

The Daily Press Fashions a Heroic Intellectual: The Making of Florentino Ameghino in Late Nineteenth-Century Argentina

IRINA PODGORNÝ*

Abstract. This article considers the emerging career of school preceptor Florentino Ameghino (1854?–1911), a fossil collector from the Argentine countryside who became an international authority in the 1880s and 1890s in the field of prehistory and the paleontology of vertebrates. Reflecting on investigations in the 1870s about the antiquity of humanity in the Argentine Pampas, Ameghino's story allows us to examine how the press circulated news in a context where political and intellectual matters were closely interconnected. This work is based on a collection of newspaper clippings gathered by Ameghino between 1874 and 1897 and found in the Jorge Furt Library, a private collection of books located near Luján, the city where it is said that Ameghino was born.

Keywords. Argentina, Florentino Ameghino, geological archaeology, journalism

1. Introduction

In Arthur Conan Doyle's *The Lost World* (2005), Edward Malone, a reporter for the London *Daily Gazette*, is sent to interview Professor Challenger, a cantankerous zoologist who claims to have discovered living dinosaurs in South America. The zoologist was also noted for having previously cracked the skull of one of Malone's rival journalists. Challenger is, however, persuaded to accept Malone as a neutral witness on his new expedition to the land where prehistoric life is still alive. This novel, a snapshot from the early 20th century, fashions a convoluted relationship between science, scandal and journalism. In the 1925 cinematic version, Challenger could only afford the trip to South America by accepting Malone's newspaper's offer to finance the expedition, and so the publicity hounds became essential for the advancement of knowledge.

Professor Challenger's compromise reveals the loss of autonomy for science just as it shows how science is interconnected with the modern public sphere. In that vein, Deborah R. Coen (2013) recalls that the words 'scientist' and 'journalism' emerged at almost the same time, so providing a label for 'an unprecedented form of authority over the public, a new class of guardians of information' in a period when scientific novelties and the

*CONICET-Archivo Histórico del, Paseo del Bosque s/n; 1900 La Plata, Argentina
E-mail: ipodgo@isis.unlp.edu.ar

progress of media fed each other. For Anglo-American readers by the 1860s, debates previously confined to the secrecy of learned societies became public scandals nourishing the dailies and contributing to the exponential increase in newspaper circulation and readership facilitated by the electric telegraph network, the press agencies and the adoption of the rotary printing press (Ellegård, 1959; Wolff, 1991; Cantor and Shuttleworth, 2004; Brinkman, 2015; cf. Belhoste, 2006 for the French case; Caimari, 2015 for Argentina).

In the decades that witnessed the emergence of geological archaeology, the past was a bestseller (Sommer, 2006). Press moguls realized that the remote past was a good source of news. Prehistoric humanity was sensational enough to win a place in this ephemeral world of news based on the constant production of novelty (Cohen, 1999). Just as newspaper editors and publishers realized the value in living dinosaurs and Professor Challengers, so learned entrepreneurs made a public career as a scientist.

The present article reviews the early career of Florentino Ameghino (1854?–1911), who, working in Argentina, became an international authority in the field of geological archaeology and the paleontology of vertebrates (Podgorny, 2015a; Simpson, 1984). Ameghino's life is unusually well-documented by Argentine biographers in the 20th century, who celebrated him as a 'national scholar' par excellence, the living proof of the idea that children of immigrants could prosper—in his case, by taking advantage of the rich array of fossils and the quality of public schools on the Pampas (Podgorny, 1997).

Ameghino received apotheosis as the incarnation of materialism, leftist culture and national genius. By casting him as a heroic genius, Ameghino's biographers have neglected the crucial fact that his research was a collective enterprise, supported by a small family business and by negotiations that traded political influences for bones (Podgorny, 1997, 2005).

It was mainly members of the local Genoese community, various German scientists living in South America and a few Argentine naturalists who patronized Ameghino's fossil business. In addition Ameghino had links with Hermann von Ihering, a German scientist who had settled in São Paulo. Both studied the Tertiary geological formations in South America and elaborated the idea that all mammals had originated in Patagonia, whence they moved to Africa over the continental bridges connecting the ancient continents (Podgorny, 2005; Lopes and Podgorny, 2014).

In the 1880s and 1890s Ameghino's discoveries revolutionized scientific opinion regarding primitive mammals, to such an extent that German paleontologist Karl von Zittel, in his *History of Geology and Paleontology* of 1899, remarked:

Next to the discoveries of Mammalian faunas in the west of North America, the most important paleontological event of the last two decades of the nineteenth century has been the disclosure made by Florentino Ameghino of a rich Mammalian fauna in the Tertiary rocks of Patagonia. (von Zittel, 1901, p. 423)

Florentino Ameghino died in 1911, after a decade of work as director of the National Museum, located in Buenos Aires, and in possession of an unalterable conviction about the 'Argentine' precursors of humanity.

Florentino Ameghino's biographers generally portrayed him as a kind of Professor Challenger *avant la lettre*, namely as a scientific revolutionary who easily lost his temper. His late celebrity was regarded as the natural result of his paleontological discoveries, his difficult temperament being the condition required to maintain his activity in an environment that was adverse to his evolutionary ideas. The present paper, however, examines Ameghino's first incursions as fossil collector in the provincial city of Mercedes, when no one could predict his later fame. By revealing how Ameghino was used by and made use of the press, I show how a young teacher from the provinces with no academic credentials was able to assemble an enormous stock of intellectual capital in a short period of time. I also contend that Ameghino's comportment was conditioned by the logic and rhetoric of the press in Argentina. Far from an episode of self-fashioning - which would imply a triumph of the will - Ameghino's career shows how self-image in the modern world is a product of modern techniques and media in communications.

The paper examines Ameghino's first publications and correspondence as well as a 306-page folder of newspaper clippings found in the Jorge M. Furt Library (Luján, Province of Buenos Aires, Argentina). The folder records the activities of Ameghino, his friends and his professional antagonists between 1874 and 1897. The first part of the article refers to this folder and the proliferation of newspapers in the second half of the nineteenth century in Latin America and in Argentina, the context for understanding the clipping collection. This folder, which remains unpublished and, until now, had not been analysed - integrates the documentation that, after Ameghino's death, was transferred to Alfredo Torcelli (1864–1936). A journalist and member of the Argentine socialist party in La Plata, Torcelli was named official editor of Ameghino's work and letters. His library was auctioned in 1962, when the writer Jorge M. Furt bought the folder for ARG\$ 500 (US\$5). Apparently, Furt never worked on the folder, but kept it as part of his private library located in an estancia close to Luján. Since 2002 the library has been open to researchers and students as the 'Biblioteca y Archivo Fundación "Jorge M. Furt."' ¹

The next two parts of the article analyse the emerging career of Ameghino as a fossil collector in the town of Mercedes. Ameghino, to promote himself, used a medium suited to a teacher in a provincial town that was being marketed as an important centre in the province of Buenos Aires: the local press, which recognized a sensational story in Ameghino's prehistoric humanity found in the surrounding countryside.

2. *Bones, Clippings and Argentine 'Diarismo'*²

Mercedes was a railway hub located 100 km west of Buenos Aires (see Figure 1) that in 1872 connected the capital city's port with the Argentine hinterland. Ameghino, age 18,

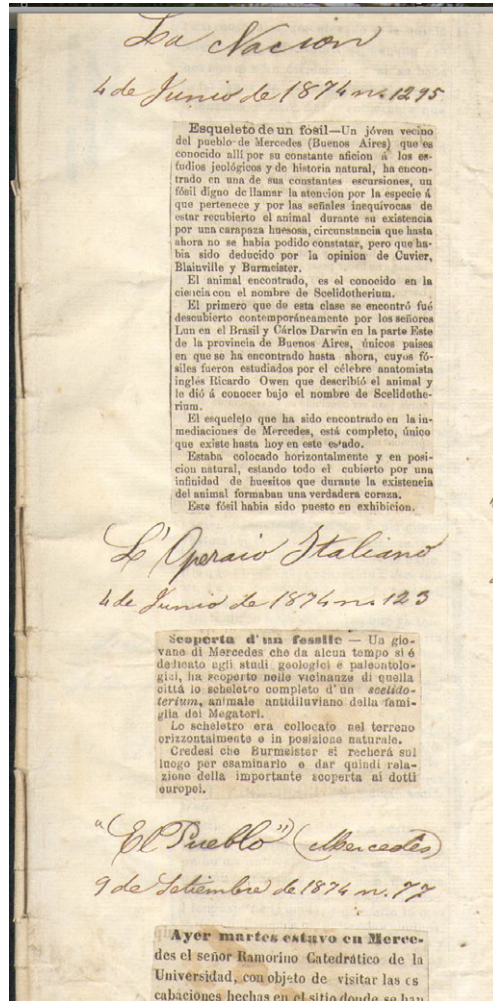


Fig. 1. Fragment of Page 1 of F. Ameghino's Scrapbook. Archivo y Biblioteca Jorge M. Furt.

arrived there from the neighboring city of Luján to become preceptor of the municipal school for boys, one of the many schools in Mercedes, which had a population of more than 8,000, according to the national census 1869. Significantly, the town also had several newspapers.

Two years later, two different dailies in Buenos Aires reported the discovery of a fossil mammal in Mercedes by 'a neighbor from that city, a young man devoted to geology and natural history'.³ The fossil was perfectly identified by its scientific name (*Scelidotherium*), but the young man had to wait until September to find a misspelled version of his own name in print. *El Pueblo*, a newspaper from Mercedes, chronicled the arrival of Genoese

Professor Giovanni Ramorino, who, attracted by the news about the discovery of fossil human remains, had decided to seek out 'Mr. Amiguino', the neighbour involved in the discoveries.⁴

Ramorino was professor of geology at the University of Buenos Aires and one of the founding members of the International Congress of Prehistoric Anthropology and Archaeology (Augello et al., 2000). He and Ameghino shared Genoese linguistic and cultural affinities. Ramorino, interested in promoting prehistoric research in Argentina, encouraged his compatriot to study the local antiquity of humankind and to become familiar with all the evidence, collected in the Pampas, which had been dispersed in diverse European collections--notably the 'fossil-man skeleton' sold in 1867 to the Natural History Museum of Paris (Podgorny, 2001).⁵

Ameghino preserved these three articles, which became the earliest of the approximately 330 clippings that he collected between 1874 and 1897 from more than 30 newspapers published in Argentina and Uruguay (see Figures 1 and 2). Cut, hand-dated and pasted on paper in chronological order, the clippings testify to Ameghino's obsessions, alliances and rivalries. For the historian, they are a remarkable source for exploring the nuances of the practice of natural history in the Rio de la Plata region. They show not only how informed the Argentine public was about local and international scientific discoveries but also how the practice of natural history was fashioned through the press (cf. Laera, 2008; Nieto-Galán, 2011).

The clipping collection demonstrates Ameghino's early dedication to constructing a reputation, as much as it records his early recognition in the fields of geology, paleontology and prehistoric archaeology. His contemporaries, it appears from this collection, held him in high esteem. Furthermore, the clippings reveal how his career owes much to his good contacts with journalists. The Argentine press is a player in the arena where scientists lobby for state jobs, state subscriptions for their journals and financial support for their projects. Nineteenth-century scientists in Argentina - and also in Europe - published their results and announced their future books in the daily press as a way to look for subscriptions and advertise themselves (Pyenson, 2013). The press - eager to find good stories to sell - was happy to present these stories of survival in the scientific world with an eye on the potential for drama, epic and morality.

The collection shows three 'popularity' peaks in Ameghino's life: 1876-1877 (the period analysed in the paper), 1884 and 1889, coinciding with the publication years of *Filogenia* and his monumental *Contribución al estudio de los mamíferos fósiles de la República Argentina*, both extensively reviewed in the press.⁶ The folder ends in 1897. There are some years without clippings, which coincide with Ameghino's stay in Paris (1878-1881) and 1893. It is unknown if there was a second volume of clippings, but the yearly distribution of clippings seems to indicate that Ameghino was losing interest in recording his triumphs in the press by 1897. Also, after the First World War clipping services began to emerge, which took over what was often a fatiguing task for an individual.⁷ (Table 1) It is possible, however, that the absence of clippings after 1897 was



Fig. 2. Map indicating the cities from which Ameghino collected newspapers's clippings (Prepared by Samanta Faiad- Department of Scientific Illustration-Museo de La Plata, Argentina).

merely related to Ameghino's other commitments in the 1890s, when he invested all his money and efforts in describing the newly discovered Patagonian fossil fauna (Podgorny, 2005).

Looking at the clippings available, it is notable that while some of the clippings are just a couple of lines, others are three or four pages long. Feuilletons are also present. *La Nación* and *La Prensa* – two dailies from Buenos Aires still published today – that were and are sold across the country - are always present in the collection, but the majority of the periodicals appear and disappear, following the life cycle that characterized the press and the places where Ameghino lived.

The number of newspapers present in the folder is not a surprise. Ameghino collected his clippings in a context in which Latin American newspapers 'blossomed everywhere' (Sábato, 2001; Forment, 2003; Román, 2010; Acree, 2011), a trend that has impressed today's historians as well as Ameghino's contemporaries. In 1883, for example, Ernesto

Table 1. Clippings collected by F. Ameghino (1874–1897), distributed by year and newspaper

	LN	LP	OI	EPM	LA	LL	EP	LR	CE	LR(M)	LRT	LU	LT	LO	EN	PA	ED	LC	S	TS	LS	DLP	D	C	E	F	EC	PI	P	Pu	PO	T	M	Total
1874	1		1	1																													3	
1875		1		1	2																												4	
1876	1	2	1	2	2	1	4	2	1																								18	
1877	3		3		2		3			2	1	1																					15	
1882	2	1											1	2																			6	
1883	1	1	1											5	4	2																	14	
1884	12	8			1					2		4	12	2	20	3	1																65	
1885	4	3												4	7	3																	21	
1886	3	6													2																		11	
1887	6	1	2									1	1		1						2	1	1	7	1	1							24	
1888	5											4					1					2											12	
1889	22	7													2	2					2	2	2	1	4	6	1						49	
1890	20	4													1	1	1				1	4			3	1							35	
1891	5	4														1						2						2					14	
1892																																		1
1894	4	2														1							4					4					26	
1895	3	1																					2											7
1896																							1											1
1897	2																																	3
Total	89	46	6	6	4	5	1	7	2	1	2	1	3	2	16	16	16	28	9	1	2	4	16	11	1	2	7	6	2	6	1	5	7	331

Buenos Aires: La Nación (LN), La Prensa (LP), L'Operaio Italiano (in Italian, OI), La Libertad (LL), El Porteño (EP), El Correo Español (CE), La Unión (LU), La Tribuna (LT), La Opinión (LO), La Patria Argentina (PA), El Diario (ED), La Crónica (LC), El Nacional (EN), El Sudamericano (S), The Standard (in English, TS), El Fígaro (F), El Censor (EC), La Patria Italiana (in Italian, PI), La Política (P), El Pueblo (Pu).

La Plata: La Semana (LS), El Diario (DLP), El Día (D), La Capital (C), L'Esperon (in French, E), El Tribuno (T), El Mercurio (M).

Mercedes (Provincia de Buenos Aires): El Pueblo (EPM), La Aspiración (LA), La Reforma (LR).

Mercedes (Uruguay): La Regeneración (LRM).

Tucumán: La Razón (LRT).

Córdoba: El Porvenir (PO).

Quesada published the studies about Argentine journalism that he had undertaken in 1877 while interim director of the Buenos Aires Public Library (on Quesada: Buchbinder, 2012; Pyenson, 2002). According to Quesada, whereas books were not widely read, newspapers had awakened an avid interest. Quesada called this phenomenon 'diarismo' (Sábato, 2001, p. 22) and attributed it to a desire to keep up with news in order to be able to express an opinion about it. By the 1870s literacy became the royal road to prosperity and justice. Newspapers were the forum for the new world.

Beginning around 1867, newspapers were sold by issue on the street. The end of subscription sales increased not only the economic power of the newspapers but also their circulation among a growing, literate population (Prieto, 1988; Sábato, 2001). Newspapers, however, still operated with tight limits on their readership and faced the difficulty of supporting their edition through sales, subscriptions and advertising (Halperin Donghi, T. (2005) *José Hernández y sus mundos* (Buenos Aires: Sudamericana)). As a result, the press was bankrolled primarily by the state, as a subscriber, through subsidies or with the rent-free loan of federal printing presses. The generosity was based, as Halperin writes (1985, p. 24), on the desire for political influence. Newspapers followed the political winds.

In 1877, Argentina had 2,437,000 inhabitants and 148 periodicals, that is, one periodical for every 15,700 inhabitants, a per-capita diversity which ranked fourth in the world. The majority of the periodicals (83) were in the city of Buenos Aires (Quesada, 1883, p. 76). These figures are confirmed by Ameghino's collection. As Table 1 shows, Ameghino in 1 year could extract articles from 10 different dailies from Buenos Aires as well as from other periodicals published in Luján, Córdoba, Tucumán and the recently founded city of La Plata (1882), where he settled in 1887. Even then, the infant and largely deserted city had several dailies (see Table 1).

In 1877, the annual circulation of Argentine periodicals was about 66,000 issues, making it an industry that moved considerable amounts of money and employed, between writers and delivery men, about 2,200 people throughout the country (Quesada, 1883, p. 96). According to Quesada (Quesada, 1883), the Argentine press was a hybrid of propaganda (like the French press), party politics (like the British press) and sensationalism (like the North American press). But in contrast to some of these other environments, such as France, freedom of the press was not an issue in Argentina, where anyone with the necessary resources, contacts and skills could run a newspaper and write. Almost all the nation's distinguished men of science, letters and art – notwithstanding their beliefs or political positions - wrote for the newspapers.

Sábato (2001, p. 44) remarked that the growth of the press 'depended mainly on the ability of the press to generate its own public by contributing to stage an arena for debate', including scientific controversies and disputes among scientists (Podgorny, 2011). As shown by Ameghino's clippings, to be in the newspapers almost became a requirement for anyone aspiring either to scientific influence or to a position in public administration, a museum or the two existing universities.⁸

The newspapers followed the logic of factions described by Halperin earlier in the century, with the additional influences of reporters' interests, reader opinions and international news provided by the Havas Agency of France, which in 1876 acquired a monopoly in Latin America (Oteiza, 2009, p. 426; Caimari, 2015). This situation explained the abundance of news about French anthropology and archaeology, where prehistoric archaeology was an important public matter (Richard, 1992, 2008). Readers eager to express their opinion looked for innovations, and popular among these were advances in science.

3. *A Rising Star*

Following an established pattern among artisans, small shopkeepers and their children, Ameghino exploited a territory rich with fossils that attracted traveller naturalists and collectors from Buenos Aires and abroad. Impressive skeletons found in the region were exhibited in the *Museo Público de Buenos Aires*, an institution which sent its employees to collect the bones on the riverbanks of the region, especially in the dry seasons. Ameghino, like many other local amateurs, knew that this natural resource sold well in Europe. Stories about men becoming rich from the trade in bones circulated widely in the Pampas and in Buenos Aires (Podgorny, 2001).

The Argentine press publicized the interest that 'fossil men' had for the European collections, and the Genoese in Argentina sought to profit in this regard from their contacts in Europe. Although the director of the Museo Público in Buenos Aires, Hermann Burmeister, never accepted Ameghino as a scientist, he was able to gain access to the collections kept in this museum thanks to the Genoese community. These community links also benefitted Ameghino outside Argentina. At the beginning of the 1870s, the Genoese taxidermist Antonio Pozzi put him in contact with the Milan museum, and it was to here that Ameghino and Pozzi would later send 'a fossil human skeleton'.⁹ By 1873, in light of the opportunities that the social and natural environment offered him, Ameghino reoriented his activities towards the collection of pre-historic antiquities. He began to acquire publications; to collect, keep and describe fossils and pre-Columbian artifacts; and to archive his letters and newspaper clippings, as if he himself were an institution (Podgorny, 1997, 2005, 2009).

We do not know why, how and where Ameghino had learnt the practice of keeping records and of revising and collecting materials from the periodical press, a habit which was adopted almost simultaneously everywhere (Garvey, 2012). The role of the press agencies in the international expansion of this practice has yet to be studied. Maybe Ameghino acquired this practice during his education as a school preceptor, where the curriculum included techniques for recording daily school life (de la Peña, 1865, p. 144). If so, we are confronted here with the transfer of skills from one domain (school administration) to the practice of natural sciences (Schäffner, 1999; te Heesen, 2005; Podgorny, 2015b).

Another explanation can be found in the Argentine obsession with 'diarismo', in which case it is not strange that Ameghino did his best to keep up with the news he needed for

his business. His correspondence indicates that he relied on his family as well as on his French and Genoese network for gaining information on discoveries in the countryside, and one can imagine that the same people presenting him with arrows and bones also provided him clippings from newspapers obtained in other Argentine provinces. The fact is that Ameghino, instead of keeping a personal diary, the quintessential 19th century autobiographical tool, collected newspaper clippings, which could speak on his behalf, as if the clippings were a bone or an arrow, an objective piece of evidence. In so doing, he left his life in the hands of the press. Paraphrasing Ellen Gruber Garvey (2012) in another context, Ameghino wrote his life with scissors.

Thanks to this early collecting of letters and clippings, we know of an exchange with the surveyor Manuel Eguía, a member of the commission that had organized the topographical office of Buenos Aires. Ameghino and Eguía shared an enthusiasm for the so-called Man of Menton – the human skeleton discovered in 1872 in the grotto of Baoussé-Roussé, near Nice (see Cataldi, this volume) discussed in the Buenos Aires press. Following Eguía's advice and imitating what he was reading and seeing in the books Eguía provided, Ameghino classified the bones found on his excursions. Soon Ameghino was convinced of having found evidence of 'man's antiquity' in the Pampas, namely the co-existence of fossil fauna with the local prehistoric humanity, which - as reflected in the news published by the Argentine press - was a hot topic in the new field of prehistoric archaeology.¹⁰ Ameghino also reacted to the discoveries published in the press. When he read in *La Libertad* of Buenos Aires that in 1875 some men had discovered ancient human bones in the Sierra of Córdoba (about 800 km north from Mercedes), he contacted them to ask if they could send the bones to Professor Ramorino.¹¹ In this way, the press served to link up collections in Argentine prehistory.

In January 1876 the periodical from Mercedes *La Aspiración* put itself at Ameghino's service. The first morning newspaper in the province of Buenos Aires, *La Aspiración* complemented the evening daily *La Reforma*, which moved its newsroom to the city of Chivilcoy in 1877. Luis A. Mohr, was the editor of both these papers. Mohr was a soldier from the Paraguay War who would later become known for his defense of women's rights (Mohr, 1914). He was the grandson of the first Prussian consul and partner in the commercial firm Mohr & Ludovici in Buenos Aires, which offered to publish for free the work of this schoolteacher who invested what little money he made from his job into science, despite 'both the vulgarity and egoism of scholars'. Mohr's periodicals promoted the local 'scholar', and, in so doing stressed the important role Mercedes was playing in both the development of the country and science.

Ameghino profited from Mohr's connections with Buenos Aires journalists, and soon became the expert on the antiquity of humanity on the Pampas. Encouraged by Ramorino and Mohr, in 1875 Ameghino presented his collection of more than 1,000 specimens of carved Stone Age silex at the first exposition of the Argentine Scientific Society (established in Buenos Aires in 1872), for which he received an honourable mention (*La Prensa*, 7 November 1875; *La Aspiración* 20 November 1875). Shortly afterwards, *La*

Aspiración (16 January 1876) announced an ‘important discovery’ of a ‘prehistoric site, from a very remote era in Mercedes’. This news, thanks to Mohr’s contacts, appeared in the Buenos Aires newspapers (*La Nación*, 18 January 1876). As a consequence, a school inspector, attracted by the topic, inquired about it.¹² Moreover, ‘a friend’ from Buenos Aires visited Mercedes and marvelled at the curiosities kept there, which in Europe would be worth a fortune. The newspapers described the virtues of young Ameghino, who had the makings of a scholar, and who had spent 3 days in a riverbed, risking his health, to extract the remains of antediluvian animals. With scientific faith, he had discovered ‘forty unknown species’. And ‘where an untrained eye discovers nothing, he sees a relic, a utensil, a weapon, a prehistoric skeleton’. Ameghino sent these items to the Argentine Scientific Society, and they were described thus:

the richest collection of bone instruments that exists in the country, which proves the existence of the fossil man in this part of the so-called new world, which the inflexible word of science has come to reveal is perhaps the oldest. (*El Porteño*, 12 November 1876)

El Porteño was in fact mimicking contemporary debates on the origin of the Americas’ inhabitants, one of the central issues at the International Congresses of Americanists, established in France in 1867 (Quesada, 1879). At the first meeting in Nancy, the autochthonism of American civilizations was extensively reviewed. This topic was treated extensively in *La Libertad* (17 November 1876), where Havas is the likely source of a summary of publications by the congress. *El Porteño*, however, phrased its article in military terms, creating antagonisms and making Ameghino a kind of young local hero who fought against European scientific prejudices. Thanks to the efforts of this young schoolteacher, the Argentine soil revealed the evidence of the antiquity of humanity in the Americas. Appealing to local pride, the journalists created tensions and conflicts that sold better than naked facts. In the same vein, the press introduced Ameghino as a very modest and simple young man, a self-taught genius who turned European savants on their head.

Meanwhile, in Mercedes *La Aspiración* (30 July 1876) hailed the city’s growing scientific celebrity as the result of Ameghino’s discoveries. The newspaper also publicized Ameghino’s *The Antiquity of Man in the Argentine Pampa* [*La antigüedad del hombre en las pampas argentinas*], a work in preparation with 25 chapters, two volumes and more than 700 prints of the weapons and instruments found by the author, whose ‘life of poverty’ was praised as one of his virtues. *La Prensa* de Buenos Aires (30 August 1876), one of Argentina’s most important newspapers, reprinted a story from a Mercedes newspaper about one of Ameghino’s more disagreeable adventures when the ‘tireless explorer of the Earth’s secrets’, busy with his work ‘two leagues’ from the city, was surprised and confronted by three men. Completely unarmed, Ameghino had no choice but to drag himself to the water of a deep and muddy river to survive. Thanks to his ‘presence of spirit, resolution and ability’, he escaped the clutches of his assailants. *La Prensa* congratulated him for his cleverness but cautioned him to be more careful in the future. This misadventure belongs to one of the tropes that has characterized Argentine literature and ideas from

the mid 19th century: the opposition between civilization - represented in this case by Ameghino's noble scientific zeal - and 'barbarism', namely the bad habits that characterize Argentine country life, here incarnated in the bandits from the Pampas, who – as Domingo F. Sarmiento (Sarmiento, 1845) declaimed - had infested the life of the cities. Ameghino's enduring reputation is as a hero of civilization.

The promotion of Ameghino's virtues coincided with the campaign in *La Prensa* (1 March 1877, *La Reforma*, 9 April 1877) and other newspapers against the government, one of the factional fights from those years. This campaign lobbied for more resources for the Sociedad Científica Argentina, a learned society created by prominent men from Buenos Aires, which enjoyed only intermittent state support. *La Prensa* opposed the national government under the guise of supporting a generation that was 'austere, simple, hard-working and educated in the shelter of the healthy principles of morality', which was able to confront the nation's decadence. The natural and exact sciences appeared, as in other periods of Argentine history (Podgorny and Lopes, 2008), as an elixir to counter overindulgence. In this context and in accord with Ernesto Quesada's diagnosis, the *Anales* inaugurated by the Society in 1876, had recruited only 11 spontaneous subscribers. The rest were on the books as a result of obligation, 'brought by members who invoked their friendship, and even so there were no more than 80 of them'. The 500-issue edition of the learned journal overwhelmingly circulated outside of the country. In the context of hostility towards Argentine President Nicolás Avellaneda's Catholicism, *La Prensa* lobbied the state so it would subscribe to the *Annals* and then reminded readers that 'the discovery of man, inappropriately called fossil, that lived eighty or one hundred thousand years ago' was not an attack on religious beliefs. *La Prensa* contended that the work of many young Argentine scientists on 'a generation as ancient as the habitable Earth', should be included in public and private school curricula. *La Tribuna* (2 May 1877) joined this campaign and showed that the passion for science 'would partly cure generations of Argentines of the paroxysm of political passion. There are illnesses cured only by contracting new ones'. Here Geology, anthropology and paleontology could play a role, as they were already uppermost in Argentine thought. *La Prensa's* diagnosis about the scientific public in Buenos Aires revealed that learned societies and their publications were subject to the influences described by Quesada for newspapers.

4. *The Antiquity of Humanity on the Pampas*

El Correo Español (20 November 1876) published various columns about the 'Pre-Adamic man of Menton' mentioned in the exchange between Eguía and Ameghino. In their reports, they calculated that the human remains found in those very old caverns were of the same age as the glyptodont and the megatherium, whose skeletons were exhibited in the Museum of Buenos Aires. As suggested by Coen (Coen, 2013), what the press published inspired

new interests, new careers and new objects of inquiry, connecting the local and the global and shaping new geographies of research.

The passion for prehistoric caves like that of Menton, discovered and explored in March 1872 (Guiter, 1976; Rivière, 1873, Cataldi, this volume), caught on among the Genoese of the Rio de la Plata. However, the Argentine Pampas' flat geography did not cooperate. The Uruguayans, with their proximity to Brazilian rock outcrops, had better luck. In 1877, the Genoese pharmacist Mario Isola explored the cavern known as the underground palace of Porongos, some 250 kilometers north of Montevideo. It was, for Isola, a monument of Uruguayan antiquity, built of columns and arches that were semi-gothic in form. Isola, avid reader of news arriving from France, believed that the proximity to water and the discovery of geodes like those found in the 1860s in the Abri of the Madeleine, Dordogne, suggested that this shelter was constructed by a much more civilized and ancient race than the nomadic tribes found by the Spanish conquerors. *La Reforma* (12 and 22 December 1877) of Mercedes reprinted the news of the Genoese explorations in Uruguay while Isola (1877) informed the Uruguayan newspapers and paid for the publication of his investigations out of his own pocket (*La Regeneración*, Mercedes-Uruguay, 19 December 1876). Ameghino, in agreement with Isola's interpretation, would include it verbatim in his own pamphlet, *News about the Indian Antiquities of Uruguay [Noticias sobre las Antigüedades indias de la Banda Oriental]*, published by the *La Aspiración* printing press and incorporating for the first time in Argentina photographs of prehistoric objects.¹³ Newspapers not only contributed in the dissemination of scientific novelties, but their printing offices could also do small print runs of booklets on cheap paper. As the case of *Antigüedades indias de la Banda Oriental* shows, these provincial printing presses pioneered the publication of photographs in scientific publications.

Ameghino had travelled to Uruguay at the end of 1876, encouraged by French engineer Octavio Nicour, whom he had met in Mercedes and who had given him bibliographical details about a troglodyte city discovered in the Andes and the geology and sites of ancient objects in Uruguay. Nicour saw banks of seashells in Uruguay and related them to the *Kjökkenmöddings* on the coast of Denmark. With this analogy, Nicour attributed the Uruguayan discoveries to fishing tribes and interpreted the bolas or round spheres found there as weights for nets (Ameghino, 1877, pp. 3–5). In Uruguay, Ameghino gathered objects that defined the Neolithic age of Rio de la Plata. He compared his objects with the figures published by European authors, such as John Lubbock and Gabriel de Mortillet, works available at the Museo Público and also in the libraries of Argentine intellectuals and practitioners of science (Buchbinder, 1996). Ameghino came to the conclusion that geological archaeology could not be limited by the current borders of a country, it required – as European prehistorians already had claimed – gathering data on an enormous scale, work that was only recently beginning and work that he would direct in southern South America (Ameghino, 1877).

In April 1876, Ameghino had presented *The Quaternary Man on the Pampas* [*El hombre Cuaternario en la Pampa*] to the Scientific Society, a monograph where he contended for the local antiquity of man. Ameghino sent ‘all kinds of proof by which the existence of the European Tertiary and Quaternary man had been admitted’ (Ameghino, 1914, p. 22) to ‘speak for itself’, appealing to the similarity of some of his objects with others from the Arno valley that had been analysed by Ramorino, who had recently died.¹⁴ In June 1876, the Scientific Society recommended suspending judgement about the Quaternary man:

Other analogous discoveries did not produce the results expected by the authors. For this reason, and given the nature of the terrain visited by one of us where the author of the Memory did his research, it is our opinion that the problem should not be considered resolved until a basic and detailed study is done on the objects found. (Ameghino, 1914, p. 33)

Previously, two members of the commission had read the news about Ameghino’s discoveries in the press and had contacted him to purchase some of the objects advertised there.¹⁵ One of them offered to send the news from Mercedes to *La Libertad*, the newspaper in Buenos Aires where he worked.¹⁶ (Ameghino, 1914, p. 35).

In March 1877, Ramón Lista, who had attended science courses in Europe thanks to his family fortune and who also wanted a place in this debate, published an article in *La Libertad* signalling that ‘the authenticity of these discoveries is very suspicious if one pays attention to the condition of the discoverers’ (*La Libertad*, 22 March 1877). Ameghino reacted indignantly: ‘I would not have bothered at all with the work of Mr. Lista as it does not add anything new ... but it refers to my work in an unfavorable way and adulterates the truth of the facts’. With this response, Ameghino – and Lista – used public debate to gain recognition in Buenos Aires society: ‘Why has Mr. Lista not drunk from clearer sources in finding the data he wanted to acquire about our work?’ – Ameghino answered this question without waiting for Lista’s opinion: because from the beginning he and his collaborators had been looked upon with disdain. ‘It has even been supposed that we were guided by the desire to carry out worthless speculations’.

The press editors were delighted by such disputes as it showed that young people had begun to focus on scientific studies:

There are two young men investigating the secrets of our geological formations who are involved in a very interesting debate. Does the Quaternary or Antediluvian man exist in Buenos Aires? (*La Libertad*, 27 March 1877, *La Prensa*, 28 March 1877, *La Reforma*, 3 April 1877)

La Prensa featured the argument to such an extent that the participants began to believe in their own glory. The different newspapers resorted to boasting and bravado to further the controversy: ‘Mr. Lista. Where, oh where, has that celebrated *naturalist* gone? Why doesn’t he answer Ameghino? Is he, perhaps, copying data to pulverize our friend? We doubt it ... a lot!’ (*La Unión*, 10 April 1876) *La Prensa* (28 March 1877), interested in promoting this new affliction, insisted: ‘Let us encourage this predisposition of the Argentine spirit, let us not dissuade it’.

The new generation of naturalists, it might be argued, followed the model of people building their reputations through their political affiliations or factions, fighting and attacking the opponents, with the press acting as catalyst. The press also used Ameghino in the context of anti-clericalism, or as in the case of *La Prensa*, against the policies of the government and the habits of the 'political class'. Willing or not, Ameghino – eager to gain visibility and prestige – was trapped in this rhetorical journalism, which needed antagonists and public debates to sell and survive in the tight Argentine market.

5. *The Permeability of Low and High Science*

The story of Ameghino's early years shows how the local press, in the context of selling the news, played a crucial role in bringing people and objects together. Ameghino, to promote himself, used the local press from Mercedes, a city that was rising quickly as a centre of commerce in the province of Buenos Aires. Local journalists used Ameghino and his prehistoric research to present Mercedes as a progressive city, and Ameghino – thanks to the links that local journalists had with the press from the capital of the country – used the local press to gain visibility in Buenos Aires. The press would remain useful for Ameghino in the 1880s, when he was at the top of the field of vertebrate paleontology and had published his work in academic journals. Ameghino's courting of the press imposed a certain structure on his life, which was shaped by an industry that he used to build his reputation. In the end, however, the press came to define who he was and how he should study science (Podgorny, 2011).

As Hebe Vessuri (1995) remarked, Latin American scientists worked in an atmosphere that was perceived as one of permanent menace. Real or not, this sense of instability reflected the intrinsic institutional weakness permeating scientists' everyday life. Latin American scientific institutions, far from representing the result of state policies, actually survived by the inventiveness of individuals interested in forging their own career (Podgorny and Lopes, 2008).¹⁷ Scientists and science practitioners found themselves in the position of having to negotiate the legitimacy and continuity of their projects, celebrated but not supported by either concrete actions or money. In a period where the funding for science depended on private alliances and favours, civic association and the press were arenas where state resources were negotiated (Podgorny, 1997). Newspapers were used to lobby for jobs and money for archaeology and other disciplines. Polemics and 'wars' became central to communication strategies. Far from reflecting the clash of strong personalities, these scandals – which abounded in the Argentine newspapers from the 1880s and 1890s – responded to strategies set by the factional structure and needs of the press (Podgorny, 2011).

Besides reporting on scandals, newspapers, in both Europe and the Americas, reviewed books and theories, announced prizes and exhibitions, celebrated discoveries and published depictions of archaeological ruins and antiquities from the most remote locations.

Scientists and learned societies accordingly realized that newspapers were a powerful tool to attract the contributions of amateurs and professionals from both the countryside and abroad. As portrayed in *The Lost World* and reflected in Ameghino's story, fossil bones, prehistoric tools and contemporary animadversions were used by the press to confect conflicting views of the world, to promote local identities, characters and celebrities, and finally, to fill the pages of the dailies. Florentino Ameghino's youth is a history in which the media – not only individuals - had a crucial role in awakening new vocations and shaping both the scientific practice and identity of the practitioners of archaeology. Writing on archaeology in the press was perceived as a way to gain intellectual credibility and visibility, a passport to prominence. For the historian, press accounts are less about 'what they said', than about providing clues regarding how aspiring archaeologists articulated their enterprises and identities.

Acknowledgements

I would like to thank Margaret Lopes, Hilda Sábato, Lewis Pyenson and Isabel Martínez Navarrete, as well as two anonymous referees, for their comments and suggestions on earlier drafts of this paper, written at the Latein Amerika Institut- FU, Berlin, while on a Humboldt Foundation's Georg Forster Research Award. This paper is part of the Project 'Sciences citoyennes: les espaces de l'amateurisme scientifique (1850 – 1950)', Ecos-Sud-MinCyT (Université du Maine/Le Mans- University of La Plata), co-directed with Nathalie Richard. As always, the help of the Max Planck Institute for the History of Science librarians was much appreciated.

NOTES

1. 'Florentino Ameghino-Colección de recortes periodísticos sobre el sabio y su obra en la prensa de Buenos Aires, La Plata e Interior desde 1875'. Jorge M. Furt Library.
2. 'Diarismo' comes from the Spanish word 'diario' (daily newspaper) and could be translated as 'dailism', a neologism representing the fervour that people had in that period for reading many newspapers on a single day (see also Thérenty, 2011).
3. 'Esqueleto de un fósil', *La Nación*, 4 June 1874 and 'Scoperta d'un fossile', *L'Operaio Italiano*, 4 June 1874.
4. 'Ayer martes estuvo en Mercedes', *El Pueblo*, 9 September 1874.
5. Ameghino to Gervais, 31 October 1875, *OCyCC*, 20, p. 18–19.
6. The year 1884 is marked by two events: the reviews of *Filogenia* –the book Ameghino published that year- and of Ameghino's talk on the droughts and floods in Buenos Aires, most of them appeared in *La Crónica* and were penned by his friend, the physician and naturalist Eduardo L. Holmberg (1852–1937), the main factotum in promoting Ameghino in the press early in the 1880s.
7. On clipping services (te Heesen, 2006; van Hulle, 2016) notably 'Le Courrier de la Presse', known as 'Lit Tout'. Also Archives nationales, Répertoire numérique du fonds Pablo Picasso (CHAN 515AP - Musée Picasso MP/1992-2), H11-H40, clippings from 'Lit Tout' from 1918 to 1978, a remarkable resource that has still to be studied. I thank Lewis Pyenson for this remark. The load and scattering of information –although accelerated with electric communication- was already a problem early in

- the nineteenth century. This problem was behind all the bibliographical compilations, translations of papers, and editorial undertakings that attempted to circulate new knowledge across national and linguistic borders (see Férussac, 1829; Godlewska, 1999; Podgorny, 2016, p. 177).
8. Sábato (2001, p. 44): 'To have a newspaper became almost a requisite for anyone aspiring to political influence'.
 9. Pozzi to Ameghino, 1 May 1872, *OCyCC*, 20 (1935), p. 14.
 10. Ameghino to Egufá, 19 September, 10 November 1873, 24 January 1875?, *OCyCC*, 20, p. 10–13; 'Comunicado. El hombre preadámico de Mentón. Estudio paleontológico'. *El Correo Español*, 29 November 1876.
 11. Ameghino to Mr. Román, 23 December 1875, *OCyCC*, 20, p. 19–20.
 12. Ameghino to Fontova, 24 January 1876, *OCyCC*, 20, p. 24.
 13. Shot by Pedro Annaratone, auctioneer and photographer from Mercedes, these prints of stone objects from the Neolithic Age were pasted into the pages of the pamphlet (Ferrari, 1993).
 14. Ramorino to Ameghino, 28 February 1876, *OCyCC*, 20, p. 24–25.
 15. Zeballos to Ameghino, 17 January 1876, *OCyCC*, 20, p. 22.
 16. Ameghino to Zeballos, April 1876, *OCyCC*, 20, p. 35.
 17. On the vulnerability of institutions, also *Museum History Journal* 9, 1, 2016 devoted to Latin American museums.

REFERENCES

- Acree, W. Jr. (2011) *Everyday reading: print culture and collective identity in the Rio de la Plata* (Nashville: Vanderbilt University Press).
- Ameghino, F. (1877) *Noticias sobre las Antigüedades Indias de la Banda Oriental con láminas fotográficas representando objetos de piedra de la Edad Neolítica* (Mercedes: La Aspiración).
- Ameghino, F. (1914) 'El hombre cuaternario en la Pampa' (1876), in: *Obras completas y correspondencia científica -OCyCC*, Vol. 2 (La Plata: Taller de Impresiones Oficiales-), pp. 21–40.
- Augello, M., and Guidi, M. (2000) *Associazionismo economico e diffusione dell'economia politica dell'Italia dell'Ottocento: dalle società economico-agrarie alle associazioni di economisti* (Milan: Angeli).
- Belhoste, B. (2006) Arago, les journalistes et l'Académie des sciences dans les années 1830, in: P. Harismendy (ed.) *La France des années 1830 et l'esprit de réforme* (Rennes: PUR), pp. 253–266.
- Brinkman, P. (2015) Remarking on a blackened eye: persifor Frazer's blow-by-blow account of a fistfight with his dear friend Edward Drinker Cope, *Endeavour*, 39(3–4), 188–192.
- Buchbinder, P. (1996) Vínculos privados, instituciones públicas y reglas profesionales en los orígenes de la historiografía argentina, *Boletín del Instituto de Historia Argentina y Americana, Dr. Emilio Ravignani*'', 13, 59–82.
- Buchbinder, P. (2012) *Los Quesada. Letras, ciencias y política en la Argentina, 1850–1934* (Buenos Aires: Emecé).
- Caimari, L. (2015) El mundo al instante. Noticias y temporalidades en la era del cable submarine (1860–1900), *Redes*, 21, 40 (125–146).
- Cantor, G. and Shuttleworth, S. (eds.) (2004) *Science serialized. Representation of the sciences in nineteenth-century periodicals* (Cambridge: The MIT Press).
- Coen, D. R. (2013) *The earthquake observers. Disaster science from Lisbon to Richter* (Chicago: The University of Chicago Press).
- Cohen, C. (1999) *L'Homme des origines. Savoirs et fictions en préhistoire* (Paris: Seuil).
- Doyle, A. C. (2005) The lost world (1912), in: *Sir Arthur Conan Doyle: the Dover reader* (New York: Dover), pp. 285–462.
- Ellegård, A. (1959) *Darwin and the general Reader. The reception of Darwin's theory of evolution in the British Periodical Press, 1859–1872* (Chicago: The University of Chicago Press), 1990.
- Ferrari, R. (1993) *Bibliografía de publicaciones argentinas con fotografías montadas (incunables fotográficos): 1864–1900* (Buenos Aires: Biblioteca Histórico-Científica).

- Férussac, A. E. (1829) *De la nécessité d'une correspondance régulière et sans cesse active entre tous les amis des sciences et de l'industrie, des progrès successifs de l'esprit humain, envisagés dans leurs rapports avec ce besoin, et des moyens successivement inventés pour y satisfaire* (Paris: Didot).
- Forment, C. A. (2003) *Democracy in Latin America, 1760–1900: 1* (Chicago: The University of Chicago Press).
- Garvey, E. G. (2012) *Writing with scissors: American scrapbooks from the Civil War to the Harlem Renaissance* (New York: Oxford University Press).
- Godlewska, A. (1999) *Geography unbound: French geographic science from Cassini to Humboldt* (Chicago: The University of Chicago Press).
- Guitar, J. (1976) Les chemins de fer dans les Alpes du Sud: passé, présent, avenir, *Revue de Géographie Alpine*, 64(4), 529–544.
- te Heesen, A. (2005) Accounting for the natural world. Double-Entry bookkeeping in the field, in: L. Schiebinger and C. Swan (eds.) *Colonial botany: science, commerce, and politics in the early modern world* (Philadelphia: University of Pennsylvania Press), pp. 237–251.
- te Heesen, A. (2006) *Der Zeitungsausschnitt. Ein Papierobjekt der Moderne* (Frankfurt a.M.: Fischer).
- van Hulle, D. (2016) *James Joyce's 'Work in Progress': pre-book publications of Finnegans Wake fragments* (London: Routledge).
- Isola, M. (1877) *Descripción de la caverna conocida por palacio subterráneo de Porongos, departamento de San José, República Oriental del Uruguay* (Montevideo: Reynaud).
- Laera, A. (2008) Cronistas, novelistas: la prensa periódica como espacio de profesionalización en la Argentina (1880–1910), in: J. Myers (ed.) *La ciudad letrada, de la conquista al modernismo* (Buenos Aires: Katz), pp. 495–522.
- Lopes, M. M. and Podgorny, I. (2014) Between seas and continents: aspects of the scientific career of Hermann von Ihering, 1850–1930, *História, Ciências, Saúde – Manguinhos*, 21(3), 809–826.
- Mohr, L. A. (1914) *Mis setenta años, 1844–1914: Autobiografía escrita á pedido de mis hijas Ana Clara y Maria Luisa* (Buenos Aires: Gadola).
- Nieto-Galán, A. (2011) *Los públicos de la ciencia. Expertos y profanos a través de la historia* (Barcelona: Marcial Pons).
- Oteiza, V. (2009) Reflexiones en torno al Centenario de 1910 en *Le Courrier de la Plata*, principal diario francés publicado en Buenos Aires, in: M. Muñoz and P. Vermeren (eds.) *Repensando el siglo XIX desde América Latina y Francia: Homenaje al filósofo A.A. Roig* (Buenos Aires: Colihue), pp. 425–432.
- de la Peña, L. J. (1865) Proyecto de Estatuto Provisorio para la Escuela Normal de Buenos Aires, *Registro Oficial de la Provincia de Buenos Aires*, 143–148.
- Podgorny, I. (1997) De la santidad laica del científico: Florentino Ameghino y el espectáculo de la ciencia en la Argentina moderna, *Entrepasados*, 13, 37–61.
- Podgorny, I. (2001) El camino de los fósiles: las colecciones de mamíferos pampeanos en los museos franceses e ingleses, *Asclepio*, 53(2), 97–116.
- Podgorny, I. (2005) Bones & devices in the constitution of palaeontology in Argentina at the end of the nineteenth century, *Science in Context*, 18(2), 249–283.
- Podgorny, I. (2009) *El sendero del tiempo y de las causas accidentales. Los espacios de la prehistoria en la Argentina, 1850–1911* (Rosario: Prohistoria).
- Podgorny, I. (2011) Los reyes del Diluvio. La geología del cenozoico sudamericano en la década de 1880, *Asociación Paleontológica Argentina. Publicación Especial*, 12, 21–34.
- Podgorny, I. (2015a) Human origins in the New World? Florentino Ameghino and the Emergence of Prehistoric Archaeology in the Americas (1875–1912), *PaleoAmerica*, 1(1), 68–80.
- Podgorny, I. (2015b) Towards a bureaucratic history of archaeology. A preliminary essay, in: G. Eberhardt and F. Link (eds.) *Historiographical approaches to past archaeological research* (Berlin: Topoi), pp. 47–67.
- Podgorny, I. (2016) Los Pichiciegos. Scraps of information and the affinities of mammals in the early nineteenth century, in: P. Manning and D. Rood (eds.) *Global scientific practice in an age of revolutions, 1750–1850* (Pittsburgh: University of Pittsburgh Press), pp. 163–178.
- Podgorny, I. and Lopes, M. M. (2008) *El desierto en una vitrina. Museos e historia natural en la Argentina* (Mexico: Limusa).
- Prieto, A. (1988) *El discurso criollista en la formación de la Argentina moderna* (Buenos Aires: Sudamericana).

- Pyenson, L. (2002) Uses of cultural history: Karl Lamprecht in Argentina, *Proceedings of the American Philosophical Society*, 146, 235–255.
- Pyenson, L. (2013) Ciencia en Córdoba en el siglo diecinueve, in: D. Saur and A. Servetto (eds.) *Universidad Nacional de Córdoba. Cuatrocientos años de historia*, Vol. 1 (Córdoba: Universidad Nacional de Córdoba), pp. 251–281.
- Quesada, E. (1879) Estudios americanistas en Europa (Congresos y asociaciones), *Revista de Ciencias, Artes y Letras, Boletín de las Universidades, Facultades, Colegios y Escuelas de la República Argentina*, 1, 126–130.
- Quesada, E. (1883) El periodismo argentino (1877–1883), *Nueva Revista de Buenos Aires*, 3(9), 72–101.
- Richard, N. (1992) *L'invention de la préhistoire: anthologie* (Paris: Presses Pocket).
- Richard, N. (2008) *Inventer la Préhistoire: les débuts de l'archéologie préhistorique en France* (Paris: Vuibert).
- Rivière, E. (1873) *Découverte d'un squelette humain de l'époque paléolithique: dans les cavernes des Baoussé-Roussé, dites grottes de Menton* (Paris: Baillière).
- Román, C. (2010) La modernización de la prensa periódica, entre *La Patria Argentina* (1879) y *Caras y Caretas* (1898), in: A. Laera (ed.) *El brote de los géneros* (Buenos Aires: Emecé), pp. 15–38.
- Sábato, H. (2001) *The many and the few: political participation in republican Buenos Aires* (Stanford: Stanford University Press).
- Sarmiento, D. F. (1845) *Facundo, or civilization and barbarism* (London: Penguin Books), translated in 1868, edition from 2002.
- Schäffner, W. (1999) Nicht-Wissen um 1800. Buchführung und statistik, in: J. Vogl (ed.) *Poetologien des Wissens um 1800* (Munich: Fink), pp. 123–144.
- Simpson, G. G. (1984) *Discoverers of the lost world: an account of some of those who brought back to life South American mammals long buried in the abyss of time* (New Haven: Yale University Press).
- Sommer, M. (2006) Mirror, mirror on the wall: Neanderthal as image and 'distortion' in early 20th century French science and press, *Social Studies of Science*, 36(2), 207–240.
- Thérenty, M. È. (2011) Vivre au rythme du journal, in: D. Kalifa, Ph. Régnier, M. E. Thérenty & A. Vaillant (eds.), *La civilisation du journal. Histoire culturelle et littéraire de la presse française au XIXe siècle* (Paris: Nouveau Monde), pp. 1309–1318.
- Vessuri, H. (1995) El crecimiento de una comunidad científica en Argentina, *Cadernos de História e Filosofia da Ciência*, 3(5), 173–222.
- Wolff, J. (1991) Structure, fonctionnement et évolution du marché international des nouvelles. Les agences de presse de 1835 à 1934, *Révue Économique*, 42(3), 575–601.
- von Zittel, K. A. (1901) *History of geology and palaeontology to the end of the nineteenth century* (London: Scott).