LSGI Distinguished Lecture
Topic: Big Data and The City: Redefining Big, Recasting Small

Overview

It was our pleasure to invite Prof. Michael Batty, Bartlett Professor of Planning at University College London to deliver a seminar of the LSGI Distinguished Lecture Series on 21 April 2016.

The seminar was about the development of data with respect to its use in understanding and planning cities as it would intimately bound up with the development of methods for manipulating the data, in particular digital computation. Prof. Batty argued that although data volumes had dramatically increased as had their variety in urban contexts largely due to the development of micro devices that enabled all kinds of human and physical phenomena to be sensed in real time, big data was not peculiar to contemporary times. It would essentially go back to basic notions of how we dealt with relationships and functions in cities that were related to interactions. Big data was thus generated by concatenating smaller data sets and in particular if we changed our focus from locations to interactions and flows, then data had faced the challenges of bigness for many years. This should make us more careful about defining what was 'big data' and to illustrate these points, we first looked at traditional interaction patterns – flows of traffic in cities and showed some of the problems of searching for pattern in such data.

Prof. Batty then augmented this discussion of big data by examining much more routine travel data which was sensed from using smart cards for fare-charging and related this to questions of matching demand and supply in the context of understanding the routine operation of transit. This gave us some sense of the variety of big data and the challenges that were increasingly necessary in dealing with this kind of data in the face of advances in digital computation.

Prof. Michael Batty
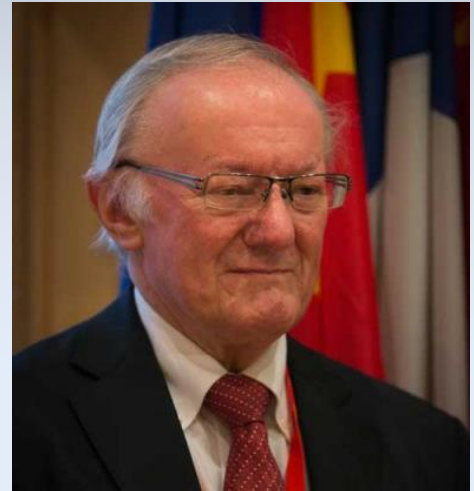
Prof. Michael Batty is Bartlett Professor of Planning at University College London where he is Chair of the Centre for Advanced Spatial Analysis (CASA). He has worked on computer models of cities and their visualisation since the 1970s and has published several books, such as Fractal Cities (Academic Press, 1994) Cities and Complexity (MIT Press, 2005) which won the Alonso Prize of the Regional Science Association in 2011, and most recently The New Science of Cities (MIT Press, 2013). His blogs www.complexcity.info cover the science underpinning the technology of cities and his posts and lectures on big data and smart cities are at www.spatialcomplexity.info.

Prof. Batty is the editor of the journal Environment and Planning B. He is also a Fellow of the British Academy (FBA) and a Fellow of the Royal Society (FRS) and was awarded the CBE in the 2004 Queen Birthday Honours List. Most recently he was the 2013 recipient of the Lauréat Prix International de Géographie Vautrin Lud, and in 2015, he received the Founders Gold Medal of the Royal Geographical Society.