Dutch Data Protection Authority], *Belastingdienst/Toeslagen De verwerking van de nationaliteit van aanvragers van kinderopvangtoeslag* (July 17, 2020), https://autoriteitpersoonsgegevens.nl/sites/default/files/atoms/files/onderzoek_belastingdienst_kinderopvangtoeslag.pdf.

¹⁸⁹ 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. Alarming and derogative references to Antillean parents made by tax authority officers were found in internal communications. See Nani Jansen Reventlow, *Automated Racism: How Tech Can Entrench Bias*, POLITICO (March 2, 2021, 4:05 AM), <https://www.politico.eu/article/automated-racism-how-tech-can-entrench-bias/>.

racism was an inherent element of the audit practices.¹⁹⁰ 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 actions.¹⁹¹ 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.¹⁹² 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, too much trust had been placed on the actions of public authorities and their procedures, and 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.”¹⁹³ 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.

¹⁹⁰ See Parlementaire Onderzoekingscommissie, *Ongekend Onrecht [Unprecedented Injustice]* (Dec. 17, 2020), https://www.tweedekamer.nl/sites/default/files/atoms/files/20201217_eindverslag_parlementaire_onderzoekingscommissie_kinderopvangtoeslag.pdf; see also *Dutch Committee Issues Scathing Report into Benefit System*, A.P., (Dec. 17, 2020), <https://apnews.com/article/mark-rutte-netherlands-europe-f56f7f76b3d96537bfd93e595914730e>.

¹⁹¹ Openbaar Ministerie [The Netherlands Public Prosecutor], *Geen strafrechtelijk onderzoek naar Belastingdienst [No Criminal Investigation into the Tax Authority]* (Jan. 7, 2021), <https://www.om.nl/actueel/nieuws/2021/01/07/geen-strafrechtelijk-onderzoek-naar-belastingdienst> (last visited Aug. 10, 2021).

¹⁹² *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/>.

¹⁹³ 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).

A. Key Values of Administrative Justice in the Digital Sphere

Traditionally, the key values of administrative justice are: openness, confidentiality when privacy, trade secrets or national security are at stake, transparency, fairness, accountability, consistency, participation, rationality, equity and equal treatment.¹⁹⁴ However, an open question remains: “How [are] these values effectively [safeguarded] in the digital sphere?”¹⁹⁵ In tax law, it is important to understand whether these values operate in the digital dimension differently than they do in the analogical world.¹⁹⁶ 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 the tax returns aims to increase simplification, which on paper should contribute to the fulfilment of the mentioned values. However, tax law is notoriously complex¹⁹⁷ and includes numerous detailed provisions interacting with each other.¹⁹⁸ 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.¹⁹⁹ Thus, the current *status quo* entails that many taxpayers might find themselves in the situation of not being

¹⁹⁴ Martin Partington, *Restructuring Administrative Justice? The Redress of Citizens’ Grievances*, 52 CURRENT L. PROBS. 173, 179-184 (1999); see also Harlow & Rawlings, *supra* note 21, at 5.

¹⁹⁵ See TOMLINSON, *supra* note 193, at 55.

¹⁹⁶ 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) and Alice G. Abreu & Richard R. Greenstein, *Tax as Everylaw: Interpretation, Enforcement, and the Legitimacy of the IRS*, 69 TAX LAW. 493, 493 (2016). 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.

¹⁹⁷ 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 196, at 497-98.

¹⁹⁸ On the interaction between norms, see David A. Weisbach, *Formalism in the Tax Law*, 66 U. CHI. L. REV. 860, 871 (1999).

¹⁹⁹ 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.

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.²⁰⁰ Moreover, even if in the past, scholars have described tax software companies as selling the simplification of the Tax Code²⁰¹, as pointed out by Professor Lawskey, tax preparation programs are unable to encode nor simplify the law.²⁰² Instead, these systems encode tax forms that are prepared by the government itself.²⁰³ 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.²⁰⁴

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.²⁰⁵ 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. Alternatively, these systems draw upon conservative legal interpretations which may generate liability overstatements. Fearful of this legal interpretation and its effects, citizens may underclaim funds that they would otherwise be entitled to.²⁰⁶

Differently, in other countries where pre-filled tax returns are designed and made available by the government itself, the intermediary layer in the interaction taxpayer-government represented here by a private company tax software is

²⁰⁰ See OECD Report, *supra* note 86, at 13 (detailing the benefits and successes of using pre-filled tax returns).

²⁰¹ J.B. Ruhl & Daniel Martin Katz, *Measuring, Monitoring, and Measuring Legal Complexity*, 101 IOWA L. REV. 191, 196 (2015).

²⁰² See Sarah Lawskey, *Form as Formalization*, 16 OHIO ST. TECH. L.J. 114, 116 (2020).

²⁰³ See *id.*

²⁰⁴ See *id.*

²⁰⁵ See Morse, *supra* note 130, at 279.; see also *supra* part II.A.

²⁰⁶ See *supra* part II.A.

bypassed.²⁰⁷ The codification of the law is directly performed into the computer code and forms simultaneously.²⁰⁸

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 may 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.²⁰⁹ At the same time, the failure to explain why they have been flagged by the system can induce taxpayers to assume that the system is correct in identifying an error or mistake.²¹⁰ Moreover, as we move to online notifications through government platforms, the digital divide will widen the discrepancies, impacting the possibility of challenging the decision if taxpayers are not aware of the digital notification timely.²¹¹ Indeed, in the tax context, the public interest to fight tax evasion and fraud might conflict with the need for transparency of the automated system deployed by the tax administration.

²⁰⁷ See generally IOTA report, *supra* note 85. An alternative that has been suggested by the Taxpayer Advocate Service could be the establishment of minimum standards for commercial return preparation software providers, including participants in the Free File program, by promulgating regulations containing the requirements for software providers and imposing appropriate sanctions for negligent or willful violations of such requirements and the provision of a fee disclosure statement to the taxpayer prior to providing tax preparation and filing services. See National Taxpayer Advocate, Special Report to Congress, Earned Income Tax Credit. Making the EITC Work for Taxpayers and the Government. Improving Administration and Protecting Taxpayer Rights, vol. 3, 2020. Further research shall be undertaken to evaluate whether this is possible and what modalities are available to ensure an effective oversight on providers by the government, the different consequences in terms of accountability between the two options (in-house built systems or outsourcing). Moreover, there will be a critical assessment of a possible cost-benefit analysis underlying the selection of one of these two options by focusing on the impact on taxpayers rights.

²⁰⁸ 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).

²⁰⁹ See, e.g., Cobbe, *supra* note 43, at 641 (noting that one “should not assume . . . that machines make decisions which are free from human biases . . .”). A similar concern has been raised also with regard to the other side of the medal: the use of technologies by tax professionals and their importance in drawing the line between professional reliance on these instruments (including AI) and unprofessional over-reliance. See Michael W. Hatfield, *Professionally Responsible Artificial Intelligence*, 51 ARIZ. ST. L. J. 1057, 1071 (2019)

²¹⁰ See *supra* Part II.B, which considered algorithmically generated fraud accusations where the taxpayer would admit to the fraud the system suggested.

²¹¹ In the MiDAS scandal, there were reports that notifications on the online portal were no longer checked by the alleged fraudsters because they had stopped receiving the unemployment benefit. See *supra* Part II.B. In that case the term to challenge the automated decision had expired. *Id.*

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.²¹² It becomes then fundamental to strike the right balance between how much of the functioning of a system can be disclosed or not. This is increasingly relevant as tax authorities continue exploring the use of artificial intelligence.²¹³ 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.²¹⁴ Consequently, for tax purposes, individuals can be subject to automated decision making and profiling.²¹⁵ 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.²¹⁶ Finally, backlashes from this concern have

²¹² Cf. ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (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).

²¹³ See OECD, *TAX ADMINISTRATIONS 3.0*, *supra* note 89, at 56 (noting the potential of using Artificial Intelligence in tax administration).

²¹⁴ Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), art. 23, 2016 O.J. (L 119) 46-47 (EU) [hereinafter GDPR].

²¹⁵ 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, Georg Kofler, Katerina Pantazatou & Alexander Rust, 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(4) *Internet Pol'y Rev.* 1, 5-7 (2019).

²¹⁶ In particular, recital n. 38 of the proposal states that “AI systems specifically intended 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.

already emerged, such as in the case of the Dutch risk-profile system called SyRI, which was scrutinized by the District Court of The Hague.²¹⁷ In its decision, the Court considered the fraud detector to be illegal on the ground of its disproportionate interference with citizens' privacy rights.²¹⁸ In this case, the government refused to disclose the risk model and the underlying risk indicators, arguing that citizens could adjust their conduct accordingly.²¹⁹ Examples like MiDAS and the Dutch Childcare Benefits scandals (Part II) demonstrate that automation primarily enhances existing risks and biases. Nevertheless, this approach to automation is particularly worrying as it reduces the protection of fundamental rights for citizens who fall within the scope of selective enforcement strategies.

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.²²⁰ 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."²²¹ The more organized and complex fraud is, the more costly it becomes to enforce tax law and build a solid case against it.²²² Therefore, tax administrations throughout the world have been designing their administrative actions based on the costs of enforcement rather than fully optimizing tax administration.²²³ 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

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.

²¹⁷ See generally 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).

²¹⁸ See *id.* at 12-13.

²¹⁹ District Court the Hague, 5 February 2020, ECLI:NL:RBDHA:2020:1878, <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2020:1878> (NCJM et al. v. The Netherlands) (Neth.) (decision in English). 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).

²²⁰ Rita De la Feria, *Tax Fraud and Selective Law Enforcement*, 47 J. L. & SOC. 240, 266, 269 (2020).

²²¹ *Id.* at 269.

²²² See *id.* at 245 (discussing the costs of organized tax fraud).

²²³ Michael Keen & Joel Slemrod, *IMF Working Paper: Optimal Tax Administration* WP/17/8 at 18-22 (Jan. 2017), <https://www.imf.org/en/Publications/WP/Issues/2017/01/20/Optimal-Tax-Administration-44555>.

their revenue without requiring high administrative costs.²²⁴ This praxis is even more incentivized when agencies are evaluated on the grounds of performance indicators.²²⁵

The focus on enforcement activities that are less costly, but revenue-maximizing, has clear practical consequences. As it has been highlighted by ProPublica data released from the IRS shows that , Earned Income Tax Credits (EITC) claimants are audited at a rate roughly equal to the top-earning Americans (1.4 per cent versus 1.6 per cent).²²⁶ The increasing attention given to low-income taxpayers seems to find its motivation in the typical features of what constitutes "selective enforcement."²²⁷ According to the IRS, unlike audits of individuals earning higher income, EITC claimants are audited more frequently than most other individuals because the audits can be automated and are cheaper to conduct without requiring lots of IRS personnel resources and time.²²⁸ As Congress has underfunded the IRS for the past decade,²²⁹ the increasing automatization of noncompliance detectors seems inevitable. Notwithstanding, in the long run, these

224 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 LAW* 253, 260 (2013).

225 See De la Feria, *supra* note 220, 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).

226 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> (noting also that "EITC recipients were audited at twice the rate of taxpayers with income between \$200,000 and \$500,000").

227 In the past, Professor Book has highlighted the IRS' 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).

228 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/>.

229 Recently "[l]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 and 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>.

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.²³⁰

Furthermore, the replacement of human street-level bureaucrats by automated systems raises “the likelihood of an even more detached, possibly despotic, administrative government.”²³¹ Automated systems did not eliminate the bias of public officials. Instead, they “traded the possibility of human bias for the guarantee of systemic bias.”²³² 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.²³³ 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,²³⁴ the lack of consideration of race in the IRS audit statistics does not permit

²³⁰ TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION, U.S. TREASURY DEP’T, 2021-40-036 IMPROPER PAYMENT RATES FOR REFUNDABLE TAX CREDITS REMAIN HIGH 3-4 (2021)(noting that 24 percent of EITC payments in FY 2020 were improper); *see also* Brown, *supra* note 228.

²³¹ 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 ADVOCATE, TAXPAYER ADVOCATE SERVICE, INTERNAL REVENUE SERVICE, ANNUAL REPORT TO CONGRESS 2015, VOL. 1237, 247.; *see also* Leslie Book, *Bureaucratic Oppression and the Tax System*, 69 The Tax Lawyer 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.”)..

²³² Ryan Calo & Danielle Keats Citron, *The Automated Administrative State: A Crisis of Legitimacy*, 70 EMORY L. J. 797, 819 (2021).

²³³ 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>; 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>; CENTRE FOR DATA ETHICS AND INNOVATION, DEPARTMENT FOR DIGITAL, CULTURE, MEDIA & SPORT, INDEPENDENT REPORT: REVIEW INTO BIAS IN ALGORITHMIC DECISIONMAKING, 2020, (UK) <https://www.gov.uk/government/publications/cdei-publishes-review-into-bias-in-algorithmic-decision-making/main-report-cdei-review-into-bias-in-algorithmic-decision-making>.

²³⁴ Jeremy Bearer-Friend, *Colorblind Tax Enforcement*, 97 NYU L. REV. (forthcoming 2022) <https://ssrn.com/abstract=3890361>.

precise data on whether the IRS is currently conducting race-bias selective enforcement.²³⁵ From a digitalization of tax 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.²³⁶ 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.²³⁷ Indeed, delimiting the scope of "inherently governmental tasks" evoke the latent debate about the division between the public and private spheres.²³⁸ Traditionally, the concept of inherently governmental tasks has been connected to the idea that some public tasks are designed for the whole

²³⁵ See Brown, *supra* note 228 (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 audits by race to address the biases in the system.); see also Bearer-Friend, *supra* note 234, 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 US 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, Nicholas A. Mirkay, & Palma Joy Strand, *U.S. Tax Systems Need Anti-Racist Restructuring*, 168 TAX NOTES FED. 855 (2020).

²³⁶ Cf. Mayson, *supra* note 26, at 2263-67 (discussing the concerns about input variables that don't properly account for racial bias).

²³⁷ 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." Federal Activities Inventory Reform § 5(2)(A), 31 U.S.C. § 501 note (2018). 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).

²³⁸ 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 the different ways in which private parties exercise tasks that were traditionally associated with state powers and how public authorities delegate certain tasks to private actors to circumvent the law).

community's benefit.²³⁹ Thus, they shall not be delegated to private actors without a detailed legal basis for outsourcing them.²⁴⁰ As Professor 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."^{241.242} 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.²⁴³ 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."²⁴⁴ This argument could also apply to contracting out IRS tax enforcement and could convincingly be applied to contracting out decisions on welfare benefit determination.²⁴⁵ 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.²⁴⁶

²³⁹ 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 (2016).

²⁴⁰ See JOHN R. LUCKEY, VALERIE BAILEY GRASSO, & KATE M. MANUEL, CONG. RESEARCH SERV., R0641 INHERENTLY GOVERNMENTAL 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).

²⁴¹ Edward L. Rubin, *Bureaucratic Oppression: Its Causes and Cures*, 90 WASH. U. L. REV. 291, 342 (2012).

²⁴² See Book, *supra* note 231, at 587.

²⁴³ Ranchordás & Schuurmans, *supra* note 238, 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. Centrale Raad van Beroep, 16 September 2014, ECLI:NL:CRVB:2014:2947 (Neth.).

²⁴⁴ Steven J. Kelman, *Contracting*, in THE TOOLS OF GOVERNMENT: A GUIDE TO THE NEW GOVERNANCE 307 (Lester M. Salamon ed., 2002).

²⁴⁵ See *id.*

²⁴⁶ Significant are the reactions by taxpayers which participated in the "ReadyReturn" pilot program. See Joseph Bankman, *Mr. Smith Gets an Education: Why It Is So Hard to Get Easy Tax Filing 11* (unpublished manuscript) (November 19, 2019) (part of the NYU Tax Policy

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.²⁴⁷ When taxpayers are identified as fraudsters, they will consequently be notified.²⁴⁸ However, to exercise their due process rights, taxpayers will have to be aware of how a particular outcome has been reached.²⁴⁹ 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 question whether a system is built by a public agency or by a private company matters for different reasons.²⁵⁰ 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.²⁵¹ Secondly, the misalignment of public and private interests endangers the pursuit of the public interest that fraud detectors aim to protect.²⁵² Finally, outsourcing enforcement tasks to private companies can jeopardize the right to due process and the right to non-discrimination of the alleged fraudster.²⁵³ 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

Colloquium, Fall 2019). 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 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.*

²⁴⁷ See *supra* Part II.B (considering automatic fraud detectors in the MiDAS example).

²⁴⁸ See *supra* Part II.B (discussing this point and how notification might break down).

²⁴⁹ 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.” *National Taxpayer Advocate 2013 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)* at 20.

²⁵⁰ Ranchordás & Schuurmans, *supra* note 238., at 7-8.

²⁵¹ *Id.* at 26.

²⁵² *Id.* at 26.

²⁵³ *Id.* at 24.

intent of the legislator.²⁵⁴ Since the interpretation of vague and indeterminate terms is mainly based on past 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 fraud the system can lead to the system flagging all individuals belonging to a certain ethnic group combined with other indicators).²⁵⁵ These types of issues can, nonetheless, also arise in public automated systems, such as in the Dutch Childcare Benefit scandal.²⁵⁶ 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.²⁵⁷ 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.²⁵⁸

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 taken.²⁵⁹ 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.²⁶⁰ Nonetheless, and to a large extent, the US tax system still 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.²⁶¹ Taxpayers acting as consumers can choose to purchase products or services, which albeit at a cost in terms of fees, enable them to gain access to those benefits.²⁶² Moreover, since the U.S. government only accepts

²⁵⁴ *Id.* at 31.

²⁵⁵ *Id.* at 31.

²⁵⁶ *Id.* at 12.

²⁵⁷ *Id.* at 31.

²⁵⁸ *Id.* at 34.

²⁵⁹ 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).

²⁶⁰ Helaine Olen, *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/>.

²⁶¹ Leslie Book, *Bureaucratic Oppression and the Tax System* 69 TAX LAW. 568, 587 (2016).

²⁶² *Id.*

online tax returns if submitted by one of the private companies acting as their partners, these companies also represent the only gateway to send a tax return online.²⁶³ From this perspective, the software behind TurboTax intermediates taxpayers' compliance to their tax obligations (*i.e.*, submitting their tax returns).²⁶⁴ 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.²⁶⁵ 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, there is case law and scholarly debate on the consequences of mistakes included in the tax return.²⁶⁶ 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).²⁶⁷ 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.*, ITA), simplicity is delivered more interactively.²⁶⁸ It asks taxpayers simplified questions about underlying facts and provides personalized answers to taxpayers' specific questions.²⁶⁹ 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.²⁷⁰ Nonetheless, when the legal issues

²⁶³ See Rodney P. Mock & Nancy E. Shurtz, *The TurboTax Defense*, 15 FLA. TAX REV. 443, 507 (2014).

²⁶⁴ See *id.* at 463

²⁶⁵ 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).

²⁶⁶ 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).

²⁶⁷ Compare successful uses of the TurboTax defense *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 and Kathleen D. Thomas, *Regulating Tax Return Preparation*, 58 B.C. L. REV. 151, 171-79 (2017), and Rodney P. Mock and Nancy E. Shurtz, *THE TURBOTAX DEFENSE*, 15 FLA. TAX REV. 443, 476-80 (2014).

²⁶⁸ Joshua D. Blank & Leigh Osofsky, *Legal Calculators and The Tax System*, 16 OHIO ST. TECH. L.J., 74, 75 (2020); see Blank & Osofsky, *supra* note 22, at 184.

²⁶⁹ Blank & Osofsky, *supra* note 22, at 218; Joshua D. Blank & Leigh Osofsky, *Legal Calculators and The Tax System*, 16 OHIO ST. TECH. L.J. 74, 75 (2020).

²⁷⁰ Blank & Osofsky, *supra* note 22, at 202.

underlying the taxpayers' question rely upon factual assumptions or involve ambiguous legal standards, automated legal guidance systems may provide suggestions at odds with what the law prescribes.²⁷¹ 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 Interactive Tax Assistant.²⁷² 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.²⁷³ 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.²⁷⁴ 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.²⁷⁵ 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.²⁷⁶

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.²⁷⁷ Nevertheless, the lack of clarity regarding the

²⁷¹ *Id.* 210-17.

²⁷² *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.

²⁷³ *Id.*

²⁷⁴ 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. On 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), <https://ssrn.com/abstract=2749417>.

²⁷⁵ 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, Commissioner of Internal Revenue).

²⁷⁶ See *infra* Part I.

²⁷⁷ 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 85, at 5-6, 10 and also Francine J. Lipman, *The Working Poor are Paying for Government Benefits: Fixing the Hole in the Anti-Poverty Purse*, in CRITICAL TAX THEORY 276, 279-80 (Anthony C. Infanti & Bridget J. Crawford eds., 2010), who in 2003 already recommended a revised government-private industry preparer partnership

consequences 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.²⁷⁸ On the other hand, when filling and submitting their tax returns, their fears get monetized under the payment of a fee for additional services to seek only purported reassurance.²⁷⁹ 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.²⁸⁰ 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 only 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.²⁸¹ However, law is not enacted 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.²⁸² 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.²⁸³ This effect was visible in the digital tax cases (*Part II*) where thousands of citizens were wrongfully

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.
²⁷⁸ Blank & Osofsky, *supra* note 22, at 208-09.

²⁷⁹ 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).

²⁸⁰ See Ranchordás & Schuurmans, *supra* note 238, at 28-29.

²⁸¹ Blank & Osofsky, *supra* note 22, at 225.

²⁸² What is the Rule of Law, United Nations <https://www.un.org/ruleoflaw/what-is-the-rule-of-law/> (last visited Sept. 7, 2021).

²⁸³ See Blank & Osofsky, *supra* note 22, at 186.

“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 government transactions and fraud detection results in more punishment of the most vulnerable citizens in our society.²⁸⁴ These citizens are in a detrimental position first because they are less well-versed in the use of technology and may thus make mistakes.²⁸⁵ Second, these citizens are more easily caught by automated systems that interpret their mistakes or oversights as attempted fraud or risk of committing fraud.²⁸⁶ 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.²⁸⁷ 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.²⁸⁸ The lack of transparency and algorithmic biases were among the causes of discrimination and consequent exclusion.²⁸⁹ For the young, middle-class, educated, and tech-savvy citizens, digitalization expanded access to state services. But for senior citizens, low-income individuals, and underrepresented minorities, it excluded them. This section explains more in detail

²⁸⁴ See Ranchordás & Schuurmans, *supra* note 238, at 30.

²⁸⁵ 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).

²⁸⁶ See Ranchordás & Schuurmans, *supra* note 238, at 28-29.

²⁸⁷ 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. HUMAN RIGHTS OFFICE OF THE HIGH COMMISSIONER (OCT. 17, 2019), <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25156>; Brief for United Nations Special Rapporteur on Extreme Poverty and Human Rights as 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>.

²⁸⁸ 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).

²⁸⁹ *Id.* at ¶ 77.

how this phenomenon occurs, even when the text of the law seeks to guarantee equality among citizens.

The digital technology employed to digitize government services, guide 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.²⁹⁰

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.²⁹¹ There is thus the assumption that citizens must be able to perform the government transactions they are by law required to do. If they cannot, fail to do so correctly, and are not documented as disabled, no legal solutions are provided. Since average citizens are indeed the most representative category statistically speaking, automated systems suppose 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. 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 documented 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. Also, it fails to consider evidence showing that about 130 million Americans lack proficiency in literacy, reading below the equivalent of a six-grade level.²⁹² According to the Pew Research Center, America’s digital

²⁹⁰ 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/>.

²⁹¹ *What is the definition of a disability under the ADA?*, ADA National Network (last updated Sept. 2021) <https://adata.org/faq/what-definition-disability-under-ada>.

²⁹² 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> (last visited on Aug. 11, 2021).

literacy is also lacking, with about 60% 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; ability to work with a true two-factor authentication system).²⁹³ This means that millions of citizens who are not officially entitled to assistance may still find it difficult to engage with digital government.²⁹⁴

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.²⁹⁵ 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.²⁹⁶ 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.²⁹⁷ 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, are more often trolled on social media.²⁹⁸ Technology still reproduces existing patriarchal attitudes towards gender which limits the potential of technology to be tools for women’s empowerment.

293 Emily A. Vogels & Monica Anderson, *Americans and Digital Knowledge*, PEW RESEARCH CENTER (Oct. 9, 2019), <https://www.pewresearch.org/internet/2019/10/09/americans-and-digital-knowledge/> (last visited on Aug. 11, 2021).

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

295 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).

296 Martha Fineman, *The Vulnerable Subject and the Responsive State*, 60 EMORY L.J. 251, 267 (2010).

297 See Ranchordás & Schuurmans, *supra* note 238, at 29-30.

298 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).

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 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 that the digitalization of public services limits their ability to exercise their rights before public bodies. Vulnerability before government amounts thus to the full or partial inability to exercise rights before public authorities and participate in public life on equal terms.²⁹⁹ Administrative vulnerability may be caused either by exogenous (e.g., socioeconomic conditions) or endogenous factors (e.g., psychological conditions, time, illiteracy).³⁰⁰ It is a reality that does not only affect low-income or marginalized populations but, in the context of digital government, it can affect anyone regardless of education or income.³⁰¹ 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 rapid results by running simple automated checks. The detection of mistakes was

²⁹⁹ Tomlinson, *supra* note 193, at 43-57; Nogueira, A. L. (2020) ‘Vulnerabilidad administrativa: los obstaculos administrativos en el acceso a los programas de vivienda’ In: Políticas y derecho a la vivienda: gente sin casa y casas sin gente / coord. por Natalia Paleo Mosquera; Alba Nogueira López (pr.), 2020, ISBN 9788413550046, p. 213-244

³⁰⁰ Tomlinson, *supra* note 193, at 57-59

³⁰¹ See Martha Fineman, *The Vulnerable Subject: Anchoring Equality in the Human Condition* 20 YALE J.L. & FEMINISM 1, 12 (2008).

not difficult, particularly because many low-income parents did not have the resources to seek professional advice.³⁰² However, this approach to enforcement is unequal and biased. Those who can seek professional tax and legal advice are not as easily targeted, even though they could have also committed fraud and if that would have been 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 is necessary to guarantee that public law enforcement stays true to the key values of administrative law. Moreover, since recent studies show how the tax gap (the difference between taxes that are owed and collected) is even more skewed toward the top of the income distribution,³⁰³ this change of course is even more desirable from an economic perspective. 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 & Nina E. Olson, on the introduction of a Taxpayer Rights Impact Statement, which is meant to assess current and future IRS system by conducting a systematic review of the impact of its actions on taxpayer rights.³⁰⁴ This solution will provide a procedural framework for ensuring that the IRS decisions undergo a type of testing with respect to taxpayer rights enabling it to identify systemic administrative burdens. At the same time, the process leading to the creation of the Taxpayer Rights Impact Statement itself will increase transparency and accountability on the functioning of the revenue agency.

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. This option has been for example 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.³⁰⁵ 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

³⁰² See Ranchordás & Schuurmans, *supra* note 238, at 12-13.

³⁰³ John Guyton, “Tax Evasion at the Top of the Income Distribution: Theory and Evidence,” NBER Working Paper No. 28542 (2021); Jason DeBacker et al., 2020. “Tax Noncompliance and Measures of Income Inequality,” Tax Notes Federal, 17 February 2021; Natasha Sarin, The Case for a Robust Attack on the Tax Gap, U.S. Department of Treasury, (Sept. 7, 2021), <https://home.treasury.gov/news/featured-stories/the-case-for-a-robust-attack-on-the-tax-gap>

³⁰⁴ L. Book, K. Fogg & N. Olson, *Reducing Administrative Burdens to Protect Taxpayer Rights* (Aug. 9, 2021), <https://ssrn.com/abstract=3902570>.

³⁰⁵ Jacques Chevallier, *Trust and the Right to Make Mistakes* GOV’T ACTION: RSCH. & PRAC. 1, 1-2 (2020).

loved one) should perform certain government transactions.³⁰⁶ While this solution is far from perfect, it shows a movement toward more empathy, less harsh and inequalitarian enforcement of law against vulnerable citizens.³⁰⁷ 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.

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.³⁰⁸ 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.³⁰⁹ 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.³¹⁰ Existing data is interpreted against them and with given the absence of a true critical eye of “the

³⁰⁶MINISTRY OF TRANSFORMATION & PUBLIC SERVICE, <https://www.oups.gouv.fr/> (last visited Sept. 2, 2021).

³⁰⁷ For a thorough discussion of the relationship between digital government, vulnerability, and empathy, see Sofia Ranchordas, *Empathy in the Digital Administrative State*, _DUKE L. J._ (2022) (on file with authors).

³⁰⁸ 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).

³⁰⁹ Reuben Binns, *Algorithmic Decision-making: A Guide for Lawyers*, 25 JUD. REV. 2, 6-7 (2020).

³¹⁰ *Id.* at 5-6.

human-in-the-loop,” these citizens are qualified as possible fraudsters.³¹¹ Who they are determines who they become in the eyes of the digital system. Second, vulnerable citizens are also excluded because of 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.

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³¹¹ *Id.* at 6-7.