C.W. Anderson
Apostles of Certainty. Data Journalism and the Politics of Doubt, Oxford, Oxford University Press, 2018, pp. 228
by Valeria Burgio

A. Ardissone
L'uso delle tecnologie in sanità. Il punto di vista del paziente cronico. [The use of technology in healthcare. The point of view of the chronic patient], Milano, Angeli, 2018, pp. 206
by Alberto Zanutto

B. Czarniawska and T. Hernes (eds.)
Actor-Network Theory and Organizing (2nd edition), Lund, Studentlitteratur, 2020, pp. 392
by Bethan Mitchell

V. Despret
Habiter en oiseau [Inhabiting as bird], Arles, Actes Sud, 2019, pp. 224
by Silvia Bruzzone

J. Jarke
Co-creating Digital Public Services for an Ageing Society. Evidence for User-centric Design, Cham, Springer, 2021, pp. 228
by Linda Tonolli

S. Loeve and B. Bensaude-Vincent
Carbone. Ses Vies, ses œuvres [Carbon. Its lives, its works], Paris, Seuil, 2018, pp. 342
by Giulia Rispoli

F. Tréguer
L'Utopie déchue. Une contre-histoire d'Internet, XVe-XXIe siècle. [The Fallen Utopia. A Counter-History of the Internet, from the 15th to the 21st Century], Paris, Fayard, 2019, pp. 350
by Julien Rossi

TECNOSCIENZA
Italian Journal of Science & Technology Studies
12 (1) pp. 117-151 – ISSN 2038-3460
www.tecnoscienza.net

SOME RIGHTS RESERVED
2021

T/S TECNOSCIENZA
Italian Journal of Science & Technology Studies

J. Watson

Lo-TEK. Design by Radical Indigenism, Köln, Taschen, 2019, pp. 418

by Andrea Botero

* * *

Christopher William Anderson
Apostles of Certainty. Data Journalism and the Politics of Doubt, Oxford, Oxford University Press, 2018, pp. 228

Valeria Burgio *independent researcher*

Anderson's book is a historic reconstruction of how data are used, in journalism, to build a culture of truth and objectivity. Far from being the exclusive prerogative of Data Journalism, the use of data dates back to the time when sociology and journalism were attempting to build a scientific basis for their undertakings, developing a social research methodology of a quantitative nature. This was especially true of the United States in the first half of the twentieth century. The book therefore reviews the phases of this attempt by journalism to pursue the methodological rigour and mathematical foundations of the more survey-based social sciences, highlighting the mutual mistrust between the discipline of sociology and the practice of journalism. Moreover, it illustrates the difficulties encountered by journalism schools, not only to enter the academic world, but also to include the study of scientific subjects such as statistics in their curriculum.

It all started in the early twentieth century with the growing popularity, in the Anglo-Saxon world, of the survey research: a social analysis based on the collection, through door-to-door surveys, and on the processing of data. In particular, Anderson meticulously examines an American movement that has largely been ignored in academic research, the *Men and Religion Forward Movement,* viewing it within the context of a more general proliferation of quantitative investigation techniques. In a context of religion-based activism and social reformism (hence the reference to "apostles" in the title), the intent became to base a "culture of truth" on data as a form of factual evidence. Both data journalism and empirical survey-based social sciences appear to be rooted in this movement. However, as Anderson notes, the development of social sciences from the 1920s to the 1940s emphasized the disciplinary boundaries that divided it from journalism: as revealed by the author's content analysis on a body of scientific sociological journals of those years, sociology considered journalism to be a lesser rigorous field of social investigation, whose purpose was to create communities of opinion, rather than to conduct social research. Unlike journalism, social sciences, based on positivism, drew increasing inspiration from the natural sciences. Consequently they presented themselves as objective and empirical sciences that sought to "meet rigorous standards of objectivity, verifiability and generality" (p. 88), just like the hard sciences. One way to do this was to observe statistical rigour in the research methodologies, which led to a visualisation of precise and accurate but hard to interpret mathematical models.

A central figure in the book is the journalist and academic Philip Meyer

who, in the 1960s, sought to reconcile journalism and social sciences through *Precision Journalism*, the goal of which was to apply quantitative methods to news reporting. Capitalizing on the developments in computer science, precision journalism based investigative reporting on the recognition of patterns, on the emergence of data correlation and trends. This was a decisively innovative proposition in a news world dominated by the new-narrative journalism of Gay Talese, Tom Wolfe or Joan Didion. Meyer sought "to treat journalism as if it were a science, adapting scientific methods, scientific objectivity and scientific ideals to the entire process of mass communication" (Meyer 1991, quoted at p. 116). Meyer had an intuition (and then confirmation, given that he is still alive) of how important technological development would become to the field of journalism for seeking evidence in news reporting. As machines progressively moved from the back of the newsroom to the front-desk, databases were preparing to become not only useful tools for market research or starting points for fancy visualisations, but first and foremost the epistemological foundation for the practice of journalism.

In the meantime, however, databases had become fundamental tools for qualitative methodologies: Anderson dedicates a chapter to *computational journalism*, a system of news reporting based on cross-checking and an assessment of the coherence between one news item and another based on available databases, hence on semantic and algorithmic criteria.

One of the many merits of this finely documented book is the relativisation of the impact of the so-called digital revolution that began in the 1990s. The change in practices was due primarily to the speed and ease of tracking news, and was not accompanied by a shift in the epistemology of journalism, which had long sought in data, and not just in facts, irrefutable proof of the news. This was already evident in the "discourse" of journalists relative to their own practices: according to a content analysis conducted on publications aimed at journalism professionals, such as *Editor & Publisher* (1907-2016), the new computer technologies and access to databases would not in and of themselves be a guarantee of hewing closer to reality, but might rather accelerate and facilitate existing practices.

Data visualisation on the other hand is not a central argument in this book, whose focus of interest lies more in the epistemological foundations of data journalism than in their translation into graphics. There are however some ideas on the subject that deserve further exploration: the only images in this book are excerpted from *Messages of the Men and Religion Forward Movement* and are a condensation of what not to do in visualisation given that, as Anderson himself points out, they omit numbers and use approximative techniques of visual translation. Despite their scant scientific rigour, the author uses these images to demonstrate the merit of this pioneering movement, which offered visible numerical proof of widespread social problems, thereby increasing public awareness and stimulat-

ing bottom-up policies of a clearly progressive nature. Rather than a truthful representation of reality, these investigations thus served to mobilise public opinion and awaken political consciences. Their role was of a more persuasive nature, in the sense that they relied on a certain type of visual rhetoric associated more readily with advertising than with analysis. Those were the years that Michael Friendly labelled as "the dark age of data visualisation" (Friendly 2008, 529), when data visualisation disappeared from the sciences, because it was considered illustrational and lowbrow, but enjoyed widespread popularity in post-war attempts at informing the public, particularly in Germany, where the pictorial statistics of Isotype were being developed. Because he restricted the geographical sphere of his analysis to the United States, Anderson does not mention these European experiences and omits all information regarding the move from pre-Nazi Europe to the USA, especially in the person of Rudolph Modley. Anderson does however remark on the progress made in the field of visual journalism in the United States in the 1950s, which witnessed a proliferation of magazines rich in data visualisations, such as *Survey Graphics* and *Fortune*, models for contemporary data journalism.

Anderson on the one hand richly documents the history of the development of an ideology, that of journalistic objectivity, which generated something of a sect embodied in a variety of figures in different historical periods: the "apostles" in the title of the book are the journalists engaged in an almost religious search for objectivity and truth. On the other hand, he distances himself from this ideology, which still attempts to stand proudly, and sometimes unquestioningly, against the populist fake-news factory. The "culture of truth" would seek to lead journalism towards a rather simplistic view of how information can become certainty and would omit an important element in the process of newsmaking: the recognition of the doubts, errors and corrections that must be addressed along the path towards reliable reporting. The mechanisms for fabricating "fake news" are in fact inherent in the production logic of contemporary journalism, which is integrated into a social-mediated space, and they cannot be considered to be the product of an imaginary antagonist against which honest journalism must take a stand.

Through the lens of STS, the author expresses his perplexity about whether data alone can guarantee the objectivity of investigative journalism: because databases are often provided by governments, they have certain limits with respect to the phenomena they serve to quantify. Quoting Star and Bowker (2000), Anderson reminds us that databases, only apparently objective, are always the result of a process that in making choices, includes and excludes. In the words of Bruno Latour, "one should never speak of 'data' – what is given – but rather of *sublata,* that is, of 'achievements'" (Latour 1999, 42). Or one should speak of *capta* (Drucker 2011), objects selected and categorized by someone towards a specific end, rather than fragments of reality.

The chronological account of the evolution of the culture of truth in journalism shows that objectivity is subject to historical relativism, and in this sense, the book echoes the famous work by Daston and Galison (2007) on the evolution of the concept of objectivity in scientific discourse: at one period in time it means neutrality and the coexistence of different voices and points of view (the "she said/he said" approach); in another period it meant "second order objectivity", which considers the database as a collection of transparent elements that unambiguously translate facts as they are. In the evolution of his thinking, manifested in the corrections and prefaces to the various editions of his book *Precision Journalism* (which counted four editions, each of them revised and corrected, between 1973 and 2002), Meyer himself understood that the scientific objectivity he aspired to was the prerogative of an antiquated vision of science, and that even social studies on modern science understand scientific data as the result of negotiation and mediation (Latour 1987). As Anderson correctly points out in the conclusion to his book, "The essence of modern science – at least in its ideal form – is not the achievement of certainty, but rather the fact that it openly states the provisionality of its knowledge" (p. 180). That is why the author invites journalists to humbly sustain a "policy of doubt" and to refrain from challenging the aberrations of populism with the presumption of truth, with the risk of being proven wrong when events turn against the hypotheses they sustain: admitting the provisionality of the results, while constantly seeking to move forward and delve deeper, will guarantee credibility and trust.

References

Daston, L. and Galison, P. (2007) *Objectivity*, Cambridge, MA, the MIT Press.

Drucker, J. (2011) *Humanities Approaches to Graphical Display*, in "Digital Humanities Quarterly", 5(1), pp. 1-21.

Friendly, M. (2008) *The golden age of Statistical Graphics*, in "Statistical Science", 23(4), pp. 502-535.

Latour, B. (1987) *Science in Action*, Cambridge, MA, Harvard University Press.

Latour, B. (1999) *Pandora's Hope*, Cambridge, MA, Harvard University Press.

Meyer, P. (1991) *The New Precision Journalism*, Bloomington, Indiana University Press.

Star, S.L. and Bowker, G. (2000) *Sorting things out: Classification and its consequences*, Cambridge, MA, the MIT Press.

* * *