The Future of Cyberunions in the Era of AI-Based Automation of Work

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Abstract

The *Cyberunion* model, proposed with the rise of the Internet, is a set of strategies for unions to mobilize the labour movement in the online space [1]. With shifts in the trends in technology, however, scholars have suggested changes to the *Cyberunion* model to bring unions up to date with current technological developments [2]. Today, we see yet another shift in modern technology towards generative AI. While AI may be a promising next step for cyberunions, the integration of AI-based automation in the workplace directly challenges the goals of unions in improving worker agency and security [5, 6]. In this study, we will explore the potential of AI as a strategic tool for unions through participatory action research involving community-led discussions, ethnographic field studies, and co-design workshops. By centering the capabilities of union members as designers of their own future, we will understand how the state of the art in AI shapes collective action in labour justice, and how in turn, it can equip unions with novel opportunities to adapt to the era of generative AI.

1 Introduction

In 2002, sociologist Arthur Shostak introduced The Cyberunion Handbook, in which he proposed how unions can strategically use the Internet to mobilize in the online space [1]. The handbook highlighted first-hand stories, challenges, and advice from unionists who adopted online communication tools during the rise of the Information Age, and still stands as an influential point of reference for research in digital unionism today. Twenty-one years later, labour and technology scholar Vera Khovanskaya suggested that the Cyberunion model must now shift to incorporate unions' uses of data tools, amid the observed increase in their organizational data and decrease in software funding [2]. Khovanskaya points out that databases used to record membership, dues, grievances, and activities in the union come with high maintenance costs, which in turn, influence the union's organizing strategies to conserve their resources as much as possible. With the development of technology, researchers have continuously proposed changes to the Cyberunion model to understand how current technology can serve as a strategic tool in promoting the labour movement.

Past the ages of Information and Big Data, we now live in the era of Generative AI. However, introducing AI as the next step for cyberunions requires a deeper, and more careful understanding of how AI is intertwined in the tilted power dynamic between union members and their employers. With large corporations such as Duolingo, Dropbox, and many more aggressively cutting down 6-10% of their workforce due to the adoption of AI [3, 4], many workers express fear of losing their jobs [5]. Furthermore, the involvement of automation within the workplace threatens the workers' sense of agency over their own labour [6]. This global phenomenon suggests that the state of the art in AI is viewed as a bigger threat than a comrade to the labour movement. To envision the future of cyberunions in the current surge of AI, we must understand: How does AI-driven work challenge the goals of unions in increasing worker agency and rights? How do unions organize collective actions

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against the replacement of labour by AI? How can we better equip unions with up-to-date tools and knowledge about AI, to support their ongoing resistance against class struggle?

2 Methods

The origins of labour unions date back to the Industrial Revolution. For centuries, unions have organized, bargained, and protested for their objective of fair labour [7]. Recognizing this expertise, we will conduct participatory action research—a framework in which researchers acknowledge the capacity of individuals living or working in a studied setting, to orient the research in improving this setting themselves [8]. We will engage with unions across industries vulnerable to AI-based automation of work, such as administration, clerkship, IT support, and the arts. We will structure the study in the following three phases: (1) community-led discussions, (2) ethnographic field studies, and (3) participatory design workshops. In phase 1, union members will lead conversations about how the rise of AI has shaped the goals, structure, and operation of the union. From these discussions, we will identify significant focal points, such as the union's strategies on navigating the growing use of AI in their industry, or their views on adopting AI into their current practices. Following the first phase, we will conduct ethnographic fieldwork in union meetings to observe how these focal points manifest through real-life scenarios. Researchers will directly engage with the unions' everyday operations over several months to establish a sense of camaraderie with union members as part of the community. Lastly, members will engage in a participatory design session to explore the potential of AI in integrating with the goals of the union. Results could include educational material for individual workers, digital systems for internal use, and policy proposals for industry stakeholders, to equip unions with necessary tools to become effective cyberunions in the era of AI.

A critical effort that must be made in participatory action research is to establish a dynamic in which researchers become participants of the researched setting, rather than maintain a sense of academic "disinterest" as an outsider to the community. This effort is highlighted in other community-based design studies, in which the procedures through which the research engages with community members must be prioritized over the goals of the study, and therefore must be determined with the community rather than imposed by the research agenda [9]. Especially when designing technology for labour unions, it is imperative to establish equal collaboration between technological and organizational expertise [2]. Many unions recruit technologists externally, as their executive members are often elected from within their own rank and therefore lack up-to-date technological expertise. On the other hand, these executive members have a deeper insight into how digital tools may be incorporated into the organizing strategies of the union, when compared to external designers. These two bodies of knowledge must be balanced throughout a participatory action study, in order for academics to play a strategic role in designing technology that empowers the labour movement. To navigate this dynamic, we will conduct the study over several months in which the researchers will center building trust and rapport with union members. The lead researcher of the study will use their position as a steward in their institution's teaching assistant union to establish trusting relationships with participants from their own and sister unions. Additionally, all research-related decisions will be made in concert with the participants, and the protection of their privacy will be prioritized in case of potential retaliation from their employers.

3 Conclusion

This study bridges labour studies and AI ethics to propose solidarity with the working class as a necessary principle for the development and social integration of AI. By centering the lived experiences of union members, the study will critically examine the future of the labour movement amid the emergence of AI-enabled automation of work. Our findings will highlight how current AI designs can exploit workers' job security and agency over their labour, and in turn, how they shape collective action organized by unions to advocate for workers' rights. These impacts will inform academics and developers about how the future of AI can advance while effectively standing with individual workers in their fight for social equity. For unions and labour activists, our work will explore the potential of AI as a tactical tool for organizing job actions. We will outline opportunities for increasing AI literacy among its members, to support more specific and targeted actions against the rise of automated work. By informing individual members about the capabilities of AI that can be used to replicate their labour, we aim to inspire precise strategies that protect them from the

employer's AI-driven exploitation of work in the everyday workplace. Additionally, just as previous scholars introduced union-specific digital communication tools through the Cyberunion model during the rise of the Internet, we will explore design opportunities for future AI systems to be used within the union context. These designs can support unions in adapting to the rapidly-changing future of technology as successful cyberunions.

Methodologically, the study will examine how participatory action research can be best employed when working with labour unions. Unions and their fight against the employers' exploitation of their work collectively represent larger class struggles in the current power structures of our society. As researchers of upper-class institutions, we must be sensitive to what our positionality symbolizes to the working class in the broader political context, despite our individual intentions. By exploring various research methods, this study will examine how academics can most effectively work in collaboration with unions to conduct research that truly uplift the participants' voices. The study will show how researchers can engage in action research as members of the community and shape the study to reflect the goals of the union, rather than their own research objectives. These methodological contributions aim to motivate future participatory research in labour and technology to navigate these relationships with conscience. Through participatory action research, we not only ensure that the workers' lived experiences are centered in our methodology, but that we empower the voices of workers as designers of their own future.

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