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Digital Urban Acupuncture

Human Ecosystems and the Life of Cities in the Age of Communication, Information and Knowledge

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Preface

In Alfred Hitchcock's Psycho, Norman Bates is split between two houses (Zizek 2006): the modern horizontal motel and his mother's gothic house. He is constantly running between the two, not being able to find his own. This parallels his complex personality, impersonations, and (perceived) identity(ies): The two architectures represent Norman's identities, and the continuous oscillations between the one and the other mimic their confrontation. Psycho is a product of modernity, in which this type of struggle is evident: In the change of the century, and after the wars, "home" becomes a complex concept, and a space of conflict, which becomes even more radicalized as the times of the revolutions of the young generations start appearing at the horizon, first with the signals of music and art, and then with the sexual revolution, the drugs, and the nomadic lifestyles which come with them at both physical, mental, and economic levels.

The postmodern dimension tends to obfuscate this dimension. If a postmodern architect was to be involved in the design of Psycho's location, the two buildings, with some probability, would have been collapsed together, in one of Ghenry's style mashups, where the poles of the antagonism could have compenetrated one into the other, combining them into a new hybrid entity. With all probability, in this case, Norman would have had no need to kill his victims, as the tension of running around between the two places (and identities) would have collapsed as well, into a third space of hybridity. At last, Norman Bateson would have been home.

Defining home also implies defining what is not home. And, thus, it implies the definitions, on the one hand, of public spaces and, on the other hand, of the private and intimate ones, which become ever more layered and fragmented: from a house, to the teen's room, to headphones with which to create and personalize our space, to the Internet, in which we can multiply ourselves and potentially create infinite numbers and modalities of public, private, and intimate contexts, identities, and environments.

The genesis of the Sony Walkman, for example, is perfectly fitting in describing this sort of (r)evolution.

As the technical opportunities allowed for smaller devices with higher quality to become ever closer to the body, architecture changed.

At first, you experienced music in the concert hall, with the selection of the musical landscape being performed administratively, by experts, curators, and politicians. Then, music moved into the houses of the rich, with instruments and expensive devices: They could invite, decide, and experience music in their own terms, the elites of culture. Then it started moving into every home, with record players and the radio: You could choose what to listen to, but there would still be fights over the radio channel to hear, or on what record to buy, a fight around consensus, authority, and the micropolitics of the house. And then, the music arrived behind the closed doors of teenagers' rooms, with all the signals of their desire for privacy, discouraging intrusion. Music also left the home, with the "ghetto blasters," the battery powered radios which you could carry on your shoulder and lay down, to broadcast music around yourself: Where your music was, the territory was your, nomadic, mobile, with you at the center. From the ghetto blaster the walkman arrived: By wearing headphones, you could completely personalize the space around you, connecting it to visions, memories, and desires. The walkman was probably the first available augmented reality consumer device: wearable augmented reality. This signed a radical transition: The compresence of multiple sounds in the same space, "attached" to the bodies of their owners, transformed urban locations into open source spaces of perceptions; it became possible to wear our own interpretation of space.

Multiple walkmans in the same space meant multiple interpretations of it: While someone was remembering romance, someone else could be experiencing violence, or excitement, or sadness, through the technological device connected to their body, extending it and its spatial capabilities.

Myriads of microhistories, side by side, compenetrating each other, paired to dress codes, behaviors, intentions, attitudes, and composed continuous flows of tactical usages of space: different music for taking the train, to wait in line, to walk in a certain neighbourhood or in another, for each person, simultaneously, in enormous numbers.

Architecture exploded: By listening to a different music, you could experience the same place in entirely different ways, also connecting to different times and places, with memories, past experiences, information (audio guides in your headphones), and emotions.

Then came the internet, further radicalizing this process, from both computational and relational points of view. Computational, for the action of algorithms, producing and presenting content and opportunities for interaction at every step, in ways which are mediated through the availability of network and connectivity, and by the action of the algorithms which select what you will experience at a certain space/time on your smartphone, and who you will connect with, what reviews you will see instead of others, what you will find in your search engine query, and what will other people see about what you expressed online. And relational, with people, object, places, a sort of novel set of superpowers which allow for almost telepathic connection with other identities, information producing or absorbing devices, remote vision through imaging, video, or tele-presence, and much more.

Time definitively became nonlinear, multiple, and emergent, and so did spaces, contexts, identities.

Norman Bateson could have easily been Norman, Psycho, and a dozen other personalities at the same time, with different Relational Ecosystems and interconnection with objects and locations, no matter where/when he was.

In all of this, the public, private, and intimate spaces are not only becoming progressively hybrid in these senses (as they integrate digital and physical, and as they become interconnective and nonlinear, instead of identitarian and linear), but also mediated. The readability and understandability of these spaces become more opaque and incomprehensible every day, and out of our possibilities for control, however individual or autonomous. Accessibility and openness are only at the surface, at the interface level, and we are all progressively loosing the ability to understand what lies below and about how to get big pictures in unmediated, autonomous ways.

In this scenario, this book constitutes a small step which could prove to be helpful to create interventions in both of these senses.

Its objective is to introduce a methodology—Digital Urban Acupuncture—which allows to gain better understandings about the Relational Ecosystems found in territories (and, particularly, in cities), between human and nonhumans, people and buildings, devices and plants, and so on, and to use these understandings to design—autonomously and collaboratively—interventions in the posthuman relational fabric of the city. This book is about a method using which it is possible to try to understand the city as an hyper-complex living being—a body, with energies, emotions, and behaviors, at micro-, meso-, and macrolevels—in which millions of identities interweave relations to punctually stimulate this body through performative actions—the needles—in order to create tangible, collaborative, and participatory effects.

To do this, a reflection is necessary on the possibility to reappropriate our public, private, and intimate spaces, and about how to perform across them as individuals, identities, communities, cultures, and societies.

This is what we dedicate this book to: not only to learn new methods and techniques, but also to reflect on how to work together in order to reclaim our spaces in socially constructive, autonomous, sustainable, solid, caring ways.

Rome, Italy

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Reference

Zizek S (2006) The pervert's guide to cinema. Amoeba Film, UK

Acknowledgements

This book would have not been possible without the contribution of many people, organizations, and institutions. They are too many to list, and for this, we invite all readers to look throughout the Web sites and references listed in this book: There you will find people, institutions, universities, communities, and workgroups without whom we would have not been able to perform this research.

Here, we will highlight a few inspirations which have made this book possible, and some institutions and organizations which have always supported us.

Inspirations: Massimo Canevacci, who is maybe the one who introduced us to a possibilistic vision of the city; Antonio Caronia, who has opened up, for us, the opportunities which come from understanding how powers manifest themselves; Derrick de Kerckhove, who we do not see as often as we would like, and who has inspired us into letting understand the profound psychological implications of technologies; Marco Casagrande, whom we have never met in person yet and who has nonetheless had a great impact on the ways in which we think, him and the wonderful anarchist grandmothers which we have learned to recognize as one of the most interesting examples of how to bring true, lasting transformation in cities; Franco Avicolli, for having believed in two unknown artists an researchers with a vision, many years ago in Mexico City, and for all the inspiring conversations on the meaning of cities in our cultures; Luisa Valeriani, for all her help in making us understand the implications of being performers, instead of "only" artists and researchers; Franca Formenti, for being a relational, interconnective performer in everything she does, which is one of the secrets on how to transform communities; Alex Giordano, for being a living example of the possibilities which come when you let Kronos and Kairos come together, and for explaining the implications which come if you do this, through his life; Marco Stancati, for realizing the power of "augmenting" the experience of our cities through data, information, and knowledge; Luca De Biase, for his continuous, silent, and effective support and for focusing on the necessity for sense-making and participatory action in our times; Tiziana Terranova, for all the enormous effort spent on achieving a more just, balanced and inclusive world, for all the precious insights which she constantly

provides, and for the wonderful walks in Naples; all the wonderful people at the University of Athens, Dimitris Charitos, Daphne Dragona, Iouliani Theona, and all the others, for being one of the most advanced observers of the evolution of our cities; Penny Travlou, for being our most trusted personal ethnographer and for constantly sincere participant observation, a rhizome in the network; Michel Bauwens, for his enormous energy and dedication to the possibilities and opportunities which come when you are able to imagine a new world; Christian Iaione, for being a constant supporter, advisor, enabler, and friend; Mark Cote, for being Italian, Canadian, Australian, and English at the same time and for all that this implies in terms of imagining a human-centered, effective, reflective research practice; Maurizio Napolitano, for his hard-core approach to the commons, which achieves the possibility to imagine an open world, with a smile, against all odds; Layne Hartsell, for being one of the most sincere people we know and one of the most profound and imaginative thinkers on the mutations of our times; Simone Arcagni, for being so energetic and for always amazing us with something we did not know; Alessandro Tartaglia, for his passion and determination, which is an example for us all, even when it is too much ☺.

Organizations and Institutions: the Eisenhower Fellowships, which has believed in us by enabling to start the Human Ecosystems through the support of their Consequential Outcomes program; the Yale World Fellowships and the TED Fellowships, for providing a supporting, engaged, caring environment in which people are the only thing worthwhile investing in; the City of Bologna, for having understood the importance of reclaiming our digital public spaces, right from the start; Universidade Metodista and SESC Brazil, for providing a world of opportunities and for sincerely understanding the importance of our work; transmediale festival, for believing in us and providing constant, critical support; Ars Electronica, for supporting us through sincere, dedicated efforts and participation; New Haven City Administration, for understanding the implications of our work immediately and as a caring, interested institution; the P2P Foundation, for all the constant support and the true relational environment which it creates; LabGov, for the incredibly insightful approach on the legal and societal implications which come from commoning and, in general, from imagining a collaborative society; SOS, the Open Source School, for being an incredible new form of school which was just waiting to exist; Nefula, for the continuous support and for the insightful contributions to the visions on the future of cities.

For everyone else: You know who you are and how much we love and respect you (and given all of the examples and references, you are probably inside the book already).

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Chapter 1
Introduction

Abstract This chapter provides a general introduction about the research process which brought to the writing of the book, and then synthesizes the its contents describing them on a chapter-by-chapter basis.

This book represents a reflection on the current state of the research process which has led us through 4 years of explorations of the transforming landscapes of information, knowledge, communication, and relation in cities worldwide.

In these few years, things have radically changed.

Things that were impossible became possible. Practices that seemed strange, or even weird, became normal. Processes whose results appeared to be unlikely became likely, so much that now we are using them as our main inspiration about what the future of our cities could be.

This transformation has not been conflict-free.

Job markets have changed. People have protested. Relationships have assumed new forms. Power architectures have evolved. Distributions of wealth, health, well-being, happiness, and access to opportunities have changed, not always for the better.

There have been migrations, revolts, crimes, and unethical behaviors.

Most of the time, all of this change found its direct or indirect origin in the massive amount of data, information, and knowledge which has become available and accessible to multiple types of subjects—citizens, designers, entrepreneurs, public administrators, activists, artists, secret services, and more—through the wide presence of ubiquitous technologies.

Our cities have become filled with technologies, so much that any gesture, motion, traversal, and action of our daily lives generate data and information and can be used to generate knowledge and wisdom. Whether it is by flipping on a light switch; purchasing a tomato at the supermarket; having fun at a bar with a Wi-fi connection; cooking in our technological kitchen; working at our office while interacting with our friends and relatives online; driving our car; or just, simply, walking, in our cities full of sensors, cameras, devices, antennas, network connected objects and infrastructures, and other technologies: each of these actions generate data.

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Whether we realize it or not, whether consciously or unconsciously, whether we are on social networks or not, and whether we possess some "smart" object in our pocket or in our home or not, we constantly generate data and information, in direct and indirect ways.

These data can be used for multiple purposes: to sell us consumer products through targeted advertising; to find patterns for fighting terrorism; to make new scientific discoveries which could create better scenarios for health, pollution, energy consumption, food production and usage, public transport, safety, development, and more.

Patterns (or their absence) can be found in data and information, generating knowledge. Patterns can be found in knowledge, generating wisdom.

In this book, we will focus on one thing which can be done with all of these data and information: understanding its flows—and the resulting flows of knowledge, wisdom, emotion, and, in general, communication—in cities, allowing us to gain insights about how to make interventions in it, creating a better, more inclusive, participatory, collaborative place.

We call this process "Digital Urban Acupuncture" (DUA), and through the years, we have developed a methodology for it, which can be useful for researchers, citizens, public administrators, urban planners, activists, entrepreneurs, designers, and artists.

In DUA, we take into consideration technologically rich environments (mainly cities, although rural environments are progressively becoming rich in ubiquitous technologies, so much that there are wonderful perspectives in applying DUA in these spaces), and we observe them through their attitude of spontaneously generating digital data and information under many forms: social networks; sensor networks; applications and services; real-time or off-line datasets; or through more creative ways which can include urban installations or interventions, citizen activation processes, gamification techniques, and more, as we will see throughout the book. In this process, we harvest large amounts of data and information, which we analyze using multiple techniques and combining multiple disciplines, from computational sociology, to digital ethnography, to network theories (e.g., Actor–Network Theory (ANT)).

Through this observation process, we aim at describing what we have defined the Relational Ecosystem: the descriptions and models according to which data, information, knowledge, and wisdom flow across (and through) the subjects of the city, whether they are individual citizens, organizations, companies, groups, "tribes," administrations, or else.

The Relational Ecosystem of the city can be seen as a landscape, superimposed on the physical landscape of the city, but with different behaviors: Its time frames are different and nonlinear; it moves, in fluid ways; it interconnects (and separates) regardless of the physical proximity; it is emergent, generative, and spontaneous, like an ubiquitous garden made of spontaneous vegetation which, instead of being carried on by winds, animals, and human beings, gets spread through digital networks, Wi-fi signals, mobile networks, interactions, transactions, and more.

The Relational Ecosystem can be interpreted by integrating the contributions coming from a range of other disciplines, such as anthropology, sociology, statistics, architecture, and arts and design.

By gaining insights about the Relational Ecosystem, cities—or parts of them, maybe in specific times or contexts—can be described as organisms, their functioning and behavior closely related—and, in some cases, determined—by these flows. Just as, to an extent, the life of a human body can be described in terms of the flows of blood, food, air, lymph, and electricity, exchanging substances, information, resources, stimuli, feedbacks, and more, between nodes as tiny as cells, as large as organs, and as diffused as the immune system.

This vision of the city as a complex system of flows gives rise to the possibility to try and interpret them and their interruptions, obstructions, blockages, interferences, deviations, jams, and dispersions, using techniques as varied as the ones derived from data and network sciences and the ones related to anthropology, psychology, and communication sciences. Through these understandings, it is possible to plan, design, and conduct interventions whose aim is to re-establish certain flows, to create new ones or to constitute the possibility for the emergence of novel ones in different, often unexpected, ways.

This process is the one we define as DUA: understanding the flows in the Relational Ecosystem of the city to design interventions to influence them; using design, architecture, policy-making, planning, restoration, and recontextualization processes for spaces and places, education processes, artistic intervention, and more; and also providing citizens with the tools and methodologies which can be used to design their own interventions.

Through DUA, this process can be done in informed, active, inclusive, participatory ways, producing positive interactions and also confronting with the value which is represented by the existence of differences, of conflicts, of transgressions, and of the social, spatial, political, and psychological configurations which they dynamically imply, through their presence, absence, fuzziness, preciseness, persistence, and volatility.

On top of that, DUA also allows for an interesting set of reflections on the times of the city. While its technological characteristics make it suitable for all the real-time analysis of the urban environment, DUA also has the qualities which allow analyses of longer time spans, highlighting the different speeds at which information, knowledge, innovation, and creativity flow within the city and across it.

In the following chapters, we will explore the notions (technical, technological, and methodological) which enable DUA and explore some notable use cases. The structure of the book is shown in visual form in Fig. 1.1.

Chapter 2 is a short chapter which describes how to use this book. The book is, in fact, composed of multiple harmoniously interweaved and interconnected experiences: The text, the images, the information visualizations, and the interviews are connected to interactive online experiences such as videos, discussion spaces, social network conversations, datasets, and maps. This chapter will introduce the reader to the visual diagrams which explain, in easy and accessible ways, how to

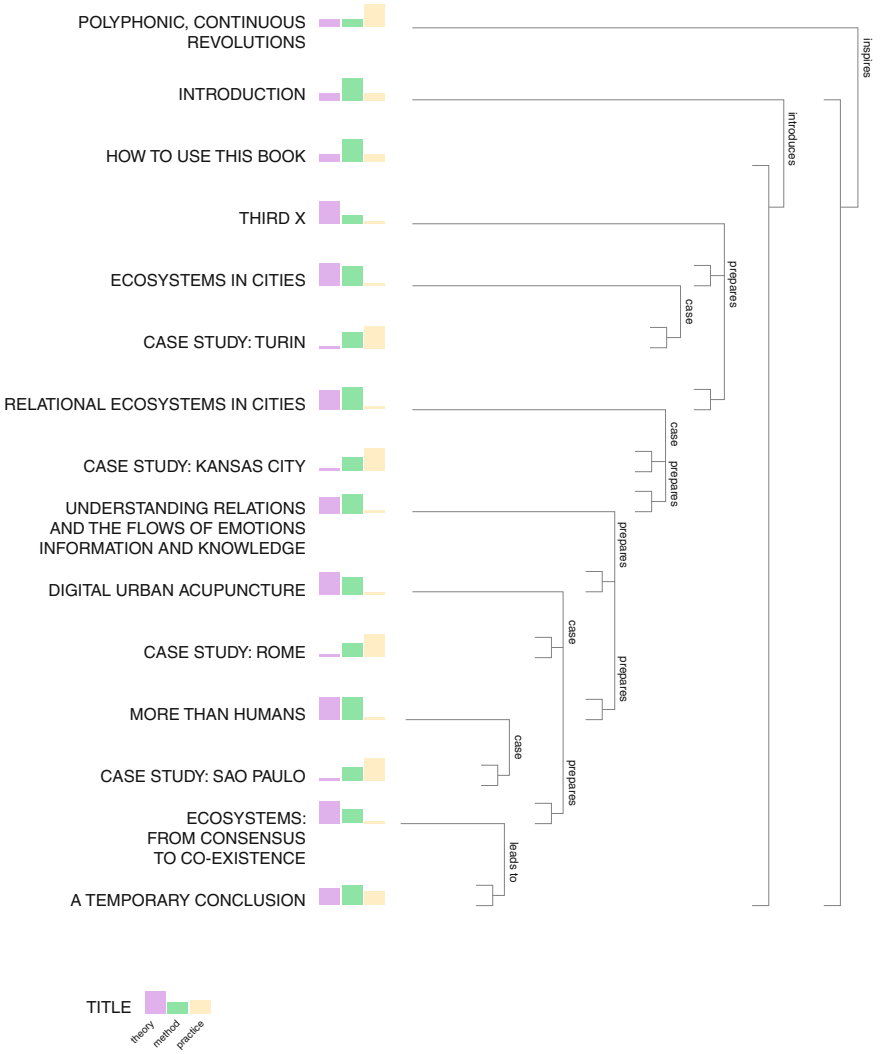

Fig. 1.1 The architecture of the book, showing how it covers the various parts of the DUA methodology

access all of its characteristics, from paper to the digital realm, and across devices (computers, smartphones, and tablets). This is commonly described as an "expanded book."

Chapter 3 introduces the concept of the Third Infoscape, which will be used throughout the book. Starting from Michel De Certeau's idea of the revolutionary potential of people's daily lives, and from the fact that people continuously reprogram the spaces they live in, we will explore the interconnection with several forms of emergence, of hybridization of spaces and contexts, and of *brassage*

(remix), from Soja's and Bhabha's Third Space, to Clément's Third Landscape, to Casagrande's Third Generation City, to Pistoletto's Third Paradise. These, together, will allow us to conceive the new definition of the Third Infoscape, in which all of these concepts come together and integrate into a view of the world in which physical and digital domains are convergent through the presence and use of ubiquitous technologies and in which data and information constitute an emergent, relational part of the landscape.

In this chapter, an interview with Gilles Clément will show how these Thirds (landscape, space, city, infoscape, and paradise) can contribute to a more open, shared, imaginative society.

Chapter 4 will start off from the definition of the Third Infoscape and describe cities as ecosystems in which networks of interconnected human and non-human entities establish the flows of information, knowledge, emotion, and opinion. Several examples will be given for this concept, leading to the description of cities as a polyphony of expressions, of microhistories, tactics, and strategies, and about how they can be collected using data and information. The chapter will end with the exploration of the legibility of all of the micro- and macrohistories which unfold in territories and will describe their use according to the logic of coexistence.

At the end of the chapter, an interview with Carlo Ratti will introduce us to the potentialities and problems of taking into considerations large quantities of data and information for strategic tasks and in order to empower citizens to organize themselves and to collaborate.

Chapter 5 will present the first case study on the city of Turin, in Italy. This will address the observation of a full year (2011) in the city through social networks, focusing on the many languages which are spoken in the city, as evidence of the multiple cultures which inhabit it. Places, crossings, emotions, communication, opinions: the city is different according to the cultural eyes from which you look at it. Building upon Kevin Lynch's concepts of imageability and readability, the city shows its multiple lives and the ways in which they relate, interact, move, interconnect, and divide.

Chapter 6 will start from the city considered as an ecosystem and focus on its relational aspects, defining the Relational Ecosystem. The chapter will introduce the concept and move on to the description of how relations in the city can be discovered, observed, and measured, starting from the types of data and information which can be captured from the various types of actors in the ecosystems (quantitative, qualitative, classification using ontologies and folksonomies, topic and emotion discovery using natural language analysis, topic/emotion networks and their evolution in time, relational networks, and their evolution in time), and the types of relationships which can be described and observed in this perspective (strength and persistence of relations; vertical, horizontal, and transversal relations; liminal relations).

At the end of the chapter, an interview with Massimo Canevacci will frame the Relational Ecosystem in its anthropological implications, from the emergence of polyphonic performative actions, to dissent and conflict, to the possibility to observe and participate in the creation of imaginaries and actions.

Chapter 7 will feature another case study, through the observation of Kansas City's innovation ecosystem as expressed on social networks and through a series of institutional data sources. The case study will use the concepts defined in the previous chapter to highlight the architecture of the relations in the city's innovation ecosystem, its social, strategic, and political implications, and the understanding how to use these insights to perform meaningful, effective action in the city.

In Chapter 8, the notion of the Relational Ecosystem will be expanded, in order to understand what roles people and other entities may have in the ever-changing network of relations. The chapter introduces a methodology according to which the nodes of the Relational Ecosystem can be classified with respect to their characteristics and the ways in which it is possible to define further classification schemes to achieve different goals. Different classification schemes provide meaningful insights about the ways in which data, information, knowledge, emotion, and opinion flow in the city: information brokers, hubs, experts, influencers, amplifiers, bridges, and more. The focus here is, again, ecosystemic, in which human and non-human entities participate (organizations, for example, or objects, plants, and environments connected through sensors, or even data and information sources of various kinds which may be present in the ecosystem).

Chapter 9 will bring all of the previous elements together, defining a method for DUA. The Third Infoscape of the city gives rise to the Relational Ecosystem of the city through which it is possible to gain insights about the flows of data, information, knowledge, emotion, opinion, and communication in the city. This comes under the form of an ever-changing network and of the description of the flows along its nodes and links. DUA takes this and reflects how it is possible to intervene in these flows, to create action, engagement, and transformation: Just like traditional acupuncture, it finds the "pressure points" on which it is possible to act to stimulate, inhibit, and suggest growth or the manifestation of limits, to create discussion and engagement, and to break or enhance existing loops and recurring patterns. The chapter will start off from the definition of Urban Acupuncture and from all its supporting theories and methodologies and then to the definition of DUA: its goals, methodological approaches, assumptions, and operative strategies. This will allow for attempting a dynamic—and polyphonic—definition of the well-being of the city and to describe the strategies according to which "pressure points" can be activated in creative ways, to provoke results, affecting wide areas of the population. A final section of this chapter explores the issues connected to the multiple forms of divide which can be present in this scenario and possible ways in which it is possible to confront with them: digital divides, cultural divides, age divides, and more.

At the end of the chapter, an interview with Marco Casagrande will highlight the connections between Urban Acupuncture and Digital Urban Acupuncture, and the roles of information and communication technologies in this.

Chapter 10 will present another case study, based on the analysis of Rome's cultural ecosystem which took place in 2013 with the support of the city administration. The process was designed to stimulate public engagement directed to promote participatory decision-making and policy-shaping processes and to foster the emergence of peer-to-peer self-organization patterns, to create novel forms of

economies in the city's cultural environment. The Relational Ecosystem of the city was observed for 6 months, after which an Open Data source was released and used through an open laboratory which was accessible to citizens, administrations, organizations, associations, companies, and multiple types of cultural operators, which could learn how to use the Relational Ecosystem to achieve their goals. The chapter describes this experience, its results, and the directions in which it is currently heading.

Chapter 11 will expand the notions and concepts presented in the previous chapters by formulating a set of hypotheses about the implications of non-human engagement in these processes: What are the social, political, economic, and operative effects of including non-human agents in the Relational Ecosystem of the city, such as plants, trees, infrastructures, organizations, sensors, and devices? The chapter also points out the possibility to include different layers within the ecosystems, like in the case of organizations—for which their members appear in the ecosystem as both individuals and as the result of another ecosystem, the one of the organization—and in the case of distributed sensing networks—for example the natural environment of the city, which can be observed through disseminated sensors placed across the natural spaces of the city.

At the end of the chapter, an interview with Pier Luigi Capucci will highlight some of the more philosophical, critical and theoretical aspects which emerge when Relational Ecosystems form involving human, non-human and posthuman subjects, all communicating, relating and influencing each other through complex dynamics, for example through algorithms, organizational systems and control/power architectures.

Chapter 12 will present a case study coming from the city of Sao Paulo, in which a Real-Time Museum of the city was created in collaboration with SESC (the Brazilian federal agency in charge of managing the nation's museums and cultural installments) and Universidade Metodista. The museum was an iconic, engaging, inclusive experience of the Relational Ecosystem of the city. It has been designed to create awareness about the many layers of the Relational Ecosystem of the city and to provide a cultural shock to the population, to promote a radical transformation of the sense of possibility about the perception of what a metropolis can be and about the ways in which the concept of citizenship can be transformed, with citizens becoming positive, active, aware, and participatory agents of the city's civic life. The museum hosts a laboratory in which all members of society can learn how to use the Relational Ecosystem of the city, using DUA techniques, to pursue their goals and to create patterns of self-organization and intervention on the urban environment, supported by the city, regional, and federal administrations. The chapter narrates the methodologies, design processes, objectives, scopes, and expected impacts of the project, documenting the patterns, expectations, and future scenarios for this initiative, starting from a citizen-initiated research on Sao Paulo's water crisis.

Chapter 13 will present possible political and economic models which take into account the opportunities opened up through DUA and, in general, through the availability of wide areas of active citizens who are aware of the Relational

Ecosystem of the city and who can use it together with the Third Infoscape, to organize themselves, to create participatory decision-making processes, and to enact peer-to-peer dynamics in the city. These can best be synthesized as a shift in focus: away from the idea of the necessity of consensus and toward the idea of the possibility and feasibility for coexistence, valuing differences, and turning them into the creative energy driving the well-being of the city, establishing a parallel with the biodiversity of natural environments.

Chapter 14 will present some conclusions, highlighting the possible directions for further research.

Chapter 2
How to Use This Book

Abstract This chapter introduces a series of features which are characteristics of this book, which comes under the form of the *expanded book*. A series of special contents are disseminated throughout it, such as databases, videos, artworks, and interactive experiences, under the form of Internet resources which can be accessed through a variety of devices and which greatly enhance the experience of the publication. While this book is completely usable and accessible in its paper form, these characteristics allow to expand its experience.

This book assumes the form of what is commonly referred to as an "expanded book."

While being fully usable in its paper form, this book builds upon it, providing the possibility to access images, data sets, interactive experiences, digital interactive maps, interactive information visualizations, videos, and other materials. This allows for a deeper immersion in the subject and to have the availability of extended tools and information which can be used for the education purposes, further research, presentation, or even just to enjoy the wonderful images, interactions, and designs.

Here, we will describe them and organize them according to their type.

It may be useful to note how, regardless of the media, a form of each content has been produced for the paper version of this book, in order to make it fully usable. Even if you do not want to use your computer, smartphone, or tablet, you will be able to get the most out of this book through images, information visualizations, meaningful screenshots, and video captures.

Of course, some digital assets (such as datasets) have no direct paper counterpart: You will need to access the Internet addresses to download them.

Some of the datasets and visualizations will automatically update themselves over time. Kansas City's innovation ecosystem (Chap. 7) is one of them. When this happens, it will be explicitly mentioned, meaning that the specific information visualization and the database feeding it are updated over time: If you open it now, you will see the current data visualized; if you open it next year, you will see next year's data, as well as the current one. This can be an interesting opportunity to

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