

Pedestrian mobility in urban Ethiopia: forms of resistance and hints for urban design

Abstract

How can the persistence of pedestrian mobility in car-centric cities like Mekelle[Ethiopia] inform urban design and planning to re-imagine streets as places beyond links? Unlocking the lessons embedded in pedestrian mobility and resistance is crucial to guide the redefining of the city's streetscapes which is the creation of richer urban experiences for people. Pedestrians in the city often navigate hostile territories with inadequate infrastructure and a traffic-centric design paradigm. This research challenges this status quo by investigating pedestrian resistance, active and passive forms of opposition to car-centric infrastructure, as a valuable resource for urban design.

Key findings reveal a vibrant pedestrian presence in Mekelle, with over 52% walking at an average speed of 1.34 m/s and 67.83% constituting total street activity. However, an empirical model exposes infrastructural deficiencies hindering pedestrian flow, including lack of properly networked sidewalks, inadequate lighting, dysfunctional traffic signals, etc.

More interestingly, the study investigates the dynamic interaction between the city's pedestrians and their environment. Beyond ordinary infrastructure needs, diverse forms of behavioural resistance emerge, such as ignoring crosswalks and navigating in undefined patterns. More than 50% of the pedestrians in the city streets walk-off the sidewalks. These seemingly disruptive actions are reframed as crucial data points for design interventions. By understanding and responding to these behaviours, this research has unlocked a transformative potential in urban design of streets. It has highlighted insights of urban design and planning concerning turning resistance into opportunity. That is, it has introduced a new urban design theory for street developments called "merebatatStreet" by triangulating the insights of urban design and planning with the cultural fabric of the public spaces. It has also developed strategic frameworks which are actionable strategies to put the re-imagined vision of creating richer urban experiences for people into practice.

Keywords; *pedestrian, car-centric, resistance, urban design, merebatatStreet*