

NICOLE STAROSIELSKI, The Undersea Network. Durham and London: Duke University Press, 2015. 312 pp. ISBN: 978-0-8223-5740-7

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Manuel Castells noted, back in 2000, that "our society is constructed around flows: flows of capital, flows of information, flows of technology, flows of organizational interaction, flows of images, sounds, and symbols" (p. 442). Fluidity is, today, the main characteristic of our way of life, therefore, flows are, following Castells, "the expression of processes dominating in our economic, political, and symbolic life" (Ibid). Daniel Headrick, in turn, in a pioneer work on the history of technology also stated that "the electric telegraph was indeed revolutionary (...) opened up real-time information to railways, stockbrokers, capitalists, and merchants, to newspapers, and finally to the general public" (p. 206). Just like the electric telegraph, the submarine network was also a global pioneer. In 1902, the Pacific Cable Company managed to encircle the Earth with submarine cables, which indeed initiated the era of real-time global flows. Currently, as Nicole Starosielski emphasizes in The Undersea Network, almost 100 percent of all transoceanic communications (phone calls, text and emails messages, websites, digital image and video, and television included) are transported by optical-fibre cables. Contrary to our common sense, the fluidity of nowadays world is neither immaterial, nor de-territorialised, nor even without fixity, although the ever present and accelerated change. On the contrary,

the routes of global flows have been deeply rooted in certain territories for a long time, even if they have been kept invisible. Therefore, The Undersea Network is a significant contribution to unveil the materiality, territorialisation and fixity of contemporary infrastructures. In effect, by focusing on the Pacific Rim and some of its nodes, Starosielski unveils the "links between" the three different cable regimes: the telegraph, the telephone and the optical-fibre, detailing "the cultural geographies of undersea coaxial cables laid between the 1950s and 1980s, the undersea optical-fibre cables of the 1990s, or the links between these newer forms and older cable systems" (p. 7). Starosielski follows the Pacific cables from the ocean depths to their landing places, where they "surface" as "semicentralized rather than distributed; territorially entrenched rather than deterritorialized; precarious rather resilient; and rural and aquatic rather than urban." (p. 10) The author supports her argument by describing the cable's "network archaeology" in order "to expose the complexity that goes into the distribution of digital media" evolving within "material contexts" which include "not only cultural practices and political formations but also atmospheric, thermodynamic, geological, and biological processes" (p. 14-15).

The book is divided into "Preface. Edges"; "Introduction. Against Flows"; six chapters: (1) "Circuitous Routes. From Topology to Topography"; (2) "Short-circuiting Discursive Infrastructure. From Connection to Transmission"; (3) "Gateway. From Cable Colony to Network Operations Center"; (4) "Pressure Point. Turbulent Ecologies of Cable Landing"; (5) "A Network of Islands. Interconnecting the Pacific"; (6) "Cable Depths. The titles and sub-titles, such as "Aquatic Afterlives of Signal Traffic", and the "Conclusion. Surfacing" eloquently set both the conceptual and epistemological novelty of the book. By elaborating a "nodal narrative", that is, focusing on individual nodes that shape systems on the ground, Starosielski argues that routes and connections between nodes are rather than taken for granted. As they are arranged, they are also vulnerable and contestable, and they live in "turbulent ecologies". Starosielski's work complements the existing narratives about submarine cables, which are mostly about cables' laying, i.e., "from connection" — with descriptions of the conditions that keep them operating — "to transmission." In doing so, the existing networks reveal a "topography" embedding a specific logic, that is a "topology", in particular those that can be transmuted as a consequence of political and/or technological changes, as the author describes in chapter three and six.

In conclusion, *The Undersea Network* is a revolutionary and appealing narrative, both in style and approach, with the greatest impact on the literature on submarine cables and from now onwards an indispensable tool

both in media cultural studies and in the course syllabuses on history of technology. Nicole Starosielski, in addition, complemented her book with an interactive digital resource www.surfacing.in where readers can trace the Pacific routes and nodes' lives and stories, by using archival materials available in the above mentioned website.