

What 15 years of mobile data can say about us

August 5 2015

Large-scale anonymised datasets from mobile phones can give a better picture of society than ever before available. Mobile phone use helps us understand social networks, mobility and human behaviour. A review article recently published in *EPJ Data Science* highlights the main contributions in the field of mobile phone datasets analysis in the past 15 years. Vincent Blondel from the Université Catholique de Louvain, in Belgium, and colleagues conclude, among other things, that predictions that the world would shrink into a small village have not completely materialised as distance still plays a role. Meanwhile, individuals appear to have highly predictable movements as populations evolve in a remarkably synchronised way.

The authors summarise the main findings from mobile data analysis and provide an overview of the different methodologies that have so far been used to analyse [big data](#) from mobile phones in order to better understand social interactions. Such data has previously been used for the study of personal mobility, urban planning, infectious-disease spread, health detection, extreme situation monitoring and country development as well as crime detection and privacy issues.

The work is based on analysing call data records (CDRs) used by [mobile phone](#) operators for billing purposes. But CDRs also contain an enormous amount of information on how, when, and with whom we communicate. And they may be coupled to personal data on customers such as age or gender.

Bearing in mind that this is a relatively new field, the review also points to the inherent shortcomings of this data. For example, further systematic research on the impact of data sampling to check whether results data that only concerns part of a population can be generalised. The research that has been conducted so far only represents the tip of the iceberg, and the authors suggest that such data could ultimately be used to save lives.

More information: V. D. Blondel et al. (2015), A survey of results on mobile phone dataset analysis, *Eur. Phys .J. Data Science* 4:10, [DOI: 10.1140/epjds/s13688-015-0046-0](https://doi.org/10.1140/epjds/s13688-015-0046-0)

Provided by Springer

Citation: What 15 years of mobile data can say about us (2015, August 5) retrieved 21 July 2024 from <https://phys.org/news/2015-08-years-mobile.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.