

origin of life. This is unfortunate because of one of the objectives of the Series "Collection 360", which is to highlight that scientific questions are also a matter of economical and political power. But this is just a trifle compared to the many qualities of the book, most of all, the fact that it raises urgent questions about how and why to promote and improve the relationship between different sciences working on the same research topic. These are timely questions because of the interdisciplinary character several current issues addressed by the society: they concern all of us, whether we are scientists or philosophers, and the lay man above all.

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Lisa Parks and Nicole Starosielski (eds.)

Signal Traffic: Critical Studies of Media Infrastructures.

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The collective book *Signal Traffic*, edited by North American scholars Lisa Parks and Nicole Starosielski, represents a noteworthy and stimulating effort to intersect the study of digital media with the STS-rooted approach of infrastructure studies. In this sense, the book enters a wider space of convergence already under development during these last few years. Indeed, recently we are assisting to the increasing interest in the contamination between STS and a broad area involving media, communication and cultural studies. This has been the cases, for example, of the book *Media technologies*, edited by Gillespie, Boczkowsky and Foot for MIT Press in 2014 and of the workshop titled *Roads Less Travelled. Exploring New Connections Between Media Research and STS*, held at the University of Siegen in February 2015 (see Sørensen and Schubert 2015). Of course, this book adds a further significant contribution to this emerging space of convergence.

Proceeding at the intersection between STS and media and cultural studies, the aim of *Signal Traffic* is to enrich the study of digital media environment thinking to it in terms of "infrastructure", thus considering media primarily as "situated socio-technical systems that are designed and configured to support the distribution of audiovisual signal traffic" (p. 4). In their introduction, editors ask readers: "what can media studies gain by adopting an *infrastructural disposition*?" and consequently the book develops by considering several infrastructural dimensions in digital media technologies, including data centres, digital compression, Internet protocols and environmental consequences of the media infrastructure

nature and so on. Parks and Starosielski offer a comprehensive sketch of how media infrastructures are conceptualized along the book chapters, identifying six main features of media infrastructures that assume relevance in the collection of essays presented: their scale, the relationality of their nature, difference and unevenness in their appropriation, labour and maintenance required to make them working, their relationship with natural resources and, lastly, the role of affects in their shaping.

One of the fundamental dimensions emerging from the book is, quite predictably, the role of materiality in the shaping and working of digital media infrastructures. As it has been also recognized by the aforementioned *Media Technologies*, materiality of media constitutes one of the most manifest levels on which STS and media studies have converged up to now. After several decades marked by a marginal interest toward the ways media technologies are materially embodied in society, communication and media scholars are finally increasingly recognizing this issue as an essential part of the understanding of the media environment.

The framework traced by the editors is obviously far from being an all-inclusive mapping of relevant focal points in the study of media infrastructures; nevertheless editors are able to offer a useful chart to navigate the multiform universe of media infrastructures, giving functional *signals* helpful to the readers to move in an orderly way in the *traffic* of digital media infrastructures. Looking more carefully to these *signals*, many of them are directly rooted in STS and since the introduction, it is easy to recognize how the conceptualization adopted borrows heavily on STS, not just on the works of scholars such as Star, Ruhlleder and Bowker, but also on other references, including ANT, Thomas Hughes's history of large technological systems and feminist science & technology studies. In this sense, the book - and especially some of the chapters contained in the volume - can be read as a genuine outcome of the STS field and especially of the area of infrastructure studies in STS. While there is no space here to enter in the contents of each chapter, I can sum up saying that the eleven chapters offer a set of mainly empirically-based perspectives on different kinds of media infrastructures, including the global undersea cable network, urban media infrastructures, data centres, the internet in Zambia, e-waste, cellular phones in Israel, with multiple chapters understandably devoted to internet protocols.

However, the attractiveness of the book lies not just on the adoption of conceptual tools from STS and their application to an object traditionally belonging to other intellectual fields, i.e. media and communication studies. On the contrary, the richness of the book is located also in the attempt to trace a wider intellectual matrix, enriched also by other influences that can undoubtedly supplement the mainstream STS perspective on infrastructures. Indeed, the book put together other instances coming from different intellectual domains that assume relevance in the overall framework proposed by the volume. Clearly, several crucial inputs are recognized as relevant in the field of media studies, as in the case of the

works by James Carey, Armand Mattelart, Harold Innis and Manuel Castells. In addition to these classical works in communication, the book brings also light on less-renowned areas in media studies, for instance *environmental media studies*, *media archaeology*, *platform studies* and *format studies*. By the way, it is rightly in *format studies* that we can trace back an earlier efforts to mix together the field of media studies with a STS-rooted perspective on infrastructures, i.e. Jonathan Sterne's 2012 book on the origin of the mp3 audio format, in which the author unfolds the infrastructural nature of compressed digital formats. Thus, it is not by chance that the opening chapter of the book after the introduction is by the same Sterne, who presents here a development of his research on data compression, extending his work toward a more general history of digital compression, showing how the process of compression is a circular process, which both adapts media contents to the infrastructure and shapes this same infrastructure in accordance to the need of representation in specific media sectors (p. 35).

Besides these satellite fields in media studies, other influences add interest to the book's overall theoretical picture, including urban studies, "maintenance and repair" and the "affective turn". At this regard, it is hard to resist to play the game of finding missing pieces in the puzzle, so I will not resist to it and therefore give my own contribution, by picking up two further influences that would sharpen even more the theoretical panorama of the book. A first addition would be the tradition of social anthropology and ethnography of consumption, especially in the cases when these areas approached the use of media in everyday life, for instance in the case of the seminal Daniel Miller's and Dan Slater's (2000) research on Internet in Trinidad; this will allow to stress even more the way global infrastructures emerge also from local and very contingent conditions. Secondly, I see fitting very well in the book's approach the perspective on infrastructures in consumer studies, especially through the work of Elizabeth Shove and other scholars on utilities (Van Vliet et al. 2005) and on home technologies (Shove 2002). While these works do not deal directly with digital media, they can anyway offer a relevant add-on to the understanding of the infrastructural configuration of technologies and distributed services in everyday life, especially in connection to the issue, explicitly raised by *Signal Traffic*, of environmental sustainability of media infrastructures.

All things considered, there is no doubt that *Signal Traffic* offers a stimulating contribution both for STS practitioners and scholars in media and communication, adding a valuable voice to the evolving debate on the study of digital media technologies, understood not just as material and isolate phenomena, but as parts of an heterogeneous, wide-ranging and multi-situated network of relationships.

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Play Matters

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Play Matters belongs to the *Thinking Playfully* series of the MIT Press, which is designed to provide readers with short, readable and argumentative books that combine depth with readability. The volume fits well into this series as an agile, yet engaging and thought-provoking manuscript on a topic, the one of play, that has never been so central in the academic debate since the time of Huizinga's seminal work *Homo Ludens* (1938). This is particularly evident in game studies and in those fields of cultural studies or social sciences that recently started facing the need to confront with breakthrough societal changes. On the one hand, pushed by the game industry and by the growth of a widespread gaming/participatory culture, video games became a dominant form of entertainment media; on the other hand, the emergence of strong semantic entanglements and cross-contaminations among different human domains blurred the very meaning of play: (i) game-related elements started entering non-gaming domains; and (ii) aspects which were typically disassociated from games, started converging into that domain, as it is generally hinted by the emergence of areas such as *professional gaming*, *gamification*, *serious games* or