Delivering "Broken Promises" to Save the Planet: Climate Crisis, Breakdowns and Socio-Ecological Infrastructure in Platform Capitalism

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Abstract

This paper theorizes climate change as *infrastructural* to platform capitalism. We weave together concepts of crisis, breakdown, and repair from infrastructure studies, advocating that platform scholars attend to socio-ecological "infrastructural politics", or the ways in which environmental management impacts critical systems and services, shaping and being shaped by platform power. This approach ultimately informs digital labor activism from below and transnational advocacy.
Over the past decade, critical digital labor studies and labor geography have focused on the ecological influences associated within labor processes and workers' precarity in tech industries and platform economies (e.g., Vu & Nguyen, 2024; Tretter & Burns, 2023), often framing "the ecological" as externalities to their economic models. In parallel, earlier critical work has criticized how transnational corporations create, manage and exploit shock and disaster to sustain capital accumulation (Klein, 2007; Loewenstein, 2015), arguing that crisis is an internal driver of planetary extractive capitalism (Arboleda, 2020).

Bridging these discussions, we argue that crises are not peripheral disruptions but central mechanisms in the governance, reproduction, and expansion of platform capitalism. Infrastructure studies have expanded the conception of "infrastructure" by theorizing human and more-than-human entanglements (Petrova, 2024), reimagining vulnerability through multi-scalar socio-ecological breakdowns (Ramakrishnan, O'Reilly, & Budds, 2021), and foregrounding often-invisible labor required to maintain and repair socio-technical systems (Sorokin, 2023; Graham & Thrift, 2007). In this light, we conceptualize climate change not as an external threat but as infrastructural to global platform capitalism. That is, climate crises are rendered actionable through policy, scientific expertise, discursive framing, and investment strategies that make ecosystems legible, governable, and investable as infrastructures essential to securing certain forms of life and capital accumulation (Nelson & Bigger, 2022).

We anchor our conceptual framework in two case studies of Amazon's delivery operations in

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Toronto (Canada) and Kolkata (India), cities that represent diverse ecological, urban, and socio-political contexts. These cases draw attention to delivery workers, whose labor is especially vulnerable to the effects of climate change. Their labor is mediated by their physical bodies, motorized vehicles, and the surrounding urban-ecological infrastructure, each a key component of how platform companies like Amazon generate profit. In this light, platform capitalism not only relies on infrastructures that absorb and navigate crises but also capitalizes their ongoing breakdown and repair.
Our article advances digital labor resistance by highlighting socio-ecological infrastructure and climate-related precarity as key lenses for labor organizing, policy advocacy, and degrowth alternatives in the platform economy.

Keywords: platform economies, socioecological infrastructure, climate crisis, breakdown, labor precarity