

Conformity in human mobility: COVID-19 enhancing the conformity effect

Abstract: Understanding the nuances of conformity in human mobility is essential for predicting collective behavior and informing strategies for behavioral changes. Our study leverages a large-scale longitudinal mobility dataset and introduces the CausalMobility framework to reveal the dynamics of conformity causal effects in human mobility before, during and after the COVID-19 pandemic. We found people conform to others' mobility behaviors. We observed a transient weakening of conformity in the short term of COVID-19's outbreak, with anti-conformity behaviors emerging, followed by a strengthening of conformity in the long-term recovery and post-COVID phase. This shift was significantly influenced by the assimilation of previously anti-conformist individuals, an increase in highly conformist populations, and a notable intensification of conformity among older adults, wealthier individuals, and those with higher educational attainment. These findings provide critical insights for developing targeted interventions aimed at behavioral change.