Technology and Regulation

Empowering Vulnerability: The Social Model of Disability and Digital Government

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Abstract

In recent years, critiques of the 'vulnerability' label ascribed to specific population groups have gained momentum due to its stigmatising effects. With Martha Fineman at their forefront, these voices contest that vulnerability is not limited to particular groups but universal and inherent to being human. However, operationalizing this universal conception of vulnerability poses challenges and risks, potentially leading to the inadequate protection of groups disproportionately susceptible to harm. This paper discusses the dilemma between universal and particular vulnerability paradigms, focusing on persons with disabilities within the context of digital government. Particular vulnerabilities in this context are mirrored in the digital disability divide, systemic ableism, and public service dependencies. Drawing from legal feminist, socio-legal, and disability scholarship, this paper suggests that a ' social model approach to vulnerability' would reconcile vulnerability perspectives and allow for a particular vulnerability approach in digital government without perpetuating stigma. Inspired by the 'social model of disability', this vulnerability paradigm emphasises that external factors, such as structural disadvantage and unequal power and opportunity dynamics are the primary causes of vulnerability. This shifts the focus from individual characteristics to systemic accountability.

1. Introduction

Since the 1990s, governments have steadily transitioned from a paper-based, analogue public administration towards the emergence of digital government, characterised by the increasing digitization and automation of public services.[1] These advancements have significantly enhanced the efficiency of the public service provision, promoted consistency in administrative decision-making, and decreased government expenditures.[2] However, the emergence of digital government has also given rise to challenges and inflicted vulnerabilities on citizens. Such 'administrative vulnerabilities' often manifest in citizens' inability to exercise their rights on equal terms or an infringement of their fundamental rights. This bears the potential to amplify pre-existing socio-economic inequalities and strain government-citizen relations.

One group that is often considered to be particularly vulnerable before digital government are persons with disabilities, defined as "any person with an impairment of a physical, sensory, mental, or intellectual nature who faces obstacles to participation on equal and equally effective terms with all others in all aspects of the life of the community."[3] This definition suggests that disability can be present whether officially documented or not and the impairment can be temporary or permanent.[4] Reasons for the outlawing of persons with disabilities as particularly vulnerable in the realm of digital government are, for instance, the excessive prevalence of digital disconnection among the population group, higher government dependencies due to low socio-economic status and poverty, and ableist system design of government services.[5] Demonstrating the vulnerability of persons with disabilities in the digital government context, an Australian survey found that 86% of respondents advocated for more inclusive digital government services for individuals with impairments.[6] Goggin and Soldatic add, "there remains a long way to go before people with disabilities are on equal terms with many others, and the list of changes needed is long."[7] Thus, individuals with an impairment face the heightened risk of bearing disproportionate burdens within the realm of digital governance to this day.

However, can we, with certainty, label an entire and extremely heterogeneous population group as particularly vulnerable before digital government? Legal feminist and bioethics scholarship has cautioned against that, as vulnerability label often has stigmatising effects due to associations with victimhood, weakness or fragility.[8] Martha Fineman is among the prominent scholars to advocate for a universal understanding of vulnerability. She claims that vulnerability is a universal and ontological aspect of the human condition,

1 Sofia Ranchordás, 'The Digitization of Government and Digital Exclusion: Setting the Scene' in *The Rule of Law in Cyberspace* (Springer 2022) 125-148; Ana Cristina Aguilar Viana, 'Digital transformation in public administration: from e-Government to digital government' (2021) *International Journal of Digital Law* 29; Joe Tomlinson, 'How digital administrative justice is made' in *Justice in the Digital State* (Policy Press 2019) 63-88; Jannick Schou and Anja Svejgaard Pors, 'Digital by default? A qualitative study of exclusion in digitised welfare' (2019) 53 *Social Policy & Administration* 464.

2 Sofia Ranchordás and Luisa Scarcella, 'Automated government for vulnerable citizens: intermediating rights' (2021) 30 *Wm & Mary Bill Rts J* 373; Christian Østergaard Madsen, Ida Lindgren and Ulf Melin, 'The accidental caseworker–How digital self-service influences citizens' administrative burden' (2022) 39 *Government Information Quarterly* 101653; James N. Danziger and Kim Viborg Andersen, 'The impacts of information technology on public administration: an analysis of empirical research from the "golden age" of transformation' (2002) 25 *International Journal of Public Administration* 591.

3 UN General Assembly, *Convention on the Rights of Persons with Disabilities* (adopted 13 December 2006, entered into force 3 May 2008) UNTS 2515 3, Article 1.

4 Katherine A. Macfarlane, 'Disability without documentation' (2021) 90 *Fordham L Rev* 59.

5 Stephen J. Macdonald and John Clayton, 'Back to the future, disability and the digital divide' in *Disability and Technology* (Routledge 2017) 702-718; Gerard Goggin, Scott Hollier and Wayne Hawkins, 'Internet accessibility and disability policy: lessons for digital inclusion and equality from Australia' (2017) 6 *Internet Policy Review* 1-18; Stefan Johansson, Jan Gulliksen and Catharina Gustavsson, 'Disability digital divide: the use of the internet, smartphones, computers and tablets among people with disabilities in Sweden' (2021) 20 *Universal Access in the Information Society* 105.

6 *Infosys, The Digital Accessibility Journey: Exploring Priorities and Investments in AUS and NZ Organisations* (2021) 15 https://www.infosys.com/australia/digital-accessibility-journey/digital-accessibility-journey.pdf accessed 26 June 2024.

7 Gerard Goggin and Karen Soldatić, 'Automated decision-making, digital inclusion and intersectional disabilities' (2022) 24 *New Media & Society* 384, 386.

8 Martha Albertson Fineman, 'Vulnerability in law and bioethics' (2019) 30 *Journal of Health Care for the Poor and Underserved* 52; Alyson Cole, 'All of us are vulnerable, but some are more vulnerable than others: The political ambiguity of vulnerability studies, an ambivalent critique' (2016) 17 *Critical Horizons* 260; Erinn Gilson, 'Vulnerability, Ignorance, and Oppression' (2020) 26 *Hypatia* 308; Gianclaudio Malgieri and Jędrzej Niklas, 'Vulnerable data subjects' (2020) 37 *Computer Law & Security Review* 105415; Kate Brown, 'Re-moralising 'Vulnerability'' (2012) 6 *People Place and Policy Online* 41.

making it inherent to all individuals regardless of their group affiliation.[9] Building on conceptual vulnerability frameworks, this paper highlights the dilemma of refraining from stigmatising vulnerability labels while simultaneously protecting certain population groups and acknowledging their challenges in the context of digital government. Consequently, through the theoretical lens of vulnerability, this paper explores the research question: *How can we meaningfully advance a conceptual understanding of the vulnerability of persons with disabilities in digital government without perpetuating its stigmatising perspectives?*

The paper is structured as follows. Firstly, it examines causes for the particular vulnerability of persons with disabilities in the context of digital government, highlighting the digital disability divide, dependency on government services, and ableist system design. This section sets the scope of how digital government has given rise to particular vulnerabilities of disabled persons. Secondly, the paper discusses prevalent vulnerability approaches in current scholarship and explores the dilemma of understanding persons with disabilities as vulnerable before the government without stigmatising them as an 'incompetent' or 'weak' population group. Thirdly, the paper explores how the social model of disability can be a viable paradigm to mitigate negative associations with vulnerability of persons with disabilities, as it redirects responsibility onto societal and institutional entities that have given rise to long-standing structural disadvantage and unjust opportunity structures. Finally, the conclusion underlines the potential of a 'social model of vulnerability' approach to overcome the explored dilemma.

2. Setting the Scene: Particular Vulnerabilities of Persons with Disabilities in the Realm of Digital Government

This section illustrates how the digitization and automation of government have given rise to particular vulnerabilities of persons with disabilities. It explores three factors, namely ableist system design, the digital disability divide, and dependency on government services that exemplify these vulnerabilities in the context of digital government.

2.1 Systemic Ableism

To date, societal and institutional structures remain rooted in ableist frameworks, perpetuating the exclusion of individuals who cannot independently navigate digital government. Essentially, "ableism embodies the attitudes of specific social groups and structures that prioritise and elevate certain abilities (...) at the expense of others."[10] The existence of ableist frameworks in society and governance highlights an underlying intolerance for citizens that deviate from normative standards and reinforces unequal opportunity structures.[11] As early as 1996, the Commission of the European Communities acknowledged that "our societies are, in many ways, organised for an 'average' citizen without any disability, and, therefore, a great number of citizens are excluded from the rights and opportunities of the vast majority."[12]

Ableist government structures are mirrored in the expectation that all citizens can effortlessly engage with digital government and independently navigate digital public services. In the case of persons with disabilities, this can, for instance, manifest in the ableist design choices of government websites, leading to the exclusion and obstacles in accessing digital public services.[13] Moreover, big data practices in the public domain increasingly transform individuals into data subjects, overlooking "non-digital and non-digitizable forms of information."[14] This gives rise to issues related to the representativeness of data, leaving out those

9 Martha Albertson Fineman, 'Universality, vulnerability, and collective responsibility' (2021) 16 *Les ateliers de l'éthique* 103.
10 Gregor Wolbring, 'The politics of ableism' (2008) 51 *Development (Society for International Development)* 252, 253.
11 Vassilis Charitsis and Tuukka Lehtiniemi, 'Data ableism: Ability expectations and marginalisation in automated societies' (2023) 24 *Television & New Media* 3, 14.
12 Commission of the European Communities, *Communication of the Commission on Equality of Opportunity for People with Disabilities*, COM(96) 406 final (30 July 1996) 3.
13 Sora Park and Justine Humphry, 'Exclusion by design: intersections of social, digital and data exclusion' (2019) 22 *Information, Communication & Society* 934.
14 Joanna Redden, 'Democratic governance in an age of datafication: Lessons from mapping government discourses and practices' (2018) 5 *Big Data & Society* 2053951718809145, 8.

who fall outside the scope of standardised data sets, such as persons with disabilities.[15] The datafication of governments and algorithmic decision-making practices have led to forms of discrimination termed 'data ableism' and 'data disablism', disproportionately impacting segments of the population that are unable to meet data standards.[16] Data ableism pertains to the design of technologies or datasets in algorithms that favour specific abilities, thereby excluding individuals who deviate from those normative standards.[17] Conversely, data disablism refers to the disabling and discriminatory practices employed within data-driven systems, often mirroring long-established socio-political disadvantages.[18] Critical data scholarship argues that it is essential to recognize that data can also embody indifference, neglect, or ignorance.[19] Incomplete data can lead to inherent biases, underlining that the categorization and classification in of data norms in digital government do not benefit all citizens,[20] often giving rise to vulnerabilities for persons with disabilities. In sum, ableist design structures, whether in website design or in the form of data, risk exacerbating the vulnerability of individuals with disabilities by creating accessibility barriers or failing to account for differences in algorithmic datasets.

2.2 Digital Disability Divide

In the context of digital government, profound digital literacy of information and communication technologies (ICTs) has become imperative for upholding one's administrative rights, as today's public service infrastructure primarily takes place online. Scholarship widely argues that individuals with a disability are disproportionately affected by digital disconnection and have always been part of the digital divide discourse.[21] Key drivers of the digital disability divide are barriers related to affordability, accessibility, the design of online resources, confidence, financial constraints, and lack of knowledge and digital skills.[22]

Notably, efforts to combat digital disconnection for persons with disabilities were legally recognized in 2006 with the adoption of the Convention on the Rights of Persons with Disabilities (CRPD), which established various rights related to the access to Information and Communication Technologies (ICTs).[23] Similarly, the European Accessibility Act of 2019 aims to enhance access of persons with disabilities to products and services in the EU.[24] However, while there is legally a strong emphasis on universal access to ICTs, Robinson et al. argue that assuming universal access automatically improves the digital skills and literacies of persons with disabilities is a misconception.[25] Instead, "the complexities of digital inequalities occur on many interrelated levels", making accessibility only one of many components of digital exclusion.[26]

Simultaneously, as heterogeneous and diverse as the group of disabled individuals is their internet use. Thus, generalised assumptions about the digital incompetence of disabled individuals can have stigmatising and discouraging effects.[27] Rather than universally characterising disabled persons as digitally incompetent,

15 Lina Dencik and others, 'Data scores as governance: Investigating uses of citizen scoring in public services project report' *Project Report* (Data Justice Lab, Cardiff University, 2018) 10.
16 Charitsis and Lehtiniemi (n 11) 5.
17 Ibid, 4.
18 Ibid, 4.
19 Shiloh Deitz, Amy Lobben and Arielle Alferez, 'Squeaky wheels: Missing data, disability, and power in the smart city' (2021) 8 *Big Data & Society* 20539517211047735, 1-16.
20 Ibid 1-16.
21 Goggin and Soldatić (n 7); Kristin Alfredsson Ågren, Anette Kjellberg and Helena Hemmingsson, 'Digital participation? Internet use among adolescents with and without intellectual disabilities: A comparative study' (2020) 22 *New Media & Society* 2128; Kerry Dobransky and Eszter Hargittai, 'Unrealized potential: Exploring the digital disability divide' (2016) 58 *Poetics* 18.
22 Macdonald and Clayton (n 5) 702-718.
23 UN General Assembly (n 3) Article 9 and 21; Article 9 draws attention to accessibility, laying out that new ICTs and systems need to be made accessible for disabled persons and need to be designed and developed so that they can become accessible at minimum costs. Article 21 specifies the right to access to information.
24 European Parliament and Council, Directive (EU) 2019/882 of 17 April 2019 on the accessibility requirements for products and services (European Accessibility Act) [2019] OJ L151/70.
25 Laura Robinson and others, 'Digital inequalities 2.0: Legacy inequalities in the information age' (2020) 25 *First Monday* 1.
26 Ibid, 2.
27 Florian Pethig, Julia Kroenung and Markus Noeltner, 'A stigma power perspective on digital government service avoidance' (2021) 38 *Government Information Quarterly* 101545; Mikaela Heikkilä, Hisayo Katsui and Maija Mustaniemi-Laakso, 'Disability and vulnerability: a human rights reading of the responsive state' (2020) 24 *The International Journal of Human Rights* 1180; Dobransky and Hargittai (n 21).

it is crucial to paint a nuanced picture of their use, consumption, and access to ICTs.[28] Factors such as gender, age, occupation, financial situation, class affiliation, accommodation, diagnosis, social and cultural contexts, generation, and impairment play a crucial role in understanding the ICT use of disabled persons.[29] Consequently, digital disability divides cannot be studied as one homogenous group but instead based on subgroups, as barriers that disabled individuals encounter online strongly depend on their impairment.[30] For instance, in Sweden, the most prevalent digitally underprivileged groups are blind individuals and those with multiple disabilities.[31]

Crucially, ICTs can also pose a valuable opportunity for persons with a disability to fully and independently participate in society.[32] Thus, disability and the internet "is a story of both exclusion and possibility."[33] For instance, text-to-speech technology can benefit people with visual or speech impairments, offering opportunities for connection with local services, education, or the labour market.[34] While assistive technologies are particularly advantageous with a single impairment, many disabled persons require multiple and complex forms of assistance.[35] This can be rather costly and often fails to adequately grasp and respond to the diverse needs of persons with disabilities.[36]

It is essential to recognize that while technology can alleviate some barriers related to education, employment, information, or social environments for persons with disabilities, the digital disability divide continues to exist and exemplifies long-established disadvantages and social exclusion for persons with disabilities.[37] Thus, it remains a key factor causing the vulnerability of this population group in the context of digital government.

2.3 Dependency on Government Services

The dependence of persons with disabilities on public social and welfare services can be a driving factor for their vulnerability in digital government.[38] If an individual heavily relies on social welfare provisions and if these entitlements are withheld or if the individual encounters obstacles in accessing them through digital government platforms, there is an elevated risk of harm. Further vulnerabilities then shape how this dependency is perceived and determine available mitigation strategies.[39]

While users of welfare services are often already marginalised or excluded,[40] digital government "isolates those even further who have the most to gain."[41] The high representation of disabled persons in the public service provision often comes down to the intersection of disability and poverty.[42] This is highlighted in Eurostat's analysis, revealing that in 2020 roughly 29% of persons with disabilities in the European Union were at risk of poverty.[43] One driving factor of this is high unemployment rates, with only one in three

28 Dobransky and Hargittai (n 21).
29 Alan Roulstone, *Disability and technology: An interdisciplinary and international approach* (Springer 2016) 3.
30 Macdonald and Clayton (n 5); Johansson, Gulliksen and Gustavsson (n 5); Gerard Goggin, 'Disability and digital inequalities: Rethinking digital divides with disability theory' in *Theorising digital divides* (Routledge 2017) 1.
31 Johansson, Gulliksen and Gustavsson (n 5) 106.
32 Goggin, 'Disability and digital inequalities: Rethinking digital divides with disability theory' (n 30); Macdonald and Clayton (n 5).
33 Dobransky and Hargittai (n 21); Deepti Samant Raja, 'Bridging the disability divide through digital technologies' (2016) *Background Paper for the World Development Report* 7, 19.
34 Raja (n 33).
35 Ibid, 10.
36 Ibid, 10; Alison Adam and David Kreps, 'Web Accessibility: A Digital Divide for Disabled People?' in *Social Inclusion: Societal and Organisational Implications for Information Systems* (Springer US 2016) 217-228.
37 Raja (n 33) 5.
38 Ibid, 5.
39 Susan Dodds, 'Dependence, care, and vulnerability' in *Vulnerability: New Essays in Ethics and Feminist Philosophy* (1st edn, Oxford University Press 2013) 183; Margaret Meek Lange, Wendy Rogers and Susan Dodds, 'Vulnerability in research ethics: a way forward' (2013) 27 *Bioethics* 333, 336.
40 Schou and Pors (n 1) 468.
41 Sue Watling, 'Digital exclusion: coming out from behind closed doors' (2011) 26 *Disability & Society* 491.
42 Eurostat, *People with Disability at Higher Risk of Poverty or Social Exclusion* (European Union 2021 https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20221214-2 accessed 26 June 2024.
43 Ibid.

persons with a disability having the opportunity to participate actively in the Dutch labour market in 2015.[44] In some countries, unemployment rates for persons with disabilities even reach up to 80 or 90 percent.[45] Crucially, active participation in the labour market is not only vital to be considered a full member in today's functionalist society, but also to overcome welfare service dependency.[46] Thus, paid employment is central to social inclusion and has been a major factor in continuous societal disadvantage and exclusion for persons with disabilities.[47] Next to structural labour market exclusion and poverty, social exclusion, inadequate housing, or inadequate support and care, are key contributors to the disproportionate representation of disabled persons in welfare support services.[48] Moreover, while dependency of persons with disabilities is often associated with reliance on care, the new technological reality requires all individuals to engage with digital tools. This led to a new form of dependence on internet access, namely 'cyber dependence' to realise basic civil rights.[49]

Furthermore, dependency structures in the setting of asymmetric power relations, as the case in digital government, are common vulnerability drivers. While "few relationships are completely level in power,"[50]citizen-government relations are characterised by strong power asymmetries. Governments commonly hold a power monopoly as they can define, in many cases, individuals' legal positions unilaterally and exert public authority. The digitalization and automation of government services have further exacerbated these asymmetries, partly due to inadequate redress mechanisms for citizens to challenge wrongful decisions made by public authorities. This highlights a critical issue: although administrative law has established mechanisms to address power imbalances, it was not designed with the digital realm in mind. In sum, dependency on government services of persons with disabilities makes them a particularly vulnerable group in the public digital domain due to asymmetric power relations and welfare dependencies of persons with disabilities.

3. Dilemma: A particular or universal approach to the vulnerability of disabled persons?

The three factors highlighted in the previous section exemplify how the digitization and automation of governments have produced or exacerbated existing vulnerabilities for persons with disabilities. An obvious conclusion would be the imposition of a particular vulnerability label on this population group in the context of digital government. However, this section addresses the dilemma of how to account for the vulnerability of disabled persons without stigmatising them or considering them as 'incapable' of meaningfully engaging with digital government. It delves into the advantages and drawbacks of particular and universal vulnerability approaches concerning persons with disabilities and thereby engages with relevant vulnerability scholarship.

3.1 The Dilemma

Individuals with disabilities have historically been marginalised and only gained recognition within the realm of human rights law around 1975.[51] Regrettably, in the past, they have been subject to outspoken discrimination as they were considered to be a group with 'undesirable' traits, often mentioned in the same context as the 'poor' or criminals.[52] While society widely overcame these extreme sentiments, persons

44 Centraal Bureau voor de Statistiek, *One in Three Disabled Hold Paid Jobs* (CBS 2015) https://www.cbs.nl/en-gb/news/2015/05/one-in-three-disabled-hold-paid-jobs accessed 26 June 2024.

45 Raja (n 33) 5.

46 Raja (n 33); Stephen Bunbury, 'Unconscious bias and the medical model: How the social model may hold the key to transformative thinking about disability discrimination' (2019) 19 *International Journal of Discrimination and the Law* 26.

47 Bunbury (n 46) 32; Colin Barnes and Geof Mercer, 'Disability, work, and welfare: Challenging the social exclusion of disabled people' (2005) 19 *Work, Employment and Society* 527, 541.

48 Lise Saugeres, '(Un) accommodating disabilities: housing, marginalisation and dependency in Australia' (2011) 26 *Journal of Housing and the Built Environment* 1.

49 Ryan Shandler and Daphna Canetti, 'A reality of vulnerability and dependence: internet access as a human right' (2019) 52 *Israel Law Review* 77, 98.

50 Jackie Leach Scully, 'Disability and Vulnerability: On Bodies, Dependence, and Power' in *Vulnerability: New Essays in Ethics and Feminist Philosophy* (1st edn, Oxford University Press 2013) 204, 213.

51 Tom Shakespeare, 'The social model of disability' in *The Disability Studies Reader* (4nd edn, Routledge 2013) 197; Heikkilä, Katsui and Mustaniemi-Laakso (n 27).

52 Lennard J. Davis, 'Introduction: Normality, Power, and Culture' in *The Disability Studies Reader* (4th edn, Routledge 2013) 6.

with disabilities still grapple with systemic disadvantages, often rooted in discriminatory societal and institutional structures.[53] As explored previously, the digitalization of public services has given rise to new vulnerabilities of disabled persons, underlining the growing demand for governments to improve disability rights and equality frameworks.[54]

Digital disability divides, ableist design structures or welfare dependencies of disabled persons lead to the conclusion that persons with disabilities are particularly vulnerable before digital government. However, as vulnerability is often associated with 'blame' or 'victimhood', such an approach holds a common vulnerability impasse: How can we address the unique challenges faced by individuals with disabilities without perpetuating stigmatisation through a group-based vulnerability label?

3.2 A Universal or Particular Vulnerability Approach?

Vulnerability, initially associated with natural disasters in the early 1980s, has evolved into a universally recognized concept cutting across numerous disciplines.[55] Consequently, vulnerability has taken shape as a well-defined yet intricate and normative concept, shedding light on the fragile nature of human identity. A prevailing perspective across various fields entails that vulnerability consists of an external element, commonly a threat, and an internal element, typically the inability to defend oneself.[56] Primarily drawing on legal feminist perspectives, the following sheds light on different vulnerability approaches and their tensions when seeking to label persons with disabilities as particularly vulnerable before the digital government.

The *particular* vulnerability approach identifies vulnerable individuals based on their group affiliation and characteristics, assuming that vulnerability is limited to specific population groups. For instance, children, migrants, disabled persons or elderly individuals are commonly considered 'vulnerable population groups'.[57] Such notions are still prevalent in legal contexts, especially in human rights legislation and case law.[58] For instance, the European Court of Human Rights creates a potentially problematic dichotomy between the 'vulnerable' and 'invulnerable' by applying the vulnerability label to specific population groups.[59] Such particular vulnerability perspectives have faced criticism for stereotyping and profiling entire population groups, often associating vulnerability with negative perceptions such as weakness and victimhood.[60] Despite that, it may evoke paternalistic policy responses due to its underestimation of the importance of autonomy.[61]

Simultaneously, a particular approach to vulnerability can be meaningful for population groups as it acknowledges issues they face and it can grant them specific resources to overcome barriers. Also in the context of digital government, the vulnerability label can benefit persons with disabilities as it makes them 'deserving' of special treatment. This is especially meaningful as the 'normalisation' of persons with

53 Macdonald and Clayton (n 5).
54 Goggin and Soldatić (n 7).
55 Daniel Joseph Hogan and Eduardo Marandola Jr, 'Towards an interdisciplinary conceptualisation of vulnerability' (2005) 11 *Population, Space and Place* 455; Florencia Luna, 'Elucidating the concept of vulnerability: Layers not labels' (2009) 2 *International Journal of Feminist Approaches to Bioethics* 121-139; Malgieri and Niklas (n 8); Doris Schroeder and Eugenijus Gefenas, 'Vulnerability: too vague and too broad?' (2009) 18 *Cambridge Quarterly of Healthcare Ethics* 113.
56 Schroeder and Gefenas (n 55).
57 Malgieri and Niklas (n 8) 2.
58 Bunbury (n 46); Corina Heri, *Responsive Human Rights: Vulnerability, Ill-treatment and the ECtHR* (Hart Publishing 2021) 1-238.
59 Ibid, 207.
60 Ibid, 207; Heikkilä, Katsui and Mustaniemi-Laakso (n 27); Catriona Mackenzie, Wendy Rogers, and Susan Dodds, 'Introduction: What is Vulnerability and Why Does It Matter for Moral Theory' in *Vulnerability: New Essays in Ethics and Feminist Philosophy* (Oxford University Press 2013) 1; Pethig, Kroenung and Noeltner (n 27); Martha Albertson Fineman, 'The vulnerable subject: anchoring equality in the human condition' (2008) 20 *Yale JL & Feminism* 1.
61 Barbara Fawcett, 'Vulnerability: questioning the certainties in social work and health', (2009) *International Journal of Social Work* 52, 473–84; Birgit Daniel, 'Concepts of adversity, risk, vulnerability and resilience: a discussion in the context of the "Child protection system"' (2010) *Social Policy and Society* 9, 2, 231–41; Beverley Clough, 'Disability and vulnerability: Challenging the capacity/incapacity binary' (2017) 16 *Social Policy and Society* 469; Nina A. Kohn, 'Vulnerability theory and the role of government' (2014) 26 *Yale JL & Feminism* 1.

disabilities often does play in their favour either.[62] Therefore, steering clear of specific vulnerability designations for groups at higher risk can inadvertently normalise power imbalances in society, contributing to ongoing social inequalities.[63] This relates to the discourse surrounding equity, drawing attention to the fact that mere equal treatment of individuals does not necessarily generate equal outcomes.[64] Although state responsibilities are universally applicable and owed equally to all individuals, specific and targeted measures are often essential to guarantee "the accessibility, adaptability, affordability and availability of societal structures to all persons with disabilities."[65] Hence, assigning a specific vulnerability label holds the potential to effectively safeguard the needs of those who are most at risk of harm. [66]

By contrast, the *universal* approach to vulnerability contends that vulnerability is an inherent aspect of the human condition, transcending particular groups or individuals as it is applicable to all human beings.[67] This understanding has become dominant in contemporary vulnerability studies with Martha Fineman's legal feminist vulnerability theory at its forefront. Fineman defines vulnerability as "the unavoidable susceptibility to change, both positive and negative, in our physical well being that we experience over the life course."[68] Such ontological understanding of vulnerability stems from the belief that it is a fundamental aspect of being human that extends beyond particular groups and is an universally inherent trait.[69] Fineman contends that legal subjects are characterised by (inter)dependency as it an inherent vulnerability which requires a strong state to build resilience and mitigate it.[70] This opposes notions of the autonomous, independent, liberal subject in today's neoliberal state. Crucially, while rejecting the particular notion of vulnerability, Fineman does not deny that there are differences between members of society, which can, for instance, be pronounced in human embodiment and therefore be of a physical, mental or intellectual nature.[71] However, this universal vulnerability approach can be challenging to operationalize due to its utopian nature, disregard for the limited resources of the state, and lack of emphasis on autonomy.

A universal approach to vulnerability can be meaningful for persons with disabilities in the context of digital government as it moves away from the focus on narrow categorizations and the stigmatising nature of vulnerability.[72] Pethig et al. provide a valuable example of how labelling entire population groups as vulnerable can be harmful and stigmatising.[73] Their study reveals that categorising individuals with disabilities as vulnerable in their interaction with technology can discourage them in their engagement with digital government services.[74] Stereotypes associating disabled individuals as "warm but incompetent" or "computer illiterate" contribute to destructive perceptions and hinder their utilisation of tailored services.[75] Additionally, labelling persons with a disability as vulnerable can trigger paternalistic policy responses and question their autonomy and agency.[76] Such an approach perpetuates a dichotomy between the 'abled and disabled' and the 'capable and incapable'[77] which reinforces the idea that persons with disabilities deviate from the norm.[78] Disability scholarship has drawn attention to the issues of patronising and disempowering

62 Gerard Goggin and Christopher Newell, 'The business of digital disability' (2007) 23 *The Information Society* 159; Kate Brown, 'Questioning the vulnerability zeitgeist: Care and control practices with 'vulnerable young people' (2014) 13 *Social Policy and Society* 371.
63 Heikkilä, Katsui and Mustaniemi-Laakso (n 27) 1180.
64 Fineman, 'The vulnerable subject: Anchoring equality in the human condition' (n 60) 4.
65 Heikkilä, Katsui and Mustaniemi-Laakso (n 27) 1181.
66 Cole (n 8).
67 Fineman, 'Vulnerability in law and bioethics' (n 8); Heikkilä, Katsui and Mustaniemi-Laakso (n 27).
68 Fineman, 'Vulnerability in law and bioethics' (n 8) 57.
69 Fineman, 'The vulnerable subject: Anchoring equality in the human condition' (n 60) 1.
70 Martha Albertson Fineman, 'The Vulnerable Subject and the Responsive State' (2010) 60 *Emory Law Journal* 251, 269.
71 Martha Albertson Fineman, 'Feminism, masculinities, and multiple identities' (2012) 13 *Nevada Law Journal* 619, 638.
72 Clough (n 61) 469; Heikkilä, Katsui and Mustaniemi-Laakso (n 27).
73 Pethig, Kroenung and Noeltner (n 27).
74 Ibid, 2.
75 Ibid, 2.
76 Clough, (n 61) 474.
77 Ibid.
78 Davis (n 52) 1.

policy responses based on their vulnerability, further harming persons with disability.[79] Fineman's universal vulnerability approach overcomes these shortcomings through the avoidance of labelling persons with disabilities as a particularly vulnerable group.

Interestingly, both approaches to vulnerability carry the drawback of underestimating the importance of autonomy of persons with disabilities and their ability to make self-determined and autonomous choices. The particular approach bears the risk of paternalistic and coercive policy responses, ultimately undermining autonomy. Simultaneously, a universal vulnerability approach can also give rise to paternalism due to its strong emphasis on constant risk and a strong and responsive state.[80] While it can be beneficial to focus on compromising autonomy for broad policy goals, such as minimum income or adequate healthcare, autonomy must be a key concern when choosing among particular policy interventions.[81] Kohn stresses that the fundamental rejection of autonomy can go as far as offsetting human dignity.[82] Thus, autonomy remains a key concern in particular and universal vulnerability contexts.

3.3 Heterogeneity

Labelling individuals with disabilities as particularly vulnerable before digital government presents another challenge due to the inherent diversity, heterogeneity, and complexity within the disability spectrum. The needs and issues of disabled persons vary depending on impairment, circumstances and characteristics. For instance, a citizen with a hearing impairment encounters different barriers in digital government than someone with a cognitive, psychological or age-related impairment. Furthermore, a comprehensive understanding of the vulnerability of persons with disabilities requires the recognition of further attributes and vulnerability layers. Two individuals may share the same medical impairment. Yet, one may be significantly more vulnerable if burdened with additional layers, such as low socio-economic status, financial difficulties, advanced age, or a lack of social support.

This concedes with Luna's layered vulnerability approach, which argues that the accumulation and synergy of different layers constitute vulnerability.[83] Luna advocates for a nuanced, contextual comprehension of vulnerability, presenting it as a multi-layered phenomenon rather than a fixed label that can simply be applied to population groups or even individuals. These layers should not be perceived as rigid hierarchies but as fluid and adaptable, because different social contexts and relational circumstances affect an individual's vulnerability differently. Therefore, the elusive, accumulative, complex, intersectional and multidimensional nature of vulnerability urges for an understanding of the characteristics and circumstances of each individual.[84] Similarly, Ferri and Connor reject a one-dimensional approach when seeking to understand discrimination of persons with disabilities.[85] Instead, they claim that it is vital to explore how the convergence of social class, race, and disability creates hurdles for students with impairments in the realm of education.[86]

79 Kate Brown, Kathryn Ecclestone and Nick Emmel, 'The many faces of vulnerability' (2017) 16 *Social Policy and Society* 497; Andrea Hollomotz, 'Beyond 'vulnerability': An ecological model approach to conceptualizing risk of sexual violence against people with learning difficulties' (2009) 39 *British Journal of Social Work* 99; Guy Wishart, 'The sexual abuse of people with learning difficulties: do we need a social model approach to vulnerability?' (2003) 5 *The Journal of Adult Protection* 14.

80 Fineman, 'The Vulnerable Subject and the Responsive State' (n 70) 269.

81 Kohn (n 61) 16.

82 Ibid, 15.

83 Luna, 'Elucidating the concept of vulnerability: Layers not labels' (n 55); Florencia Luna, 'Identifying and evaluating layers of vulnerability–a way forward' (2019) 19 *Developing World Bioethics* 86.

84 Scott Keay and Stuart Kirby, 'Defining vulnerability: From the conceptual to the operational' (2018) 12 *Policing: A Journal of Policy and Practice* 428; Luna, 'Elucidating the concept of vulnerability: Layers not labels' (n 55); Luna, 'Identifying and evaluating layers of vulnerability–a way forward' (n 83).

85 Beth Ferri and David Connor, 'Talking (and not talking) about race, social class and dis/ability: Working margin to margin' (2014) 17 *Race Ethnicity and Education* 471.

86 Ibid.

Furthermore, considering disability as an isolated phenomenon only affecting one specific population group is strongly inaccurate.[87] Bunbury claims that disability is an exceptional category within discrimination as all individuals are at risk and even likely of becoming temporarily disabled at some point in their lives.[88] This can come down to an impairment that emerges with a higher age or even a broken leg. Thus, all humans are likely to be confronted with disability throughout their lifetime, either experiencing that on their own bodies or in our social surroundings, underlining the heterogeneous and complex nature of disability. Consequently, the imposition of a particular vulnerability label on disabled citizens as an isolated population group is flawed and imprecise in its nature. Some impairments may only be temporary or situational, while others are inherent.

4. The solution? A Social Model Approach to Vulnerability

The previous section pointed to the dilemma that while singling out individuals can perpetuate stigma and cause harm, not acknowledging particular vulnerabilities can lead to inadequate protection and also cause harm. This section offers a solution to this dilemma, proposing that the social model of disability provides valuable guidance in advancing a particular vulnerability approach while overcoming the negative and blame-related sentiments of vulnerability.

4.1 Models of Disability

Heretofore and outdated in current times, disability was understood through the moral model of disability, which assumed, often in a spiritual or religious manner, that disability is a form of deficiency, inflicted through sin.[89] While such sentiments are no longer prevalent in contemporary society, the legacy of the moral model highlights the discrimination and stigma faced by disabled individuals in the past, prompting us to scrutinise whether remnants of these perspectives persist in current societal and institutional frameworks. Today, scholarship primarily distinguishes between the medical and social model of disability.[90]

Firstly, the *medical model of disability* conveys the traditional western philosophical perspective that disability stems from physical or mental impairments, viewing disability "as an individual's unfortunate state of functioning and being."[91] It places significant emphasis on the medical condition, presupposing that impairments deviate from the norm and should be perceived as individual deficits. The primary goal within this model is to minimise the effects of disability, with a focal point on diagnosis, treatment, and mitigation. Thus, the medical model "regards disability as an impairment that needs to be treated, cured, fixed, or rehabilitated."[92] If medical professionals fail to cure an impairment, the unchallenged consequence is that the individual has a limited ability to participate in society.[93]

Secondly, the *social model of disability* advocates for the notion that disability emerges due to disabling factors in society.[94] Over decades, persons with disabilities have challenged the overly medicalized and individualistic understanding of disability, advocating for an approach that takes into account its social implications, cultural discourse, and environmental barriers.[95] As a result, the social model of disability emerged in the context of a social justice movement by UPIAS in the 1970s, claiming:

87 Bunbury (n 46).
88 Ibid.
89 Peter McTigue, 'The challenge of HIV-social stigma or disability?' (2010) *Web Journal of Current Legal Issues* 4 https://www.bailii.org/uk/other/journals/WebJCLI/2010/issue5/mctigue5.html accessed 1 August 2024; Simo Vehmas, 'Ethical Analysis of the Concept of Disability' (2004) 42(3) *Mental Retardation* 209.
90 Michael Oliver, *Understanding Disability: From Theory to Practice* (2nd edn, Bloomsbury Publishing 2018);; Shakespeare (n 51).
91 Vehmas (n 89) 209.
92 Theresia Degener, 'A New Human Rights Model of Disability' in *The United Nations Convention on the Rights of Persons with Disabilities* (Springer International Publishing 2017) 42.
93 Bunbury (n 46) 28.
94 Sara Goering, 'Rethinking disability: the social model of disability and chronic disease' (2015) 8 *Current Reviews in Musculoskeletal Medicine* 134; Bunbury (n 46) 29.
95 Shakespeare (n 51) 214; Degener (n 92); Bunbury (n 46) 42; Oliver (n 90) 2.

"In our view, it is society which disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society" (1975).[96]

This quote shows how the disabling factor of a physical impairment is rooted in social exclusion and a lack of opportunities rather than the inherent physical or mental limitation itself.[97] The social model of disability views impairment and disability separately. While impairment refers to a physical or mental condition, disability stems from the societal and environmental response to it.[98] Thus, "disability is linked to the loss of opportunities caused by society's failure to break down the barriers (physical and social)."[99] Structural barriers for persons with disabilities can range from individual intolerance to institutional discrimination and from inaccessible public transport to excluding work places. Instead of focusing on medical care, the emphasis of the social model of disability lies on dismantling existing power structures and structural barriers that disadvantage individuals with impairments and hinder their full and equal participation in society.

While the social model of disability offers a meaningful framework for addressing the marginalisation and discrimination faced by disabled individuals, it falls short in accounting for the heterogeneity of disability and variations in the physical and mental conditions of people.[100] Additionally, the model has faced criticism for its oversimplified view of disability, as it overlooks the lived medical experiences of disabled persons, including pain, individual restrictions, and the fear of mortality.[101]

Moreover, the human rights of persons with disabilities have been codified in the Convention on the Rights of Persons with Disabilities (CRPD), which came into force in 2008. Also considered as a 'human rights model of disability', the Convention adopts a remarkable approach by aligning itself with the social model of disability.[102] This perspective considers disability in the context of external elements, such as environmentally and socially constructed barriers, and places particular emphasis on dignity, equality, accessibility, and participation.[103] Its preamble acknowledges "that disability is an evolving concept and that disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others."[104] Thus, the social model of disability is a fundamental building block of the treaty.[105]

4.2 Shifting the focus: A 'Social Model Approach of Vulnerability'

Inspired by the social model of disability, which argues that societal and environmental factors disable persons with an impairment; this paper proposes a 'social model of vulnerability approach' in the context of digital government, which asserts that disadvantageous power and opportunity structures and systemic disadvantages are critical causes of vulnerability. This contends that external factors render individuals or population groups vulnerable and not their attributes or features per se. A 'social model of vulnerability approach', previously touched upon by Wishart and Clough,[106] enables a deflection of responsibility for vulnerability from the individual to external factors, such as the state, society and institutions.[107] This makes the individual a 'passive' actor to the vulnerability label. Such passivity does not mean that the vulnerable individual should not actively participate in shaping policy choices and exert autonomy, but it means that the focus on who is responsible for the occurred vulnerability is shifted. Thereby, it rejects a focus on the

96 Union of the Physically Impaired Against Segregation, *Fundamental Principles of Disability* (UPIAS, 1975) 14.
97 Shakespeare (n 51) 215; Degener (n 92).
98 Degener (n 92), 42.
99 Bunbury (n 46), 30.
100 Heikkilä, Katsui and Mustaniemi-Laakso (n 27).
101 Lorella Terzi, 'The social model of disability: A philosophical critique' (2004) 21 *Journal of applied philosophy* 141.
102 Michael Perlin, '"The ladder of the law has no top and no bottom": How therapeutic jurisprudence can give life to international human rights' (2014) 37 *International Journal of Law and Psychiatry* 535, 538.
103 Ibid; UN General Assembly (n 3), Article 3.
104 UN General Assembly (n 3) Preamble.
105 Degener (n 92), .42.
106 Clough (n 61).
107 Ibid, 479; Wishart (n 79) 16, 25.

citizen's characteristics as a negative or flawed contributor to the vulnerability.[108] Such a 'social model of vulnerability approach' offers a valuable solution to the paper's central dilemma as it allows us to concede with particular notions of vulnerability while overcoming its blame-related and stigmatising notions.

The external perspective of a 'social model of vulnerability' holds similar viewpoints to pathogenic vulnerability, encompassing the notion that environmental or systemic issues put individuals at (situational) risk of being harmed.[109] Thus, pathogenic vulnerabilities result from "prejudice or abuse in interpersonal relationships and from social domination, oppression, or political violence."[110] Similar to the social model of disability, vulnerability in this context does not stem from individual traits deviating from societal norms but rather from societal and institutional attitudes. Consequently, external entities bear responsibility for addressing and lessening the vulnerabilities they generate.[111] Interestingly, pathogenic vulnerability can also arise "when a response intended to ameliorate vulnerability has the paradoxical effect of exacerbating existing vulnerabilities or generating new ones."[112]

Moreover, despite her advocacy for a universal vulnerability approach, Martha Fineman argues for such a shift in responsibility of vulnerability, asserting that individuals should never be held responsible for their vulnerability since disadvantage is caused by external factors.[113] While Fineman claims that vulnerability is inherent to the human condition, she argues that group differences persist due to externally imposed unequal power and opportunity structures, rendering some individuals more susceptible to harm than others.[114] The receptivity of these risks of harm is linked to the fact that all individuals are (inter)dependent subjects and inevitably impacted by societal structures.[115] Other theories, such as Critical Race Theory[116], Social Justice Theory[117], or Feminist Theory[118] also argue that dismantling unequal power structures are crucial to achieve social justice and gender equality.

Furthermore, a 'social model approach of vulnerability' aligns with perspectives of relational autonomy, which contend that both the state and society have a responsibility to foster conditions wherein individuals can make autonomous decisions.[119] Relational autonomy posits that self-determination is developed and exercised within social relationships, making it subject to societal structures and power dynamics.[120] This suggests that autonomy is fundamentally intertwined with social, cultural, and institutional frameworks, thereby challenging conventional notions of autonomy as a solely individualistic endeavour.[121] Particularly persons with disabilities are often perceived as lacking autonomous decision-making abilities due to support requirements and reliance on assistance from others.[122] However, self-determination and autonomy are vital for all individuals. It is therefore essential to provide an "interpersonal, social, and institutional scaffolding" to exercise autonomy.[123] In the case of persons with disabilities, other parties therefore play a key role in making them independent and autonomous actors.[124]

108 Wishart (n 79).
109 Catriona Mackenzie, 'The Importance of Relational Autonomy and Capabilities for an Ethics of Vulnerability' in *Vulnerability: New Essays in Ethics and Feminist Philosophy* (Oxford University Press 2013) 33, 39, 54; Dodds, 'Dependence, care, and vulnerability' (n 39).
110 Mackenzie, 'The importance of relational autonomy and capabilities for an ethics of vulnerability' (n 109), 39.
111 Ibid, 40.
112 Mackenzie, Rogers and Dodds, 'Introduction: What is vulnerability and why does it matter for moral theory' (n 60) 9.
113 Fineman, 'Feminism, masculinities, and multiple identities' (n 71) 638.
114 Ibid.
115 Clough (n 61) 469; Fineman, 'The vulnerable subject: Anchoring equality in the human condition' (n 61); Martha Albertson Fineman, 'Equality and Difference - The Restrained State' (2015) 66 *Alabama Law Review* 609.
116 Richard Delgado and Jean Stefancic, 'Critical Race Theory: An Introduction' (2017) *Journal of Pan African Studies* 408.
117 Clara Sabbagh and Manfred Schmitt (eds), *Handbook of Social Justice Theory and Research* (1st edn, Springer 2016) 1-491.
118 Look into works by Judith Butler and Bell Hooks.
119 Mackenzie, 'The importance of relational autonomy and capabilities for an ethics of vulnerability' (n 109).
120 Laura Davy, 'Between an ethic of care and an ethic of autonomy: Negotiating relational autonomy, disability, and dependency' (2019) 24 *Angelaki: Journal of Theoretical Humanities* 101.
121 Mackenzie, 'The importance of relational autonomy and capabilities for an ethics of vulnerability' (n 109).
122 Davy (n 120) 101.
123 Mackenzie, 'The importance of relational autonomy and capabilities for an ethics of vulnerability' (n 109), 42.
124 Davy (n 120).

In sum, the social model of disability provides a meaningful framework to advance a 'social model approach of vulnerability', which allows for an external perspective that focuses on how society and its institutions render some population groups or individuals vulnerable. While this enables a particular vulnerability approach, it does not necessarily reject the universal character of vulnerability. Instead, it advances an understanding that some individuals are more susceptible to harm than others due to long standing structural and systemic disadvantage. Such a macro-level perspective and deflection of responsibility for vulnerability helps overcome negative and blame-related vulnerability connotations, ultimately allowing ruling out specific population groups, such as persons with disabilities, as vulnerable.

4.3 Application of the 'Social Model Approach of Vulnerability' in Digital Government – Asking the Right Questions

Revealing structural inequalities is challenging, and addressing them in a sustainable way can be even more difficult. However, it is crucial not to shy away from these significant tasks, as they lie at the root of many societal issues. Avoiding them only further perpetuates unequal power dynamics and opportunity structures.

In the context of digital government, a 'social model of vulnerability' paradigm cannot instantly solve accessibility and engagement challenges. However, this is also not its intent. Instead, it aims to shift the narrative by framing vulnerability not as an individual trait but as a result of external conditions. Instead of focusing on 'who' is vulnerable before the government, the model rather asks 'why' specific population groups are placed in vulnerable positions and 'what' underlying power and opportunity structures are that give rise to those vulnerabilities. Revealing root causes of vulnerability in the context of digital government by asking questions such as the 'why' and 'what', allows for policy responses that are tailored to those vulnerabilities of citizens before the government.

For example, consider a person with a mild intellectual disability who is unable to independently file their tax returns. To answer the question, "Why is this person vulnerable in their engagement with the tax authorities?" two factors come into play. First, the system's complexity and unclear instructions make it difficult for many citizens to navigate the online tax system independently. Thus, their vulnerability does not stem from their cognitive impairment but rather from the complexity of the tax authority's system design. Second, the lack of recognition for mild intellectual disabilities has resulted in insufficient support services for this group. Similarly, the question, "What underlying power and opportunity structures contribute to the vulnerability of individuals with mild intellectual impairments?" can be answered by recognizing that this population often receives inadequate attention.[125] This example demonstrates how the proposed model can function as a practical framework, despite its abstract nature, by highlighting how systemic issues and overlooked needs contribute to vulnerabilities.

In section two, this paper outlined how systemic ableism, the digital disability divide, and government dependencies are key contributors to the particular vulnerability of persons with disabilities before digital government. When applying a 'social model approach of vulnerability' lens to these three factors, it becomes evident that they are rooted in long-standing structural disadvantages of persons with disabilities. Thus, vulnerability is not caused by attributes of persons with disabilities, but by failure of the government to accommodate those. For instance, an underlying structural cause for *government dependencies of persons with disabilities* is the close link of poverty and disability, often coming down to the failure to adequately include them in the labour market.[126] Moreover, *systemic ableism* is rooted in the fact that society is constructed around an individual that conforms to 'average' citizen standards. This can give rise to vulnerability if those normative ideas are encoded in data that is used in automated decision-making systems or manifest in ableist system design, inhibiting the accessibility of public services. Again, this underlines the external character of vulnerability as governments fail to respond to the unique needs and circumstances of persons with disabilities. Interestingly, even when governments express a willingness to involve persons with

125 Mariska Oosterveld-Vlug and others, 'What difficulties do people with mild intellectual disabilities experience when seeking medical help from their GP? A qualitative study' (2021) 34 *Journal of Applied Research in Intellectual Disabilities* 178; Sharon J Krinsky-McHale and Wayne Silverman, 'Dementia and mild cognitive impairment in adults with intellectual disability: issues of diagnosis' (2013) 18 *Developmental disabilities research reviews* 31.

126 Raja (n 33); Bunbury (n 46).

disabilities in the co-design of artificially intelligent virtual assistants for digital government, the prevailing culture and organisational structure of public administration can hinder its effective implementation.[127] Van Toorn demonstrates that a co-design approach for inclusive government in Australia failed due to "a lack of institutionalised support and resistance to sharing power."[128] Engaging persons with disabilities as equal partners remains a challenge for public authorities.[129] Finally, the *digital disability divide* is closely linked to challenges in accessibility, affordability, confidence, education and design.[130] For instance, the affordability of digital devices is often connected to the intersection of poverty and disability, which is frequently linked to labour market exclusion or inadequate welfare support. Similarly, a lack of confidence in digital skills may result from past negative experiences with inaccessible technology or from insufficiently tailored education for individuals with impairments. As a result, the digital divide is deeply rooted in structural issues that mirror the unequal power dynamics and opportunity gaps faced by people with disabilities.

In sum, the digital government needs to provide persons with disabilities with the tools and the societal and institutional scaffolding to autonomously engage with public services. This includes the implementation of user-friendly designs and the consideration of unique circumstances in automated and non-automated decision-making processes. While the definition of 'user-friendly' varies depending on the type of impairment and the specific needs of individuals, certain measures can benefit a broad spectrum of citizens. For example, reintroducing more physical, in-person services alongside digital options, and incorporating simple, clear language in public online platforms, would reduce barriers and thereby improve accessibility for many. The perspective of relational autonomy is relevant here as it also shifts the focus from merely safeguarding external threats to nurturing relationships that empower persons with disabilities.[131] Importantly, structural disadvantage not only inflicts vulnerability externally but also impacts the internal resilience of the individual to defend itself against any form of potential harm inflicted by, for instance, the government. Given the diverse experiences and marginalisation faced by individuals with disabilities, a holistic approach that addresses their social positioning and marginalisation is essential in determining the extent to which vulnerability is experienced.[132]

5. Conclusion

This paper began by highlighting the issue that the digitalization and automation of governments have introduced new administrative vulnerabilities for citizens which often manifest in citizen's inability to enforce their rights or an infringement of their administrative rights. The digital disability divide, ableist system design, and welfare dependencies are prime examples of vulnerabilities of persons with disabilities in the realm of today's increasingly digitised public administration. While this would suggest that persons with disabilities are a particularly vulnerable population group in the context of digital government, such a vulnerability label can be problematic due to its stigmatising, harmful, and blame-related sentiments.[133] This paper highlighted the dilemma that on the one hand certain population groups need to be adequately protected and ruled out as vulnerable, such a particular vulnerability label can be harmful and stigmatising on the other hand. Stemming from this impasse, this paper addressed the research question: *How can we meaningfully advance an understanding of the vulnerability of persons with disabilities in digital government without perpetuating its stigmatising perspectives?*

To navigate this dilemma, the paper contended that the social model of disability offers a meaningful framework for understanding the vulnerability of persons with disabilities in the realm of digital government. Relying on a 'social model of vulnerability' paradigm, it posits that vulnerability is an externally inflicted phenomenon arising from structural disadvantage and unequal power and opportunity structures. This

127 Georgia van Toorn, 'Inclusion interrupted: Lessons from the making of a digital assistant by and for people with disability' (2024) 41 *Government Information Quarterly* 101900.
128 Ibid, 1.
129 Ibid, 8.
130 Macdonald and Clayton (n 5).
131 Janet Delgado, 'Re-thinking relational autonomy: Challenging the triumph of autonomy through vulnerability' (2019) 5 *Bioethics Update* 50.
132 Scully (n 50) 219.
133 Gilson (n 8).

perspective refrains from stigmatising individuals and instead focuses on societal disablement imposed by the broader system. Thus, the focus is shifted away from individualised perceptions of vulnerability towards a macro-level analysis of systemic injustices, inflicted by the state and society. Here, a 'social model of vulnerability' approach renders the vulnerable individual a passive participant and underscores how existing societal and institutional structures fail to accommodate difference, particularly in the context of digital government.

While a 'social model of vulnerability' approach holds significant potential to reduce the stigma associated with the term 'vulnerability' and acknowledge the disproportionate burdens faced by some members of society, it falls short of directly addressing existing vulnerabilities. Nonetheless, the proposed model presents two key benefits in the context of digital government. First, by highlighting that vulnerabilities are caused by external factors rather than citizens' inherent characteristics, it promotes a solution-oriented perspective. Identifying the specific practices, biases, or societal structures that create vulnerabilities enables targeted interventions to address these issues. Second, viewing vulnerability as externally imposed helps combat the term's associated stigma. It shifts the focus away from the individual and their perceived shortcomings, directing attention instead to systemic flaws and structural inequalities. This external view justifies the labelling of specific population groups as particularly vulnerable, as their vulnerabilities are seen as entirely as stemming from external societal and systemic factors.

The current state of the art has acknowledged that vulnerability is externally inflicted; however, scholarly contributions that focus on the social model of disability in relation to vulnerability remain scarce, underlining the contribution of this paper. The focus on persons with disabilities and their vulnerability in the context of digital government provides a valuable case study as there are distinguishable factors that render the population group particularly vulnerable, such as the digital disability divide, systemic ableism, and government dependencies. The application of a 'social model to vulnerability' framework reveals that all three factors are the product of long-standing unequal power and opportunity structures and thus externally inflicted. For instance, vulnerability arising from welfare dependencies is rooted in the labour market exclusion of disabled persons and the high prevalence of poverty among the population group. Similarly, the transition to a digital landscape has not eradicated, but rather exacerbated, ableist system designs in public service provision. Finally, the digital disability divide persists, often underpinned by intersectional structural disadvantages faced by persons with disabilities. As these causes are special to this population group, they justify a particular vulnerability approach as opposed to its universal notions.

While this paper focuses on the vulnerability of persons with disabilities in the realm of digital government, the 'social model approach to vulnerability' holds promise to reshape perceptions of vulnerability, away from negative, individualistic associations to something that originates externally. Moreover, tackling the vulnerability of citizens before the government regardless of group affiliation and advancing a meaningful understanding of the concept will become increasingly relevant in the years to come as public administrations around the world continue to digitise and automate their services. However, potential limitations are the operationalization of vulnerability as an externally inflicted phenomenon through the social model as the elimination of long-standing structural disadvantages can be challenging. Moving forward, further research is needed to explore the application of the 'social model approach to vulnerability' across diverse population groups in the context of digital government to test its wider applicability.

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