

Preface

This book contributes to the discussion on how the world was transformed into an entire urban phenomenon. Impacts of such change are still to be clearly understood, but decisive tools to implement it are repeatedly said to be the means of information and communication technologies. This phenomenon is made concrete when space is intertwined with time, its scales are challenged, political and economic boundaries of territories are reviewed and social groups can kaleidoscopically appropriate parts of the world to turn them into their places. New ubiquitous and mobile technological urban infrastructures, essentially supported by ICTs, are crucial to provoke and to explain such changes. This is the main principle and reference to be found throughout this book.

By adopting a necessary multidisciplinary approach authors focus on ICTs and new urban infrastructures to discuss this topic. Discussions developed here, both theoretical and analytical, are all connected with global networks of signs, values and ideologies, locative media that gives us the freedom of spatial mobility and the possibility of creating and recreating places, and the surveillance artefacts which permeate our daily life and allow a hypothetical total control of space. These three types of technology constitute the three-section structure of this book. Sections may be read separately according to readers' interests on the book. Complex, multidisciplinary and unfinished character of the discussion brought here justify the expected interest it may arise among different researchers, either from a more sociological, psychological or anthropological point of view or from a more technological, urbanistic or public managerial perspective.

Each one of the three sections of the book, besides discussing three different but closely intricate aspects of the new urban world or of the new informational city, is introduced by a reference chapter. Each of these reference chapters guides and serves as a reference to the following chapters, which try, whenever possible, to engage in a conversation with the reference chapter of their respective section.

The first section presents six chapters (including the reference chapter) that have as their main theme what we are calling *global networks*. The intention of this section is to discuss the global networks of signs, values and ideologies, which break down the social and political boundaries of territories. The challenge presented in this section is to discuss both the roles of the global flows of information, social and cultural values, and – especially in this part of the book – the infrastructures that have been built as a global technological network. The reference chapter in this section, and hence the first chapter in the section, written by Peter Taylor, is *Measuring the World City Network: New Results and Developments*. Taylor proposes a model to measure what he calls the world city network, through the analysis of activities of advanced producer service firms. His intention is to show the possibility of precisely quantifying the connections between cities in a global scale.

In the second chapter in the section, *Policy-Oriented City Networks in Cyberspace: A Methodological Approach to the Understanding of Social and Political Articulations between Cities Based on the*

Concept of Policy Web Spheres, Klaus Frey, Mario Procopiuck and Altair Rosa invite the reader to suspect if global networks can be entirely explained by economic and financial flows by alerting that it is also the result of local and global articulation emerging from a wide variety of sociopolitical issues: the fight against poverty, the strengthening of human rights or protection of the environment, among others. The authors propose to indentify the complexity and diversity of the emerging city networks by means of the methodology of Web Sphere Analysis. In order to do so they take the example of a city in southern Brazil, Curitiba, and its position regarding other cities in the context of environmental policies.

Susan Drucker and Gary Gumpert, in *The Urban Communication Infrastructure: Global Connection and Local Detachment*, (the third chapter of the section) criticizes the traditional way of understanding cities through the lens of financial, commercial, and industrial entities. At the same time, authors offer a different perspective: a combinative environment of interpersonal interaction, media landscape of spaces, places and communication texts. The result is a tacit agreement between traditional geographic community and a complex network of an enlarged one linked by virtual multimedia.

In the fourth chapter, *City Networks in Cyberspace and Time: Using Google Hyperlinks to Measure Global Economic and Environmental Crises*, Andrew Boulton, Lomme Devriendt, Stanley Brunn, Ben Derudder and Frank Witlox call attention to the “intangible” space of flows in order to better understand the characteristics of relationships between world cities. Authors argue that the Web represents an under-utilized database of information that is immense and updated in real time. To demonstrate this, they bring to this book a research based on the Google search engine used to specify a dynamic, informational classification of North American cities.

Chapter six is signed by Tan Yigitcanlar and Jung Hoon Han - *Ubiquitous Eco Cities: Infrastructure, Technology and Management* - where the main focus is on the search for tools to understand what is called Ubiquitous eco cities (U-eco cities). U-eco city is presented as a city that promises to provide a friendly environment, infrastructures and services, evidence in minimizing inputs through ubiquitous technologies and sustainable principles. To do so, authors argue that it is necessary to take telecommunication infrastructure in high consideration. Thus, authors concentrate in the discussions about developments in telecommunication infrastructure and trends in convergence technologies and their implications on the management of Ubiquitous Eco Cities.

Social Networks on the Internet: Twitter Coverage of the Exile of the Peruvian Indigenous Leader Alberto Pizango to Nicaragua (chapter seven), by Débora de Carvalho Pereira closes the Global Networks section. This chapter discusses the use of the methodology of Social Network Analysis to systematize a network of relationships around the collective transnational flux of information via the micro-blog service Twitter. The case studied is the exile of Peruvian indigenous leader Alberto Pizango to Nicaragua, and the conflicts between Indians and the military in 2009. Information systems in geographically dispersed networks are discussed throughout this work as differential factors potentiating the practices, flow, and movement of information.

The second section of this book is based on the discussions around *mobile and locative media*, and as the intention to approach the technological and social implications of such instruments that give us the freedom of spatial mobility and the possibility of creating and recreating places. Divided in five chapters, this section is opened by chapter eight (the reference-chapter), titled *Locative Media and Surveillance at the Boundaries of Informational Territories*, where André Lemos advances on how location-based technologies (LBT) and location-based services (LBS), articulated through global information networks, have been used as new forms of surveillance – what shows an interdependency between the sections of this book. Lemos shows that small devices infiltrated in our daily life are the visible part of locative

media. But they are dependent on ubiquitous though invisible information networks. Those networks have *hard* components (infrastructure and devices) but also *soft* components, such as the political, social and legal framework they are based on.

In chapter nine - *Mobile Telephony, Public and Private Planning and Regulation: A UK Perspective* - Deborah Peel and Greg Lloyd unveil how public and private planning and regulation are constituent parts of the mobile telephony in UK. The authors discuss attempts in Scotland “to design an appropriate regulatory regime to reconcile the environmental, economic, technocratic, and democratic considerations needed to support the physical distribution networks required to support mobile telephony”.

Georgios Patris, Vassilios Vescoukis and Maria Giaoutzi in the chapter *Advances of the Location Based Context-Aware Mobile Services in the Transport Sector* (chapter ten) propose a theoretical model of location-based services for transit and transport. Using multiple locative technologies, they create a context-aware environment, where “services automatically adapt to the environment of a user”. With this model authors show how urban space can be seen as an environment full of infiltrated information where people behave depending on which devices they have to establish an informative dialogue. Dialogues between users and urban environments are also explored by Thiago Falcão, Luiz Adolfo Andrade, Emmanoel Ferreira and Paolo Bruni, who analyse, in chapter eleven, different games developed in Brazil which use locative media to build a hybrid space, where electronic devices and the city constitute the environment where players must act. Thus, in *Locative Media and Playful Appropriations, or How Electronic Games Help to Redefine the Meaning of Space* author’s main argument is that alternate reality games could “reconfigure the way we observe the city and interpret urban space”.

This section closes with *Mobile Devices: Designing Hybrid Body-Spaces*, as chapter eleven, by Luísa Paraguai, who argues that the relationships between space and body, when mediated by mobile devices demand “new behavioural codes and evoke other communication patterns”. According to the author, these devices, infiltrated in daily life, create new social bonds and boundaries which could enhance new spatialities. The artistic projects discussed by Paraguai in her chapter try to explore those new mobile urban spatialities.

The last section is also the biggest, with seven chapters. In the third section, authors focus their efforts on issues more directly involved with the application of *surveillance technologies*. In general, the chapters in this section discuss the technological and social implications of instruments that permeate our daily life, and which permit for those who control it a hypothetical total control of the space. The progressive relation between surveillance and new technologies, especially ICTs, coincides with a trajectory from the bodily, as seen in Foucault’s panopticism to a surveillance society based on computerised and increasingly automated systems. The reference-chapter for this section, which is also chapter thirteen, is written by David Lyon: *Why Where You are Matters: Mundane Mobilities, Transparent Technologies, and Digital Discrimination*. Lyon shows how surveillance technologies have been used to increase the visibility of personal data through strategies of tracing bodies and artifacts. By associating mobile and traceable technologies to surveillance, Lyon also shows, indirectly, the interconnections between the three sections of the book, and hence, between the three types of technological applications which the approach of this book is based on.

In chapter fourteen, Zixue Tai, demystifies the idea that the efforts by the Chinese Government to control the Internet flow in the country is a single unified project based on filter technologies and network firewalls. In *Casting the Ubiquitous Net of Information Control: Internet Surveillance in China from Golden Shield to Green Dam*, Tai shows how control is made of a range of different and complex practices and technologies in a multilayered and multifaceted surveillance strategy mainly orchestrated

by the Web Bureau of the Central Propaganda Department in the central government, and distributed through many other public and private institutions.

The pre-emptive characteristics of today's surveillance systems that rely on profiling software integrated to Closed Circuit Television is approached by is approached by Fernanda Bruno in chapter fifteen - *A Brief Cartography of Smart Cameras: Proactive Surveillance and Control* - through a socio-technical standpoint, in order to understand these "intelligent" systems of control beyond its technological features. Although the author does describe recent developments of these technologies, her focus is more to analyze these devices as socio-technical systems that alter various practices, actions and processes of surveillance upon behavioural patterns of people and objects in public and private spaces.

Chapter sixteen, *Recording and Reporting: Camera Phones, User-Generated Images and Surveillance*, by Bilge Yesil, discusses the constitution of a "viewer society" with the intensification of the culture of visibility brought in by the increasingly widespread use of camera phones by individuals. The author interestingly points out the concepts of lateral surveillance (individuals surveilling other individuals), sousveillance (individuals observing observers), and synopticon (many watching the few) to deconstruct the idea that the use of personal surveillance devices by individuals constitutes an empowering practice. After Bilge's account on the "viewer society" through the use of camera phones, Lucia Santaella, in chapter seventeen, interestingly analyses the same kind of apparatuses (small, mobile and locative devices) to theorize what she calls the three regimes of surveillance: the panoptic regime, the scopic regime and the tracking regime. In *Mobile and Locative Media: In between Thánatos and Eros*, Santaella argues about the importance of considering the social construction of surveillance technologies as opposite to a deterministic view that considers these technologies and surveillance itself either good or evil.

The eighteenth chapter - *Notes about Vehicle Monitoring in Brazil and Europe from a Data Protection Perspective* - approaches projects of vehicle monitoring in a cross-national perspective to discuss previous preoccupation, discussions and legal instruments regarding the fundamental protection of personal data. Danilo Doneda and Mario Viola de Azevedo Cunha analyse some European and Brazilian regulations to build their argument and defend their concern about the widespread use of personal data in different kinds of (private and public) databases, especially in the case of projects for vehicle monitoring, by pointing out the risks of threats to individual privacy and data protection.

Finally, in chapter nineteen - *Urban Surveillance in Mexico* - Nelson Arteaga-Botello questions the influence of the increasing use of Closed Circuit Television in the organization, form, experience and social practices in public and private places in two Mexican Cities. In this analysis, the author shed light in the relationships between this specific kind of surveillance technology and the agency behind its implementation, acceptance, symbolic construction and organizational use for tackling crime and violence problems in urban public and commercial spaces.

This book is part of a greater contemporary effort to understand our own moment in history, characterized by a society both excited with its differences from predecessor moments and reluctant to easily accept artifacts and methods adopted to achieve it. By displaying side by side excitement and fear towards changes imposed by technological devices and digital procedures, this book is a contribution to make these feelings clear and proper, perhaps helping us to understand the moment in which we are witnessing the rising of the ubiquitous city, clearly marked by the relationships between space, place, territory, global networks, locative media, and surveillance practices and technologies.

Rodrigo Firmino, Fábio Duarte, Clovis Ultramari
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