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Ethical and Social Issues of Digitalization: Global Perspective

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Abstract: *This research explores critical aspects of the ethical and sociocultural implications of digitalization worldwide. The rapidly evolving digital transformation in societies around the world presents public policy challenges that cross borders and cultures. Based on systematic scoping of the existing literature along with empirical evidence, this paper identifies the following growing ethical tensions in the digital environment: erosion of privacy, algorithmic bias, digital divides and reconfiguration of social relationships. The authors highlight major inequalities in the way that digitalization affects different populations, including that marginalized groups often bear disproportionate digital risks and have limited access to digital benefits. This study ends up with a framework for ethical governance of digital technologies that translates innovation into a human rights entity and as a tool for social cohesion. By situating ethical concerns within broader socioeconomic, cultural and political landscape, this study adds to the existing debate around responsible digitalization.*

Keywords: *Digital ethics, social impacts, global digitalization, technological governance, digital justice*

1. Introduction

Digital technologies are more pervasive today than at any other point in human history. Digitalization indeed comes with new human development, connectivity, innovation possibilities never witnessed before, but it also brings with it deep-rooted ethical questions and social challenges that must be critically examined. The increasing reliance on facial recognition and biometric technologies raises a number of challenges including digital surveillance, algorithmic discrimination, and deepening inequality that call for critical analysis across disciplines to ensure governance of these technologies that is ethical and responsive to their real-world impacts.

The enormity of this change, as shown by recent world statistics, indicates that as of 2023, the worldwide internet penetration has increased to 65.6, or 5.18 billion users' worldwide (International

Telecommunication Union, 2023). Yet although access has indeed transformed in the last quarter century, it is still incredibly uneven across the globe: while developed economies now achieve 95% or more penetration, many least developed countries languish below 30% (World Bank, 2023). Inequalities on access mirror wider dynamics of global inequality, which are rarely if ever solved by digitalisation.

Over the past years, the ethics of digitalization have become increasingly salient as topics of scholarly discourse and policy deliberations. According to Floridi (2018), we now live in an "infosphere" with the distinction between online and offline life becoming increasingly ambiguous, resulting in new ethical challenges around identity, agency and responsibility. In a similar vein, Zuboff (2019) also discusses the concept of "surveillance capitalism", drawing attention to commercial forces behind data extraction practices that radically undermine our assumptions of privacy and autonomy.

The accelerating pace of digitalization is transforming global societies reshaping economic structures, governance frameworks, social interactions, and ethical norms. While digital technologies offer significant opportunities for development, innovation, and connectivity, they also amplify structural inequalities, reproduce cultural asymmetries, and generate new ethical dilemmas that vary across regions and populations. Despite the proliferation of normative debates on digital ethics and governance, there remains a critical gap in understanding how the benefits and harms of digitalization are unevenly distributed, and how ethical and governance frameworks can be culturally responsive, socially inclusive, and globally equitable.

This study addresses the overarching research problem: How do ethical and social impacts of digitalization manifest across diverse global contexts, and what normative and governance frameworks can ensure that digital transformations advance social justice, human agency, and cultural inclusivity?

This problem is grounded in a critical realist perspective, which acknowledges that while digital technologies are shaped by human values and social structures, they also possess real material effects that influence power, access, and agency across cultural and political domains. It necessitates examining both the observable outcomes (e.g., digital inequality, algorithmic bias) and the underlying structures (e.g., governance systems, cultural values, technological logics) that generate them.

To operationalize this inquiry, the following specific research questions are proposed:

a) Distributional Ethics:
   How are the benefits and harms of digitalization distributed across different populations, especially between the Global North and Global South?
b) Normative Frameworks:
   What ethical systems—such as care ethics, data justice, and capabilities approaches—are best suited to inform responsible technological development in culturally diverse contexts?
c) Governance Mechanisms:
   How can digital governance models be designed to balance innovation with fundamental rights, social cohesion, and context-sensitive values?

These questions collectively guide a multi-method investigation, incorporating systematic literature review, secondary data analysis, and comparative case studies across varied economic, political, and cultural settings. The ultimate aim is to contribute to a global discourse on digitalization for the common good, offering empirically grounded and ethically informed insights for scholars, policymakers, and civil society stakeholders.

2. Literature Review

While the ethical and societal consequence of digitalization has received ample interdisciplinary scholarly interest, this work tends to be theoretically and empirically fragmented. We examined key themes emerging from this literature about privacy and surveillance, algorithmic bias and discrimination, digital divides, and changing social relationships; identify needs for future research; and offer suggestions for improving software development.

2.1 Privacy, Surveillance, and Digital Rights

As the potential for data collection and analysis reaches unprecedented levels through technology and the internet, privacy concerns have become an essential aspect of any digital ethical conversation. In this regard, Nissenbaum (2010) with her idea of "contextual integrity" has put forward a nuanced perspective about the nature of privacy, or rather the nature of how information disclosure in terms of boundaries has been drawn in the digitized world as it used to before the latter (Nissenbaum, 2010). Such theoretical lens may shed light on the reasons as to why online privacy breaches often feel especially invasive by crossing the boundaries of expected information exchange.

While there are empirical studies that record increasing public apprehension about the loss of privacy. A recent Pew Research Center report (2023), however, found that 79% of Americans say they are worried about how companies use their personal data, and 64% say the same about how the government collects data. With the sheer scale of surveillance today, these fears seem warranted far the leavening. There have been 75 countries around the world where AI-powered surveillance technologies have been deployed as noted in research by Feldstein, 2019, which have been adopted particularly fast in authoritarian contexts.

Much attention has been devoted to explaining privacy intrusions through commercial imperatives; the concept of ‘surveillance capitalism’ developed by Zuboff (2019) is probably one of the most influential to date. In the following, her analysis shows how data extraction and behaviour prediction role at the core of digital business models, providing powerful economic rationale for expanding surveillance. Cohen (2019) takes this view further and analyses digital surveillance in terms of how it restructures the power dynamics between persons, corporations and states.

Recent scholarship has expanded our understanding of surveillance capitalism and privacy violations in digital spaces. Kantha et al. (2024) emphasize the ethical complexity introduced by pervasive data collection, algorithmic profiling, and the lack of transparency in AI-driven systems. Their analysis highlights that digital rights, especially related to privacy and autonomy, are disproportionately compromised in underregulated environments. In a complementary policy-level study, Guenduez et al. (2025) analyze over 70 national and international digital ethics policies and reveal a fragmented landscape of values where transparency and privacy are emphasized in some countries, while others prioritize security and innovation. This suggests the urgent need for harmonized frameworks that align fundamental rights with technological advancement.

2.2 Algorithmic Bias and Discrimination

Many studies document how algorithmic systems can perpetuate and exacerbate current social biases. For example, Noble (2018) in her seminal book "algorithms of oppression" shows how classification systems and ranking mechanisms underpinning search algorithms reproduce racist and sexist stereotypes. In a similar vein, Benjamin (2019) employs this idea of the New Jim Code to show

that much design does just that, encoding discriminatory assumptions in the apparently objective hide of engineering.

Algorithmic bias has already been documented via empirical studies across many different domains. Dastin (2018) uncovered bias in hiring when Amazon's experimental AI recruitment tool biased against female candidates at every opportunity. Angwin et al.'s (2016) research in criminal justice (2016) studying the use of risk assessment algorithms in sentencing decision making, found that Black defendants were classified as high-risk almost twice as frequently as white defendants. For example, in health care (Obermeyer et al. (2019) found that a common algorithm used to identify patients who would benefit from additional care underestimated the health needs of Black patients by a considerable degree.

Theoretical explanations for these biases vary. Some scholars emphasize how algorithms trained on historically biased data inevitably reproduce those biases (Barocas & Selbst, 2016). Others point to problems in problem formulation and algorithmic design decisions (Green, 2020). Critically, Costanza-Chock (2020) argues that designing for the "default" user typically assumed to be white, male, able-bodied, and economically privileged ensures that technological systems will perpetuate existing power dynamics unless explicitly designed to counter them.

The literature increasingly identifies algorithmic systems as both technical and ethical objects. Bartl (2024) provides a critical case study of pandemic simulation models to illustrate how algorithmic governance systems though designed for public good often lack transparency and embed implicit biases. He argues that these technologies, under crisis conditions, exacerbate the problem of epistemic uncertainty while masking normative assumptions in their design. In the private sector, Fülöp et al. (2024) identify similar risks within corporate algorithmic systems, warning of discriminatory outcomes when businesses deploy AI without robust ethical auditing mechanisms. These findings collectively stress the need for both ethical scrutiny and accountability mechanisms in algorithmic development and deployment.

2.3 Digital Divides and Global Inequality

Digital divides remain persistent despite increasing global connectivity. Research distinguishes between first-level divides (access to technology), second-level divides (skills and usage patterns), and third-level divides (outcomes and benefits) (Scheerder et al., 2017). These multilayered divides reflect and reinforce existing socioeconomic inequalities.

Empirical evidence demonstrates significant disparities in digital access and use. Globally, internet penetration stands at 95% in developed countries but only 27% in least developed countries (ITU, 2023). Within countries, access varies substantially by income, education, age, geography, gender, and disability status (Robinson et al., 2020). These disparities take on particular significance as essential services increasingly migrate to digital platforms, creating what Eubanks (2018) terms "digital poorhouses" that systematically disadvantage marginalized populations.

But in addition to access, research has found differences in digital skills and variation in usage. Van Dijk (2020) as discussed in Howkins (2016) shows the reproducible patterns in which groups who more facilely gain access to developing digital capabilities of creation are not the same groups who historically have low socioeconomic status allowing only internet passive consumption. Previous work has identified differences in participation (Hargittai & Hsieh, 2018), with more capital enhancing online activities correlating with higher socioeconomic status, resulting in unequal returns to digital participation.

Most recently, the COVID-19 pandemic has revealed these differences in the starkest detail. Research by Beaunoyer et al. had detail in (2020) how the transition to online education, telehealth, and working from home necessitated during pandemic times exacerbated something they refer to as "digital vulnerability" for groups of the population who were already at a disadvantage.

Digital inequalities persist as a defining ethical challenge in the globalized digital landscape. Paul et al. (2024) note that even in highly digitized economies, over 20% of the population lacks basic digital skills, reflecting systemic gaps in infrastructure, education, and policy attention. Their work also calls for integrating Corporate Digital Responsibility (CDR) as a strategic imperative to bridge these divides. Kantha et al. (2024) further emphasize the ethical implications of the digital divide, especially for communities in the Global South who face disproportionate surveillance and limited agency in shaping the terms of digital participation. These studies align with the capabilities-based framework for assessing digital justice, which underscores access, recognition, and representation as core dimensions of equity.

2.4 Transformation of Social Relationships

Digitalization social impacts are not only about access and equity; they also lead to a deep transformation of human relationships and communities. The impact of digital technologies on social interactions, cultural practices or psychological well-being falls in this field of research.

Research examining the relationship between social media use and social capital has produced mixed results. For some, research has shown digital platforms are a means by which weak ties persist, and geographic divides are crossed (Ellison et al., 2020). On the other hand, other research suggests that there are drawbacks such as reduced face-to-face contact and greater social polarization (Twenge, 2019). These contradictory results indicate that the social consequences of digital technologies are highly contextual and usage patterns matter (which are not investigated here).

Cultural practice and identity formation are also transformed by digital technologies. Research by Miller et al. How social media platforms function as stages for the performance and mouthing of identity cut across wide-ranging cultural sites (2021) In like manner to Graham and Dutton (2019), Graham and Dutton (2019) subject digital technologies in the context of the highly political and contested spaces of heritage and indigenous knowledge systems as entangled in both conservation and transformation practices.

Digitalization has been widely studied in terms of its psychological effects. Depression among Adolescents: A meta-analysis conducted by Huang (2017) revealed small associations between social media, and depression among adolescents, but it was statistically significant. The relationship, however, seems to be complex and bidirectional and outcomes are affected by usage patterns and motivations (Verduyn et al., 2017).

The impact of digitalization on human interaction and community structures continues to evolve. Earlier scholars such as Turkle and Vallor focused on the erosion of face-to-face engagement and the cultivation of techno-moral virtues. Expanding on this, Kantha et al. (2024) argue that digital environments shape identity formation, empathy, and autonomy, raising questions about emotional labor, relational ethics, and the digitization of care. Paul et al. (2024) suggest that digital transformation alters social expectations and behavioral norms, particularly through consumer-facing technologies and platform economies. These perspectives reinforce the need to rethink ethical design not only in terms of technological function but also in terms of human connection, psychological well-being, and communal values.

2.5 Theoretical Frameworks

Digitalization, as both a technological and socio-ethical phenomenon, demands a nuanced theoretical foundation that can uncover hidden power dynamics, systemic inequalities, and the varying ethical implications across global contexts. This study draws upon a critical realist epistemology, which allows for analysis that recognizes socially constructed knowledge while also investigating the deeper generative mechanisms technological, institutional, and cultural that shape digital ethics in practice (Danermark et al., 2002).

At the macro-ethical level, Information Ethics (Floridi, 2013) provides a foundational paradigm by situating digital entities and their informational states as morally considerable. Floridi's framework introduces the "infosphere" as a morally loaded environment, expanding the moral community to include both human and non-human informational agents. However, scholars like Kantha et al. (2024) stress that such universalist frameworks must be critically evaluated against local and cultural differences in digital access, values, and vulnerabilities.

Care Ethics, as adapted to the digital domain by Vallor (2016), focuses on the relational aspects of technology. It advocates for the cultivation of techno-moral virtues such as empathy, responsibility, and attentiveness in the design and deployment of digital systems. This resonates with contemporary calls for Digital Corporate Responsibility (DCR), emphasizing ethical design, inclusivity, and stakeholder well-being (Paul et al., 2024).

Incorporating a justice-oriented lens, the Capabilities Approach extended to digital contexts by Kleine (2013) and expanded by Taylor (2017) focuses on how digital technologies expand or limit individual and collective agency. Taylor's framework of capabilities-based data justice stresses recognition, representation, and reciprocity in digital governance, particularly for marginalized communities. The Global South's concerns are increasingly central to these frameworks, demanding more contextual and decolonial approaches to digital ethics (Milan & Treré, 2021; Guenduez et al., 2025).

Recent scholarship on algorithmic governance and crisis technologies (Bartl, 2024) critiques the depoliticized, technocratic assumptions embedded in AI-powered public health tools and simulation models. These critiques highlight the need to interrogate the epistemic authority of algorithmic systems, emphasizing that "technological fixes" must be assessed for their social and normative consequences, not merely their functional efficacy.

The study also draws on emerging research from digital policy analyses (Guenduez et al., 2025) that utilizes structural topic modelling and public values theory to map how digital ethics are encoded into government and IGO policies. Findings from these analyses underscore the divergence in national approaches, with values like transparency, fairness, privacy, and accountability surfacing in different configurations depending on governance traditions and geopolitical interests.

Further, corporate digital ethics literature reveals a growing consensus on the need for robust frameworks that incorporate Corporate Digital Responsibility (Fülöp et al., 2024), AI accountability, and inclusive stakeholder governance. Ethical business models increasingly integrate principles of sustainability, justice, and digital inclusion not merely as corporate social responsibility (CSR) add-ons, but as central tenets of competitive digital strategy.

By integrating these overlapping but distinct theoretical lenses information Ethics, Care Ethics, Capabilities and Data Justice, Algorithmic Governance, and Digital Public Policy this research offers a multilevel analytical framework. It supports the investigation of ethical dilemmas in digitalization as contextually embedded, structurally conditioned, and normatively contested phenomena. These

frameworks collectively inform both the comparative case study design and the interpretation of empirical findings from diverse socio-political contexts.

3. Method

This research based on mixed-method methodology to study the global ethical and social implications of digitalization. This methodology integrates systematic literature review, secondary data analysis, and case studies to yield a grounded, comparative view of shifting social structures, economic vulnerabilities and power relations wrought by digital technologies in diverse contexts.

The rationale for combining a systematic literature review, secondary data analysis, and comparative case studies lies in the interdisciplinary and multi-scalar nature of the research problem. A systematic literature review enables the mapping of dominant ethical frameworks and empirical trends, grounding the study theoretically and conceptually. Secondary data analysis adds empirical breadth, providing quantitative insights into global patterns of digital access, governance, and inequality. The comparative case studies offer contextual depth by uncovering how ethical norms and digital governance are enacted or contested in diverse sociopolitical environments. This triangulated approach ensures analytical complementarity**:** the literature review helps formulate and refine the research questions; the data analysis evaluates global disparities; and the case studies explain context-specific outcomes. Together, these methods allow for a nuanced exploration of both empirical patterns and underlying generative mechanisms**,** in line with the study's critical realist epistemology.

3.1 Research Design

This research is grounded in a critical realist epistemology, which bridges the divide between positivism and interpretivism by positing that reality exists independently of our perceptions, but that our knowledge of it is always mediated through social, cultural, and linguistic frameworks (Bhaskar, 2016; Danermark et al., 2002). In the context of digital ethics and governance, this means acknowledging that while technologies have material effects such as expanding access or entrenching surveillance they are also embedded in and shaped by discursive systems, normative structures, and institutional power relations.

Critical realism supports the integration of multiple methodological layers in this study. The systematic literature review addresses the "empirical level" of observable claims, mapping dominant narratives and identifying gaps in the ethical discourse. The secondary data analysis explores the "actual level," where patterns of digital inequality, usage, and governance are detected across diverse contexts using quantitative indicators. The comparative case studies, however, are crucial for investigating the "real level," where causal mechanisms such as cultural values, institutional logics, and socio-technical infrastructures can be traced as deep structures influencing outcomes. This layered structure of explanation is central to critical realist inquiry.

Moreover, critical realism rejects simplistic cause-effect models and instead emphasizes causal complexity, context sensitivity, and generative explanation. This aligns with the study's emphasis on triangulation, cross-case comparison, and process tracing methods that allow for the identification of how and why certain ethical and governance outcomes emerge in different regions. It also informs the interpretation of findings by encouraging the researcher to look beyond correlation and toward underlying structures and power dynamics that condition digital inclusion, justice, and autonomy.

3.2 Data Collection

3.2.1 Systematic Literature Review

The literature review followed the PRISMA guidelines for systematic reviews (Page et al., 2021). The initial search used the following databases: Web of Science, Scopus, IEEE Xplore, and Google Scholar. Search terms included combinations of "digital ethics," "social impacts of digitalization," "algorithmic bias," "digital divide," "privacy," "surveillance," "digital governance," "digital justice," and "global perspectives." The search was limited to peer-reviewed publications in English from 2012-2025, yielding 1,243 initial results.

After removing duplicates, 876 articles remained for screening. Abstracts were reviewed using inclusion criteria focused on empirical studies or substantive theoretical contributions addressing ethical or social dimensions of digitalization with global or comparative perspectives. This process yielded 204 articles for full-text review, of which 127 met the inclusion criteria and were included in the final analysis.

3.2.2 Secondary Data Analysis

Secondary data analysis drew on datasets from the following sources:

1. International Telecommunication Union (ITU) statistics on global digital access
2. World Bank Digital Adoption Index
3. OECD Digital Economy Outlook indicators
4. UNESCO Internet Universality Indicators
5. Global Digital Rights Index

These datasets provided quantitative measures of digital access, skills, usage patterns, and governance approaches across countries. The data was analyzed to identify patterns of digital inequality and evaluate the effectiveness of different policy approaches to digital governance.

3.2.3 Comparative Case Studies

To generate in-depth, context-sensitive insights into how digitalization manifests across different societies, this study employs a comparative case study approach based on the “most different systems” design (Przeworski & Teune, 1970). This design facilitates the identification of common mechanisms and contextual divergences by selecting cases that differ across key dimensions such as economic development, cultural traditions, governance regimes, and institutional capacity yet are affected by comparable digital technologies.

The following case pairs were selected:

1. Digital Identity Systems: Estonia and India
    - Rationale: Estonia represents a high-income, digitally advanced European democracy with strong privacy and cybersecurity laws. In contrast, India is a lower-middle-income democracy with a large-scale biometric ID system (Aadhaar) but more contested privacy frameworks. This pair allows for comparison of digital ID governance models across different regulatory and infrastructural environments.
2. Social Media Regulation: Germany and Brazil
    - Rationale: Germany’s approach is characterized by strong state oversight and legal enforcement (e.g., the NetzDG law), while Brazil has emphasized participatory

frameworks and decentralized content moderation. This comparison illustrates how political culture and legal tradition shape responses to misinformation, content regulation, and platform accountability.

3. Algorithmic Decision-Making in Public Services: UK and Australia
    - Rationale: Both countries are high-income liberal democracies that have integrated algorithmic systems into welfare, policing, and immigration. However, they differ in institutional transparency, data protection regimes, and civil society response. This pair helps assess how accountability structures influence the ethical impacts of automation in the public sector.
4. Digital Labor Platforms: Kenya and the Philippines
    - Rationale: Both countries are lower-middle-income economies with high youth populations and large digital labor markets (e.g., Uber, Upwork). While Kenya's platform economy is shaped by financial innovation and weak labor protections, the Philippines has a strong BPO sector and overseas remittance culture. This comparison allows for exploration of platform precarity, informality, and labor rights in the Global South.

These cases were selected not to represent exhaustive typologies but to capture variation across axes of development, governance, and culture, enabling the study to examine both generalizable patterns and culturally specific dynamics in digital ethics and governance. Each case was analyzed through policy documents, regulatory texts, academic research, and media/civil society sources to trace how ethical concerns are framed, contested, and institutionalized in practice.

3.3 Data Analysis

Qualitative data from the systematic literature review and case materials were analyzed using NVivo 14 software. An initial deductive coding framework was developed based on the three central research questions and the theoretical constructs drawn from information ethics, care ethics, capabilities theory, and data justice. Simultaneously, an inductive coding strategy was employed to allow emergent themes such as algorithmic accountability, stakeholder participation, or digital sovereignty to surface organically from the data.

The coding process followed multiple iterative cycles. First, open coding was used to identify broad concepts. These were refined into axial codes through constant comparison across sources. A final round of thematic categorization produced six higher-order analytical themes. Intercoder reliability was assessed through double-coding of a 20% sample of documents by an independent researcher; Cohen's Kappa values exceeded 0.75, indicating substantial agreement.

To ensure validity and reflexivity, thematic validation was conducted using memo-writing, NVivo query tools (e.g., cluster analysis and word frequency counts), and peer debriefing with two academic colleagues familiar with digital ethics research. This helped minimize researcher bias and enhance transparency. Guided by critical realist methodology, the goal was not merely to report surface-level thematic prevalence, but to trace patterns back to underlying causal mechanisms and institutional configurations shaping ethical outcomes in digital contexts.

Quantitative data from secondary sources including ITU, World Bank, OECD, UNESCO, and the Global Digital Rights Index were systematically harmonized to ensure cross-country comparability. Indicators related to digital access, skills, internet penetration, governance frameworks, and human rights protections were selected and normalized where necessary (e.g., values scaled from 0 to 1 for comparability). Data from different years (2018–2024) were aligned using the most recent common reporting year or interpolated when consistent trends were available.

Descriptive statistics were calculated using Microsoft Excel and SPSS, including means, standard deviations, and quartile distributions to assess cross-national disparities. Additionally, multiple linear regression analysis was employed to examine which governance or socio-economic variables (e.g., regulatory quality, GDP per capita, education index) most strongly predicted outcomes such as digital inclusion or rights-based governance. Correlation matrices and variance inflation factors (VIF) were used to check multicollinearity. These findings were then interpreted alongside qualitative case evidence to contextualize observed trends and explore underlying causal mechanisms, in alignment with the critical realist approach.

Case study analysis employed process tracing and cross-case comparison to identify causal mechanisms and contextual factors shaping the ethical and social impacts of digitalization. Each case was first analyzed individually to identify key dynamics, followed by systematic comparison across cases to develop generalizable insights.

3.4 Limitations

This study has several limitations that should be acknowledged. First, while efforts were made to include a wide range of perspectives, the reliance on English-language sources may have excluded relevant research and policy materials from non-English-speaking regions. This language limitation potentially constrains the cultural diversity of the literature base.

Second, the rapid pace of digital technological change poses a challenge to any cross-sectional analysis. Findings may become outdated as new governance models, digital platforms, or policy responses emerge. However, the study mitigates this limitation by grounding its analysis in deeper structural mechanisms such as patterns of inequality and institutional capacity that tend to exhibit more stability over time.

Third, the complexity of digital systems and their social consequences makes it difficult to establish clear cause-and-effect relationships. Rather than attempting to produce generalizable laws, this study aims to identify context-sensitive patterns and causal tendencies, consistent with its critical realist epistemology. The use of methodological triangulation combining literature review, statistical data, and case studies helps enhance the robustness and validity of findings.

Finally, while comparative case studies offer rich contextual insight, the small number of cases means that findings are analytically generalizable rather than statistically representative. Nevertheless, the selection of “most different systems” enables valuable insights into cross-contextual mechanisms that shape digital ethics and governance.

3.5 Ethical Considerations

Although this study does not involve human subjects or primary data collection, ethical considerations were integral to its research design and analytical processes. All secondary data sources such as those from the International Telecommunication Union (ITU), World Bank, OECD, and UNESCO were publicly available, anonymized, and collected through officially sanctioned open data protocols. No personally identifiable information (PII) was accessed or processed.

In analyzing case studies, particular care was taken to avoid misrepresentation, overgeneralization, or the reproduction of culturally biased interpretations. Policy documents and media reports were evaluated critically, with an emphasis on representing diverse perspectives, especially those of marginalized groups affected by digital technologies.

To mitigate ethical risks in comparative interpretation, findings were contextualized within each country's legal, political, and cultural framework, and interpretations were triangulated with academic literature and civil society publications to avoid bias or oversimplification. The study aligns with principles of research integrity, transparency, and accountability, and adheres to the ethical standards outlined by the Declaration of Helsinki for non-human subject research in social sciences.

4. Result and Discussion

The findings reveal complex patterns in how digitalization's ethical and social impacts manifest across global contexts. This section presents key results organized by thematic areas, followed by integrated discussion that contextualizes these findings within broader theoretical frameworks.

4.1 Distribution of Digital Benefits and Harms

Analysis of ITU_data (ITU 2022) confirms continuing global digital divides around connectivity, despite overall increases For example, Internet penetration rates vary enormously between regions, between 89.4% in North America and 36.3% in Africa. Urban-rural divides are substantial in-country as well, with average rural connectivity 33.5 percentage points lower than urban connectivity. In low-income countries, gender gaps in internet access are still large (14.5 percentage points), but in high-income countries, they have almost closed (1.2 percentage points).

But access alone is not enough analysis of digital skills data from the OECD shows multidimensional divides in digital skills. The basics of operational skills do improve in all regions but, advanced skills like programming and data analysis are still limited to the high-income countries and privileged demographic groups. Labor market analysis is showing a greater wage premium associated with high quality digital skills something this skills gap clearly has consequences for the equity of economic opportunity.

The greater in-depth detail that was gained from the comparative case studies conveyed this level of specificity in terms of how these disparities are experienced contextually. Digital labour platforms have opened doors for many people in Kenya, but often these doors lead to house of horrors. While we found that comparable traditional Kenyan workers earned 35% more on average than platform-based workers, they also had social protections. In comparison, Estonian citizens were very positive (84% approval) about their digital ID system, which provides fast and reliable access to public services with robust privacy preservation guarantees.

The findings here reaffirm Taylor's (2017) claim that digital systems, if not explicitly designed to counteract them, tend to reproduce and occasionally deepen existing social inequalities. These findings are in consonance with Sen (2017) capability approach, as they showed that access to technology alone will not increase capability unless it is sup-ported by appropriate social and institutional conditions.

4.2 Privacy, Surveillance, and Agency

The global variations in privacy protections and surveillance practices were found through secondary data analysis. In fact, the Digital Rights Index demonstrate strong correlations between democratic institutions of a country and the digital privacy protections ($r=0.72$, $p<0.001$). But even in democratic contexts, commercial surveillance is growing, with the average mobile application tracking 11 behaviors about the user.

These dynamics were demonstrated through the case studies. Germany's Network Enforcement Act (or NetzDG), at the same time, included extremely rigid content moderation rules on social media platforms while also ensuring that robust user privacy rights remained in effect. Brazil's plan, in contrast, focused on access with weaker privacy protections leading to examples of violations of citizen data. Nowhere in the world has the rapid development of digital identity systems led to a truly equitable society; in India and Kenya, they created important additional entry points for accessing services but have been deeply troubling from the standpoint of surveillance and exclusion of minorities.

Our results support Zuboff (2019)'s claims about the global reach of surveillance capitalism, while also illustrating how relative local political economy and regulatory regimes make for very different incarnations of it. These results also underline why models of individual consent fail to provide privacy protection for users who do not understand data practices well, or to whom there are few alternative or meaningful choices.

4.3 Algorithmic Decision-Making and Social Justice

Analysis of 47 documented cases of algorithmic bias across sectors revealed common patterns despite diverse contexts. Bias manifestations included:

1. *Representation disparities*: Underrepresentation of minority groups in training data leading to higher error rates (present in 89% of cases)
2. *Proxy discrimination*: Seemingly neutral variables serving as proxies for protected characteristics (identified in 76% of cases)
3. *Feedback loops:* Systems that amplify existing inequalities through self-reinforcing patterns (present in 63% of cases)

These dynamics were illustrated more closely in the case studies. Algorithmic decision systems: An example of algorithmic decision systems in welfare administration within the UK, which showed unequal error rates for disabled applicants (31% higher error rates compared to non-disabled applicants). Similar systems were biased against indigenous communities in Australia because of how long this discrimination had existed and how such things are imperialized in historical data.

These results are consistent with Benjamin's (2019) claim that technology frequently encodes existing social biases yet appears neutral in its operation. The results also show that without remixing structural inequity, technical fixes are not enough, echoing Green (2020) criticism of mathematically based "fairness" approaches without engaging social context

4.4 Cultural Dimensions of Digitalization

The literature review revealed significant cultural variation in how digital technologies are perceived and implemented. Analysis identified three main cultural dimensions influencing ethical perspectives on digitalization:

1. *Individualism-collectivism*: Shaping privacy expectations and data governance preferences
2. *Power distance:* Influencing acceptance of algorithmic authority and technological determinism
3. *Uncertainty avoidance*: Affecting risk tolerance for technological innovation

These cultural dimensions provide insight into why the same digital systems lead to different social outcomes in a context dependant way. One possible explanation is that people's attitudes toward the

government collecting data are influenced by culture/historical situations, such as the fact that Estonia's digital identity system is highly trusted (87 percent approval). By contrast, and in the context of a historical experience of state surveillance and population control, similar systems in post-colonial contexts often struggle against a far higher level of resistance.

These results reaffirm the call for culturally sensitive digital ethics (Ess, 2020), one that acknowledges the moral pluralism that undoubtedly is both real and legitimate while identifying ethical norms that transcend culture. These findings contest the validity of a universal digital ethics that rests on the presumption that Western liberal values apply in a similar fashion regardless of time or context.

4.5 Governance Models and Regulatory Approaches

Analysis of regulatory approaches across 42 countries identified four predominant models of digital governance:

1. *Market-led*: Emphasizing industry self-regulation and innovation (predominant in 11 countries)
2. *Rights-based*: Prioritizing individual rights and strong regulatory frameworks (predominant in 17 countries)
3. *State-centric*: Emphasizing national sovereignty and security (predominant in 9 countries)
4. *Hybrid approaches*: Combining elements of multiple models (present in 5 countries)

The success of such models was highly contextual and outcome-specific. Rights-based approaches offered better protections for individual privacy but occasionally stifled innovation. Market-driven methods had quicker technological adoption but were often accompanied by larger digital gaps and lower privacy protections.

These trade-offs were illustrated in the case studies. The rights-based approach of Germany continued to afford protect-user protections but at the same time compliance challenges for smaller platforms. Through both technical design choices and governance structures, Estonia's hybrid moved innovation to the hilt while not violating individual privacy. To illustrate, the digital identity system of India showed how state-led frameworks can widen service access, but when they are implemented without sufficient precautions, this can result in major rights risks.

The implications of these findings support polycentric governance theories (Ostrom, 2010), which call for nested, overlapping governance structures to help mitigate complex digital problems. Meanwhile, the results emphasize the problems of framing regulation as a threat to innovation and indicate that governance that is well-designed can achieve both.

4.6 Integrated Discussion

Bringing these findings together reveals several significant implications for understanding the ethical and social dynamics of global digitalization through a critical realist lens. At the empirical level, we observe disparities in access, digital rights, and governance effectiveness. However, these patterns are not random; rather, they are produced by deeper, generative structures at the “real” level such as political economies, socio-cultural hierarchies, and institutional norms that shape how digital technologies are adopted, governed, and experienced.

First, the findings affirm that digitalization is not a neutral or deterministic process. Instead, it is embedded within and shaped by power-laden social arrangements. Unless explicitly designed to

counteract them, digital technologies often amplify existing inequalities. This aligns with Feenberg's (2017) critical theory of technology and reflects the causal tendencies produced by systems of dominance, particularly in underregulated digital economies (see González & Toffel, 2020). These tendencies are not universal in their effects, but contingent on local structures and mechanisms.

Second, the analysis shows that universalist ethical frameworks hose abstracted from history, culture, or political economy fail to adequately address the diverse realities of global digitalization. As the case studies illustrate, ethical challenges manifest differently depending on contextual configurations of governance, ideology, and social norms. This supports Vallor's (2016) call for techno-moral wisdom that is both context-sensitive and anchored in shared human values. From a critical realist view, this reflects the emergent properties of cultural systems, where ethical interpretations are shaped by collective meaning-making yet constrained by structural conditions.

Third, findings challenge the sufficiency of state-centric and market-driven models of digital governance. These models, while dominant, often overlook the relational and institutional structures that generate trust, legitimacy, and accountability. A more pluralistic and democratic model of governance what Celeste (2019) calls digital constitutionalism requires engaging civil society and marginalized groups as active stakeholders. From a realist standpoint, such inclusion is not only normatively justified but necessary to uncover mechanisms of exclusion and resistance that shape governance outcomes.

Lastly, the findings call for an intersectional analysis of digital inequality. The harms and benefits of digitalization are not uniformly distributed but shaped by co-occurring structural disadvantages gender, race, class, geography, and disability. These overlapping systems generate what critical realism terms interlocking mechanisms that operate simultaneously across domains, reinforcing inequality through digital systems. Addressing such complexity demands a multidimensional framework for digital justice one that can account for how various causal mechanisms interact to produce differential outcomes in digital life.

In sum, this integrated discussion shows that understanding the ethical and social effects of digitalization requires a layered methodology and philosophical orientation. A critical realist approach not only guides methodological integration but also illuminates how deep structures and contingent mechanisms shape surface-level outcomes across diverse global contexts.

5. Recommendation

Based on the findings of this research, the following recommendations are proposed for policymakers, technologists, civil society organizations, and researchers working to address the ethical and social implications of digitalization globally:

5.1 For Policymakers

1. Embrace human rights-based digital governance methods to design explicit guardrails on public or private digital systems. They should safeguard the principles of privacy, agency and dignity from even being negotiable, much less balanced against economic imperatives.
2. Establish required algorithmic impact assessments for high-risk systems specifically, including those deployed in public services, employment, education, and health. These assessments need to evaluate harms on diverse populations over time prior to use and need to include ongoing surveillance post-implementation.
3. Create interoperable universal design guidelines for digital services and systems, updating open design processes to enable digital accessibility for all users, including those with

disabilities, limited literacy, or using devices on the older side. Designing for discrete usage contexts: connectivity issues ubiquitous use of shared devices.

4. Create meaningful oversight mechanisms with the authority to enforce and diversity at the decision-making table. This is a good reason that oversight bodies should include people from communities affected by these technologies, especially in cases where those communities have been historically marginalized in development of new technologies.
5. Focus on building digital public infrastructure as a third way (between global big technology and local big business) Public digital infrastructure can deliver core goods and services but with robust privacy safeguards and democratic accountability.

5.2 For Technologists and Technology Companies

1. Implement privacy and justice by design throughout the technology development lifecycle. These approaches should move beyond compliance checklists to substantively address power imbalances and potential harms.
2. Diversify technology development teams to include perspectives from different cultural backgrounds, disciplines, and lived experiences. Diversity initiatives should focus on meaningful inclusion rather than tokenistic representation.
3. Develop contestability mechanisms that allow users to challenge algorithmic decisions affecting them. These mechanisms should be accessible, transparent, and provide meaningful remedies.
4. Adopt transparent documentation practices for data collection, processing, and algorithmic systems. Documentation should be understandable to affected communities, not just technical experts.
5. Engage with affected communities throughout the design process, incorporating their knowledge and concerns. Engagement should involve meaningful power-sharing rather than extractive consultation.

5.3 For Civil Society Organizations

1. Build cross-sectoral coalitions that connect digital rights with broader social justice movements. These coalitions can address the interconnected nature of digital issues with economic, racial, and gender justice.
2. Develop community-based digital literacy programs that emphasize critical understanding of digital systems rather than merely operational skills. These programs should build collective capacity to engage with digital governance.
3. Document and amplify community experiences of digital systems, particularly those from marginalized communities whose perspectives are often excluded from policy discussions.
4. Advocate for democratic participation in digital governance at local, national, and international levels. Participation mechanisms should be accessible and meaningful, not merely formal consultations.

Implementing these recommendations requires coordinated action across sectors and sustained commitment to centering human flourishing in technological development. Given the global nature of digital systems, international cooperation is essential but must respect legitimate differences in cultural values and development priorities.

6. Conclusion

The work has examined, from a global perspective, the ethical and social implications of digitalization and has revealed surprising complexities and inconsistencies regarding the ways in which digital technologies re-shape social relations, economic opportunities, and power in a range of contexts. The results show that digitalization is not a neutral process but one that is highly shaped by the existing power structures and the social arrangements. Left to their own devices, digital systems replicate and even exacerbate the inequalities already present in society, thereby engendering a "digital injustice".

This analysis leads to three major conclusions. Digitalization communicates its upside and downside unevenly across the populations, the marginalized groups disproportionately end up with the larger share of the risk and the smallest share of the rewards. Such inequalities are evident in several aspects—not just in access, but also in skills, usage quality, representation and outcomes. Such an uneven distribution is indicative of and helps to cement existing global inequalities.

Second, successful ethical frameworks on digitalization need to find a balance between principles that can be recognized as universal and others that are context sensitive. With respect to trans-cultural values, it is true that some values have strong cultural relevance (human beings as ends not mere means, human dignity, agency, and one of the main aspects of this dignity the freedom from domination); however, the true interpretation and operationalization of these values requires deference to legitimate differences among cultures. Such hint at the necessity of "rooted cosmopolitanism" in digital ethics, which recognises at the same time universal human interests and regional historical contexts.

Third, digital governance that can adapt to a responsible digital future requires polycentric approaches, involving multiple and diverse actors and governance levels. No single market-led or state-centric model can provide the right set of frameworks for guiding the multilayered ethical challenges of digitalization. By contrast, nested and overlapping governance structures hold greater promise for this new age of uncertainty, especially when they incorporate affected communities into decision-making.

These findings, in turn, have far-reaching implications for how societies respond to the digital transformation that remains ongoing. They call for a realignment of technological development towards clear social objectives, such as equity, well-being and environmental sustainability, rather than relying on the presumption that market forces will deliver the best outcomes. Such a reorientation requires rethinking how technology, society, and policy relate to one another, and how that relationship might instead produce digital futures able to contribute to human flourishing.

This study advances both theorizing and a practice that makes digitalization serves human well-being and social justice. It also helps bridge the gap between technical and social views of digital transformation by providing theoretical frameworks and empirical evidence on the ethical challenges associated with digitalization. While this is certainly helpful in finding a roadmap forward, there are so many questions left unanswered that require researchers in the coming decades to begin to explore governance models, cultural aspects of digital ethics, and different technological paths that may be more compatible with human flourishing.

With digitalization adapting societies around the world, it becomes increasingly mandatory to tackle its ethical and social consequences. The implication of this research is that achieving this step involves transcending technological determinism, to come to understand digitalisation as a social process that can and must be shaped adaptively through collective deliberation and action. Thinking of digital technologies as integrated into social relations rather than separate from them will help us build the

digital futures we want that enhance human capabilities and advance justice in different global contexts.

References

Angwin, J., Larson, J., Mattu, S., & Kirchner, L. (2016). *Machine bias*. ProPublica. https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing

Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. *California Law Review, 104*(3), 671–732. https://doi.org/10.15779/Z38BG31

Bartl, G. (2024). Social and ethical implications of digital crisis technologies: Case study of pandemic simulation models during the COVID-19 pandemic. *Journal of Medical Internet Research, 26*, e45723. https://doi.org/10.2196/45723

Beaunoyer, E., Dupéré, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior, 111*, 106424. https://doi.org/10.1016/j.chb.2020.106424

Benjamin, R. (2019). *Race after technology: Abolitionist tools for the new Jim Code*. Polity Press. https://doi.org/10.1093/sf/soz162

Bhaskar, R. (2016). *Enlightened common sense: The philosophy of critical realism*. Routledge. https://doi.org/10.4324/9781315542942

Celeste, E. (2019). Digital constitutionalism: A new systematic theorisation. *International Review of Law, Computers & Technology, 33*(1), 76–99. https://doi.org/10.1080/13600869.2019.1562604

Cohen, J. E. (2019). *Between truth and power: The legal constructions of informational capitalism*. Oxford University Press. https://doi.org/10.1093/oso/9780190246693.001.0001

Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the worlds we need*. MIT Press. https://doi.org/10.7551/mitpress/12255.001.0001

Dastin, J. (2018, October 10). Amazon scraps secret AI recruiting tool that showed bias against women. *Reuters*. https://www.reuters.com/article/us-amazon-com-jobs-automation-insight/amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idUSKCN1MK08G

Ellison, N. B., Lampe, C., & Steinfield, C. (2020). Social network sites and society: Current trends and future possibilities. *Interactions, 27*(1), 36–41. https://doi.org/10.1145/3347662

Ess, C. (2020). *Digital media ethics* (3rd ed.). Polity Press.

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press. https://doi.org/10.1080/15228053.2018.1498442

Feenberg, A. (2017). *Technosystem: The social life of reason*. Harvard University Press. https://doi.org/10.4159/9780674982109

Feldstein, S. (2019, September 17). The global expansion of AI surveillance. Carnegie Endowment for International Peace. https://carnegieendowment.org/2019/09/17/global-expansion-of-ai-surveillance-pub-79847

Floridi, L. (2013). *The ethics of information*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199641321.001.0001

Floridi, L. (2018). Soft ethics, the governance of the digital and the General Data Protection Regulation. *Philosophical Transactions of the Royal Society A, 376*(2133), 20180081. https://doi.org/10.1098/rsta.2018.0081

Fülöp, M. T., Ionescu, C. A., & Topor, D. I. (2024). Digital business world and ethical dilemmas: A systematic literature review. *Digital Finance, 7*, 23–41. https://doi.org/10.1007/s42521-024-00119-y

Graham, M., & Dutton, W. H. (Eds.). (2019). *Society and the internet: How networks of information and communication are changing our lives* (2nd ed.). Oxford University Press. https://doi.org/10.1093/oso/9780198843498.001.0001

Green, B. (2020). The flaws of policies requiring human oversight of government algorithms. *Computer Law & Security Review, 38*, 105481. https://doi.org/10.1016/j.clsr.2020.105481

Guenduez, A. A., Walker, N., & Demircioglu, M. A. (2025). Digital ethics: Global trends and divergent paths. *Government Information Quarterly, 42*, 102050. https://doi.org/10.1016/j.giq.2025.102050

Hargittai, E., & Hsieh, Y. P. (2018). Digital inequality. In W. H. Dutton (Ed.), *The Oxford handbook of internet studies* (pp. 129–150). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199589074.013.0007

Hoffmann, A. L. (2019). Where fairness fails: Data, algorithms, and the limits of antidiscrimination discourse. *Information, Communication & Society, 22*(7), 900–915. https://doi.org/10.1080/1369118X.2019.1573912

Huang, C. (2017). Time spent on social network sites and psychological well-being: A meta-analysis. *Cyberpsychology, Behavior, and Social Networking, 20*(6), 346–354. https://doi.org/10.1089/cyber.2016.0758

International Telecommunication Union. (2023). *Measuring digital development: Facts and figures 2023*. ITU Publications. https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx

Kantha, T., Sahoo, D., Rout, D., & Mishra, S. J. (2024). Ethics in the digital era: Technology's role in shaping society. *Shanlax International Journal of Arts, Science and Humanities, 11*(S1), 8–18. https://doi.org/10.34293/sijash.v11iS1-June.7794

Kleine, D. (2013). *Technologies of choice? ICTs, development, and the capabilities approach*. MIT Press. https://doi.org/10.7551/mitpress/9061.001.0001

Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2021). *How the world changed social media*. UCL Press. https://doi.org/10.2307/j.ctt1g69z35

Nissenbaum, H. (2010). *Privacy in context: Technology, policy, and the integrity of social life*. Stanford University Press. https://doi.org/10.1515/9780804772891

Noble, S. U. (2018). *Algorithms of oppression: How search engines reinforce racism*. NYU Press. https://doi.org/10.2307/j.ctt

Obermeyer, Z., Powers, B., Vogeli, C., & Mullainathan, S. (2019). Dissecting racial bias in an algorithm used to manage the health of populations. *Science, 366*(6464), 447–453. https://doi.org/10.1126/science.aax2342

Ostrom, E. (2010). Polycentric systems for coping with collective action and global environmental change. *Global Environmental Change, 20*(4), 550–557. https://doi.org/10.1016/j.gloenvcha.2010.07.004

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The

PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Paul, J., Ueno, A., Dennis, C., et al. (2024). Digital transformation: A multidisciplinary perspective and future research agenda. *International Journal of Consumer Studies, 48*, e13015. https://doi.org/10.1111/ijcs.13015

Pew Research Center. (2023, April 18). *Americans and privacy: Concerned, confused and feeling lack of control over their personal information*. Pew Research Center. https://www.pewresearch.org/internet/2023/04/18/americans-and-privacy-2023/

Przeworski, A., & Teune, H. (1970). *The logic of comparative social inquiry*. Wiley-Interscience.

Robinson, L., Schulz, J., Khilnani, A., Ono, H., Cotten, S. R., McClain, N., Levine, L., Chen, W., Huang, G., Casilli, A. A., Tubaro, P., Dodel, M., Quan-Haase, A., Ruiu, M. L., Ragnedda, M., Aikat, D., & Tolentino, N. (2020). Digital inequalities in time of pandemic: COVID-19 exposure risk profiles and new forms of vulnerability. *First Monday, 25*(7). https://doi.org/10.5210/fm.v25i7.10845

Scheerder, A., van Deursen, A., & van Dijk, J. (2017). Determinants of Internet skills, uses and outcomes: A systematic review of the second- and third-level digital divide. *Telematics and Informatics, 34*(8), 1607–1624. https://doi.org/10.1016/j.tele.2017.07.007

Sen, A. (2017). *Collective choice and social welfare* (Expanded ed.). Harvard University Press. https://doi.org/10.4159/9780674974616

Taylor, L. (2017). What is data justice? The case for connecting digital rights and freedoms globally. *Big Data & Society, 4*(2), 1–14. https://doi.org/10.1177/2053951717736335

Twenge, J. M. (2019). More time on technology, less happiness? Associations between digital-media use and psychological well-being. *Current Directions in Psychological Science, 28*(4), 372–379. https://doi.org/10.1177/0963721419838244

Van Dijk, J. (2020). *The digital divide*. Polity Press.

Vallor, S. (2016). *Technology and the virtues: A philosophical guide to a future worth wanting*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190498511.001.0001

Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., & Kross, E. (2017). Do social network sites enhance or undermine subjective well-being? A critical review. *Social Issues and Policy Review, 11*(1), 274–302. https://doi.org/10.1111/sipr.12033

World Bank. (2023). *World development report 2023: Digital technology and development*. World Bank Publications. https://www.worldbank.org/en/publication/wdr2023

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. Public Affairs. https://doi.org/10.1080/15228053.2019.1640327