

**Practices and values of science journalism. Analysis of the production's
conditions, contents and perspectives by journalists in Argentina**

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Introduction

The news coverage of science has been studied for at least three decades¹, mainly in Anglo-Saxon contexts and in some parts of Europe (Hansen, 2009), and although Latin America and Argentina specifically have not been strange to this trend thanks to a diversity of academic communities that have shown interest for the subject², its development is still incipient and a large gap remains not only in terms of collection and systematisation of quantitative data, but also on qualitative research of how local conditions, journalists' perceptions and professional identities and trajectories influence science journalism (SJ) development³, allowing to contextualise and enrich findings reported by the international literature and the debates generated about the present and future of the profession.

The research that has been carried out so far in Latin America have shown, broadly, a dominance of the news articles journalistic genre, a trend in covering scientific controversies and an homogenization of the information as a result of the press releases and wires produced by news agencies and universities, research centers and governmental bodies⁴ (Arboleda et al., 2011; Massarani et al., 2007; SECYT, 2006). Journalistic information about science in the region seems to frequently focus on the positive results of

¹ At a global scale, SJ has been subject of analysis by different disciplines, including research in "Public Communication of Science and Technology" (PCST), of interest by Social Studies of Science and Technology (SST) and, of course, subject of scrutiny by journalism and communication studies that usually look at it as part of an specialization of journalism or a "beat" within news.

² Argentina, for instance, started organizing an International Congress of Public Communication of Science (Copuci) in 2011, while Brazil is hosting for the first time a PCST conference

³ Schäfer (2011) points out two main limitations of studies about science in the media: they are mainly based on print media's analyses and are centred in Anglo-Saxon's countries. And that's precisely one of the motivations for my own research, which seeks to provide evidence on how the field of science journalism is developing in Argentina.

⁴ Suggesting a similar pattern brightly described by US researcher Dorothy Nelkin (1995) in the classic work *Selling Science* about science journalism' culture.

developments and often “without accounting the processes of the research that underlie these results, which contributes to sacrilegious science” (Arboleda et al., 2011:153). Massarani et al. (2007) report an absence of the coverage of controversies, uncertainties and risks associated to science advancements. This, the authors conclude, produces an “uncritical” journalism towards science and its impacts on society. Ramalho, Polino and Massarani (2012) analysed⁵ the coverage of science and technology in prime-time news television show in Brazil, *Jornal Nacional* during 2009-10. Their content analysis showed that most of the news reports were focused in the announcement of research results and the framing or “tone” of the news items was more positive than negative while the controversial aspects were scarcely covered.

A study on science and technology in national daily newspapers in Argentina (SECYT, 2006) suggests that these topics have started to be included in the main dailies’ menus and its predominant form is that which favours a dissemination of advancements in detriment of their meanings, scopes and limitations, although certainly further qualitative analysis of how the national press covers science are urgently needed to complement these results. Vara and Hurtado warned of a similar trend in 2004: “the specialized coverage orientates in an almost exclusive manner to the positive aspects: obtaining achievements, such as publications at international journals, advancements of certain developments, awards and other recognitions” (2004: 79-80). Due to the growing professionalization of the field⁶, journalists have relatively sophisticated criteria to select their sources (publication in peer-review journals, subsidies or awards by international institutions), but this doesn’t translate into critical journalism which “make substantial contributions to the understanding and improvement of the local scientific institutions” (p. 48).

The science journalists’ perspective

Debates about accuracy and the role of the media involving the public in “meaningful dialogue” about science issues can be enriched with qualitative studies on practices, perspectives, values and cultural identities of journalists, allege Amend and

⁵ This research used an analysis protocol for TV science content developed by the Ibero-American Network of Monitoring and Training in Science Journalism, of which the authors are members.

⁶ The Argentinean Network of Science Journalists (www.rapc.org) is affiliated to the World Federation of Science Journalists since 2010 and has a membership of 70 journalists. Vara is the current president of the association.

Secko (2012). These authors report a valuable meta-synthesis exercise of the literature on journalists' perspectives that cover science and health to show the state of the studies and outline some future research on the topic⁷. Some of the results concerning routines, professional identities, relationship with sources, journalistic constraints and notions of the social role of SJ serve as the basis of my own analysis of Argentinean science journalists' practices.

Other previous works are also important empirical basis for this research, such as Hansen's (1994) study with journalists working in the UK and the US as well as Hargreaves and Ferguson's (2000) interviews with 50 journalists working in print and audiovisual media in the UK as part of a research to investigate the relationship between them and scientists. Cortassa (2012) analysed social representations of science in Argentinean journalists, finding that those who she interviewed incorporate the "discovery" component when thinking about science activities. This element adopts diverse meanings and abstraction levels such as "novelty", "findings", "advancement", "breakthrough" and "innovation". These science journalists, who recreate narratives about science when telling stories to the public, says Cortassa, share with the public a set of feelings close to that of someone "that looks to a brilliant objet from the outside and is fascinated with its sparkles: admiration, glaring, wonder, expectations" (p. 166).

Finally, researchers at LSE, Museu da Vida and *SciDev.Net* (Bauer et al., 2013) surveyed 953 science journalists/writers around the world during 2009-2012, asking them about working conditions, professional ethos and future expectations about the profession.

The survey concluded that science journalists see themselves as reporters informing the public and translating complex issues and contributing to a better understanding of science, although there are important regional differences, strengthening the argument that further research is needed into local practices and perceptions. Two thirds think science journalists are not critical enough and most worry about the quality of reporting.

⁷ Authors found 14 "meta-themes" and 4 taxonomic categories on what the studies have research, the methods and approaches used and the main findings for each area. The exercise produced 21 studies between 1994 and 2010 about 788 journalists. They suggest three theory approaches in studies: descriptive (practices related to accuracy and relationships between journalists and their sources); of social construction (understanding the subjectivity of the practice and how journalists build their version of reality); and of social change (arguing in favour of making changes in the journalistic practice through interventions). My research is more closely related to the second approach to journalist's practices.

Methodological considerations

The empirical approach of my thesis points to semi-structured and in-depth interviews with Argentinean journalists and news analyses of national broadsheet newspapers using an adapted version of a protocol designed by the Ibero American Network for Monitoring and Training in Science Journalism (Ramalho et al., 2012) and the “Table of Citizen Interests” developed at the National Autonomous University of Mexico (Crúz-Mena, 2010).

The first stage of my thesis’ exploratory fieldwork consisted in interviewing 5 professional experienced journalists who attended the 8th World Conference of Science Journalists, held in Helsinki, Finland (June 23-27, 2013). This exercise had two parallel goals: testing the interview as a valuable collecting tool of information about practices, views and values of science journalists (see Figure 1) and, assess its pertinence as part of the empirical evidence used for the qualitative analysis of the research (e.g., allowing to compare its results with local journalists’ views, working conditions, self-perceptions, etc.).

Interviewing is a widely used method in qualitative social research due to its value to approximate journalists’ tacit knowledge and the ideas that go along with their work, and which are hardly accessible only from content analysis of journalistic products: “These subjective perspectives are complementary to a heavy reliance on texts in science communication research to understand the construction of health and science journalism” (Amend & Secko, 2012: 245). Furthermore, interviewing reporters and editors responsible, Jensen says (2007), can unveil the “behind the scenes” of journalistic practices.

Due to the short time available to prepare the exploratory conversations –attending the WCSJ was an unplanned and at good opportunity to meet with journalists- the selection of the interviewees unavoidably responded to some arbitrary criteria such as the speed to which the group contacted responded and the availability of some of them to meet. Two requisites were set to choose from a list of speakers (showed in the programme of the meeting) and delegates attending: to work at least half time as science reporter/editor by that time and having more than 10 years of experience in the profession. All journalists interviewed had an average experience in the field of 20 years and all of them work or had worked in recent years as writers, reporters, correspondents and/or editors of science/health information published and broadcasted in mass media at national and international scales. The interviewees were: Hanns Neubert (J1, German freelance science reporter, editor and

producer), Martin Enserink (J2, Dutch freelance editor and writer for *Science* magazine and others), Ivan Oransky (J3, US editor at *MedPage Today*), Lynne Smit (J4, South African editor and director at *Hippo Communications*) and Dino Trescher (J5, German freelance writer, editor and researcher).

The interviews' length varied between 35 and 1 hour and 15 minutes, with an average time of 40 minutes each. A flexible questionnaire was designed, containing queries within 3 main topics: "professional trajectory/experience"; "working conditions and journalistic practices" and "perceptions and values on journalism and science journalism" (Figure 1). Being a semi-structured interview, questions were used only as a guide, leaving the conversations to naturally developed and for other topics, concerns, themes and elements not included in the original guide to arise.

DIMENSION	SUB-DIMENSION	Indicators/guide questions
Professional trajectory/background and experience	Current work previous and professional experience/capacitation/professional and academic training/other relevant experience	Please briefly describe your current work and relevant past professional experience (Freelance, full-time, main income?) What's your background? What relevant formal and/or informal training have you received on journalism/science journalism? How did you "become"/started working as a science journalist?
	Description of media, company, institution or organisation	What are the main characteristics of the media/organisation you work for? Is there an editor? What does he/she do? How is your relationship with him/her?
Working conditions and journalistic practices	Main features of the daily work	Describe a typical day at work; how many pieces you publish every day and every week? Which topics you cover more? Are you specialised in any area/topic? Why? What sources do you use? Why those and not others? In which ways do you use these sources? What resources do you apply to verify the information?
	About the journalistic products (quality)	What elements would you say make a "good" science story? Why? What opinion do you have on how the media cover science?
Perception and values on journalism and science journalism	News values	Which criteria is used to select science news? Credibility in a double account: sources selection and building a story.
	Social role of science journalism	Do you think science journalism has a social role to play? Which one? How would you define SJ?

Figure 1

Preliminary results (exploratory interviews)

The preliminary results of the exploratory interviews reported here put focus on two topics: the social role attributed to SJ and how they see themselves as professionals. When asked whether they consider journalism and science journalism to have any kind of “social purpose”, “responsibility”, “social role” or more broadly asked to define the main goal of their profession, all respondents agreed, as expected, in attributing it a relevant role in society as it they tend to agree in that journalists work as intermediaries between science institutions, scientists and research, and “society” at large or the “publics” of science. *“We*

are the ones making science accessible for a lay public, a broad audience, and I think is important the people understands what's going on in the world of science” (J2).

Journalists referred in different ways to the links between science development, social implications and research funding. Some of them, for example, used the well-known argument of valuing science communication as democratic access to knowledge. Science funded by citizens must be accessible through discussions including what research should be sponsored, how advancements must be applied and how should science be used to achieve economic and social development, in which communication and journalism, specifically, has clear goals to accomplish: *“[The] public spends a lot of money on science, like to particle accelerators and so...to them too it's important that they have an opportunity to learn what's done with their money...” (J2, Science).* Another journalist (J1, freelancer) put it this way: *“What science should be funded in the end? Science is funded by public money; we pay it, so there it should be a debate, a public debate (...) on where to invest the money”.* When questioned about the role of profession in a broader context of science communication, this journalist distanced himself from those “who make advocacy” for specific causes, emphasising journalism principle of “objectivity” and impartial reporting: *“I tell a story of how the world is, not how I want it to be” (J1)* while almost all coincided in the need of “critical journalism” or “scepticism” when reporting science, usually through classical journalism principles such as verification, fact-checking, accuracy and contextualization of news information. Contextualization of science, technology and medical advancements or “breakthroughs” in media coverage was actually an issue spontaneously brought by all 5 journalists, who agreed in that, is both a much-needed and missing element in many science news stories. Interviewees reflected on the context theme at two levels: a) on the importance of “putting things/news into context”, meaning that science developments and advancements always fit into broader discussions or debates on a given topic (including within the scientific system) and, b) the relevance of “going beyond science”, that is, giving the public a much wider sense of what findings mean for larger parts of society: *“[I] like it when there is a societal implication and that's why I like writing about infectious diseases, cause it's not just pure science, is always...it's about patients, it's about healthcare systems, often it's about politics, money, the way people live, it's about travel, it's about role of health organisations, (...) I like when it's not just about microbes but also about people and...companies” (J2).*

Watchdog and “fourth Estate” notions of professional journalism also emerged as roles attributed to the mass media, and most of the interviewees coincided that accountability and transparency are essential missions and principles of journalism excellence. *“We should be holding institutions accountable and scientists and universities they work for and the companies they work for and environmental groups; all institutions, the journalists should accountable. If everything else fell away and that's all we have left in journalism was accountability journalism I'd be very happy”* (J3). At another level, relating decision-making linked to science, one of the journalists highlighted the role of the media in empowering the public through high-quality reporting: *“[I]f you provide people with information, credible, honest; then they are much more powerful, much more able to live at last properly; as a journalist your social responsibility is to give the (...) information, to make sure is accurate, that you're putting (...) things in a context that's meaningful and not just going for the sensational, or...for which is easy and wrong”* (J4).

Perspectives by these journalists, of which only a few are included here, have already been used to design a new questionnaire for Argentinean science journalists. So far 5 interviews of 2 hours' length each have been conducted with experienced and high profile reporters and editors working on science and health topics for different print and online media and transcriptions are currently under analysis to decide on the following steps of the fieldwork. Both groups of interviews have already started to be analysed using some elements of Bourdieu's field theory and derivations of his work by journalism' researchers (Benson and Neveu, 2007) who have investigated journalistic specializations and therefore result of interest for the theoretical framework of my very own work, which has started to orientate towards characterising the field of science journalism in Argentina.

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