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The Next Generation of AI for Social Transformation: Opportunities and Governance Challenges

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Abstract. Artificial intelligence is changing every industry, and it is considered an important tool for sustainable development. This article investigates the topic of “AI for Social Impact” (AI4SI): the use of advanced AI technologies, such as foundation models, generative AI, cloud computing, and data-centered approaches, to provide services in such areas as public sector, health care, education, environment conservation, disaster response, and poverty reduction. Based on the narrative literature review of the AI4SI and responsible AI, the article reveals the factors of governance, which prevent people from trusting AI: algorithmic bias, insufficient transparency and accountability, privacy concerns, lack of data governance, digital inequality, and fragmentation of regulation. Moreover, the article describes the conditions under which implementation of AI4SI initiatives becomes successful, including local approach, multidisciplinary collaboration, involvement of stakeholders, and impact assessment, and provides a short list of governance readiness criteria to be used by practitioners and reviewers in evaluating AI4SI projects.

Keywords: AI for social Impact; social transformation; AI governance; Responsible AI; SDGs; Digital Inclusion.

1. INTRODUCTION

What began as an esoteric discipline is now a tool that can radically transform the way we structure our societies, economies, and governance systems. Foundation models, generative AI, large language models, and multi-agent systems are just some of the recent developments that have enabled applications to expand and open new possibilities for solving social challenges. This evolution has helped shape “AI for Social Impact” (AI4SI), a branch of AI research distinct from traditional AI research in that it puts emphasis on societal impact for disadvantaged communities as opposed to novelty and performance improvements [5]. AI4SI focuses on topics such as poverty reduction, public health, education, agriculture, disaster response, and sustainability [1,5] and requires the collaboration of multiple disciplines [8].

Previous work has typically conflated “AI for Social Good” and AI4SI; this paper, like recent work in the field, will consider AI4SI to be the more accurate label for interventions that have a specific social outcome and a defined beneficiary group [1,5,6]. It will use “social transformation” to describe the larger, more long-term societal transformation that a set of AI4SI interventions can help achieve. The 2016 White House Workshop on AI for Social Good is commonly acknowledged as the event that marked the consolidation of the field [2].

While these opportunities exist, application of AI to social sectors has been associated with continuous governance challenges such as algorithmic bias, poor transparency and accountability, privacy and security concerns, fake news and digital divide [9]. Events in 2025-2026, such as the emergence of socially impactful systems developed using foundation models, have further brought up the issue of human control, fairness, and compliance [6]. The aim of this paper is to explore the opportunities presented by next generation AI in social change, its governance challenges, and the operational checklist thereof.

2. REVIEW METHODOLOGY

This paper is not a systematic review or an empirical study but rather a narrative one. The sources used come from three sources: (i) basic and modern studies on AI4SI (e.g., [5,6,8,11,13]); (ii) responsible-AI and governance studies (e.g., [7,9,18]); and (iii) applications of AI4SI in computer science and public health studies (e.g., [14,15,16,17]) along with additional policy studies like the United Nations SDGs [1] and the most recent public opinion surveys [10]. These sources have been identified using the references of surveys and conference tracks of established surveys and conference tracks of AI4SI (AAAI, IJCAI, AAMAS). It does not purport to be comprehensive but is a way of synthesizing common themes and using actual deployment experience to make the governance checklist presented in Section 4 meaningful.

3. CASE STUDIES IN AI4SI DEPLOYMENT

In order to discuss the issue of governance based on practice rather than principles only, this paper analyses three applications of AI4SI that have been described in the literature. The governance lesson that has been learned from each application is presented in Table 1 below.

Case	Deployment	Governance lesson
Maternal health engagement, India [8]	Call prioritization for an NGO (ARMMAN) for mothers who are likely to disengage from an automated health line, assessed using a real randomized deployment.	Effective when the deploying institution retains interpretable oversight and override power over the decisions made by algorithms.
Humanitarian aid targeting, Togo [15]	Mobile phone data ML prioritization for COVID-19 emergency cash transfer without survey data.	Increases coverage in low data environments but necessitates clear and legal limits to data usage and consent.
Flood forecasting, multi-country [16]	Validation of ML flood warning system based on historical gauge data and warning dissemination.	Protective efficacy is contingent on ongoing model validation and a local partner institution to implement outcomes.

Table 1. Selected AI4SI deployment and governance lessons.

Common threads across these examples include three factors irrespective of sector: a named institution responsible for algorithmic decision-making, an explicit limitation to data use and consent, and a local partner capable of maintaining the system post initial technology implementation. It is upon these factors, rather than assumptions, that the checklist in Section 5 is based.

4. CURRENT LANDSCAPE AND EMERGING TRENDS

Aside from the above-discussed cases, the development of AI4SI technology is becoming more interdisciplinary in recent times. The collaboration of computer scientists, policymakers, doctors, social workers, environmental scientists, and community members

will help ensure that the solution is contextually relevant and socially acceptable [8]. In this regard, stakeholder participation throughout the process of design, deployment, and evaluation of the AI4SI project represents application of the rights-based approach to disability with respect to technical governance (“nothing about us without us”) [7]. There are two trends worth mentioning at the field level: the use of foundation models decreases the cost of creation of task-specific systems where technical knowledge and data are limited [6], and cloud infrastructure reduces the cost of implementing AI4SI solutions in the public sector. Public discussion about AI is developing amidst worries about misinformation, unemployment, discrimination, and lack of regulation [10], which shifts the attention of the field from technical aspects to those that were discussed directly in Section 3.

5. TOWARDS OPERATIONAL GOVERNANCE : A PRACTITIONER CHECKLIST

Criteria like fairness, transparency, and accountability are discussed in many papers in the AI4SI literature [9,18]; however, very few papers convert these criteria to a format that can be used in practice. Drawing on the lessons learned from deployment (Section 3) [8,15,16] and the discussion of design factors in [9], we present a six-dimension governance readiness checklist in Table 2 that should be used in the design and pre-deployment phases of a project rather than as a certification criterion. In each dimension, we combine an issue related to governance with a question, which makes it clear what projects will have high risk on a certain dimension because they cannot say “yes” to the question or have a mitigation strategy.

Dimensions	Pre – deployment questions
Fairness & Bias	Have there been tests of the representativeness of training and deployment data on the target population?
Transparency	Can affected users and oversight organizations receive an easily understandable account of how decisions are made by the system?
Accountability	Is there someone accountable for results, as well as for resolving any issues?
Privacy & Data Governance	Does data gathering, management, and transfer have clear legal policy in place?
Inclusion & Participation	Have the affected communities been consulted in designing and evaluating the system as well as deploying it?
Sustainability	Has there been provision for running the system once external technical assistance has stopped?

Table 2. AI4SI governance – readiness checklist.

6. THE FUTURE OF AI FOR SOCIAL TRANSFORMATION

The development path for socially transformative AI is contingent upon the interplay between technological advancement and the institutions within which it operates. Three issues consistently arise from the literature surveyed. Firstly, AI for SI applications must be developed with regard for the context in which they operate and be the product of participatory design that engages the stakeholders affected by its implementation [8]. Secondly, scalability and sustainability continue to be problems, in that while many AI for SI projects are successful early on, few continue to have an impact in the long term, and

local governments, NGOs, and other public bodies require the capacity and skills to maintain the systems without reliance on external technical assistance [5]. Finally, evaluation practice for the systems and their impact must expand past purely technological measures to consider socioeconomic and ethical outcomes based on fieldwork and stakeholder assessment [7].

Making the tools of AI4SI more widely available to experts in the field, civil society organizations, and communities, in conjunction with greater AI literacy among policymakers and other stakeholders, will likely foster both inclusive innovation and more resilient citizen participation. The development of foundation models is anticipated to make the construction of tools even more efficient and lower the cost through reducing the task-specificity of the systems [6], but in doing so, such generalization also brings about risk – communities that are under-represented within the training datasets become disproportionately vulnerable to bias and exclusion, while insufficient transparency and context within foundation models makes the development of robust and equitable AI systems difficult. As the technology becomes increasingly adopted, it is likely that research will move from technical deployment to governance and equitable distribution of AI4SI benefits.

7. CONCLUSION

Social transformations through AI is one of the most impactful use cases of artificial intelligence with proven potential in the areas of health, education, sustainable environment, poverty reduction, disaster response, public services as shown by the use cases of Section 3. Unlocking the potential will require addressing several interlinked challenges including: socially contextualized, sustainable systems; representative data; and evaluation methodology that measures impact on social outcome rather than proving the capability. Social transformations through AI will also depend on ongoing interdisciplinary collaboration, wider AI literacy of the policy makers, practitioners and citizens, and engagement of stakeholders throughout the life cycle so that the transparency and inclusion are designed in. Therefore, the impact that AI4SI can have on society will be not only dependent on the technology but the integration of it in socio-cultural and institutional system. Governance checklist provided in Section 5 based on the case studies of Section 3 is proposed as an attempt to assess such integration; further validation and refinement of it based on the additional case study should be carried out in the future work. Next generation of AI can become a reliable source of social transformations if all these aspects are pursued in parallel.

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