Reflecting on Two Decades of Community Informatics: Unfulfilled Promises and Unanticipated Challenges

Ricardo Gomez, University of Washington, *rgomez@uw.edu*

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Abstract

This note critically examines the evolution of community informatics over the past two decades, evaluating its successes and shortcomings in creating a more just and equitable world. It reflects on the initial aspirations we held for community informatics, and contrasts them with the current landscape, dominated by challenges we did not foresee then, and by the transformative influence of artificial intelligence (AI). I also project potential future trends and issues in community informatics, emphasizing the need for proactive strategies to navigate a world increasingly shaped by corporate interests, AI-driven knowledge management, and the threat of misinformation to democratic processes.

Keywords: Community Informatics; Digital Literacy; Misinformation; Artificial Intelligence; Corporate Control; Gig Economy.

Introduction

Community informatics emerged as a promising field at the turn of the millennium, aimed at leveraging information and communication technologies for community empowerment and social justice. Also known as Information and Communication Technologies for Development (ICTD or ICT4D), Community Informatics envisioned information technologies as a tool for bridging digital divides, enhancing citizen participation, and fostering local development, community informatics held great promise. However, twenty years after the publication of the first issue of The Journal of Community Informatics, the potential of harnessing ICT for community development appears unfulfilled.

I have been active in the field of Community Informatics (and ICTD) over the past quarter century. In this note I discuss how the initial aspirations of community informatics have been overtaken by unanticipated challenges we did not anticipate in the early days, challenges that the field has been for the most part unable to meet or resolve.

The Failed Promise of Community Informatics

Initially, community informatics was seen as a way to democratize information access, promote local content creation, and support community-led development. Efforts were focused on creating inclusive digital spaces, fostering digital literacy, and encouraging civic engagement. The goal was not just to provide access to technology but to enable communities to use it for their empowerment.

Over time, challenges emerged that we did not fully anticipate in the early days of community informatics. I discussed some of these challenges in an earlier piece, written in the

form of a letter from an imaginary aunt (Gomez, 2021) twenty years after having published a more optimistic account of the promises of community informatics (Gomez & Casadiego, 2002). In her response, the imaginary Aunt Ofelia lamented ten key unexpected challenges that underscore the failed promise of ICTD. These are: the control exerted by large e-commerce companies over the market; the rise of the gig economy with its ensuing job insecurity; the concentration of media content in the hands of a few companies; the widespread use of surveillance technologies and the demise of privacy; the perpetuation of bias and discrimination through algorithmic controls; the increasing dependence and addiction to digital devices and platforms; the spread of false information; the acceleration of the pace of life; the increased sense of isolation and loneliness; and the environmental degradation caused by e-waste and increased energy consumption.

Today, in commemoration of 20 years of The Journal of Community Informatics, I expand on the concerns raised by the imaginary Aunt Ofelia, emphasizing the renewed challenges to CI presented by the corporatization of the digital space, the unprecedented growth of misinformation, and especially, by the extraordinary rise of Artificial Intelligence.

Corporatization of the Digital Space

The digital landscape, which we once saw as an open and democratizing space, has become increasingly dominated by large corporations. Corporate dominance in the digital realm has led to significant control over information and data. This power influences public perception and decision-making, often prioritizing corporate interests, sidelining community-driven initiatives. Additionally, the rise of the gig economy, fueled by these corporations, has led to a precarization of work. Many jobs have become temporary, flexible, and without traditional benefits, leading to instability and uncertainty for workers. Ironically, much the work of training of AI and data cleaning that requires human input is increasingly done by outsourced gig workers paid pennies. This shift challenges traditional employment models and raises questions about workers' rights and the long-term sustainability of such economic structures.

The Misinformation Crisis

The spread of misinformation has emerged as a critical challenge in the digital age. The ease with which false information can be disseminated and amplified poses a significant threat to informed citizenry and trust in institutions, challenging the integrity of democratic processes and public discourse. For communities relying on digital platforms for communication and information sharing, the challenge is to discern credible sources and counter the spread of misinformation. This issue is exacerbated by algorithms that may amplify sensational or divisive content. Addressing this requires robust digital literacy programs, fact-checking mechanisms, and responsible platform management to ensure communities have access to accurate, reliable information.

The Rise of AI and Its Implications

The rapid deployment of AI after the release in late 2022 of ChatGPT has revolutionized how information is produced, processed, and disseminated. While it offers immense potential for enhancing efficiency and personalization, it also raises concerns about job displacement, privacy

erosion, and the centralization of decision-making in opaque algorithms. AI is not just a new technology tool; it represents a paradigm shift in how we interact with technology, with important implications for Community Informatics in at least three important ways: 1) Automated Decision Making: AI's capability to make decisions based on vast datasets challenges traditional notions of human-centric decision-making in community settings; 2) Personalization vs. Privacy: While AI can offer tailored information and services, it often does so at the cost of privacy, collecting and analyzing vast amounts of personal data; and 3) AI-driven Echo Chambers: Personalization algorithms can lead to the further encroachment of echo chambers, limiting exposure to diverse viewpoints and reinforcing existing biases.

Looking Ahead: The Next 20 Years of CI

As we look to the future, it is clear that community informatics will continue to evolve in a landscape increasingly shaped by AI and dominated by corporate interests. Key considerations for those working in the field of Community Informatics will need to include more than a continued effort to promote equitable access to technology and fostering digital literacy and critical thinking, as in the community informatics of the past. Moving forward, we need to focus our efforts on at least the following key issues:

Supporting evolving digital literacies

As technology evolves, continue to adapt and anticipate new challenges to digital literacy through continuous learning, inclusive education, critical thinking skills, collaboration and community engagement, to promote digital literacy that fosters inclusion, genuine participation, and equity.

Combatting misinformation and algorithmic bias

In systems increasingly managed through algorithms, confront the acceleration and entrenchment of misinformation and bias through stronger algorithmic transparency, diverse data testing, public awareness and education, community involvement in design, and collaboration with fact-checkers and human domain experts.

Promoting Ethical AI governance and regulation

Help shape regulation and governance of AI systems to prevent bias and discrimination, offer privacy protections, and increase transparency and accountability, through stakeholder collaboration, regular audits and reporting, encouraging ethical AI design principles, and working towards global standards and regulations to manage the cross-border nature of AI and its impacts.

Conclusion

The past two decades of community informatics have seen significant shifts, with unanticipated challenges overshadowing earlier promises. As AI reshapes our relationship with technology, the field must adapt and respond to ensure that the digital future is equitable, inclusive, and democratic. Proactive engagement, ethical consideration, and a commitment to social justice will be crucial in navigating the complex landscape of community informatics in the years ahead.

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