A Balanced Approach to Artificial Intelligence in Government Decision-Making Processes

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Introduction

The essential pillars of democratic governance in a successful and functional system at all levels unfailingly include the participation of citizens in the local decision-making processes. The health of any democratic governance structure is often reflected through the level of transparency exhibited by the government, the willingness of the government to actively involve the citizenry in the decision-making procedures, and the facilitation of public voices being heard (Warren, 1992).

These parameters of democratic health, while being fundamental, also represent persistent challenges. For instance, the active

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involvement of citizens in public policy discussions and decision making, while a cherished democratic ideal, is fraught with logistical and financial implications. Participatory mechanisms, such as referendums, town hall meetings, public consultations, and alike, although might seem the epitome of democratic engagement, are weighed down by significant constraints. These constraints range from the financial and logistical costs to broader issues like voter turnout and the quality of citizen participation.

Facilitating citizen participation in decision-making processes, then, is akin to walking a tightrope. Failure to strike a balance can distort the democratic ethos, skewing decision-making processes, fostering public disillusionment, and ultimately leading to a waste of potentially beneficial fiscal, human and temporal resources (Smith, 2018).

Compared to this predicament faced by governments globally, the advent of Artificial Intelligence (AI) in the governance process provides a promising ray of hope. Seen from a state's perspective, the strategic use of AI portends a revolutionary shift towards enhanced operational efficiency across governmental agencies. With innovative data analysis capabilities requisite for various complexity levels, AI can augment the creation, passage and implementation of government policies, thereby surpassing the capabilities of traditional systems (Bol et al., 2020). The potential of AI extends to digitizing government tasks, which allows for streamlining of mundane tasks, enabling public workers to focus their energies on critical tasks that require human involvement, intervention, deliberation, and analysis.

Enhancing citizen experiences, AI-infused systems can contribute to real-time communication between the government and its citizens, facilitating quicker and more efficient functioning of government

entities. Moreover, AI's ability to gather, manage, and analyze large data volumes can allow governments to analyze potential scenarios related to decision-making processes and resource allocation, thereby replacing many policy development assumptions with actual data-backed insights (Desouza, 2018).

Contrarily, scholars expressing caution towards this rapidly expanding sphere of AI in governance underline several concerns. They suggest that an unbridled expansion of AI incorporation in governance and decision-making might inadvertently risk redundancy of certain job roles, potentially leading to a future society marred by job insecurities and alienation (Brynjolfsson and McAfee, 2014; Arntz, Gregory and Zierahn, 2016). Hence, this relentless march of technology, if not managed responsibly, might render subjective human judgment irrelevant, the consequences of which are yet unclear but potentially profound. Furthermore, AI's potential innate biases could undermine the principles of transparency and fairness, while careless mishandling of citizen data could open the doorway to misuse of private and sensitive information, compromising privacy rights and raising ethical concerns (Zarsky, 2016).

Steering between these opposite poles of optimism and apprehension requires a balanced and pragmatic approach. The application of AI in government functioning should be seen as a citizen-centric democratic tool rather than a purely technical, problem-solving instrument, thereby requiring the public and government officials to work in harmony in defining and harnessing AI's usage. It is proposed that the introduction of AI should align with, and serve to accentuate, the existing governance systems rather than disrupt and replace them. In this environment, the transparency of governments in handling

citizen data and establishing trust is paramount. A diligently considered approach is thereby needed, which also underlines the potential risks of machine learning biases and human redundancies. The society should perceive AI as an aid, augmenting the existing decision-making processes rather than a standalone entity usurping the human intervention from crucial civic decisions (Merh, 2017).

Taking these arguments into account, our objective herein is to navigate through the intriguing landscape of AI in government decision-making spheres. We aim to strike a balance between its transformative potential and the necessity of preserving human agency in crucial decisions, thereby catalyzing a context-sensitive, efficient, and citizen-centric AI governance model that effectively serves our democratic institutions.

Artificial Intelligence and Public Services

Over the course of time, there has been a global shift among governments towards incorporating technological innovations in their operations, spurred predominantly by the evolving needs and demands of their citizens. Prominent among these considerations have been the digitization of public activities and a heightened impetus for citizens' involvement in the cycle of public policy—its development, implementation, and subsequent evaluation. This transformation is inextricably linked with the concept of e-government, which has emerged as a potent solution catering to the aforementioned demands.

More than a mere paradigm shift, e-government signifies a strategic recondite of public governance. It amplifies effectiveness and efficiency in government operations, imbuing the traditional bureaucratic setup with an enhanced focus on processes and procedures leading to the provision of quality public services. Another key aspect intrinsic to e-government is its potential to ameliorate decision-making processes. By leveraging technology, e-government can substantially augment the utilization of available information for informed decision-making while facilitating seamless and efficient communication among various governmental offices. These benefits add up to foster an atmosphere of transparency and efficiency, thereby enhancing public trust in government services. As such, there has been a paradigm shift in how governments approach their operations, with artificial intelligence (AI) being adopted as a significant component of the technological solutions, given its multitude of advantages (Duberry, 2022. 14–15).

Considering public services at the local level, local governments undeniably play an indispensable role. They are tasked with the provision of critical services that citizens rely upon for their everyday administrative needs, The authoritative competence conferred by law and the fiscal capacity of the local self-government dictates the number and quality of these services. These include, but are not limited to, significant domains such as social assistance, health care, tackling unemployment, housing provisions, and education. Ethnographically considered, these services cater to the societal fabric's different strata, each uniquely, pluralistically, and democratically impacting a cross-section of citizens in their respective lives, thereby being inextricably intertwined with citizens' life quality.

The type of public services provided run a complete gamut of categories, including administration, social affairs, education, health, safety, and infrastructure, striving to assuage citizens' diverse and dynamic needs, Considering the pivotal role of local self-government bodies, their primary task remains the provision of these services efficiently and effectively. Decisions within the public sector demand constant vigilance and scrutiny. They need to be justifiable, thereby emphasizing the accountability of public institutions towards the citizens they serve, reflecting responsiveness in local governance (Gesk and Leyer, 2022).

Considering the application of AI in public services, several municipalities in Nordic countries serve as ample examples. As of 2019, these municipalities started integrating AI into their digital strategies. The scope and extent of the usage of AI varied among these governments, ranging from attempts at an organization-wide application across different departments to focused attempts at forming AI-based structures grounded on political foundations. While some governments spared no effort in creating conducive conditions for introducing AI, it was observed that, in many cases, AI technologies were not fully utilized, often due to reluctance or hesitation among certain employees or politicians.

Detailed examples of AI's practical usage in these municipal contexts are extensive. Notable among these are systems redirecting calls to designated clerks, AI systems for sorting incoming emails, the utilization of AI chatbots for citizen inquiries, and deploying robots for executing repetitive tasks. Many of these municipalities have leveraged AI chatbots on their official websites that provide automated responses to frequently asked information by citizens, thereby reducing human intervention and increasing efficiency. The City of Copenhagen uses

specific AI algorithms to direct citizens who call the municipal call center to a particular employee. Similarly, Helsinki developed algorithms using text analysis for sorting out citizens' written inquiries, aiming to reduce the manual handling time involved for employees. However, while these instances show the potential advantages of integrating AI in governmental services, they also raise urgent questions on AI's extent of usage, the significant influence it can have on decision-making processes, and the perils of bias or discrimination it may induce in processing citizen inquiries that need conscious, guided discussions and scrutiny (Nordic Municipalities' work with Artificial Intelligence, 2019: 16–17). As such, while AI seems promising, its application requires careful consideration, balancing risks and benefits, and ensuring a citizen-centric approach.

Artificial Intelligence and Its Influence on the Decision-Making Process

Our initial discussion laid out how the facilitation of Artificial Intelligence (AI) in public service domains has considerable potential to transform citizens' lives for the better. It outlined current areas where citizens can exploit AI to navigate through everyday administrative nuisances and to procure essential information with relative ease.

However, the evolution of AI is not without its set of challenges. Significant knowledge boundaries exist, creating roadblocks that restrict establishing stable communication channels within and between different stakeholders involved in AI development. This disparity often

stems from the skewed distribution of authority and power that can shake the foundations of mutual trust and undermine the principles of democratic governance (Warren, 1992).

The magnitude and complexity of such challenges call for a multi-faceted strategy. Incorporating AI in public administration systems warrants prompt and precise policy coordination, which needs to permeate various social levels and administrative sectors. Authorities need to adapt promptly and reconceive their modus operandi to establish new procedures that can house the advancements of AI. Efficient governance echoes the productive orchestration of stakeholders and their collaborative efforts, with AI standing to catapult these collective governance procedures to loftier tiers.

We live in an era of unprecedented social and political changes, which propels the call for innovative solutions and forward-thinking strategies. AI carries the potential to usher in significant enhancements to democratic processes, instilling citizens with the required motivation to partake in this wave of change with more involvement and enthusiasm. This citizen-centric approach to engagement is not just beneficial for society but stands as a crucial prerequisite for fostering trust in AI technologies and the institutions effectively managing AI. Governments can play a pivotal role by organizing educational programs and debates centred around the positive aspects of AI, facilitating a better understanding of its features among citizens.

As we delve into the 21st century, our urban landscapes grapple with formidable challenges that have a bearing on their regular functioning. Managing sprawling cities with ever-increasing populations, the continual swelling of resource demand, and, most critically, the widening chasm of socioeconomic differences among citizens,

encapsulate some of the predicaments that today's modern cities encounter. AI comes into the picture as a potential problem-solver, a beacon of hope that could chart the road map for future city development (Yigitcanlar et al., 2021).

However, unchecked or irresponsible innovation has the potential to give rise to unforeseen issues, distracting from ongoing attempts to tackle existing challenges. Responsible urban innovation, hence, becomes pivotal in uncovering and addressing pressing urban challenges dominated by complex problems, uncertainty of solutions, and associated risks. Proposed innovations must incorporate a responsibility clause that places priority on public and environmental values over mere technological advancement. Economic factors are crucial in shaping innovation, but they cannot sideline environmental and social ones in the development and implementation of urban innovations.

Local governments hold an advantageous position in this narrative— to view AI as an instrument that can foster stronger relationships with their citizens and enhance their functioning and efficiency. AI's advantages for local governments span enhancing administrative efficiency, hastening task completion, automation of routine decisions, effective management of repetitive tasks, and the relegation of error margins to a minimum. With these merits, local governmental departments such as infrastructure management, environmental protection, customer services, cybersecurity, and performance analysis could significantly benefit from AI implementation (Sigfrids et al., 2023).

Despite this optimistic view, numerous constraints persist, including inevitable issues of data bias, substantial investment requirements, potential risks of automation, regulatory and ethical concerns, and informational gaps about AI's practical implications. However, local

governments express an eagerness to maximize AI's potential use, notwithstanding their organizational structures that may lack the necessary support for the comprehensive integration of AI (Yigitcanlar et al., 2022).

This situation has given rise to two main approaches: the cautious "wait-and-see" approach, where local governments observe AI with keen interest for the ideal time to jump onto the AI bandwagon, or the rather hands-on, experimental approach, where governments implement AI right away and iron out potential wrinkles during the process.

Yet, both strategies bring to focus the necessity for local authorities to lay out regulatory guidelines, improve AI technology's accessibility, increase public understanding of AI, and encourage public acceptance of AI technologies. They need to define a specific direction for AI integration and adopt best practices of AI management for successful application and overcoming both technical and non-technical issues that may arise along the way. A successful AI application hinges not just on technical know-how, but also on rigorous leadership support. As we continue to navigate the potential of AI in public service and iron out these issues, the full embrace of AI's capabilities in local governance becomes a captivating prospect (Ojha et al., 2021).

Artificial Intelligence, Decision-Making Process, and E-Democracy

As we delve into the 21st century, we notice that the structure of institutional power is undergoing an overhaul. With economic growth

becoming less uniform and much more fragmented, the convention-al role of central government institutions is witnessing a decline. The traditional responsibilities for resource allocation and territorial security, which were the prerogatives of national governance, are gradually shifting to cities and urban areas (Valladão, 2018).

This shift in power dynamics is not happening in isolation. It is intricately connected to the exponential growth of technology. Technological advancements have made it possible for cities—the new hubs of economic activities—to become more interconnected. This interconnectivity, powered by emerging technologies, has fostered the development of independent capacities that allow urban centers to make sovereign decisions without the oversight of central state authorities. In essence, national governments are witnessing a contracting of their instutional sphere of influence, also evidenced in their declining fiscal capabilities (Valladão, 2018).

This decentralization has sent ripples across the political arena, affecting not just the central governments, but also the many organs that are part of the political machine including parliaments and political parties. The clear dividing lines that once marked the boundaries of power are blurring, triggering a redefinition of roles and a rethink of hierarchical structures (Valladão, 2018).

One of the most significant hallmarks in this new political landscape is the emergence of Artificial Intelligence (AI) and its impact on the decision-making process. E-democracy, a concept that is broader than e-governance, represents a shift to a democratic system where people can participate in the decision-making process online. This implies that citizens have the ability to directly influence decisions

that affect them, overcoming barriers of distance and logistics to make their voices heard (dos Reis and Melão, 2023).

Information and communication technologies are the pillars upon which e-democracy stands. And with their continued evolution, they are playing a vital role in strengthening democracy. E-democracy is an enhanced form of democracy where political institutions and subjects communicate with the electorate through the internet, social networks, and mobile technologies. This ensures a channel for dialogue that is uninterrupted and accessible to all (dos Reis and Melão, 2023).

An analysis of e-democracy reveals three main axes along which it expands: basic conditions, e-government, and e-participation. For basic conditions to be satisfied, a well-developed infrastructure promoting access to digital media and unrestricted internet access is a prerequisite. E-participation evolves from mere information dissemination to active involvement of citizens in the decision-making process (dos Reis and Melão, 2023).

Illustrative examples include Portugal, where participatory platforms have redefined the government-citizen interaction, and Belgium, where the establishment of CitizenLab[1] is a testament to how AI technologies can be harnessed for political participation and decision-making support. Utilizing AI, CitizenLab not only encourages citizen engagement but also translates these engagements into categories that aid decision-making.

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[1]   CitizenLab is a Belgian civic tech company which creates platforms for local governments where citizens engage.

E-democracy can also spur governments' actions to become more responsible and transparent. By providing avenues for online deliberation and consultation, they offer citizens the opportunity to express their opinions and influence policy decisions, helping to nurture trust with citizens. Additionally, AI aims for equitable treatment of all citizens, promoting transparency while also initiating discussions on privacy and ethics (dos Reis and Melão, 2023).

Simultaneously, the novel approach of e-government integrates information and communication technologies with the public sector. Rapid technological progression provides citizens with platforms to express their views and contribute to national development. The rise of e-government has brought about a raft of new administrative services making everyday lives easier, and the provision of these services further enables governments to align their functioning with citizens' needs, such as convenience, personalization, and ease-of-use (Rahmadany and Ahmad, 2021).

However, as we make strides in using AI in decision-making and governance, the pertinent issues of privacy, autonomy and fairness come to the fore. It prompts a careful consideration of the manner in which AI is implemented and used. This interaction requires a balanced partnership between people and machines. Notwithstanding our limitations, it is paramount to leverage AI in areas where human capacity can be bolstered (Phillips-Wren, 2012).

The primary function of e-government acts as a conduit for active participation of the citizenry in the decision-making process. The complementary forces of e-democracy and e-government work in tandem to foster a stronger relationship between governments and citizens. This bond can confer greater responsibility and

accountability to the government, therefore increasing public faith in its operations and cultivating a healthier democratic environment (Rahmadany and Ahmad, 2021).

The Hazards of Excessive Dependence and Unrestricted Application of Artificial Intelligence in Decision-Making Procedures

It is an undeniable fact that artificial intelligence (AI) has permeated virtually all aspects of our daily existence. Its applications are seen with increasing regularity in both the private and public realm, from enhancing the functionality of our homes to driving data-centric decisions in business, hinting at how radically this technological revolution is set to reshape our world.

Nevertheless, it is crucial to remain cognisant of the potential dangers that are associated with an over-dependence on AI, in particular when used without appropriate moderation and regulation in decision-making contexts, especially within governmental frameworks. This discourse focuses largely on the identification and exploration of such challenges, including the issue of human redundancy in administrative processes, ethical dilemmas that arise from machine-driven decision-making, and the broader implications these might present for the democratic system and civic involvement.

AI indeed brings a degree of efficiency and accuracy into decision-making procedures that is often difficult for humans to achieve consistently. However, as AI grows in its capacity and penetrates further into decision-making frameworks, it is impossible to ignore the concerns raised about the potential for human roles in these processes to become increasingly redundant. Brynjolfsson and McAfee (2014) have warned about the increasing likelihood of job roles, previously thought to be safe from automation, becoming obsolete. Such a scenario could prompt the sudden onset of several major societal problems, including mass unemployment and escalated societal inequality. A lack of regulation could ultimately result in administrative procedures that are stripped of human intervention and subjective judgement, leaving AI to make critical decisions.

Further adding gravity to these concerns is the tremendous growth that the AI industry has been experiencing. The International Federation of Robotics predicts that worldwide spending on AI systems will increase from just over $37.5 billion in 2019 to nearly $98 billion by 2023 (Fernandes, 2019). This rapid expansion could potentially stimulate a crisis characterized by job insecurity and escalating unemployment rates. This assertion aligns with a McKinsey Global Institute report, which estimates AI could displace around 15% of the global workforce by 2030 (Chui et al., 2017).

In conjunction with consideration of human obsolescence is the ethical aspect, another facet of AI incorporation into decision-making processes which cannot be overlooked. In conventional systems, humans have been responsible for making ethical judgements and exercising discretion in decision-making. Despite advances in the development of ethical systems within AI, there remains substantial

ambiguity and uncertainty surrounding how such ethical conundrums can adequately be addressed.

AI systems inherently lack the ability to exercise the kind of discretionary judgment that humans can—this is a significant complication, not least in terms of establishing accountability. This is a particularly severe ethical concern in sectors where the decisions made have far-reaching consequences, such as criminal justice or social welfare. Key questions about the transparency and fairness of AI-driven decision-making are raised, along with concerns about inadvertent bias, and potential misuse of sensitive information (Zarsky, 2016).

The potential risks of an excessive dependence on AI within governmental systems underscore the need for a balanced approach. As Bostrom (2014) suggests, technology, no matter how advanced, should serve as a tool that assists humans rather than replacing them. As highlighted by Schumpeter (1942), technological innovation does not follow a strict linear progression, implying that finding the ideal balance between human expertise and AI is a delicate process. This balance must be achieved while keeping in mind the significant benefits of AI, alongside the need for precautionary measures against potential risks.

Within a democratic system, active participation by citizens is a fundamental tenet. Thus, entrusting AI systems with more decision-making power could potentially lead to a decrease in such engagement. Citizen roles in a democratic system should not be confined to merely providing input for AI systems to analyze. Instead, AI should serve to enhance and complement human involvement in the democratic discourse (Bol et al., 2020).

In achieving this challenging equilibrium, the primary objective should be to develop a visionary approach to government where AI serves as a digital aid, augmenting human capabilities in decision-making rather than replacing them. As suggested by Bostrom (2014), our ultimate goal should be to capitalize on the impressive potential of AI while ensuring that this technology respects and upholds essential human values and needs,

Conclusion

The accelerated integration of artificial intelligence (AI) into governmental activities and procedures has the potential to revolutionize democratic systems on a global scale. However, as noted in the preceding sections of this paper, this technological revolution brings with it a series of intriguing challenges and risks, requiring an equally transformative shift in our approach to technology integration.

The objectives of this study, as summarized in the introduction, were to strike a balance between artificial intelligence's transformative potential and the necessity to preserve human agency in the decision-making process. The aim was to stimulate a debate that catalyzes a context-sensitive, efficient, and citizen-centric model of AI governance. This transformation would effectively serve a wide range of stakeholders involved in the democratic process, ranging from lay citizens to high-ranking government officials.

The methods used in analyzing artificial intelligence's role in modern governmental functions unravelled the multidimensional aspects and implications of its implementation, showing that AI is more than

a simple problem-solving tool. It is precisely this realization that has led to an understanding of how redundant human roles may become in administrative procedures, leading into further discussions on ethical dilemmas that arise from machine-led decision-making processes. Aside from the significant ramifications that this realization holds for democratic systems and civic involvement, a lack of human intervention could lead to the unchecked misuse of the technology, bringing with it the potential to compromise civil rights and personal freedoms.

However, it is equally pertinent to bear in mind the limitations of this study. While an attempt was made to provide a comprehensive overview of the impending AI disruption, a fully conclusive exploration remains elusive due to the rapid progression of the field, and constant technological advancements, as well as evolving legal and regulatory frameworks. Even as the findings of this study draw attention to the potential pitfalls and challenges associated with AI integration, a measure of uncertainty is inherent due to the nascent nature of the field.

The study opens up avenues for future research inquiries. One of the most compelling of these relates to the direct influence of AI on the processes of e-democracy. An investigation into the technologies propelling e-democracy would not only provide a clearer picture of the advantages and risks posed by AI but also inform a proactive strategy for its integration. Moreover, in-depth examination of specific case studies where AI has been embedded in governmental functions could deepen understanding of the practical implications and outcomes of such integration.

Exploration of countermeasures to avoid human obsolescence is another crucial research interest to be pursued. It is also noteworthy to

explore how a human-AI partnership could be cultivated in a way that neither is the human judgement compromised nor is the potential of AI not fully capitalized. Future work should also aim to investigate the ethical consequences of machine-driven decision-making processes, focusing on ways to maintain transparency, fairness and uphold the right to privacy whilst harnessing the efficiency and capabilities of AI.

The future of an AI integrated governmental framework is not too far down the road. It thus becomes imperative that rigorous scholarly attention be given to shape an environment wherein AI supports, rather than supplants, human involvement in democratic systems. The goals that this paper aimed to set out may seem challenging in the current context, but it is clear that they are not impossible to attain. Recognizing the great potential of AI while simultaneously addressing its challenges is the crucial step toward a future where AI brings about enhanced decision-making processes, increased citizen engagement, and improved public service delivery in a balanced and responsible manner.

It is, therefore, fair to conclude that as society moves forward, the objective should always be to use AI as a beneficial tool for humanity, combining human expertise with machine abilities to enhance democratic functioning and ultimately, better serve society. This conclusion, perhaps encourages us to step back and consider the broader significance and ramifications of our current path, and through reflection, envisage a future where technological advancement and human ingenuity merge to create a more efficient, democratic, and inclusive society.

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