报告 28

借力移动大数据的行为研究
Leveraging Mobile Big Data in Behavioral Research
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报告摘要 Abstract

Across three interwoven projects, we use individual-level mobile data to study fundamental issues in risk perception, consumer learning, and human response to environmental changes. Specifically, we use geophysical and mobile phone data (individual-level mobile apps, telecommunications, and internet usage) of 157,358 victims of the Ms 7.0 Ya'an earthquake in 2013 to diagnose the effects of the disaster and investigate how experiencing real risk (at different levels of intensity) changes human behavior. Rather than reducing the scope of human activity, higher earthquake intensity yielded graded increases in communications (e.g., social networking, messaging), functional (e.g., informational tools), and hedonic (e.g., music, videos, games) behavior. Combining mobile data with a field survey (N = 2000) completed 7 days after the earthquake, we use an instrumental variable approach to show that only hedonic behavior reduced perceived risk, the feeling of danger created by disaster. We also map the temporal patterns of post-disaster behavioral recovery, which are not linear, but typically follow exponential-decay functions, yielding insights on psychological adaptation. Additionally, we use aftershock data as an instrument to study how individuals learn and adapt to the recurring experience of risk over time. We also discuss the theoretical contributions and real world applications of our findings, which have important implications for fields ranging from marketing to psychology to risk management to public health.