

panding on the standardization processes from various points of view, processes that are an integral part of innovation and, as is well-known, a crucial element of STS.

It is also worth mentioning the special attention given to social technologies of standardization, such as law, governance and bioethics, especially when the authors argue that their success in stabilizing social order “is based mostly on a relatively successful standardization. It distances itself from pinning common goals and instead creates procedures that permit advances on many different paths” (p. 82).

This reflection offered by Nowotny and Testa is full of meaningful passages like those cited above and many other interesting ideas that make it a dense and stimulating reading, even for non-specialized audiences. Another merit not to be underestimated.

References

- Bloor, D. (1976) *Knowledge and Social Imagery*, London and Chicago, The University of Chicago Press.
- Latour, B. (1999) *Essays on the Reality of Science Studies*, Cambridge, MA, Harvard University Press.

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Cécile Méadel

Quantifier le public. Histoire des mesures d'audience de la radio et de la télévision [Quantify the public. History of audience measures of radio and television]
Paris, Economica, 2010, pp. 283

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The French scholar Cécile Méadel presents in this volume a first interpretative synthesis of over twenty years research work on the history of audience measurement in the French broadcasting system. Precious for many aspects, this study represents in some way the missing link between media studies and socio-technical studies, and a very useful key for media researchers to access the field of techno-science.

Méadel defines the audience measurement in the broadcasting field as a typical example of performative device (“object techniques performatif”). While this may appear as a normal statement in the young field of socio-technical studies, such is not in the field of media and communication studies, which founded their own theoretical apparatus

exactly on a clear and radical separation between technical and social dimensions in the media action, as we can see in the definition of "medium" still dominant today: "a medium is a tool to transfer contents".

By pointing out the action of transferring contents, this tradition has been able to assimilate into a single concept technical tools radically different in their technical basis. So it was, for example, for the key concept of "massmedia", shaped through the occultation of the technical basis of print, cinema, radio and television. And so it is still today for its ambiguous present form, deprived of the prefix "mass", which emerged historically, not surprisingly, along with the radical restructuring of the media system triggered by the Internet development in the mid-Nineties.

Focusing on audience measurement, Cécile Méadel's study enters in one of the key issues in the recent social history of the television system (not just of the French one) and crosses it with new questions and interpretations, opening the possibility of a deep revision of the theoretical background of media history, as well as of our current comprehension of the media system.

To consider audience measurement as a performative device – as Cécile Méadel suggests – implies that it cannot be reduced to a simple set of technical, methodological, and theoretical tools (as it is in the long lasting tradition of Marketing and Public Opinion studies, well known to media scholars), nor to a cultural practice, translated in a "power/knowledge device", as in Ien Ang's innovative proposal (*Desperately Seeking the Audience*, Routledge, 1991). Rather it implies to accept that audience measurement is something more than their synthesis and that its action transforms the medium as a whole.

As a typical socio-technical object, audience measurement is a performative device based on a principle of quantification, which is able to give an intelligible form to reality and by which reality is transformed at the same time, through the diffusion and uses of its output data. Today "share" and "rating" are, at the same time, concepts and core data in our television culture: they are basic references not only in our understanding of the social functioning of radio and television, but even in their processes of production and consumption.

On this basis Méadel aims to understand how the quantification principle, by means of audience measurement, has emerged historically as the dominant pattern in the work of media production. The history of audience measurement assumes in this perspective a shift toward genealogy: not a linear development of techniques and theories, marked by progressive success and improvements, but a continuous change in the mix of actors, networks, techniques, tools, goals, results, which identify measurement as a process and which define, time by time, its categories, objects, rules, and procedures.

In the opening chapters Méadel analyzes the genesis and development of the first devices used by French radio broadcasters in the Thirties to know, understand and qualify their public; and their extension to the tel-

vision viewership in the early Fifties.

Méadel notices that, until the end of the Forties, French broadcasters made use of non-statistical mediators to know and represent their audience: broadcasters collected and produced a knowledge about their listeners, that did not need to be "objectified". Listeners' letters, their participation in live programs, the activities of their associations, their advice and opinions on the programs, were considered by French broadcasters as opportunities for knowing their audience: they all concurred to give form to an idea of the radio audience that was negotiated with the audience itself.

At the debut of television system, the French national broadcasting organization assumed a more centralized model that implied a redefinition of the relationship between broadcasters and their audience. This new social and technical context gave form to a double process: it changed the broadcasters needs about their knowledge of the audience and it extended the perceived social relevance of radio-television audience, up to identify it with the whole nation. In France, like in the U.S., the radio system had rooted in the amateur radio operators' local communities: the television viewer was, instead, a radically new subject, with a strong national identity but de-localized (in respect to the broadcaster) and with no roots in previous cultures or practices.

Cécile Méadel identifies in this new socio-technical configuration of broadcasting (larger, centrally structured, and spread throughout the country), the new context in which new interests in audience measurement emerged, brought by new subjects external to the broadcasting system: public administration, governmental offices, advertising agencies and advertisers. All of them started to perceive the growth of broadcasting audience as an issue of more general and multifaceted relevance, both politic and economic. The first French television audience surveys were the answer to their new questions.

Méadel considers this change in the actors interested in audience measurement, as a key to understand how and why the audience surveys cannot be considered as a simple and linear improvement of previous "qualitative" devices. Although they are commonly regarded by media studies as a relevant step toward a more "scientific" approach in audience research, they caused a drastic reduction in typical aspects of scientific research, like the wide range of questions and interpretative hypothesis, or the experimentation in new methodologies.

Early audience surveys - ambiguous hybrid, cross between the national statistic culture and the international marketing culture - had their own techniques, which included a range of data collection tools (personal interviews, diaries and questionnaires), as well as methodological and theoretical assumptions connected to them.

Méadel brings the focus of her historical analysis on the combined and simultaneous change which invested their technical apparatus together with the group of subjects interested in its management. She is

able to show that audience survey gained its stable and homogeneous historical form, during over thirty years, because of the continuous negotiation among actors involved in its production, rather than its scientific coherence (which was often questioned).

Looking for temporary accords between their diverging interests and heterogeneous needs, these actors found in audience surveys an effective tool to transform television audience in an analytical entity: stable, homogeneous and quantifiable. Due to this new goal, the same act of "watching tv" (which identified the tv viewers) lost the participative components that had been peculiar to the concept in previous un-quantitative audience research, giving it a more abstract status, based on generic and comparable elements.

In this way the quantification principle becomes, historically, the cornerstone of the measurement device: distant from the traditional common sense which identifies quantification and objectification, as well from the constructivist assumptions which reduce quantification to a form of representation: here it is the "operational core" of the black box of audience measurement. "Quantification", Méadel says, "is a thin articulation between very different and heterogeneous actors and actions, compelled to work in the greatest instability, but kept close by the black box of measurement" (p. 8).

The last chapters of the book explore the emergence of the "audimeter" device in the French audience measurement system.

Traditional media studies still consider the audimeter as such as a "simple" and powerful mechanical instrument that replaced humans in the data collection for audience surveys. Away from the analytical frame of the socio-technical approach, this device is usually regarded, at the same time, as the "technical solution" to human errors in the data collection (made by either viewers or interviewers), and as the "cause" of the rapid and global diffusion of a unique and coherent audience survey method, governed by the advertising market and able to force the entire television programming to its own needs.

In Cécile Méadel's interpretation, instead, the "audimeter machine" is just one of the many components in the process of historical transformation of audience measurement as a whole, which took place in the Eighties, with the end of public broadcasting monopoly and the reorganization of the national television system. This was a change which invested the entire black box, in its analytic tools, techniques, and network of actors. In this context audimeter becomes the unique reference system, which produces data not only for the television market goals, but also for the governmental regulatory activity on the broadcasting system, (something like the price indexes or the national statistics produced by INSEE). The objectification of audience measurement produced by its entry in the black box was, therefore, something more complex than a simple effect of the "mechanization" of the device: it was rather the effect of a new social and institutional positioning of the device itself.