Mobile AI in Urban Life: Rethinking Urban Communication in an Era of Algorithmic Infrastructure

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Today, artificial intelligence (AI) is most often experienced through the mobile devices in our pockets and the infrastructures we rely on to move through the world. I call this **Mobile AI**: the integration of AI systems into mobile devices and city infrastructures, from smartphones and payment apps to intelligent transport networks and self-driving vehicles. These systems structure millions of micro-decisions that govern the terms of social and economic participation, shaping how people communicate and move around in urban spaces. As an urban communication phenomenon, Mobile AI is not a neutral tool but a governing force that determines who can access essential services, earn a living, or participate in urban life. Navigation apps like Waze help users find new routes through neighborhoods, increasing unintended traffic congestion, while autonomous vehicles like Waymo rely on proprietary AI algorithms to determine geofenced service boundaries, invisibly shaping which neighborhoods gain access to driverless mobility technology.

In the majority of the world, where mobile connectivity is the primary form of digital access, Mobile AI is rapidly reshaping urban economies and social relationships. Yet scholarship and public debate remain dominated by U.S.-centric perspectives focused on affluent communities, leaving what Irani (2019) calls “the other 90%” largely invisible. Understanding Mobile AI as urban communication means recognizing that every routing decision, service boundary, and platform default encodes assumptions about whose mobility matters—and that making these logics legible to communities is a precondition for democratic participation in urban life. My comparative research across Rio de Janeiro, San Juan, and Boston will examine how different infrastructural configurations, governance regimes, and cultural practices produce distinct sociotechnical arrangements of Mobile AI, and how communities negotiate, contest, and reimagine these systems in real time. Two competing dynamics define the role Mobile AI plays in communities. On the one hand, these systems operate through opaque logics largely unaccountable to the communities they affect, often determining who can access essential services, earn a living, or participate in urban life. On the other hand, low-income communities are beginning to appropriate AI tools to create opportunities previously unavailable to them—using AI to design communication materials, prototype apps, and organize for social change—demonstrating forms of grassroots innovation that challenge dominant narratives about technological expertise.

Recommendations

We will draft recommendations based on field work and interview with the communities, but here are some preliminary ones:

- For Policymakers: Require plain-language transparency for AI systems embedded in urban infrastructure, disclosing how service boundaries and access determinations are made. Fund participatory governance structures—modeled on Boston’s *What the Tech?* program and the ALT (Adapt, Listen, and Trust) framework—that foster two-way communication between those designing AI tools and those impacted by them.

- For Researchers: Develop frameworks that treat Mobile AI as mobile communication infrastructure operating simultaneously as communication technology, mobility system, and governing apparatus. Prioritize comparative, cross-cultural research centering low-income communities across the Global South and domestic urban margins, pursuing co-production methodologies that position communities as co-investigators rather than research subjects.
- For Community and Professional Action: Develop critical literacy resources tailored to the specific Mobile AI systems communities already rely on. Community members can become effective advocates for digital equity when given the right tools. Amplify grassroots AI innovation—community-led app development, participatory mapping, WhatsApp-based organizing—as legitimate contributions to just AI governance before current technological arrangements become permanent.

Insights from this research can enhance critical understanding of how AI transforms mobility and urban communication practices and how scholars, policymakers, and communities may intervene to foster more just and equitable technological futures.