



Digital Methods for Social Science

*An Interdisciplinary Guide
to Research Innovation*

Edited by

Helene Snee

Christine Hine

Yvette Morey

Steven Roberts

Hayley Watson



Digital Methods for Social Science

Digital Methods for Social Science

An Interdisciplinary Guide to Research Innovation

Edited by

Helene Snee

Lecturer in Sociology, Manchester Metropolitan University, UK

Christine Hine

Reader in Sociology, University of Surrey, UK

Yvette Morey

*Research Fellow, Centre for the Study of Behaviour Change and Influence,
University of the West of England, UK*

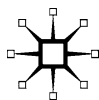
Steven Roberts

Senior Lecturer in Sociology, Monash University, Australia

Hayley Watson

Senior Research Analyst, Trilateral Research and Consulting, UK

palgrave
macmillan



Selection and editorial matter © Helene Snee, Christine Hine, Yvette Morey, Steven Roberts and Hayley Watson 2016

Individual chapters © Respective authors 2016

Foreword © Noortje Marres 2016

Softcover reprint of the hardcover 1st edition 2016 978-1-137-45365-5

All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

No portion of this publication may be reproduced, copied or transmitted save with written permission or in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency, Saffron House, 6–10 Kirby Street, London EC1N 8TS.

Any person who does any unauthorized act in relation to this publication may be liable to criminal prosecution and civil claims for damages.

The authors have asserted their rights to be identified as the authors of this work in accordance with the Copyright, Designs and Patents Act 1988.

First published 2016 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

Palgrave® and Macmillan® are registered trademarks in the United States, the United Kingdom, Europe and other countries.

ISBN 978-1-349-55862-9 ISBN 978-1-137-45366-2 (eBook)

DOI 10.1057/9781137453662

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data

Digital methods for social science: an interdisciplinary guide to research innovation / [edited by] Helene Snee, Christine Hine, Yvette Morey, Steven Roberts, Hayley Watson.

pages cm

Includes bibliographical references and index.

1. Social sciences—Methodology. 2. Social sciences—Research—Data processing. 3. Internet research. 4. Digital media. I. Snee, Helene, editor.

H61.D546 2015

300.285—dc23

2015021880

Contents

<i>List of Figures and Tables</i>	vii
<i>Foreword by Noortje Marres</i>	viii
<i>Acknowledgements</i>	x
<i>Notes on Contributors</i>	xi

1 Digital Methods as Mainstream Methodology: An Introduction	1
<i>Helene Snee, Christine Hine, Yvette Morey, Steven Roberts and Hayley Watson</i>	

Part I Big Data, Thick Data: Social Media Analysis

Introduction to Part I

2 Methodological Innovation in Precarious Spaces: The Case of Twitter	17
<i>Axel Bruns and Jean Burgess</i>	
3 Have We Even Solved the First ‘Big Data Challenge?’ Practical Issues Concerning Data Collection and Visual Representation for Social Media Analytics	34
<i>Phillip Brooker, Julie Barnett, Timothy Cribbin and Sanjay Sharma</i>	
4 ‘I’m Always on Facebook!’: Exploring Facebook as a Mainstream Research Tool and Ethnographic Site	51
<i>Eve Stirling</i>	

Part II Combining and Comparing Methods

Introduction to Part II

5 Mixing Modes to Widen Research Participation	71
<i>Jo Hope</i>	
6 Do We Need Polls? Why Twitter Will Not Replace Opinion Surveys, but Can Complement Them	87
<i>Javier Sajuria and Jorge Fábrega</i>	

- 7 Video Analysis in Digital Literacy Studies: Exploring Innovative Methods 105
Roberto de Roock, Ibrar Bhatt and Jonathon Adams

Part III Developing Innovations in Digital Methods

Introduction to Part III

- 8 Prototyping Social Sciences: Emplacing Digital Methods 127
Adolfo Estalella
- 9 Digital Methods and Perpetual Reinvention? Asynchronous Interviewing and Photo Elicitation 143
Emma Hutchinson
- 10 Digital Stories and Handmade Skills: Explorations in How Digital Methods Can Be Used to Study Transmissions of Skill 157
Victoria Tedder

Part IV Digital Research: Challenges and Contentions

Introduction to Part IV

- 11 What's the *Matter* with MOOCs? Socio-material Methodologies for Educational Research 175
Jeremy Knox
- 12 Towards an Innovative Inclusion: Using Digital Methods with Young People 190
Emma Bond and Stuart Agnew
- 13 Ethics Issues in Digital Methods Research 206
Claire Hewson
- 14 Digital Methods as Mainstream Methodology: Conclusions 222
Helene Snee, Christine Hine, Yvette Morey, Steven Roberts and Hayley Watson

- Index* 231

8

Prototyping Social Sciences: Emplacing Digital Methods

Adolfo Estalella

Redistribution of methods

Research methods in the social sciences has a history of intense development during the twentieth century. The historical accounts that describe the invention of interview methods, survey techniques, and modern ethnography have demonstrated that social researchers and scholars have exerted great effort in aid of their development. In the twenty-first century, the conditions for the invention of new research methods have been radically transformed with the extension of digital technologies. Many blogs and websites display tag clouds, a technology based upon textual analysis techniques; no less widely spread are the technologies for visualizing hyperlink patterns that draw on the technique of social network analysis. These are but two examples of technologies developed by non-scholars that are based on the application of social science research methods. Noortje Marres (2012) has described this process with the notion of redistribution of methods, highlighting the fact that research methods are now used and even produced anew by people with no formal credentials in the social sciences.

The emergence of new (digital) methods beyond the circumscribed limits of academia challenges scholars to reconsider how the social sciences may reinvent their methods. The process of redistribution offers the opportunity to expand their repertoire drawing inspiration from, or even incorporating, those methods developed by amateurs, non-experts and technology users. This chapter examines one of such method called prototyping, a socio-material device for the production of knowledge. I approach prototyping as an empirical object that forms part of the social worlds I have researched. My discussion is based on an

ethnography undertaken in 2010 at the critical centre Medialab-Prado,¹ an institution that works at the intersection of art, science and technology. The activity of Medialab-Prado is organized around the notion and practice of prototyping, which involves tinkering with technologies, recycling materials, and extensively documenting the process.

The chapter is organized as follows. I introduce first the practice of prototyping at Medialab-Prado, and then describe the forms of material engagement in prototyping to suggest that we consider prototyping a process of conceptual exploration and theoretical elaboration. Two distinctive dimensions of prototyping are discussed in the following sections. I describe the effort to make prototypes open to the continuous reconfiguration through practices of documentation and hospitality, but for this to occur certain conditions are necessary, such as the use of space. I propose that we may consider prototyping a digital method that deploys experimental conditions for the production of sociological knowledge. Further, I argue that prototyping as a method is not only instantiated through digital technologies but configured in face-to-face situations through forms of material engagement.

Prototyping

Medialab-Prado (MLP) is a cultural centre, part of Madrid City Council's Area of Culture, which has been populated by hackers, artists, technologists and scholars since it was founded in 2004. In the last ten years the institution has sustained one of the most productive research programmes in Spain on the social and cultural dimension of digital technologies, and has gained recognition throughout Europe.² Its activity is organized around workshops, talks and seminars that involve a community of regular local participants; large workshops are also periodically organized in which participants from abroad take part. The centre defines itself as devoted to experimenting with digital technologies in their varied expressions, including digital art, technological design (based on Free Software, open source hardware) and forms of knowledge production (digital humanities, citizen science, and so on).

MLP mobilizes in its everyday practice only free and open source technologies such as the operating system Linux, the programming language Processing, or the web platform MediaWiki. Free Software is a type of technology characterized by a property regime that allows for copying, modifying and redistributing its source code. Programmers of Free Software made public the interior design of technology and release work-in-progress or beta versions so that anybody can take part in their

development. In this sense, Free Software has been described as a type of technology, a moral genre, a form of material practice and a mode of knowledge production (Leach et al., 2009; Coleman, 2013). But Free Software is too the social collective that is enacted in this process of technological development; the anthropologist Chris Kelty has conceptualized it with the notion of recursive public: ‘a public that is constituted by a shared concern for maintaining the means of association through which they come together as a public’ (Kelty, 2008, p.28).

The ethos of Free Software imbues the activity of MLP, invoking openness, collaboration and experimentation as its principles. There is a constant encouragement to make all the knowledge and information generated and shared at MLP publicly available through copyleft-like licenses, which permit copying and modifying information and reproducing MLP-created designs in other places. More importantly, Free Software is integral to prototyping, a cornerstone notion and practice that shapes MLP’s everyday activity. MLP’s clear preference for this free and open ecology of digital technologies sheds light on the relevance of considering the values inscribed in digital technologies when analysing and developing digital methods. For if digital technologies have different values inscribed on them so could be the methods that are constructed mobilizing those technologies.

‘In the Air’ and ‘re:farm the city’ (aka re:farm) are two examples of prototypes that were developed at MLP in their early stages; both of them take the city as an object to be researched and acted upon. In the Air, a project developed by Nerea Calvillo and collaborators (2010), has designed tools for measuring and visualizing microscopic agents that populate the air, and tools for exploring how these agents interact with the city.³ The project has tried to construct sensors (with no success) using modest materials that can eventually be distributed and located in private houses. They have developed a software program that visualizes air components and locates their density over the city. Its first design, produced in a MLP workshop, was a ‘diffuse façade’, a system that visualized the air’s components through a coloured cloud of water on the exterior façade of the centre.⁴

re:farm the city has been working around the city since 2009, creating tools for urban farmers while prototyping urban allotments and building communities around them. The project was originally conceived by Hernani Dias (2010) in Barcelona and travelled that same year to a MLP workshop, where it would return for another one in 2011. Participants in re:farm the city have built visualization software and electronic sensors for measuring temperature, humidity and watering using Arduino

and other open source hardware technologies. In addition to hardware and software tools, the set of infrastructures produced includes wooden boxes, composters and mobile cases for allocating small allotments, very often using recycled materials. re:farm the city mobilizes do-it-yourself (DIY) and recycling practices that are intermingled with open software and hardware technologies. Moreover, all the activities of the project are documented and published on the project's website, and almost all the knowledge produced is available under open-access conditions in an easy-to-edit wiki, with enough detailed information for anyone to reproduce and build similar designs.⁵ The diverse set of practices that are required in the workshops organized by re:farm gives the opportunity to participate to almost anybody, no particular technological skills are needed.

The prototype is a common concept in technological design contexts where it refers to testing artefacts that precede the final technological design; MLP has however re-elaborated the practice and notion of prototype to signify something else. re:farm the city, for instance, not only produces tools for urban farmers but by helping and teaching people how to grow vegetables it also helps to grow a community around each allotment. re:farm gathers people at the same time as it develops technology and produces the knowledge for doing so; in this process of material tinkering prototyping opens a space for experimenting with digital technologies and forms of sociality. Prototypes are therefore not just fragile objects and unstable technologies but the associated collectives gathered around them. We have seen this kind of configuration over recent years in projects like Free Software and Wikipedia. The online encyclopaedia, Wikipedia, is a work in progress with no stable and definite edition; it is constantly evolving as a result of the collective efforts of hundreds of thousands of contributors.

Prototypes in MLP make of their provisional 'beta' state a virtuous mode of social production and reproduction that recursively enacts its own public. As Alberto Corsín Jiménez (2014) has defined it: the prototype works through its openness and tentativeness as descriptor for both an epistemic object and an epistemic culture; it is a mode of knowledge production enmeshed in its own forms of sociality. Tinkering with materiality, designing objects, hacking software, documenting practices and exploring the properties of materials, prototyping resonates with a recent conversation in the social sciences (e.g. Ratto, 2011) that contends that we could consider forms of material engagement as practices of theoretical production. By material engagement I am referring to practices in which objects do not play the role of simple tools but they

are a key part of the research exploration (Marres, 2009), in this case, the qualities and affordances of materials are not given in advance but are the result of the relation that the researcher establishes with them.

Material engagement

Before going on with my description it is important to outline my conceptualization of research methods. Existing social science methods shape our empirical practices by establishing the protocols and rules we must follow in our research. Despite their canonical status, they have an empirical foundation described, for example, in accounts of the development of the survey (Igo, 2007), interviews (Savage, 2010) and field notes (Sanjek, 1990). Recent discussion (Savage, 2013) on the social life of methods has criticized the view of methods as neutral instruments for the production of empirical data. Rather than thinking of them solely as tools I follow the conceptualization put forth by John Law and Evelyn Ruppert (2013), who propose viewing methods as devices. By this term they mean the patterned teleological arrangements that ‘assemble and arrange the world in specific social and material patterns’ (2013, p.230). This concept highlights the heterogeneous condition of methods: more than a set of rules, they are arrangements of people, infrastructures and knowledge arranged in a precise spatiotemporal pattern.

It is easy to see how the method of interviewing arranges a particular social encounter: two people meet for a period of time during which one poses questions to the other in a conversation, which is recorded and later transcribed. The interview arranges in spatial and temporal terms a situation that is mediated by certain infrastructures and particular social rules for the production of empirical data and whose ultimate objective is the production of social scientific knowledge. Law and Ruppert’s (2013) proposal is part of a growing interest in exploring conditions under which the methods of the social sciences are reshaped or even reinvented (Lury and Wakeford, 2012b) and this chapter on digital methods and prototyping seeks to contribute to this literature.

The relation between digital technologies and digital methods is very often instrumental; the most common configuration takes the shape of a tool used for gathering, analysing, or producing visual representations of empirical data. Sometimes they are publicly accessible technologies used by social scientists; Christine Hine (2007), for example, used the commercial software for network analysis, Google TouchGraph technology, to crunch and visualize the hyperlinking patterns of websites. On other occasions, technologies can also be purposely designed for elaborating

new research techniques, as illustrated by many of the cases described in this book; in both scenarios, digital methods are articulated through technologies that have been turned into tools. Yet prototyping composes a different relation between methods and material technologies: it neither mobilizes ready-to-use tools for the production of empirical data (Rogers, 2013) nor does it take technologies as evocative objects to think with (Turkle, 2007). The materials, technologies and artefacts that participate in prototyping are part of a process of tentative exploration that enacts a form of conceptual elaboration that demonstrates the material craft of knowledge production.

Prototyping resonates with the recent proposal for critical making, developed by Matt Ratto (2011) and others. Critical making is 'a research program that explores the range of practices and perspectives connecting conceptual critique and material practice' (Ratto, Wylie and Jalbert, 2014, p.86). Drawing inspiration from design practices, critical making displaces the traditional methods of social sciences – instead of observing technology designers or users in an attempt to describe the social dimension of technology, critical making organizes knowledge production through workshops and encounters aimed to produce artefacts through collaborative practices. The objects designed in these encounters are not the ultimate goal, but rather a means for the production of new sociological concepts: it is in the process of technological tinkering and material engagement that new conceptual elaborations are produced. Critical making is therefore a practice and method 'intended to bridge the gap between creative physical and conceptual exploration' (Ratto, 2011, p.252).

Certainly, re:farm the city does more than simply design cheap infrastructures for urban allotments. The project seeks to increase participants' interest in the food they eat by helping them produce it, and it aims to recover local species of vegetables and produce knowledge about them. In so doing re:farm explores the limits of urban life, the distinction between nature and society, the boundaries between the rural and the urban social fabric and the interface between communities and technologies. Working with mundane recycled materials, experimenting with digital technologies and documenting these practices, re:farm the city materially re-farms and conceptually reframes the city. In so doing the project reshapes the urban environment through a sophisticated reflection on the relation of the city with our food and the opportunity to intervene in this process through digital technologies.

There is a twofold displacement in the conventional configuration of digital methods that takes place in prototyping, both in the role of

the empirical and in the relationship between the method and material objects. First, the production of new concepts and the construction of theory do not follow the common path of data production, analysis and writing. Prototyping is not a method for producing empirical data; sociological knowledge is elaborated in embodied and face-to-face contexts, through practices of material engagement and in places carefully designed for this kind of work.

Second, the method is not materially inscribed in a tool, as for example is the case when social network analysis is materially inscribed in hyperlink representation technologies. The production of knowledge in prototyping is the result of material tinkering, collective design and collaborative experimentation. The method in this case is a device that emerges in the process of material engagement. In this sense prototypes may be described as socio-technical assemblages that intertwine material construction and conceptual production; they unfold experimental ambiances for conceptual exploration, but in order for this to happen certain conditions are necessary.

Openness

At MLP, prototypes are produced during large workshops in which a few dozen people meet for three weeks to create visualizing software programs, develop electronic artefacts and discuss the social and political aspects of digital technologies. 'Interactivos?' is one of MLP's lines of enquiry that aims to problematize the simple notion of interactivity, which for some people 'was reduced during the 1990s to the idea of pressing a button', according to Marcos García, director of MLP. Months before the annual 'Interactivos?' workshop event, the centre makes an international call for ten projects that will be funded for materials and tools. A second call is later made for selecting three or four dozen collaborators whose travel expenses are paid for. The 2010 'Interactivos?' workshop gathered forty people: a few from Spain, half from the rest of Europe, and some from America. At the workshop, collaborators (as they are called) choose the project they want to collaborate on and during the following days an atmosphere of conviviality pervades the centre. Improvised seminars and small workshops are organized by participants to teach others specialized techniques. The intense work during the day continues till very late and often extends into the night in the bars of the neighbourhood.

The 2010 'Interactivos?' workshop was organized around the topic of 'neighbourhood science' with the objective of reflecting on how MLP

and similar centres could be considered citizen laboratories. The motto explicitly invoked the process by which amateurs and aficionados are becoming more relevant in the production of scientific knowledge in our societies; its goal was 'to set up small urban experimental laboratories to foster neighbourhood participation based on experience, on the passion for learning and sharing that is characteristic of amateur and hacker culture' (Medialab-Prado, 2010). One of the projects worked to create a method for urban naturalists, another investigated the relation between urban and virtual environments, and a third was a DIY, easy-to-assemble photobioreactor. Since being held for the first time in Madrid in 2006, 'Interactivos?' has travelled all around the world and the workshop's methodology has been replicated in London, Lima, Mexico, Dublin and Ljubljana.

The workshop's topic strongly resonates with the research programme on the co-production of science developed by Science and Technology Studies (STS) over the last three decades, making evident that research centres and universities are not the only sites in which scientific knowledge is produced (Nowotny, Scott and Gibbons, 2001). These authors contend that science is progressively produced by new agents in completely new sites, and sound knowledge is now created by amateurs and non-experts, associations of patients, civil organizations and activist movements (Jasanoff, 2004).

Workshops are events for production and although some of the creations are exhibited, yet exhibition is not an overall aim for MLP. When I arrived at the centre in 2010 there were a few projects exhibited in its main room: a modified computer made of recycled hardware and cardboard boxes, and a visual intervention that the creator was trying to fix but that would not last long. The prototypes of MLP are unstable and precarious artefacts: very often they don't work, and even if they do, they are so fragile that they never last for long. The workshops are more of an event that prompts the initiation or continuation of prototypes under development than an opportunity to finalize them. Instead of seeking technological closure and the production of stable versions of technological artefacts, prototypes invest in their own openness. This orientation resonates with the inductive practice proper to certain methodologies in the social sciences that call for flexible research designs; however openness refers here to a socio-material state: a condition of temporal suspension involving artefacts that are in permanent development and a design that must be flexible to accommodate changes in its material and social composition at any time. In the first stage of workshops the invocation of openness

means, for instance, that the initial design proposals must be capable of accommodating the proposals of different collaborators.

There is not any standard protocol for developing prototypes; it is always a tentative exercise full of uncertainty. There is not a specific method for constructing the urban allotments of re:farm the city; its construction has to be worked out in each case. The method, we may say, is elicited in the process of socio-material exploration during prototyping: the method of prototyping turns into a form of prototyping methods – a second displacement in the articulation of digital methods. If we follow Law and Ruppert's (2013) conception that methods are socio-material arrangements, then prototypes can be seen as methodological devices that invest in making social and material assemblages open to continuous reconfiguration over time. The distinctive element when compared with conventional methods is the suspension of temporality: the prototype aims at reproducing over time the epistemic condition of its socio-material arrangement. Being always incomplete, in a precarious and fragile state, the prototype is a method that calls for the participation of others to sustain its productive condition. In this sense openness is a temporal operator that projects the prototype into the future: the prototype as a temporal method of epistemological hoping.

But openness is only possible under the very precise conditions that are unfolded in MLP. Two other practices are oriented to open prototypes: first, the documentation of the process and second, the hospitality that mediates the relationships in MLP. The centre invests great effort in documenting all its events: talks and seminars are streamed online and recordings are uploaded to the Internet. During the workshops participants are prompted to document their activities in a wiki platform and all the information is offered under a copyleft-like licence. re:farm has documented in detail the different projects and technologies developed, and its wiki contains information on farm containers, devices for seeds, watering systems, diverse electronic sensors and software tools. The documentation may be a graphic, for instance depicting the containers, on other occasions it is the design of a workable electronic board for controlling watering while on vacations.⁶ To a great extent, MLP is translating the common Free Software practice of documenting code into accounts of the process of prototyping; documentation oriented to allow others to replicate prototypes.

Openness is enacted too in the form of a social practice that permeates the sociability at the centre: hospitality. Cultural mediators (*mediadoras culturales*) are in charge of introducing the centre to any newcomer; while their role could be conceived as that of museum caretaker it is

very different. Cultural mediators are responsible for sustaining a convivial atmosphere, taking care of the physical space, documenting the activities and pursuing their own research projects. If the process of documentation tries to open the past by keeping a material memory of events, the practice of hospitality intends to open the present by taking care of the ambience of events. We may say that hospitality is the spatial translation, in a face-to-face context, of the openness that in Free Software is enacted by documentary practices. While it may seem unusual to invoke hospitality as a technique or method for the social sciences, it is no more so than the notion of establishing rapport in ethnographic research. If rapport is intended to build trust and establish a positive relationship with research subjects during empirical work, hospitality is aimed at figuring out an epistemic ambience for the production of knowledge in a collective space.

It is not clear what experimenting with methods might entail or how to turn methods into experimental objects, but this might be an apt description of prototyping. However, for methods to become experimental objects they require specific conditions that in MLP involve mobilizing infrastructures, setting up spaces, practicing hospitality and carrying on activities of documentation; these are the conditions for prototypes to be developed. We may distinguish two different methods that are intertwined during the workshops at MLP: one that is brought into existence in a tentative process in which prototypes are assembled through material engagement; and another that provides the experimental conditions that allow for the first one to be brought into existence. Thinking of method as a twofold distributed arrangement of space and materiality challenges us, first, to rethink how material practices establish the conditions of possibility for conceptual elaboration; and second, to reconsider the conditions for experimenting with research methods in the search for reinvention.

Space

The topic of digital methods may be contextualized into a larger and recent conversation in the social sciences that has called for the reinvention of the repertoire of research methods. It has resulted in a series of proposals that look for inspiration in the arts (Back, 2012), explore new forms of collaboration (Konrad, 2012) and search for new approaches to the empirical (Adkins and Lury, 2009). The contributions of this literature have been enormously rich and diverse, opening the way for completely new inventions of methods (Lury and Wakeford, 2012a).

Little attention has been paid however to the role that space has in the production of new methods: Does the invention and innovation of digital methods need specialized spaces or can it occur in any place? It may seem an unusual question for the social sciences, but the history of experimentation has demonstrated the relevance of space in the production of science. Experiments require specialized sites characterized by specific infrastructures, spaces and social relations like laboratories, museums, botanic gardens and observatories, among others (Galison and Thompson, 1999). We may consider whether, in certain situations, space is necessary for the invention of digital methods and what kinds of specialized spaces may social sciences need for this task. I am thinking in space as the effect of heterogeneous relations (Law and Hetherington, 2000) and place as a particular articulation of those relations (Massey, 1994).

During the celebration of the 2010 'Interactivos?' workshop in MLP a group of five advisors were in charge of assessing the projects. These advisors then met with the coordinators and participants of each project on a regular basis. In one of the advisor's internal meetings they commented that collaboration between the projects was low and suggested changing the distribution of the groups in the large room in order to promote interaction between them; a few days later they reorganized the spatial arrangement of the groups. Taking care of the spatial layout of the workshop was intended to promote collaboration. On another occasion the use of space was a technique for transparency: in 2010 there were only a large room and a small office in MLP so all the management meetings took place in the large public room in a gesture of elected, or forced, transparency.

A participant used to refer to MLP as a 'face-to-face Internet'; on other occasions the centre was understood as an experiment into the 'analogization' of digital culture, a site in which digital culture was translated into the configuration of a face-to-face site. This is not exclusive of MLP, as hackerspaces are sometimes understood as a manifestation in the physical realm of production model of peer-to-peer networks (Kostakis, Niaros and Giotitsas, 2014). Something similar occurs with Burning Man, the famous artistic event annually held in the desert of Nevada. It is portrayed by some participants as a spatial realization of the values of digital culture: 'a mirror of the internet itself' (Turner, 2009, p.83). MLP, like these other places, may be considered a site where certain values attributed to the Internet and digital technologies like openness, horizontality, transparency and collaboration are inscribed in material infrastructures and translated in the organization of space.

Celia Lury and Nina Wakeford (2012b, p.15) have referred to what they call ‘inventive’ methods as ‘devices of auto-spatialization, whose movement [...] is both topological and nomadic: topological in that they bring together what might have seemed distant, and disconnected and nomadic in that they are processual, iterative, emergent and changeable’. The reference to the spatialization of methods provides a clue to the reconsideration of the conditions under which methods may be reinvented. MLP is certainly not an academic institution, however it is a site where non-scholars and people with no conventional credentials experiment with digital technology and produce knowledge, and in this process we may say that they invent new research methods. This process is especially intensified in certain sites that I will call places for redistribution of methods: sites that in their spatial translation of the values attributed to digital technologies provide the conditions for experimentation with and innovation in digital methods.

Emplacing methods

I have described in this chapter the practice of prototyping at MLP as an instance for the production of sociological knowledge. I have argued that we may consider prototypes as instantiations of digital methods that problematize the convention that equates digital methods with digital technologies. Prototypes at MLP shed light on a relevant aspect of methodological invention in the contemporary moment: They show us novel configurations of digital methods that are brought into existence in face-to-face contexts through practices of material engagement. In so doing, they point out to the epistemic dimension of different practices like documentation and hospitality and the relevance of space for constructing epistemic ambiances for the production of sociological knowledge. To sum up and close my argument I now turn to consider the particular conditions under which methodological innovation happens in MLP.

I have designated MLP as a place for the redistribution of methods, a site where new techniques for the production of knowledge are developed by non-scholars. But in order for social scientists to take the work carried out in these places seriously they have to reconsider their approach to methodological invention. Methodological knowledge has traditionally depended on a reflexive gesture by which social scientists scrutinize their own practice, as many of the chapters in this book illustrate. The writing genre that accounts for this exercise usually takes the form of a reflexive report. The sites for redistribution of methods seem

to emplace us to operate a twofold displacement in our conceptualization of methods and empirical descriptions that I have tried to perform in the writing style of this chapter. The method in this account is not my own practice but an empirical object, it refers to the arrangements that my counterparts in the field deploy for the production of sociological knowledge. Under these circumstances my writing does not follow the conventional reflexive genre but takes the form of an ethnographic description.

John Law (2004) has called for more risky methods, arguing that we need to be more flexible and generous if we want to renew our repertoire. He has argued that we need 'Multiple method. Modest method. Uncertain method. Diverse method' (2004, p.11). For if new methods are produced by non-scholars in places that allow for the redistribution of methods, the methodological repertoire of the social sciences could be renewed by empirically describing those methods or becoming practically engaged with them. In the first case (describing methods) we can return to our conventional techniques to describe these methods; this chapter is an example. In the second case (engaging practically) social scientists may participate in places for the redistribution of methods, taking part in the process of methodological innovation. In both situations, places for the redistribution of methods are sites full of uncertainty and social science researchers need to inculcate a sense of modesty in their own practices in order to recognize other forms of non-conventional expertise; doing so opens the opportunity to extend the methodological repertoire of the social sciences with multiple and diverse methods.

Mike Savage and Roger Burrows (2007) have warned of a coming crisis of empirical sociology arising from the progressive digitization of our societies and the entry of completely new agents into the production of sociological knowledge. They argue that the social sciences are progressively losing their relevance due to this process. In this chapter, I have tried to show that MLP seems to the reverse this argument: the participation of new agents in the production of sociological knowledge is an opportunity for the social sciences. MLP demonstrates that places for the redistribution of methods seem to challenge us to reconsider not only 'how' but 'where' we reinvent the digital methods for the social sciences.

It is not unusual to point out the experimental conditions of different methods; an expression that highlights the role that method plays in setting up the conditions of possibility for experiments. Less common is the exploration of how to turn methods into experimental

objects. Certainly it is not clear what shape this kind of experimentation would take but the prototypes of MLP provide us with some clues. Methodological experimentation points in this case to a displacement of observational practices and a move towards other approaches in which the world is not only investigated but engaged with, too. The method is not in this case a set of procedures or rules for producing empirical data but a methodological device that carefully set up the conditions for tentatively producing social scientific knowledge; in this sense we might think of MLP as a place that experiments with methods in the process of prototyping social science.

Acknowledgements

I want to express my sincerest gratitude to the people of Medialab-Prado. This chapter was only possible thanks to them. I want to mention explicitly Hernani Dias and Nerea Calvillo for sharing with me moments of discussion and an opportunity to understand their epistemic practices. Thanks to Yvette Morey and Steve Roberts for their careful reading and comments during the editorial process. This chapter is part of a long ethnographic project I have carried on in collaboration with my colleague and friend Alberto Corsín Jiménez; it has been enriched by long debates and shared conversations between us.

Notes

1. This ethnographic research was carried out in collaboration with the anthropologist Alberto Corsín Jiménez.
2. In 2010, Medialab-Prado was given an Ars Prix award by the renowned Ars Electronica Festival.
3. This part of the project was developed and led by Susana Tesconi in 'Interactivos? 2009' under the project Glob@s.
4. The software developed by the project is available at its website: <http://www.intheair.es/>.
5. It is possible to consult this information in the wiki of 're:farm the city': <http://refarmthecity.org/wiki/index.php>.
6. Some of the designs for 're:farm the city' are available here: <http://refarmthecity.org/wiki/index.php>.

References

- Adkins, L. and Lury, C. (2009) 'Introduction: What is the empirical?', *European Journal of Social Theory*, 12(1), 5–20.
- Back, L. (2012) 'Live sociology: Social research and its futures', *The Sociological Review*, 60(S1), 18–39.

- Calvillo, N. (2010) 'Infra(proto)types'. Paper presented at the *Prototyping Cultures: Social Experimentation, Do-It-Yourself Science and Beta-Knowledge*, Madrid, Spain, 4–5 November 2010.
- Coleman, G. (2013) *Coding Freedom. The Ethics and Aesthetics of Hacking*. Princeton and Oxford: Princeton University Press.
- Corsín Jiménez, A. (2014) 'The prototype: More than many and less than one', *Journal of Cultural Economy*, 7(4), 381–98.
- Dias, H. (2010) 'Re:farm the city. Connecting food to people', Paper presented at *The Prototyping Cultures: Social Experimentation, Do-It-Yourself Science and Beta-Knowledge*, Madrid, Spain, 4–5 November 2010.
- Galison, P. and Thompson, E. (1999) *The Architecture of Science*. Cambridge, MA: The MIT Press.
- Hine, C. (2007) 'Connective ethnography for the exploration of e-science', *Journal of Computer-Mediated Communication*, 12(2), 618–34.
- Igo, S.E. (2007) *The Averaged American: Surveys, Citizens and the Making of a Mass Public*. Cambridge, MA: Harvard University Press.
- Jasanoff, S. (2004) *States of Knowledge: The Co-Production of Science and the Social Order*. London: Routledge.
- Kelty, C. (2008) *Two Bits. The Cultural Significance of Free Software*. Durham: Duke University Press.
- Konrad, M. (ed.) (2012) *Collaborators Collaborating. Counterparts in Anthropological Knowledge and International Research Relations*. New York and Oxford: Berghahn.
- Kostakis, V., Niaros, V. and Giotitsas, C. (2014) 'Production and governance in hackerspaces: A manifestation of commons based peer production in the physical realm?', *International Journal of Cultural Studies*, first published on 13 February 2014 doi:10.1177/1367877913519310.
- Law, J. (2004) *After Method. Mess in Social Science Research*. Oxon: Routledge.
- Law, J. and Hetherington, K. (2000) 'Materialities, spatialities, globalities', in J. Bryson, P. Daniels, N. Henry and J. Pollard (eds.) *Knowledge, Space, Economy*. London: Routledge, pp.34–49.
- Law, J., and Ruppert, E. (2013) 'The social life of methods: Devices', *Journal of Cultural Economy*, 6(3), 229–40.
- Leach, J., Nafus, D., and Krieger, B. (2009) 'Freedom imagined: Morality and aesthetics in open source software design', *Ethnos*, 74(1), 51–71.
- Lury, C. and Wakeford, N. (eds.) (2012a) *Inventive Methods. The Happening of the Social*. Oxon: Routledge.
- Lury, C. and Wakeford, N. (2012b) 'Introduction: A perpetual inventory', in C. Lury and N. Wakeford (eds.) *Inventive Methods. The Happening of the Social*. Oxon: Routledge, pp.1–24.
- Marres, N. (2009) 'Testing powers of engagement. Green living experiments, the ontological turn and the undoability of involvement', *European Journal of Social Theory*, 12(1), 117–33.
- Marres, N. (2012) 'The redistribution of methods: On intervention in digital social research, broadly conceived', *The Sociological Review*, 60(S1), 139–65.
- Massey, D. (1994) *Space, Place and Gender*. Minneapolis: University of Minnesota Press.
- Medialab-Prado (2010). *Interactivos?10: Neighborhood Science Workshop*, http://medialab-prado.es/article/taller-seminario_interactivos10_ciencia_de_barrio, date accessed 4 February 2015.

- Nowotny, H., Scott, P. and Gibbons, M. (2001) *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty*. Oxford: Polity.
- Ratto, M. (2011) 'Critical making: Conceptual and material studies in technology and social life', *The Information Society: An International Journal*, 27(4), 252–60.
- Ratto, M., Wylie, S.A. and Jalbert, K. (2014) 'Introduction to the special forum on critical making as research program', *The Information Society: An International Journal*, 30(4), 85–95.
- Rogers, R. (2013) *Digital Methods*. Cambridge, MA: MIT Press.
- Sanjek, R. (ed.) (1990) *Fieldnotes. The Makings of Anthropology*. Ithaca and London: Cornell University Press.
- Savage, M. (2010). *Identities and Social Change in Britain since 1940: The Politics of Method*. Oxford: Oxford University Press.
- Savage, M. (2013) 'The "social life of methods": A critical introduction', *Theory, Culture and Society*, 30(4), 3–21.
- Savage, M. and Burrows, R. (2007) 'The coming crisis of empirical sociology', *Sociology*, 45(5), 885–99.
- Turkle, S. (2007) *Evocative Objects. Things We Think With*. Cambridge, MA: MIT Press.
- Turner, F. (2009) 'Burning man at Google: A cultural infrastructure for new media production', *New Media and Society*, 11(1&2), 73–94.