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MICROMOBILITIES SERVICES IN URBAN BRAZIL: A CASE OF MOBILITIES (IN)JUSTICE

Adriana de Souza e Silva
Northeastern University

Ragan Glover
University of Michigan

Introduction

Rio de Janeiro (Brazil) received some of the strongest investments in South America during the past decade for developing shared bikes and scooters micromobility services. These services were developed under the premise that everyone could easily move around the city. However, their implementation has disproportionately served the wealthiest areas of the city. They are primarily used by those who already have access to other forms of urban mobility, like private cars and bikes. These inequalities highlight the need to better understand the development and integration of micromobility services in Rio de Janeiro and across Global South cities.

We provide a case study of the development and integration of electric scooters (e-scooters) as micromobility strategy in Rio de Janeiro. We explore the entanglement of e-scooter services with systemic injustices related to mobilities, networked infrastructural access, and regulatory frameworks. E-scooters are not merely transportation devices, but also internet-connected platforms that facilitate short-distance travel. Exploring the integration of these technologies is crucial to understanding the how network connectivity shapes physical mobility. This study ultimately advances our understanding of digital divides, shedding light on how emerging technologies simultaneously offer opportunities and perpetuate inequalities in connected societies.

Rio de Janeiro was chosen because it is a significant megacity in the Global South that has invested in modernizing its transportation infrastructure with micromobility services. Drawing from 108 news articles in the Brazilian newspaper, O Globo, we explore the development and uses of e-scooters in Rio de Janeiro. Our findings provide context for understanding micromobility in mega-cities in the Global South. While these cities have

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actively adopted micromobility services as part of urban mobility, the integration often falls short in complementing broader sustainability initiatives, such as the development of bike paths, access to proper smartphones, and reliable mobile internet. This case study provides insight into how networked infrastructures intersect with mobilities and regulatory frameworks, providing key lessons for building justice-oriented mobilities futures.

Literature Review

Although cities in the Global South are gaining prominence as sites for the study of urban networked mobilities (Grassi & Díaz, 2024; Khajehpour & Miremadi, 2024; Roy & Some, 2022), few studies have specifically addressed mobility justice in relation to micromobilities in the region (Glover & de Souza e Silva, 2022; Khajehpour & Miremadi, 2024). This small body of scholarship emphasizes that micromobility in Global South cities is often more precarious compared to the Global North, due to the complexities of infrastructure, traffic, and socioeconomic inequalities. Scholars have also argued for place-specific accounts, recognizing that the Global South is not a homogenous region. In addition, while there is a robust scholarship on bike sharing services as micromobility options (C. A. Teixeira, 2014; J. F. Teixeira et al., 2021), less attention has been placed on the development and contexts of shared electric scooters, particularly in South America.

We contribute to this existing scholarship by exploring: (1) How did shared scooter services develop in Rio de Janeiro? (2) How did known issues of socioeconomic inequality, networked technology access, and transportation access shape the development and use of shared scooter services? and (3) How can we understand mobility justice, micromobility, and mobile communication in a Global South mega-city?

Methods

To answer these questions, we engaged internet archival research of O Globo's—a major newspaper in Brazil. Our team found 108 articles in the archive, by searching terms like "scooter" and "e-scooter". We conducted deductive thematic analysis (Braun & Clark, 2006) to understand the development and urban-infrastructural contexts of e-scooters in Rio de Janeiro. Guided by our research questions, we identified four interconnected themes related to the difficult mobilities faced using e-scooters: (1) safety concerns, (2) lack of regulation, (3) crime, and (4) labor exploitation. We applied a mobilities justice framework (Sheller, 2018) to further analyze these themes. We frame our discussion in relation to considerations about sustainability, equity, and social inclusion.

Results

Our findings reveal that safety concerns emerged as a prominent issue, highlighting the challenges of integrating a leisure-oriented object into a broader transportation network. These risks were exacerbated by urban infrastructures that were developed without e-scooters in mind. Adding to this, like most new technologies, e-scooters lacked necessary regulation. Eventually the city of Rio de Janeiro's attempted to improve safety by restricting speeds and operating hours, but poor enforcement made such measures ineffective. It seemed that geo-fencing was not implemented, even though it could have curbed these concerns.

Crime added another layer of complexity to these micromobilities, as e-scooters were used as an instrument and object of crime. The socioeconomic disparities in Rio de Janeiro fueled unauthorized appropriations of these devices, like using scooters for illicit activities or dismantling them for resale in underserved areas. Similar practices have been observed with mobile phones and other internet-connected technologies, demonstrating ongoing practices of integrating new technologies into informal economies. Even under proprietary systems, users engage practices that violate the intended contexts-of-use, often in response to hardships in their lives.

Relatedly, e-scooter companies capitalized on the growing relationship between internet-connected devices and transportation infrastructures by exploiting the gig economy. Low-income workers (called “charges”) were tasked with e-scooter retrieval and maintenance, but were subject to exploitative labor practices like heavy workloads and low pay. This underscores a darker side of the gig economy, where looser regulation of labor through digital platforms can lead to exploitative practices.

Discussion and Conclusion

E-scooters in Rio de Janeiro exemplify the potential for micromobility to enable and hinder equitable urban transit. The case of Rio de Janeiro shows that their integration has been unsuccessful so far due, in part, to the city’s historically-precarious micromobilities. The haphazard interconnection of urban infrastructures, internet/mobile infrastructures, and regulation contribute to this. Moreover, the integration of e-scooters into existing socioeconomic inequalities exacerbates their contribution to mobility injustices. Without integrating comprehensive and equitable urban planning measures or ensuring proper regulation, these new transportation modes risk exacerbating social and economic inequalities, rather than alleviating them. In conclusion, we argue that addressing these injustices requires a relational approach that attends to the interconnection of material-infrastructural environments with social-cultural issues.

References

Bar, F., Weber, M. S., & Pisani, F. (2016). Mobile technology appropriation in a distant mirror: Baroquization, creolization, and cannibalism. *New Media & Society*, *18*(4), 617–636. https://doi.org/10.1177/1461444816629474

de Souza e Silva, A., Glover-Rijkse, R., Njathi, A., & de Cunto Bueno, D. (2021). Playful mobilities in the Global South: A study of Pokémon Go play in Rio de Janeiro and Nairobi. *New Media & Society*, 14614448211016400. https://doi.org/10.1177/14614448211016400

de Souza e Silva, A., Sutko, D. M., Salis, F. A., & de Souza e Silva, C. (2011). Mobile phone appropriation in the favelas of Rio de Janeiro, Brazil. *New Media & Society*, *13*(3), 411–426. https://doi.org/10.1177/1461444810393901

de Souza e Silva, A., & Xiong-Gum, M. N. (2021). Mobile Networked Creativity: Developing a Theoretical Framework for Understanding Creativity as Survival. *Communication Theory*, *31*(4), 821–840. https://doi.org/10.1093/ct/qtaa006

Khajehpour, B., & Miremadi, I. (2024). Assessing just mobility transitions in the global south: The case of bicycle-sharing in Iran. *Energy Research & Social Science*, *110*, 103435.

Sheller, M. (2018). *Mobility justice: The politics of movement in an age of extremes*. Verso.

Teixeira, C. A. (2014, March 24). Programa Bike Rio Chega À Zona Portuária. O Globo, 9. *O Globo*.

Teixeira, J. F., Silva, C., & Moura e Sá, F. (2021). Empirical evidence on the impacts of bikesharing: A literature review. *Transport Reviews*, *41*(3), 329–351.