

SCIENCE ON TELEVISION: THEORY MEETS PRACTICE. AN INTRODUCTION

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“Science on Television” was the topic of the “7th European Spring School of History of Science and Popularization” that was held in May 2013 in Maó, Minorca, Spain. “Science on Television” seems to be a fascinating subject. It deals with the communication and circulation of scientific knowledge in contemporary societies. Television has been and still is an extremely influential mass media and has the power to shape our ideas of science, medicine and technology. Yet what exactly are we to study? News programs, magazines, edutainment shows, science documentaries, movies, series, advertising – the variety of different TV genres that explicitly or implicitly deal with science is as broad as television itself. And how are we to study it? Approaches vary from a purely textual analysis of television pieces to a fully-fledged contextualization of the science and media processes of their production and consumption.

Studies about “Science on Television” have repeatedly dealt with the “eternal” tension between the meanings and purposes of education, information and entertainment. They have addressed the relationship between the processes of production and management of scientific knowledge and the general public, focusing on issues such as accessibility, literacy,

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accuracy and general interest (Long & Steinke, 1996; Corner, 2002; León, 2010; LaFollette, 2012). A central topic has always been the socio-cultural construction of certainty and authority (Collins, 1987) and its relationship with people's everyday concerns and expectations (Silverstone, 1987, 1994). Historians of science point to the multidimensional traits of the craft (the making of news programs, documentaries, magazines, etc.) in order to understand the nuances of the processes of circulation of scientific knowledge through media, in our case, television (Boon, 2008, 2015).

With this dossier we hope to add a new approach to this scholarship, encapsulated in the motto of the School: "theory meets practice". Our goal was to initiate a fruitful interaction between scholars studying processes of representation and articulation of scientific, medical and technological knowledge on television, and producers of science television programs. How can the practitioners' actual experience of the craft inform historical, sociological and anthropological inquiry? And how may academic research contribute to the representation of "Science on Television"? Trying to answer these questions – we hope – also problematizes disciplinary boundaries and raises new ideas of how to approach "Science on Television" for every professional involved.

In our vision, "theory meets practice" did not end with gathering 45 practitioners, scholars and students in the same room. The "experiment" was meant to go further: We asked the three practitioners to give a talk (after all an academic format despite the numerous video clips shown) and to participate in the ensuing discussion with an audience full of academics. Reciprocally we asked the participants to create a video. Five (groups) of them took up the challenge to do something they had not been taught in their university seminars. Their videos were screened, discussed and evaluated by the practitioners in a specific session of the School.

This experience of changing sides, from practice to theory and from theory to practice was the cornerstone of the School. Practitioners reflected on their work in an entirely new setting, in different terms and in front of an academic audience. Some participants accepted the challenge to communicate scientific content in a TV format and shared these experiences and the problems they had encountered in a final session. In our perception this awakened creativity, enhanced the finding of new narrative strategies and helped to understand the logic of the "other side".

While the School itself ended after three days our goal was to make its contents accessible to a wider audience in order to foster interdisciplinary discussion and ongoing reflection. We wanted to find out whether "theory meets practice" would not only work in a conference setting but also in a written format. Thus we asked all the speakers to write a paper.

"Theory meets practice." This catchy phrase is obviously ambiguous and may be understood in a variety of ways. On the "personal" level it means practitioners meet theoreticians, in our case TV producers get together with academics researching science on TV. Yet on the

“content” level it means to look at practice – how is science on TV “done” – with the tools of theory. In this sense a big leap was required from the practitioners. They were asked to talk about their every-day work in a “theoretical” way. At the same time scholars had to delve deeply into practice and its associated material culture.

It is true though that the focus on “practice”, in a deliberately broad sense, is by now well established in the history of science and in the neighbouring disciplines that concern us here (Thompson, 1995; Secord, 2004; Couldry, 2004; Topham, 2009; Bräuchler & Postill, 2010). Scholars ask about how knowledge is actually produced in concrete spaces such as workshops, laboratories and the field. This implies a focus on very concrete materials (objects, instruments), practices (experimenting, observing etc.), actors (motivations, preconceptions, networks etc.) and the general context (social, political and economical). This approach allows to better address questions such as how techno-scientific knowledge is appropriated and how scientific authority is established.

This focus on “practice” does not limit itself to processes of knowledge production but includes by definition also the ways and means by which knowledge is communicated and appropriated. Historians of science predominantly study written sources so the field of “Science on Television” still poses a challenge. This might explain why in the field of science communication and in particular the history of science popularization there is much more scholarship on periodicals, newspapers and books than on “Science on Television”. For quite some time now historians of science appreciate how crucial the study of visual culture is. Nevertheless hardly anyone would object to the claim that this “visual turn” leaves much to be desired.

Previous editions of the “European Spring School of History of Science and Popularization” reflected this increasing interest of our discipline in exploring different areas of practices and of material and visual culture. These Schools focused on topics such as museums, journalism, cinema, advertising and propaganda, radioactivity in the public sphere, and visual representations of science.² For our edition of the School, in order to capture “Science on Television in Action”, we thought it essential to complement the perspective of history of science with approaches from the sociology of science and (in this case: medical) anthropology. The School was structured in three working sessions that attempted to apply as many perspectives as possible (different television formats and their intertextuality, the documentary genre as a reference, and the tension between education and entertainment). “Theory met practice” in each session as each one of them was run jointly by a scholar and a practitioner. The session titles were:

1. From news to fiction: television formats featuring science, medicine and techno-

2. The website of the School: <<http://blogs.iec.cat/schct/activitats-2/escola-de-primavera/7th-european-spring-school-on-history-of-science-and-popularization/>> include links to the programs of the previous editions.

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2. Science documentaries: history and evolution of a genre
3. Science as home entertainment: commercial approaches and their impact on contemporary society

A fruitful and dynamic exchange ensued – through the discussion between these academics and practitioners, but also through the interaction with a critically engaged audience (consisting of graduate students, academics and other practitioners). This dossier is the result of our common endeavour in Minorca. Its structure mirrors the three thematic sessions of the School. In the first section, medical anthropologists Josep Comelles and Serena Brigidi explore the role of fictional television series set in hospitals. In their article “Fictional encounters and real engagements: the representation of medical practice and institutions in medical TV shows” they use anthropological methods and focus on textual analysis. They show that there are a myriad of ways of looking at the intersections between these audio-visual products and the viewers’ experiences of medical-health matters. In the end they pose the question in how far medical television dramas contribute to the construction of scientific-medical processes. In “Science story telling in TV documentaries” David Dugan looks back on a long career as film and television director and producer and his own fascination for the life sciences. Finding the proper narrative is crucial to most documentaries, Dugan urges. This is particularly the case if the films deal with science, where the challenge is not only to find the stories to tell, but also the most interesting ways of bringing them to life.

In the second section Tim Boon explains the genesis of “Formal conventions in British science television, 1955-1965”. He compares two subgenres of science television (“Sciences” covered more “lab-technology” while “Natural Sciences” stayed closer to traditional natural history topics) and pays specific attention to the media practices involved (use of camera, anchor in studio, etc.). Boon thus asks how scientific authority is created and conveyed in these early documentary television series. Joan Úbeda explores the obstacles documentary producers and filmmakers like himself have to overcome in order to communicate science on television. He maintains that scientific processes are close to impossible to capture on film. Therefore “Creative strategies for scientific TV documentaries” are called for and Úbeda provides us with a practice-proven toolbox of audio-visual storytelling.

Finally, in the third section, Markus Lehmkuhl assesses the “Current state and challenges of science in today’s TV: a look at the interplay between supply and demand on European media markets” from a sociological perspective. His paper integrates the production and reception perspectives into a comprehensive picture in order to unlock the basic interplay between supply and demand of science on television. Ana Montserrat draws on her ample experience as a director of a science program on Spanish television. She claims that “Science television is just television” and explains the strategies and rules that are common to televi-

sion genres in general in order to make the program attractive.

The “7th European Spring School on History of Science and Popularization” was a forum where scholars studying the representation and articulation of “Science on Television” and producers of such programs had the opportunity to interact with each other. It quickly became clear that neither are practitioners theory-blind (or unaware of historical dimensions) nor are academics unaware of the concrete conditions (i.e. challenges and limitations) under which science programs are being produced. All the speakers (i.e. all the authors of this dossier) were highly reflective of their own work and the role they are playing in this complex dynamic. In other words: theory and practice did not clash but showed the need to further develop a multi-layered frame of analysis. In the conclusion of this dossier we will not only address systematically the questions raised at the School, but also try to formulate new ones for future research. In this dossier, just like at the School, theory meets practice as well.

References

BOON, T. (2008), *Films of Fact: A History of Science in Documentary Film and Television*, London/New York, Wallflower Press.

– (2015), «The televising of science is a process of television”: establishing *Horizon*, 1962–1967», *British Journal for the History of Science* **48**, (1), 87-121.

BRÄUCHLER, B.; POSTILL, J. (ed.) (2010), *Theorising Media as Practice*, Oxford, New York, Berghahn.

COLLINS, H. (1987), «Certainty and the public understanding of science: science on television», *Social Studies of Science* **17**, (4), 689-713.

CORNER, J. (2002), «Performing the real: documentary diversions», *Television and New Media*, **3**, 255-269.

COULDRY, N. (2004), «Theorising Media as Practice», *Social Semiotics*, **14**, (2), 115-132.

LAFOLLETTE, M. C. (2012), *Science on American Television. A History*, Chicago, The University of Chicago Press.

LEÓN, B. (ed.) (2010), *Ciencia para la television. El documental científico y sus claves*, Barcelona, UOC.

LONG, M.; STEINKE, J. (1996), «The Thrill of Everyday Science: Images of Science and Scientists on Children's Educational Science Programmes in the United States», *Public Understanding of Science*, **5**, (2), 101-119.

SECORD, J. A. (2004), «Knowledge in Transit», *Isis*, **95**, (4), 654-672.

SILVERSTONE, R. (1987), «Narrative strategies in television science». In: CURRAN, J. et al. (eds.), *Impacts and Influences: Essays on Media Power in the Twentieth Century*, London: Methuen, 291-330.

– (1994), *Television and everyday life*, London, Routledge.

THOMPSON, J. B. (1995), *The Media and Modernity. A Social Theory of Media*, Cambridge, Polity Press.

TOPHAM, J. R. (2009), «Introduction», Focus: Historicizing "Popular Science", *Isis*, **100**, (2), 310-318.