

Communication Maintenance in *Longue Durée*

Edited by Gabriele Balbi
and Roberto Leggero

First published 2025

ISBN: 978-1-032-54369-7 (hbk)

ISBN: 978-1-032-54368-0 (pbk)

ISBN: 978-1-003-42453-6 (ebk)

Communication Studies *Long for* Maintenance Cultures A Theoretical Introduction to the Book

Gabriele Balbi and Roberto Leggero

(CC-BY-NC-ND 4.0)

DOI: 10.4324/9781003424536-1

The funder of the Open Access version of this chapter is
Paris Lodron University of Salzburg Publication Fund



Routledge
Taylor & Francis Group
NEW YORK AND LONDON

Communication Studies *Long for* Maintenance Cultures

A Theoretical Introduction to the Book

*Gabriele Balbi and Roberto Leggero*¹

Introduction

While working on a research project on the subject of maintenance in *Longue Durée* in Southern Alpine Switzerland in 2020, we realized that scientific works combining communication studies, maintenance, and *Longue Durée* were lacking. For this reason, we launched a call for papers for an online workshop held in February of 2022: the workshop was entitled “Communication Maintenance in *Longue Durée*”, exactly like this book. Sometimes, papers presented in small conferences or workshops immediately appear connected to each other and, in our workshop, this was the case: for this reason, with some new chapters added in the meantime, we initiated a book project, and after a thorough book review, Routledge enthusiastically approved the idea. All the chapters written were then reviewed by at least two peers – such as the editors, the other people involved in the project, and external reviewers. The book is now in your hands, or in front of your eyes on the screen, and it is composed of 11 chapters which are grouped into three main sections.

This is a peculiar book introduction because it is not limited to just introducing the book and its contents. We also plan to focus on three main issues: explaining the reasons why communication, maintenance, and *Longue Durée* are combined; trying to define one of the most relevant findings emerging in the chapters which are, according to the editors, the existence of different “maintenance cultures”; and finally, in the last section, providing a short overview of all the chapters.

Communication. Maintenance. *Longue Durée*. **Unpacking the Book’s Three Keywords**

We take the book’s title seriously because *communication*, *maintenance*, and *Longue Durée* are the three axes around which all the chapters revolve.

First of all, this is a book that can be placed in the field of communication studies because all the chapters deal with case studies related to

DOI: 10.4324/9781003424536-1

This chapter has been made available under a CC-BY-NC-ND 4.0 license

communication, strictly speaking or at large. From a communication perspective, one of the book's aims is to expand the meaning of the concepts "communication infrastructure" and "communication technology" by including transport routes (Balbi & Moraglio, 2016; Miller, 2018; Rospocher, 2018). Indeed, all communication and transportation infrastructure systems – i.e., roads, telegraph lines, railways, and telephone or Internet networks – are ideally designed to last for a long time and so they need to be maintained, repaired, and adjusted to be kept in good order.

The reader can find in the book different forms of communication from traditional media (like broadcasting) to telecommunications (like telegraph and telephone); from mostly forgotten communications infrastructure (like pneumatic tubes) to transportation infrastructure (like roads) or tools to politically control land (like maps); from the clock as a medium and a material artifact to communication theory with a reflection on redundancy as a maintenance resource; and, of course, many other forms of communication which can help to expand the subjects studied by communication and media studies.

According to us, maintenance is an act of communication, and, *vice versa*, communication is an act of maintenance. This mutual relationship between maintenance and communication can be seen in a positive and negative manner, as we illustrate in one of our papers:

Informing drivers of the presence of obstacles on the roadway or dangerous road conditions is an act through which drivers are informed that someone is maintaining the infrastructure. Using the same example, this act of communication can be done because it is easier to place tags than to solve the problem. A tag "no swimming" in a polluted ocean beach means that whoever is responsible cares about people, but at the same time, all the possible efforts to solve the problem have not been undertaken.

(Balbi & Leggero, 2020, p. 22)

Communication and media studies have basically overlooked maintenance for a long time, but now things are slowly changing for several reasons, especially, the shift toward materiality and sustainability in the field (see, e.g., Gillespie, Boczkowski, & Foot, 2014; Starosielski & Walker, 2016; Kaun & Liminga, 2023). This book contributes to the field of communication studies and aims to combine maintenance and *Longue Durée* with these already existing discourses.

Maintenance is indeed the second keyword of the volume. The word comes from Old French *maintenir* and, conversely, from Latin *manu tenere*, "to hold in the hand" (Klein, 1965, p. 925) and "meant administration, originally action of managing" (Brachet, 1873, p. 224). Today, the Oxford English Dictionary identifies three main senses for the word: maintenance can be related not only "to support and assistance" figuratively but also

practically to indigent or sick people, “to continuance and preservation”, especially in the meaning of “keeping in good order”, and in senses relating to conduct, like “bearing, deportment, demeanour, behaviour” whose meaning has mostly disappeared (OED, 2023). All these meanings can be applied to the maintenance cultures that are considered in this book and, especially, maintenance as a practice and an act of caring (as the title of this introduction suggests) whose aim is to make something persist in good order.

This meaning has been especially applied to technology studies in the last decades (for a well-organized literature review on the topic see Young & Coeckelbergh, 2024). David Edgerton (2007) emphasized in his seminal book *The Shock of the Old* the fact that we tend to underestimate the relevance of technologies already been in use for decades. According to Edgerton, newly-emerged technologies are scarcely used by or relevant to societies, while, at the same time, old technologies, which are no longer in the spotlight, are at the peak of their popularity. Maintenance is a theoretical umbrella under which old but still crucial technologies can emerge in the research agenda. Steven Jackson (2014) claimed that maintenance is decisive even in order to understand contemporary technological systems and contemporary societies. Indeed, our societies are characterized by what he called broken-world thinking, “a world of risk and uncertainty, growth and decay, and fragmentation, dissolution and breakdown” (p. 221). Maintenance is embedded in risk societies because it fights against the “natural” entropy, aging, and degradation of technologies. Andrew L. Russell and Lee Vinsel (2016, 2018) are considered two of the pioneers of maintenance theory and have claimed that maintenance is often underestimated, whereas innovation is overestimated. Maintenance can be juxtaposed to the “ideology of innovation” (Vinsel & Russell, 2020) which focuses on the new, disruptive technologies breaking away from the past, while maintenance is needed to keep technologies already being used in working order. Also according to Stefan Krebs and Heike Weber (2021), the traditional agenda of the history of technology is “innovation-centric”, but maintenance and repair are forms of incremental innovations themselves; consequently, according to them, drawing a distinction between innovation and maintenance does not make sense. Furthermore, maintenance and repair should be historicized or, better, we should look at them through “manifold temporalities” that can last for decades or centuries. Christopher Henke and Benjamin Sims (2020) have chosen the word “repair” to underline how technological infrastructures need to be continuously maintained and restored through a broad range of activities, which can be both material and immaterial, social and technical, and small and large scale. These activities are often invisible, but they are performed on a daily basis and they are crucial to the preservation of technical and social orders.

However, maintenance goes beyond the purely technological dimension. Again, Russell and Vinsel claim that maintenance is often considered a task related to:

preserving technical and physical orders. We define technology as broadly as possible: technologies are objects that humans make or transform in order to achieve their goals. And physical orders including everything from machines to the built environment, to farm fields, including maintaining the borders between fields and “wilderness”. . . . Put another way, maintenance is a war – maybe the war – with entropy. (Russel & Vinsel, 2018, pp. 7–8)

In addition, maintenance must take into account “system safety, economic viability, quality, and the most appropriate use of environmental resources” (Cigolini et al., 2009, p. 1). Maintenance thus embraces human relationship with technology, the economy, the juridical culture, and even landscape architecture and engineering. Furthermore, maintenance is closely bound up with political and administrative power. When it relates to public goods and infrastructure, for example, it must be decided and ordered in a horizontal interrelationship between local communities or a vertical one, between local communities and higher powers, above all where extraordinary maintenance is concerned, which requires financial resources to be collected or made available specifically for this purpose. Moreover, once it is done, maintenance needs to be monitored and is thus subject to judgments and assessments by one or more authorities. In fact, one of the challenges regarding infrastructure and fixed asset maintenance affecting multiple stakeholders is fixing each individual player’s proportional benefits and how expenses are thus to be divided up. This implies creating negotiation and socio-economic definition processes regarding each collective actor’s advantages and disadvantages (Henke, 2019). The role of public institutions is preponderant in this dynamic. As Silvia Cecchini wrote, maintenance, as control and conservation, requires planning and periodicity. Maintenance is such only if it is conducted in a planned and systematic way. However, the kinds of periodic reviews and inspections that would slow down the deterioration of public works and artifacts do not guarantee visibility, are not communicable, and do not attract political attention (Cecchini, 2012).

Starting from these and other scientific works on maintenance, this book aims to advance maintenance theory as well. In the following chapters, we can find different definitions of maintenance as an umbrella term and as an *act* going from the need to make something that stopped working, work again, to practices that tend to improve the functionality of something that is not working correctly or is working inefficiently. There are also examples of links between maintenance and theories of communication and media

studies such as domestication, redundancy, or path dependency. In some chapters, there are reflections on power and maintenance: maintenance is sometimes seen as a structure of political, economic, or social power, and sometimes as a means that Power (with a capital “P”) can use or refrain from using in order to communicate its will. Some chapters focus on maintenance and understudied aspects of communication like malfunctions, the senses, environmental sustainability, and technical longevity. And, of course, several authors concentrate on the relationship between maintenance and *Longue Durée*, like, for example, Andy Russell, who proposes a reflection on the reasons why the American history of technology has not produced much work combining maintenance and *Longue Durée*, and how combining these two concepts could change the whole discipline.

The third and final keyword of this book is *Longue Durée*. At least three chapters in this volume directly address the history of this concept, so we will not go in depth here. Maintenance and communications are both linked to long-term perspectives, even if this overlapping interest has not led to the development of systematic research into long-term communication maintenance. Maintenance can best be understood long term because it is multiform, overlapping, and designed to conserve communication networks, tools, and practices over time. Maintenance is closely bound up with this persistence over time, which allows older infrastructures and forms of communication to function for decades or centuries and allows their efficiency to be conserved (on the connections among media, persistence, and maintenance, see Balbi et al., 2023). This book explicitly adopts a long-term perspective, analyzing the contribution maintenance has made to decision-making processes and practices relative to the persistence, change, and even abandonment of communication infrastructure. The persistence/continuity and change dimensions are key to historiographical communication work, while the abandonment, failure, or afterlife of communication infrastructure has been analyzed much more rarely and in sectorial contributions (e.g., Schwieterman, 2001, for the railways; on digital infrastructures, Magaouda & Balbi, 2024).

In this volume, the notion of *Longue Durée* is at the center of several chapters. Some of them aim to expand its definition, going beyond the classics like Braudel and the “*histoire quasi-immobile*” (a history that is almost immovable), toward new long-term temporalities or “technical times” of infrastructure systems such as telephone networks. Other chapters aim to expand and introduce longer patterns in communications and technologies studies – like users’ need to reproduce maintenance practices from old to new media. Others reflect on the combination of maintenance and *Longue Durée*, defining maintenance as a never-ending story or as a continuous and long-term practice *par excellence*. Kellogg’s chapter includes nature and environment in the concept of *Longue Durée*, underlying how

important it is to consider the nature of the terrain in order to understand long-term routes and patterns of movement.

These are just some of the possible keys to interpretation, and we are sure that readers will find more meanings and ideas in the various chapters which help to expand and find new links between communication, maintenance, and *Longue Durée*. Combining the three keywords together, and consequently, the three empirical and theoretical angles behind them, is probably the most innovative aspect of this book. The efficiency and longevity of communication routes, services, and tools are fundamental to any societies or businesses: efficiency is a constant effort secured by several technical practices and, above all, maintenance; longevity is secured by building technologies that last or making decisions that can be evaluated over long terms. All the contributions deal with some aspects of this triangle and can bring to communication studies (but also STS, history of technology, media studies, and other related disciplines) new perspectives on how to see and, literally, take care of its future (more on care and maintenance in Mattern, 2018). This agenda can also help the emergence of a “new” concept and, practically, a new way of doing communication research: focusing on maintenance culture(s). However, what does it mean?

Unpacking Maintenance Cultures: Toward a Definition

As already mentioned, starting from the workshop and without a lot of reworking in subsequent production phases of the book, basically all the chapters reflect on forms, practices, and theories of communication maintenance for different media, in different time frames, and different spaces in the world. As editors, we have grouped all these reflections under the label of *maintenance culture(s)*. It is not the first time that the term has been used and there are papers dealing with this topic from a theoretical perspective, especially focusing on maintenance cultures in developing countries. Among others, Sani et al. (2012) have tried to focus on the determinantal factors influencing maintenance culture in developing countries. Sani et al. (2011) and Abiodun et al. (2016) have written about how maintenance culture needs to be developed in poor countries in order to improve the quality of maintenance work. Ogunbayo et al. (2022) claim that the level of abandonment and deterioration of public buildings is high due to a lack of a maintenance culture among stakeholders in the maintenance process. Onohaebi and Lawal (2010) highlight how poor maintenance culture in Nigerian electric power generation stations resulted in the spasmodic and unreliable power supply in Nigeria. Oedewald and Reiman (2002) developed a methodology for modeling the core maintenance task at the Loviisa nuclear power plant in Finland and thus to better understand the “maintenance culture” behind the task.

Our goal is to apply the concept of “maintenance culture(s)” to communications, with a long-term perspective, and to expand it beyond mere technical terms. We are aware that culture is one of the most polysemic, slippery, and dangerous words in social sciences and humanities, but we insist on using it because, while it is not yet fully defined, it seems to us to be effective and potentially productive. First of all, we provide a working definition of “maintenance cultures” as the specific ways, tools, and practices by which different stakeholders in specific societies address the problem of preserving, over time, the effectiveness and efficiency of what is useful or of interest to human beings. Our hypothesis is that several “maintenance cultures” have (co)existed over time and that this concept changes in relation to political, economic, technological, and socio-cultural aspects. In other words, communication maintenance requires financial resources, technical skills, and political will. In this sense, maintenance changes its meaning from an apparently neutral act of care and restoration (“I take care of you”) to a message of power imbalance (“I [*the* power] exist and, in the action of protecting you, I gain more power”). Politics, economics, and technology are the three fundamental actors from which maintenance practices are generated. If one of these three elements varies, maintenance can vary as well, but so do the maintenance cultures that a particular society or group of actors expresses according to its political structures, its economic efficiency, and its technological resources. Just as an example, note how especially in the second half of the 20th century and early 21st century, the act of repairing everyday objects has been forgotten in favor of replacement. Or how important ancient monuments were not accorded protection, preservation, and maintenance in the past simply because the “culture” of preservation was different or even ineffective. Or think how, in recent years, a new sensitivity toward repairing instead of replacing digital devices seems to be slowly emerging and is sometimes connected with what is known as “green washing”: we could even call it a new way, a new “culture” through which we approach communications.

This book goes much more in-depth toward a definition of maintenance cultures, and, specifically, the various chapters help in developing this idea. In different centuries and different conditions, communication maintenance is described as a political decision in the broad sense and, for this reason, it is driven by different political sensitivities and “cultures”. When we claim that maintenance is political, we mean that maintaining and making communication last for a long time is always a choice that depends on different factors including the degree of technological efficiency, the availability of data to make reliable predictions, the state of finances and funding in each country and society, as well as the attitudes and beliefs of politicians, entrepreneurs, and citizens (on these topics, see Denis & Pontille, 2022). This can be clearly seen in the case of the American Great Northern Railroad workers’ commitment to

snow and ice control during the long winters. As time goes by, they refine their tools and techniques to the point where what seemed well done in the distant past is considered irresponsible or extremely dangerous in the following years, a sign of a changing maintenance culture. Several chapters focus on the fact that changes in political regimes can often bring a change in the “maintenance cultures”, be it in a small Italian region during the Middle Ages or in Lisbon, the capital city of Portugal in the 20th century. Others focus on the continuity and the existence of constitutive choices (on this concept, see Starr, 2004) which tend to be replicated from old to new technologies over time, like in Luxemburg’s telecommunication networks or in the everyday use of digital media today.

There is also an economic and financial dimension of maintenance, which can shape its cultures. On one hand, maintenance is an expensive activity and sometimes even nation-states have challenges in performing it: consequently, there are different maintenance cultures in rich and poor states, and this attitude can also change over time, for example, when one state goes bankrupt or simply decides to focus on other, less expensive activities, including inaugurating new infrastructure systems instead of maintaining the old ones. High maintenance costs are sometimes covered by state or private companies as a strategy to keep monopolies: as is recounted in two different chapters, for example, both the American Telegraph and Telephone in the United States and the German Federal Post Office tried to secure their monopolies by investing in maintenance and keeping telecommunication networks in good order and functioning well. In other words, as already said by Henke and Sims (2020), repair and maintenance reveal other sociotechnical dimensions of technology like the maintenance of prestige or power. Sometimes, maintenance costs can be one of the reasons for nationalizing communication services: indeed, private companies tend to invest in lucrative areas and in services, which they keep running as efficiently as possible, in places where they can get more subscribers or clients, generally pumping more money for these activities into urban areas than into rural ones, or focusing on premium services rather than on making basic services broadly available. As is evident from the case study on Portugal presented in this book, national governments can decide to take over communication services like railways because they want to modernize and renew the networks to serve the country’s economy more efficiently. Thanks to these and other examples, it is quite clear how the economics of maintenance can affect the propensity to maintain and, contrary to what we tend to think, there are specific governmental but also corporate “cultures” that prefer to spend a lot in order to keep their infrastructures or services working perfectly and without interruptions. It is a culture of “continuity”, of providing reliable services in operation 24 hours a day, and a culture of maintenance.

The costs of maintenance can also change according to the times and the places where maintenance is performed. Adopting a historical – and so long-term – perspective on maintenance is useful because the associated cultures often change over time, as well as the people in charge of maintaining: today, we tend to think that only private or public institutions are in charge of maintaining our communications, but this was not the case centuries ago when private citizens, for example, performed this role, voluntarily or under explicit or even implicit and unwritten rules. The geography of maintenance matters too and can impact the cultures associated with the upkeep and repair of communications. For example, in mountainous areas, maintenance is generally more expensive than on the plains or, as already mentioned, in cities and countryside there are different “styles” of maintenance. Sometimes, maintenance can be done in very small and residual economies like the repair cafes or the mobile phone repair communities in Bangladesh or Uganda well described by Jackson. Maintenance can also change the use of a specific area of land, imposing a kind of geographical determinism: in the chapter on the Backbone Pass written by Sam P. Kellogg, for example, it is clear how maintaining one path and not maintaining alternative ones makes the chosen one a compulsory option and a sort of bottleneck for all the people moving from one point to another. There is even a relationship between time and space, as clearly shown in Julie Momméja’s chapter on the Clock of the Long Now: this clock places humans at the center of the “long now”, a present moment that can be extended toward the past and future while making our concept of “here” and “now” part of a much wider scale and timeline, the spatial “big here” and, therefore, the temporal “long now”. This clock is a clear example of how maintenance in *Longue Durée* is a matter of past and future combined.

Maintenance cultures are also materialized into everyday practices performed by different people, experts or non-experts: this is another finding emerging in all of the following chapters. Thanks to maintenance, for example, new categories of communication workers can emerge: contrary to performers such as actors, writers, or TV anchor(wo)men, who are often visible in media and communication history, maintainers have been often hidden and understudied. We are talking about specialized workers using skills, technologies, and practices refined in the respective fields over time (such as the practice of blowing in the tubes to find failures, as described by Laura Meneghello in her chapter about pneumatic mail). These workers are often unpaid and sometimes not so well equipped, they often operate under pressure, with strong time constraints, and sometimes with little security; and their actions are generally invisible because they take place when the infrastructure systems are less used (e.g., during the night) and because their work is a day-by-day task. Technology is commonly visible when it does not work and the same is the case for maintainers.

Alongside professional maintenance workers, a crucial role is played by communication technologies, infrastructure, and service users. In her chapter, Corinna Peil argues that we are all maintainers, focusing on the role of everyday users in preserving media and communication technologies in good order. Additionally, there are several examples of professional users actively participating in maintenance: for example, Laura Meneghello writes that secretaries were involved in the maintenance of pneumatic mail networks in offices, workers of those in factories, nurses had to take care of this communication technology in hospitals, clerks in public administration buildings, and so on. Professionals and users can also work in combination: according to Felipe Beuttenmüller Lopes Silva, for example, users can play both a suppletive and a strategic role in repairing networks and this active role played by users can also influence politics. This is clear in countries such as Portugal, Spain, and Italy, for example, where users' knowledge in repair and maintenance can significantly benefit from the knowledge possessed by state actors.

This is a perfect conclusion and links back to the first lines of this section, where we claim that maintenance is a political action and that sometimes the expertise of normal users can also be used by politics, and so politicized, to hide those politics' deficiencies.

Summarizing, the chapters in this book have both singularly and collectively interpreted and deconstructed "maintenance culture(s)" in different ways: maintenance cultures are shaped by political decisions and choices, which can change significantly over time; they are subject to economic and business cultures, which can make repair and maintenance too expensive or, on the contrary, a good deal; maintenance cultures can change over time but also can change according to the place where the act of repairing is performed, making it a time- and space-based activity; finally, maintenance cultures are represented and materialized by a set of practices performed by specialists or normal users and, because of the variety of these stakeholders, can significantly change from culture to culture. Of course, our definition of "maintenance culture(s)" is not definitive and it is just a starting point, which will hopefully generate debate, criticism, and new definitions.

Structure and Main Contents of the Book

This book is made of 11 chapters plus this introduction. All the chapters have a separate existence and significance; they all deal with very different forms of communication, time frames, and historical periods and with specific theoretical frameworks coming mostly from media and communication studies, history of technology, STS, and general history.

Despite the singularity of the chapters, there is a comprehensive and consistent theme throughout the book that reconciles the differences and appears to establish a common understanding. We have partially addressed this lowest common denominator in the previous paragraphs, but also the book's structure can help in this "mathematical" exercise. The book is organized into three parts. Part 1 is entitled *Temporalities* and includes four chapters all dealing with an explicit theoretical and/or empirical reflection on the *Longue Durée* of communication maintenance. Julie Momméja authors a chapter on the so-called Clock of the Long Now, a peculiar and giant technological artifact whose aim is to tick for 10,000 years and, consequently, to be maintained for millennia. This case study interrogates the deep meaning of *Longue Durée*, as well as the relationship between past, present, and future visitor maintainers (and so of communications). The second chapter is written by Andrew L. Russell and is mainly centered around a theoretical and disciplinary question: why have historians of communication in the United States missed opportunities to view U.S. history through the conceptual lenses of maintenance and *Longue Durée*? The answer underlines the potential of a historical approach that emphasizes continuity or non-change instead of the historical obsession with continuous change. Laura Meneghello's third chapter compares different practices of maintenance and repair of pneumatic tube networks, a technology used to send telegrams, small objects, or documents through administrative buildings and the cities' underground, where its infrastructure persisted even after it had been abandoned. From the late 19th to the early 21st century, repair and maintenance of pneumatic networks were daily activities performed through practices based on embodied knowledge, such as listening to air noises and sound; the phenomenological approach of this contribution helps rethink the work of maintenance as being deeply connected to sense perception and knowledge-in-the-hands. The fourth and final chapter of this section is authored by Stefan Krebs and Rebecca Mossop and focuses on the practices and "power" of maintenance in the long history of the Luxembourgish telephone system. Thanks to well-established and, at the same time, always evolving maintenance practices, the telephone network became a stable and crucial infrastructure in the country, helping to convey a sort of "prestige" through constant functioning.

Part 2 of the book delves deeper into theorizing communication maintenance over time. Roberto Leggero makes disruptions, disinvestment, and reactivation of maintenance activities tools to identify historical junctures determining the transition from one maintenance culture to another. The chapter focuses on some articles of the statutes issued by the Duke of Savoy in 1430 and follows consequent maintenance activities and practices over the long term, finding a transition between two different "maintenance cultures". Blythe Alice Raviola focuses on the creation of maps in a small

but relevant region in Northern Italy in the 18th century: Ticino. Maps are considered tools to “maintain” and supervise the lands, and so useful also to repair communication networks like rivers, but at the same time, maps are a contested tool, used to both reaffirm and fight for political control of an area. Kirill Postoutenko discusses how communicative redundancy can be considered a maintenance resource, investigating the ambivalent role of redundancy, which not only increases the robustness of communication but also affects its efficiency, in the self-maintenance of communicative systems. The concluding chapter of this second part, authored by Corinna Peil, sheds light on the everyday practices of maintenance in media usage. Drawing on examples from traditional media such as radio and television, as well as contemporary digital networked technologies, the chapter illustrates the role of everyday maintenance practices in the domestication process of communication technologies and how they have evolved and, surprisingly, persisted despite the changing media landscape.

The third and final part of the book contains three case studies from different times, diverse world regions, and focusing on different forms of communication – but all dealing with the durability of infrastructures – and, for this reason, we decided to label this part *Infrastructuring*. Sam P. Kellogg has analyzed the *Longue Durée* history and maintenance of Backbone or Marias Pass, in the Rocky Mountains of Montana, as a space of transportation and communication infrastructures from precolonial Indigenous times, to the transcontinental railroad, to logistical communication and transportation in the 20th and 21st centuries. The following chapter is written by Felipe Beuttenmüller Lopes Silva and aims to analyze how, in the second half of the 20th century, Portuguese policymakers used repair, maintenance, and enhancement concepts to solve transport infrastructure problems in Lisbon. This study examines repair and maintenance in the spatial context of the European center and periphery. Finally, Matthias Röhr’s chapter covers the attempt of the German Federal Post Office (Bundespost) to secure the telecommunications monopoly through the rhetoric and effective use of maintenance. The telecommunications monopoly, which had come under criticism in the 1970s, was “saved” for some additional years by showing a willingness to modernize and digitize the West German telecommunications network in a long-term perspective. All three chapters, then, deal with the power of infrastructural maintenance in shaping spaces and communicating political thoughts and ideas.

Enjoy your reading!

Acknowledgments

We want to thank Louise Ingham (Routledge) for having followed the book project step by step and having forgiven our delays, Luigi Provero

for helping in the reviewing process, all the authors of the book who have revised a chapter of one of their colleagues, and Riccardo Ferrigato for revising and putting together the manuscript.

Note

- 1 Open Access publication supported by the Università della Svizzera italiana (USI) publication fund.

References

- Abiodun, T. S., Olayemi, A. A., & Joseph, O. O. (2016). Lack of maintenance culture in Nigeria: The bane of national development. *Civil and Environmental Research*, 8(8), 23–30.
- Balbi, G., Hagedoorn, B., Haydari, N., Schafer, V., & Schwarzenegger, C. (2023). Media persistence: Theories, approaches, categorization. *Studies in Communication Sciences*, 23(3), 299–310.
- Balbi, G., & Leggero, R. (2020). Communication is maintenance: Turning the agenda of media and communication studies upside down. *H-ermes: Journal of Communication*, 17, 7–26.
- Balbi, G., & Magaouda, P. (2018). *A history of digital media. An intermedia and global perspective*. Routledge.
- Balbi, G., & Moraglio, M. (2016). A proposal to hybridise communication and mobility research agendas. In S. Fari & M. Moraglio (Eds.), *Peripheral flows: A historical perspective on mobilities between cores and fringes* (pp. 10–27). Cambridge Scholars Publishing.
- Brachet, A. (1873). *Etymological dictionary of the French language*. McMillan.
- Cecchini, S. (2012). *Trasmettere al futuro. Tutela, manutenzione, conservazione programmata*. Gangemi.
- Cigolini, R. D., Deshmukh, A. V., Fedele, L., & McComb, S. A. (Eds.). (2009). *Recent advances in maintenance and infrastructure management*. Springer.
- Denis, J., & Pontille, D. (2022). *Le soin des choses. Politiques de la maintenance*. La Découverte.
- Edgerton, D. (2007). *The shock of the old: Technology and global history since 1900*. Profile-Books.
- Gillespie, T., Boczkowski, P. J., & Foot, K. A. (Eds.). (2014). *Media technologies: Essays on communication, materiality, and society*. The MIT Press.
- Henke, C. R. (2019). Negotiating Repair: The Infrastructural Contexts of Practice and Power. In I. Strebel, A. Bovet, P. Sormani (Eds.), *Repair Work Ethnographies* (pp. 255–282). Palgrave Macmillan.
- Henke, C. R., & Sims, B. (2020). *Repairing infrastructures: The maintenance of materiality and power*. The MIT Press.
- Jackson, S. (2014). Rethinking repair. In T. Gillespie, P. Boczkowski, & K. Foot (Eds.), *Media technologies: Essays on communication, materiality and society* (pp. 221–239). The MIT Press.
- Kaun, A., & Liminga, A. (2023). Welfare service centers: Maintenance, repair, and care at the analog interfaces of the digital welfare state. *New Media & Society*. <https://journals.sagepub.com/doi/10.1177/14614448231220362?icid=int.sj-full-text.citing-articles.9>

- Klein, E. (1965). *A comprehensive etymological dictionary of the English language*. Elsevier.
- Krebs, S., & Weber, H. (Eds.). (2021). *The persistence of technology. Histories of repair, reuse and disposal*. Transcript.
- Magaudda, P., & Balbi, G. (2024). Theorizing failure in digital media. Four eclectic theses. *Annals of the International Communication Association*.
- Mattern, S. (2018, November). Maintenance and care. *Places Journal*.
- Miller, J. (2018). Media and mobility: Two fields, one subject. *The Journal of Transport History*, 39(3), 381–397.
- Oedewald, P., & Reiman, T. (2002). Maintenance core task and maintenance culture. *Proceedings of the IEEE 7th Conference on Human Factors and Power Plants*, 8(8), 23–29.
- Ogunbayo, B. F., Aigbavboa, C. O., Thwala, W. D., Akinradewo, O., Ikuabe, M. O., & Adekunle, S. A. (2022). Review of culture in maintenance management of public buildings in developing countries. *Buildings*, 12(677).
- Onohaebi, O. S., & Lawal, Y. O. (2010). Poor maintenance culture: The bane to electric power generation in Nigeria. *Journal of Economics and Engineering*, 28–33.
- Oxford English Dictionary. (2023, December). *Maintenance (n.)*. https://www.oed.com/dictionary/maintenance_n?tab=meaning_and_use
- Rospoche, M. (2018). What is the history of communication? An early modernist perspective. *Jahrbuch für Kommunikationsgeschichte*, 20, 9–15.
- Russell, A., & Vinsel, L. (2016). Hail the maintainers. *Aeon*. Retrieved December 29, 2023, from <https://aeon.co/essays/innovation-is-overvalued-maintenance-often-matters-more>
- Russell, A., & Vinsel, L. (2018). After innovation, turn to maintenance. *Technology and Culture*, 59(1), 1–25.
- Sani, S. I. A., Mohammed, A. H., Misnan, M. S., & Awang, M. (2012). Determinant factors in development of maintenance culture in managing public asset and facilities. *Procedia-Social and Behavioral Sciences*, 65, 827–832.
- Sani, S. I. A., Shukor, F. S., & Awang, M. (2011). Development of maintenance culture: A conceptual framework. In *International conference on management (ICM2011) proceeding*.
- Schwieterman, J. (2001). Abandoned corridors. *Railroad History*, 185, 20–32.
- Starosielski, N., & Walker, J. (Eds.). (2016). *Sustainable Media: Critical Approaches to Media and Environment*. Routledge.
- Starr, P. (2004). *The creation of the media: Political origins of modern communications*. Basic Books.
- Vinsel, L., & Russell, A. L. (2020). *The innovation delusion: How our obsession with the new has disrupted the work that matters most*. Currency.
- Young, M. T., & Coeckelbergh, M. (2024). Keeping Things Going: Maintenance and Philosophy of Technology. In M.T. Young & M. Coeckelbergh (Eds.), *Maintenance and Philosophy of Technology: Keeping Things Going* (pp. 1–36). Routledge.