

## Abstract

Policy rhetoric and the media portray Information and Communication Technology (ICT) as a means to social and economic empowerment. The ubiquitous presence of mobile telephony and proliferation of digital networks imply a critical role for these technologies in overcoming the tyrannies and constraints of space. Academic literature draws from a range of disciplines but fails to address the significance of new technologies for African-, and South African cities. Debates on technologies and urban spaces reflect a Northern bias and case literature that dwells on the developmental aspects of ICT do not engage with the broader significance with regards to urban change in African cities. This research addresses these gaps by examining the metropolitan and local transformative qualities of ICT in a South African city, Durban.

Three cases were selected. The first examined the city of Durban as place and policy space. Geographic data was used to analyse distribution of technology access. Perusal of policy documentation and newspaper articles together with open-ended interviews informed the analysis of ICT policy and discourse in relation to access. The second case tracked a process by which web sites were developed for 8 community organisations in marginalised places in Durban. This was an action research project where participant observation, interviews and focus groups were methods used to collect data. The third case was concerned with the ways in which technology is used by informal traders active in the city. Photography, interviews and focus groups comprised the methods used in this instance. Actor-network theory was used in all three cases in the analysis of the field work, uncovering material and human actors, network stabilisation processes and agency in determining the transformative potential of ICT at city and local scales.

The distribution of ICT access in Durban was found to follow a spatial trajectory resembling historical patterns of investment and resource distribution. The inclusion of ICT policy on the municipal agenda has deepened the complexity of the local governance terrain. Digital Durban may be promoted as developmental but its transformative qualities are limited; its goals are aligned with the needs and agendas of a broad range of actors, not necessarily in support of inclusion. Network relations are determined by aligned strategic agendas as actors are enrolled into the actor-network through translation. A failed web development process showed that translation processes are core to stabilising network relations. Work with informal traders indicated that appropriation of technology is informed by livelihood strategies.

Innovation is enabled when translation extends to appropriation. More in-depth research is needed on how technology is moulded and appropriated to suit livelihoods. Throughout the research the spatial dimensions of the relationship between ICT and networks were considered. The network spaces that emerge from actor relations do not correspond with the physical spaces usually considered in policy. Future work on these contradictions is necessary in order to provide insights into how more meaningful public intervention can be enabled; the true spaces of transformation.