SCIENCE POPULARIZATION IN NINETEENTH CENTURY FRANCE: NÉRÉE BOUBÉE (1806–1862) AND THE JOURNAL L’ÉCHO DU MONDE SAVANT

by

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Simon-Suzanne-Nérée Boubée was born in Toulouse (France) in May 1806 and died in August 1862 in Luchon (France). This paper discusses Boubée’s activities as a science popularizer exemplified through the journal L’Écho du Monde Savant, published in Paris from 1834 to 1846. L’Écho intended to ‘present a summary of the most important news taking place within the savant world’ to the public. In this journal Boubée published a broad range of topics, for example, advocating the crucial role and extent of geology, and the utmost value of industry and agriculture. The working hypothesis is that Boubée’s convictions and profile, intertwined with some relevant trends within the French intellectual context—as manifested in science and technology matters—constituted the propelling force for his project to popularize science. Boubée’s commitments to popular education, together with other aspects such as valuing the knowledge of workers, and praise for women’s education and their scientific activity, were aligned with contemporary political and social movements. Like many practitioners of science hitherto unknown to historians, his work deserves deeper appreciation.

Keywords: Nérée Boubée, L’Écho du Monde Savant, science popularization, France

INTRODUCTION

It is currently widely accepted that the nineteenth century was a turning point in the popularization of science in various countries ranging from Asia to Europe, from North to South America, and it would be a difficult and unfair task to cite only a small number of the hundreds of works already produced that demonstrate this point. This paper, following the call for more in-depth studies,¹ intends to be a small contribution to this well-established picture, focusing on the rarely cited and not yet studied journal L’Écho du

¹ Pietro Corsi, ‘What do you mean by a periodical? Forms and functions’, Notes Rec. 70, 325–341 (2016).
Monde Savant,² published weekly in Paris from 1834 to 1846, emphasizing the years it was run by its founder and owner, as well as topics related to geological sciences.

Established and directed by Nérée Boubée (1806–1862) for many years, L’Écho aimed to ‘present a summary of the most important news that happened within the savant world’ to the general public, and constituted a relevant facet of Boubée’s professional activities, namely as a science popularizer. A preliminary analysis of another facet, Boubée as a textbook writer, has already been published.³ The working hypothesis is that Boubée’s convictions and profile, intertwined with some relevant trends of the French intellectual context—as manifested in science and technology matters—constituted the propelling force for his project to popularize science. This intellectual context was described by Robert Fox as one in which ‘science occupied a central place in French society and culture. … The overriding pattern was one of science’s growing prominence, both in governmental policy and in public perceptions of its importance in the life of the nation.’⁴

THE VOICE BEHIND L’ÉCHO: NÉRÉE BOUBÉE

Simon-Suzanne-Nérée Boubée, or simply Nérée Boubée as he was known, was born in Toulouse, France, on 12 May 1806, and died on 2 August 1862, in Luchon (in the same region).⁵ Although he is little known these days, he gained a certain prestige in his time, as evidenced by the fact that streets in the city centres of Toulouse and Bagnères-de-Luchon were named after him, and his bust⁶ placed on his tomb (itself a French Heritage Monument),⁷ was sculpted by the French artist Jean-Claude Petit (1819–1903), who worked for the Bonaparte family. Boubée was one of the founders of the Société Géologique de France (SGF) in 1830, and a regular, active presence in the sessions, besides belonging to several scientific associations, such as the Mineralogical Society of America,⁸ the Société d’Économie Industrielle, the Académie des Sciences, Inscriptions et Belles-Lettres de Toulouse, the Société Linnéenne de Bordeaux, and various other Sociétés Linnéennes, among others.

He also founded and directed journals aimed at science communication and popularization, such as the L’Écho du Monde Savant (1834–1846), at the heart of the present paper, and the

² The digital version of the collection available at the Bibliothèque Nationale de France (BNF), with complementary information, can be read and downloaded at Gallica: https://catalogue.bnf.fr/ark:/12148/cb327622829. Therefore, throughout the article only the numbers, pages, and dates of the cited data are indicated, rather than every electronic address of each source. They may be easily accessed via the link above. Only the years 1834, 1835, 1836, 1844, 1845, and 1846 are available. Missing volumes at Gallica can be found at the Biodiversity Heritage Library (https://www.biodiversitylibrary.org/search?searchTerm=L%27echo+du+monde+savant#titles).
³ Silvia F. de M. Figueirôa, ‘A French author in a Brazilian library: Nerée Boubée (1806–1862) and his textbooks on geological sciences’, Centaurus 60, 52–68 (2018).
⁴ Robert Fox, The savant and the state: science and cultural politics in nineteenth-century France (Johns Hopkins University Press, Baltimore, 2012), pp. 1–2.
⁵ Boubée remains practically unknown to history or the history of science. The present paper cites as much information on him as it was possible to find.
⁶ Alfred Dantès, Dictionnaire biographique et bibliographique, alphabétique et méthodique, des hommes les plus remarquables dans les lettres, les sciences et les arts, chez tous les peuples, à toutes les époques (Auguste Boyer & Cie, Libraires-éditeurs, Paris, 1875), available at http://gallica.bnf.fr/ark:/12148/bpt6k208423n (accessed 26 July 2021).
⁷ See https://www.pop.culture.gouv.fr/notice/merimee/IA31012387 (accessed 8 November 2019).
⁸ See http://www.minreac.org/labels.asp?colid=216 (accessed 7 July 2016). (Wilson, Wendell E. (2016) Mineralogical Record Biographical Archive, at www.mineralogicalrecord.com.)
Réforme Agricole, Scientifique et Industrielle. In both journals, he published extensively, always advocating the crucial role and extent of geology, or the utmost value of industry and agriculture.\(^9\) Frequently, geology and agriculture went together, or geology was discussed alongside industry, civil works, medicine, hygiene, railways, architecture, history, and the Bible in the several books and articles he wrote. At the beginning of the 1830s, he also founded the scientific journal *Bulletin d’Histoire Naturelle de France—pour servir à la Statistique et la Géographie naturelle de cette contrée*. The *L’Écho du Monde Savant* and the first pages of his books enumerated not only his published works, but also those in print, and those ‘in preparation’, which may be interpreted as an effort to establish himself in the scientific arena, demarcating an academic territory.

On the title pages of his books, Boubée presented himself as ‘Professeur de Géologie à Paris’, and in other occasions as ‘Ingénieur géologue’—which was not accidental, as will be seen—but he was not institutionally affiliated to any mainstream educational establishment in France (nor abroad), as far as I have found. Most likely, he was an independent teacher, offering private as well as public courses, as many others did at that time. In fact, in the first issue of *L’Écho*, one reads: ‘Mr. Boubée will start on Saturday at 9:30 a.m., rue Guénégaud n° 17, his ‘Elementary and Practical Course in geology, accompanied by excursions to the surroundings of Paris’.\(^10\) This kind of advertisement was usual in subsequent editions of *L’Écho*. However, it should be mentioned that Boubée would teach geology twice a week from 16 December 1834, onwards, in a then recently created educational establishment, the Athénée Central.\(^11\)

In the pages of *L’Écho*,\(^12\) the start of the new series of lectures was enthusiastically welcomed:

> The courses at the Central Athenaeum will open with a formal and public session next Thursday, December 11, at 7:30 p.m. This new establishment should not be confused with the old Athenæum; the Central Athenæum has been dedicated for the last two years to public education in science, literature, and languages, especially education in what these studies acquire in the way of new and progressive data every day. The Central Athenæum is situated in the Passage du Saumon, and it is at the Athenæum secretariat that the entrance cards for the public session are issued free of charge. Simply to mention the names of MM. Lechevalier, Glashin, Eugène de Pradel and Azaïs is to announce a most brilliant scientific and literary evening.

That institution, located half-way between the Conservatoire National des Arts et Métiers (CNAM) and the Palais Royal (Passage du Saumon (Galérie du Salon), nowadays Passage Ben Aïad, 2e Arrondissement),\(^13\) was ‘the central auditorium for Restoration-era popular science’,\(^14\) where Charles Dupin (1784–1873), a driving force behind statistics and

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\(^9\) Silvia F. de M. Figueirôa, ‘À propos de l’enseignement, des livres et des échantillons: les sciences géologiques dans les rapports entre le Brésil et la France au XIXe siècle, *Arch. Int. Hist. Sci.* 53, 45–63 (2003), p. 53.

\(^10\) *L’Écho du Monde Savant* 1, 7 (10 April 1834). Hereafter, all translations from the original French text into English are by the author.

\(^11\) *L’Écho du Monde Savant* 37, 148 (12 December 1834).

\(^12\) *L’Écho du Monde Savant* 36, 141 (5 December 1834).

\(^13\) See https://monumentum.fr/vestiges-passage-saumon-actuel-passage-ben-aiad-pa75020007.html (accessed 7 January 2021).

\(^14\) John Tresch, *The romantic machine: utopian science and technology after Napoleon* (University of Chicago Press, Chicago and London, 2012), p. 98.
industrial development in France, delivered lectures on French industry.\textsuperscript{15} At the CNAM, Dupin and Jean-Victor Poncelet (1788–1867) started in the 1820s a movement to create scientific courses for workers.\textsuperscript{16} The Athénée was also where Saint-Simonians preached to an audience of 400–500 people every Wednesday on society’s moral and scientific progress, and Auguste Comte himself taught courses about popular astronomy in the early 1830s.\textsuperscript{17} Boubée’s incorporation into such an institution informs us about his ideas and personal connections, a point to which I will return briefly in the final remarks.

It is not clear yet whether Boubée received a formal education. It is certain that he spent some time working at the Muséum d’Histoire Naturelle (MHN) with Henri Marie Ducrotay De Blainville (1777–1850), the well-known zoologist and professor. After that training, Boubée wanted a similar apprenticeship in geology/mineralogy with the famous Alexandre Brongniart (1770–1847), but his plea was denied.\textsuperscript{18} During his time at the MHN, he may have followed courses in different institutions, such as the CNAM,\textsuperscript{19} the Sorbonne, or the Polytechnique (the last two geographically very close to the MHN at that time), as auditeur libre (free listener), which was relatively common, for both French people and foreigners. Did he take free courses, acquiring his expertise as a mainly self-taught man? From the evidence collected until now, that seems to be the case. What is without doubt is that Nérée Boubée published significantly on geological subjects and was cited, whether by contemporary authors or posthumously, in relevant journals—as was the case in the Annales des Mines, where he is first mentioned in an article dated 1834. His links to the SGF, whose meetings he regularly and actively attended, and several other scientific associations were not negligible. These facts allow him to be placed within French scientific circles. According to Pietro Corsi, ‘the French Geological Society saw amateurs and professionals interact on an equal footing. … In Paris, merchants of fossils and naturalia were members of the society, and lost no occasion to talk about fossils they had collected or had in their shops, as did Nérée Boubée and Louis Saemann.’\textsuperscript{20}

Nevertheless, although Nérée Boubée was, indeed, a merchant of fossils and naturalia, that was just one more facet of his professional career. He did start a natural history supply house early in his life. It began in the small Saint-Bertrand de Comminges, moved to Luchon (both towns close to his hometown Toulouse), and was finally established in Paris in 1845.\textsuperscript{21} In Paris, he associated with his future brother-in-law, a naturalist named Arthur Éloffé, in a shop that dealt in ‘rocks, minerals, fossils, plants, etc.’ Boubée had accumulated, from a young age, numerous collections, including entomological and mineral ones, which formed

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\textsuperscript{15} Claudine Fontanon and André Grelon (eds), Les professeurs du Conservatoire National des Arts et Métiers: dictionnaire biographique 1794–1955, 2 vols (Institut National de Recherche Pédagogique and Conservatoire National des Arts et Métiers, Paris, 1994); Tresch, op. cit. (note 14); for those less familiar with the French language, an important work is Margaret Bradley, Charles Dupin (1784–1873) and his influence on France: the contributions of a mathematician, educator, engineer, and statesman (Cambria Press, Amherst, 2012).

\textsuperscript{16} Fontanon and Grelon, op. cit. (note 15); Fox, op. cit. (note 4) remarks that Dupin was one of the main political figures to lobby for science-based instruction at that time, within which the École Centrale des Arts et Manufactures (CNAM) was an outstanding representative.

\textsuperscript{17} Tresch, op. cit. (note 14).

\textsuperscript{18} Nérée Boubée and Alexandre Brongniart, Letters 112 et 112a, 10 December 1830 and 2 March 1831, ref. no. 1964–1968, Archives du Muséum National d’Histoire Naturelle, Paris, France.

\textsuperscript{19} Unfortunately, there are no records about regular students, or free listeners, at the CNAM during the nineteenth and the first decades of the twentieth century (cf. Fontanon and Grelon, op. cit. (note 15)).

\textsuperscript{20} Pietro Corsi, Fossils and reputations—a scientific correspondence: Pisa, Paris, London, 1853–1857 (Plus-Pisa University Press, Pisa, 2008), p. 52.

\textsuperscript{21} Pierre de Gorsse, ‘Une gymnastique commingeoise de naturalistes’, Rev. Comminges 82, 11–16 (1969).
the backbone of the natural history trade promoted by the shop. Boubée’s shop is found among several trustworthy commercial establishments listed by the geologist Ami Boué (1794–1881) in his Guide du Géologue Voyageur. After the death of Nérée, his daughter-in-law, Julie Boubée (married to his only son Ernest), herself versed in crystallography and a productive member of the Société Française de Minéralogie et Cristallographie, was the ‘soul’ running the business. Boubée’s commercial enterprise lasted until 2014, in the hands of the family for more than a century. Over the decades, it supplied museums, cabinets of natural history, and schools from different parts of the world, as well as the MHN itself, demonstrably making money from that. Most of his minerals are currently part of the Sorbonne Mineralogy collection, and the rest of his collections were dispersed in Luchon and among American amateurs. Éloffè & Cie also became a publishing house, issuing a significant part of Boubée’s prolific production.

To help understand Boubée’s apparently peculiar situation, it is essential to bear in mind the words of Pietro Corsi when he discusses the changes Natural History went through from the end of the eighteenth century:

the growing demand for naturalistic texts, as well as exhibits and samples for collections, helped to orient researchers of less privileged backgrounds to natural history. Unlike the dilettante naturalists of the aristocracy, these newcomers made a living from their scientific work…. For Jean-Baptiste Lamarck himself (1744–1829), the market for fossil shells represented, with the publication of his works, an important source of income. It can be seen from this last example that the fashion for the natural sciences created a series of commercial activities which tended to specialize in naturalistic studies … It is also essential to add that the generation that came into being around 1800—the one to which Boubée belonged—faced severe difficulties finding institutions to engage with professionally: ‘for the educated offspring of the commercial or professional classes, opportunities for advancement and sources of patronage were suddenly blocked because of the Restoration’s institutional reshuffling in favour of the nobility and the clergy. This was a generation that saw itself as having been thrown back on its own resources.’

Therefore, Boubée can be positioned within this frame, reflecting a broader situation that lasted for the first decades of the nineteenth century. The whole of Boubée’s initiatives indicates his struggle to live a worthy life and carve a place in the academic world.

BOUBÉE MAKES POPULARIZATION HAPPEN

Boubée’s profile fits well with the nineteenth-century science popularizers. His words in the Preface to his book Géologie élémentaire appliquée à l'agriculture et à l'industrie reinforce his willingness to ‘spread science for all’: ‘It is not only savants, theologians, physicians, archaeologists, geographers, farmers, industrial men who should learn geology with profit;

22 Figueirôa, op. cit. (notes 3 and 9).
23 de Gorsse, op. cit. (note 21).
24 Nérée Boubée, Correspondance et catalogues d'objets d’histoire naturelle envoyés des Pyrénées [Correspondence and catalogues of natural history objects sent form the Pyrenees], ref. no. Sous-série AJ/15, Cote AJ/15/543, Archives Nationales de France, Paris, France.
25 See http://eths.fr/an/prosopo.php?id=101511# (accessed 5 September 2018).
26 Pietro Corsi, Lamarck: genèse et enjeux du transformisme, 1770–1830 (CNRS Éditions, Paris, 2001), pp. 14–15.
27 Tresch, op. cit. (note 14), p. 10.
… but especially the workers, whose jobs place them in the field of geological discoveries, who should not remain alien to the useful essentials of this science [geology].” These words might be linked to the more extensive epistemological basis that between 1820 and 1850, according to Tresch, “resonated with the rising visibility of labour and the working class.” Also, “the activities of the engineer-scientists [remember that Boubée titled himself ‘ingénieur-géologue’] and the discoveries of workers brought a new attention to the ‘work’-based aspects of knowledge production.”

At various times, L’Écho praised projects for the popularization of science, as in issues 1–2, when it announced that, in Heidelberg, the well-known mineralogist and geologist Karl Caesar von Leonhard (1779–1862) was teaching a successful course of popular geology, attended by a significant number of workers, as well as by other people who dealt with geological sciences. On another occasion, the example was popular science courses in England, and the journal took the opportunity to ask when, in France, such efforts would be widespread. Additional signs of Boubée’s preoccupation with science popularization could be his books’ dimensions: the majority, if not all of his books, were initially printed in a small paper size (octavo)—suggesting an attempt to make them portable. Also, among the several books he wrote, there is the Géologie Populaire à la portée de tout le monde (1833), explicitly intended to the non-specialist public.

What was the situation in France, especially in Paris, regarding science popularization at that time? Corsi points out that there was relevant interest, and a market for science dating back to the last decades of the eighteenth century:

Starting in the 1770s, writing about science, natural curiosities, and voyages became a growing occupation for men of letters and amateurs. Readers appeared to enjoy and consume costly editions of Buffon’s works (along with cheaper, often pirated editions) and periodical publications and dictionaries where scientific information was condensed and made accessible at a reasonable price. … The philosophical, political, and social thrills offered by reading and writing about nature helped the proliferation of publications announcing the most updated and “true” systems of the universe, of Earth, and of life.

Bensaude-Vincent and Rasmussen, in an attempt to singularize the nineteenth century initiatives as mainly focused on the working classes, state that ‘what characterizes the nineteenth century are the repeated, multiple, obstinate attempts to expand the public of science beyond the sphere of educated people.’ Several authors place between 1850 and 1890 the major boom of this movement, in France, Britain, and other countries—including North and Latin America, Brazil not excepted. Those so-called ‘pioneers’ aimed ‘to
educate the masses, keep them informed of progress, satisfy their curiosity, amaze them, entertain them and even, in some cases, allow them to judge or sanction science. For Corsi, ‘the variously composed reading public was convinced that debating scientific issues was part of their claim to genteel status… in several countries the march of the intellect was to them the lever to pull down the hollow shells of aristocratic and priestly power.’ A political issue, in short, that reverberated in a vast project of popular education underway in France since the eighteenth century and that found a privileged medium in the press.

Furthermore, sciences played a central role in these debates, which almost paradoxically brought together monarchic philanthropists, Saint-Simonians, and followers of Proudhonian anarchism. And republicans, too, as was the case of the prominent astronomer François Arago (1786–1853), head of the Observatoire de Paris, and secretary of the Académie des Sciences, who for years gave public lectures about popular astronomy to audiences that crowded the observatory’s amphitheatre. About these courses, L’Écho heartily commented:

Astronomy is now the trendy science; The Observatory’s classes are attended by over 500 people, and the ladies are not the least part of it. Moreover, if astronomy were ever to enter the domain of the fashionable world, it would undoubtedly be due to the professorship of M. Arago who dismissed from this science the figures with which it was so spiked.

It seems clear that Boubée was in tune with that atmosphere. One may even wonder if he cherished the dream of becoming the Arago for geology. However, Boubée’s initiative seems to precede the so-called ‘major boom’ of popularization, perhaps because the roots of this movement had been established earlier. The period after the French Revolution witnessed significant social and political transformations, which allowed the emergence of new publications to spread scientific information. As remarked by Alex Csiszar, ‘journals began to offer alternative models of sociability to the academies, with editors often arguing that public opinion—which they claimed to represent—was the only legitimate judge of truth, whether in politics, culture, or natural knowledge.’ In the case of L’Écho, this intended posture of authority is evident in the slogan adopted from no. 5 onwards: ‘Indiquer les progrès, signaler les abus’.

The emergence of that new press was not accomplished without tensions and conflicts. Learned societies or academies opposed its influence, trying to firmly restrain the presence of journalists in their meetings. However, the success of that commercial press was not stopped, and ‘not only did the new journals often excerpt or print texts that had originally

‘dans un océan d’analphabétisme’: singularités brésiliennes’, In La science populaire dans la presse et l’édition—XIXe et XXe siècles (ed. Bernardette Bensaude-Vincent and Anne Rasmussen), pp. 225–236 (CNRS Éditions, Paris, 1997).
36 Bensaude-Vincent and Rasmussen, op. cit. (note 34), p. 29.
37 Corsi, op. cit. (note 1), p. 329.
38 Bruno Béguet, ‘Lectures de vulgarisation scientifique au XIXe siècle’, In La science populaire dans la presse et l’édition—XIXe et XXe siècles (ed. Bernardette Bensaude-Vincent and Anne Rasmussen), pp. 51–68 (CNRS Éditions, Paris, 1997).
39 Béguet, op. cit. (note 38); Antoine Picon, Les Saint-Simoniens: raison, imaginaire et utopie (Belin, Paris, 2002).
40 Tresch, op. cit. (note 14).
41 L’Écho du Monde Savant 9 (29 Mai 1834), p. 34.
42 Corsi, op. cit. (notes 1 and 33).
43 Alex Csiszar, The scientific journal: authorship and politics of knowledge in the nineteenth century (University of Chicago Press, Chicago, 2018), p. 6.
44 L’Écho du Monde Savant 5 (1 May 1834).
45 Csiszar, op. cit. (note 43).
been submitted to academies and societies, but independent journals were increasingly publishing original papers, submitted directly by authors who chose to bypass them entirely. In the case of L’Écho, this situation was increasingly common, pari passu the journal enlarged its audience, prestige, and the number of pages. A good example, to cite just one among several others, illustrative of the constraints surrounding emerging or second-tier authors, can be found in the long text submitted by Émile Jacquemin (1805–1896), a mix of letter and article. This author, who later became relatively well-known in natural history and agricultural sciences, belonged to the same generation as Boubée, that of young scientists fighting for a place in the sun. Jacquemin politely complains about having been prevented from delivering his scientific findings, which could lead to losses of priority:

Sir, registered since June 1834 to read at the Academy of Sciences a Memoir on the Development of the Planorbe, I have not yet been able to speak, because of the great number of works of the Academy; distressed to see the time elapse and my research losing its novelty every day, I beg you to transmit to the many readers of your useful journal a succinct summary of this Memoir, until I can read it in full at the Academy. You will recognize in this outline a large number of new observations, which I was unable to state in the extract that M. Oken was kind enough to publish in German in the fifth cahier de l’Isis 1834, and which you yourself have translated in L’Écho n° 37.

Such a situation was more the rule than the exception: ‘Scientific personnel, however employed or socially placed, were well aware of the often-haphazard fortunes of institutional publications, and chose among a variety of alternative and parallel venues to reach an audience. When under threat, it was unwise to wait for the next ‘official’, authoritative journal issue to appear.’

L’Écho suffered a similar kind of blockage, too. Although the first three issues had been sent to the SGF, to which Boubée belonged, they were not exposed on the desks in the meeting room during the session of 21 April 1834, along with the rest of the books and journals received. Thinking it was an involuntary mistake, Boubée approached the session president (his nemesis Constant Prévost (1787–1856)), who replied that the Society’s Council did not approve many articles in them. Profoundly offended and surprised, Boubée protested loud and clear, initiating a verbal fight that turned into bitter subsequent discussions, when he was even accused of charlatanism. Many members spoke out in his defence, one of the most emphatic being the respectful Élie de Beaumont (1798–1874). As a result, L’Écho was finally accepted by the SGF. Of course, the mess was ironically reported in L’Écho, under the provocative title Anedocte …!!!

THE SOUND OF THE SAVANT WORLD TRANSPOSED TO PAPER

Overview

L’Écho du Monde Savant published its first issue on 10 April 1834, and lasted until 1846, publishing more than 6000 pages over 13 years. The first issue (nos 1 and 2 altogether) announced the intention to appear twice a week, which in fact happened only in the third
year, from January 1836 onwards. At that time, the journal split into two different sections: on Thursdays, it informed about astronomy, meteorology, physics, chemistry, mechanics, industrial economy, archaeology and history; on Sundays, it published matters related to zoology, physiology, botany, palaeontology, mineralogy, geology and geography.\textsuperscript{50} On the very first page, besides informing of the intention to succeed the Bulletin [Universel de] Férussac, editors made clear the purpose of the journal, aimed at a large-scale popularization of science and technology, which is worthy of reproduction:

Science has become so popular that everyone today feels the need, if not to be a scholar, at least to be kept abreast of the newest ideas in science and the advancements it makes every day. A few newspapers seemed to have understood this societal need at first; but either they have embraced only one speciality, or they have regarded as foreign to the purpose of their publication that news which, without contributing to the advancement of science, nevertheless interests savants, and pleases everyone; they have only begun that work, the present state of which calls for completion. So, this is the gap that we want to fill.

To mark the ascending march of human knowledge to all classes of society, to make known all the news that may be of interest, by dismissing or indicating only succinctly what would be too special, to be in a word the ‘Echo of the Learned World’, that will always be our goal. Taking a frank and independent look, we will report abuses, we will re-establish genuine rights, and we will open our columns to any just complaint. Finally, to be complete, and useful to friends of work, we will announce all the prices offered by the various Academies in France and abroad.\textsuperscript{51}

\textit{L’Écho}’s subtitle summarized its scope: \textit{Journal analytique des nouvelles et des cours scientifiques} (\textit{Analytical Journal of News and Science Courses}). It explicitly envisioned complementing the political journals: ‘it must be considered … as the complement of the political sheets’.

\textit{L’Écho} was distributed in Paris and the rest of France, as well as in some countries abroad. In the first year, there were dealers in Leipzig (Saxony), but as early as 1835 England, Belgium, Russia, Switzerland, Italy and the USA were added to the list,\textsuperscript{52} attesting both the journal’s editorial and commercial strategies, and the interest it had acquired. The annual subscription was of 12 to 15 francs (15 to 18 francs outside France) during the two first years but was then increased to 20 francs (in Paris—22 francs in the rest of France) owing to the number of issues being doubled. The journal was published uninterruptedly, even during Christmas, New Year and Easter, with 39 issues in 1834 and 52 in 1835, so its cost may be estimated at around 0.28–0.35 centimes each number. That price was entirely comparable with other popular publications of the time and accessible to popular classes.\textsuperscript{53} It is difficult to map the readership of any journal, but in the case of \textit{L’Écho} we have at least one illustrative example: the collection that belonged to Louis Agassiz (1807–1873), ranging from number 1 to 91, is preserved in his Archives in Neuchâtel, attesting that, more than a reader, he was a subscriber.\textsuperscript{54}

\textsuperscript{50} \textit{L’Écho du Monde Savant} 92 (3 January 1836), p. 1.
\textsuperscript{51} \textit{L’Écho du Monde Savant} 1 (10 April 1834), p. 1
\textsuperscript{52} \textit{L’Écho du Monde Savant} 59 (15 May 1835), p. 276.
\textsuperscript{53} Parinet, op. cit. (note 35).
\textsuperscript{54} Catalogue des Archives de Louis Agassiz (1807–1873) établi par Marise Surdez, Université de Neuchâtel, Institut de Géologie et Séminaire d’Histoire, https://core.ac.uk/download/pdf/20660547.pdf; (accessed 12 November 2019).
Nérée Boubée was the founder, owner, and main character behind the enterprise. Nonetheless, several other scientists soon joined him: Félix Dujardin (1801–1860), Auguste-Désiré Desprez, Aimé des Génevez (1807–1835) and Charles D’Orbigny (1806–1876). Dujardin and D’Orbigny became well known mainly in zoology and botany, respectively. Des Génevez died very soon, at the age of 28, but had enough time to give scientific contributions and be quoted by Virlet D’Aoust in a paper (in fact, a letter to François Arago) on ‘The phenomenon of dolomisation, and the transformation of rocks in general’. Desprez authored, in 1837, the Histoire de la littérature française depuis son origine jusqu’à nos jours, which had some success, and further editions, even recently. All of these collaborators belonged to the same generation, and none was born in Paris, which might indicate a common strategy of grouping together to better set foot in Paris through the journal, therefore establishing themselves in the academic, intellectual environment: ‘Paris remained for several decades the hunting ground for successful penmen in search of a career.’ When Dujardin arrived in Paris in 1834, he founded L’Hermès, a science popularization journal. But it merged with L’Écho, where he was already a collaborator, in October 1836, in a movement-like ‘united we are stronger’.

Two other, younger, collaborators must be mentioned. Victor Meunier (1817–1903), publicist, socialist militant during 1848–1850, and well-known French science popularizer, was a regular collaborator from his youth onwards. He later became the editor of the scientific feuilleton La Presse until 1855, when he left his place to Louis Figuier to create L’Ami des Sciences and material for children. Between 1867 and 1870, Meunier directed the journal Cosmos and radicalized it. He also edited La Phalange, the Revue Synthétique, and Courrier de l’Industrie. Meunier merged ‘strands of utopian socialism with scientific popularization, envisioning his job as synthesizing scientific and social progress: ‘To popularize science is to use everyday language to recount the efforts of science to constitute a new social order’.

The other younger collaborator was François Louis Paul Gervais (1816–1879), who in 1835 became research assistant in the laboratory of comparative anatomy of the MHN, and later, in 1841, obtained a chair in the University of Montpellier. He made his reputation in zoology/entomology, and palaeontology. About 10 years younger than Boubée and the members of the board, Meunier and Gervais might have been recruited via advertisements in L’Écho, such as: ‘WE HIRE—A young naturalist copying well, able to translate English and make excerpts from books. Speak to the newspaper office in the morning.’

That group in charge of L’Écho, Boubée at the fore, set the tone of the journal. An important feature perceived through reading its pages is that it intended to connect ‘deep France’—everywhere that was not Paris—with the capital, the eternal centre. News about scientific progress, meetings, museums, learned societies, publications and naturalists from the provinces were constant—the ‘voices on [from] the periphery’, according to Fox, which was intended to demonstrate that good science was being pursued there: ‘provincial savants were an indispensable element, … in the gathering vogue for the collecting and

55 L’Écho du Monde Savant 49 (6 March 1835), p. 213.
56 Published in October 1836 in The Edinburgh New Philosophical Journal, edited by Robert Jameson: Virlet D’Aoust, ‘The phenomenon of dolomisation, and the transformation of rocks in general’, Edinb. New Phil. J. 21, pp. 95–98 (1836).
57 Corsi, op. cit. (note 1), p. 329.
58 Csiszar, op. cit. (note 43), p. 207.
59 L’Écho du Monde Savant 3 (17 April 1834), p. 11.
60 Fox, op. cit. (note 4), p. 52.
study of specimens.  

The group around L’Écho, who came from the Midi, the Pays de la Loire, or Central France, positioned itself as the spokespersons for those provincial naturalists who wanted to be included in the relevant academic circles. A sense of native pride may be detected here and there too, as, for instance, in the suggestion made that people went to the Pyrenees (Boubée’s and Desprez’s homeland) to escape the cholera epidemic of the 1830s because the soil and the climate were better.

L’Écho published a significant volume of scientific and technical news from foreign countries, ranging from scientific meetings, inventions and new machines, new minerals or fossils, new books, and journals, which seems unnecessary to list. However, it is important to remark that part of the material came from the exchanges L’Écho established with authors, editors and learned societies. Another part was reproduced from other journals, from France (like Le Réformateur, edited by the chemist François-Vincent Raspail (1794–1878)) or abroad (from Germany, England, Italy, North America, Russia, etc.) Specifically related to geological sciences, one may cite the following news topics, among many others: the resignation of Charles Lyell from London University in order to travel to Scandinavia (the possible uplift of these rock masses was a significant topic then); the translation of his Principles of geology into French; his fossil discovery in the loess close to Basel; a book in preparation by Roderick Murchinson, and the financial support the London Geological Society would give to Louis Agassiz; a new model of geological hammer, conceived by the Englishman Robinson, assorted news on the works, travels and findings of Alexander von Humboldt; and so on.

Internally, L’Écho was subdivided into seven sections: ‘Discussions de la Semaine’ (Discussions of the Week); ‘Cours Scientifiques’ (Scientific courses); ‘Nouvelles’ (News); ‘Bulletin Archéologique’ (Archaeological Bulletin); ‘Prix Proposés’ (Proposed Prizes); and ‘Annonces’ (Announcements). Depending on the material available, other sections might appear. The ‘Discussions de la Semaine’ offered a summary of the leading academic discussions held in official or private meetings, written purposely in ‘understandable language’. The aim was to keep readers updated about scientific developments pari passu they were enthusiastically and progressively instructed. The Cours Scientifiques published the transcript of courses taught in Paris. The Nouvelles presented news about persons and facts of interest in science, such as a résumé of Alcides D’Orbigny’s voyage from 1826 onwards, or the calculating machine created by Charles Babbage. The section Bulletin Archéologique was expected to be a privileged space for disseminating archaeological news and content, including those received from learned associations of the field, like the Société Royale des Antiquaires de France. From no. 37 onwards, L’Écho became the official journal of archaeological societies. The Prix

61 Ibid., pp. 62–63.
62 L’Écho du Monde Savant 10 (6 June 1834), p. 37.
63 L’Écho du Monde Savant 1–2 (10 April 1834).
64 L’Écho du Monde Savant 51 (3 March 1835).
65 L’Écho du Monde Savant 4 (24 January 1836).
66 L’Écho du Monde Savant 3 (17 April 1834).
67 L’Écho du Monde Savant 18 (1 August 1834).
68 In French, termes à la portée de tout le monde.
69 L’Écho du Monde Savant 37 (1 August 1834), p. 148: ‘L’Écho du Monde Savant sera ainsi désormais le Journal officiel des sociétés archéologiques, et par suite le journal spécial des antiquaires, comme il est celui des naturalistes, des géologues et de tous les amis des sciences physiques et naturelles.’
Proposés informed of prizes open to competition, in France and abroad, as a stimulus not only to scientific and technological achievements, but also in literature, arts, and so forth. A new section started in no. 90 (18 December 1835), on ‘Industrial Economy’, sometimes enlarged to ‘Industrial and Agricultural Economy’. Finally, in the Annonces, the readers could find transcripts of ordinary news that the ‘savants’ supposedly did not have enough time to read.

Another section, mostly present though not always, was the one dedicated to advertisements, an additional source of revenue besides subscriptions. Each line cost 50 centimes. It displayed a vast and curious array of subjects, more academic or definitely mundane: naturally the books and other publications by Boubée, as by other authors; publishing initiatives of the ensemble of editors/journalists of L’Écho, such as the _Révue Élémentaire et Progressive des Sciences Physiques et Naturelles_ (aimed at high school students) or _La Science pour Tous_; different journals focused on specific audiences, such as _Le Panorama de Londres—Gazette de tous les Journaux anglais_ or _La Science Catholique_; shops selling all kinds of natural specimens; recently created technical instruments, such as the _scissomètre_, calculating machines, or metal-tipped pen; L’Écho headquarters for rent (which certainly did not happen, because the address continued to be 17 Rue Guénégaud for some years); sale by shares of the Castle of Hutteldorf (near Vienna), and the Seigneurerie de Neudenstein (in Illyria, Austrian–Hungarian Empire); sprain bandages; and much, much more. Many readers complained about the advertisements, but editors replied that they were indispensable to the journal’s financial health.

That general structure subsisted, roughly unchanged, until the end of the journal’s life. Nevertheless, in 1839,70 L’Écho passed into the hands of Adrien (viscount of) Lavalette (1813?–1886).71 By 1844, the journal had definitely shown itself to be a great success: the subtitle became the all-embracing _Révue Encyclopedique des Travaux des Savants des tous les Pays dans tous les sciences_ (Encyclopaedic Review of the Works of Scientists of all Countries in all Sciences); it displayed more than ten different thematic sections—including specific ones on photography and railways—and collaborators included Johan Christian Poggendorf, Auguste Bravais, Henri Becquerel, Charles Adolphe Würtz, Alphonse De Candolle, Adolphe D’Archiac, Auguste Daubrée, Bory de Saint-Vincent, Michel Chevalier (the Saint-Simonian) and Giacinto di Collegno. The number of pages doubled to eight per issue, although it continued to appear twice a week. This new phase will not be analysed in the present paper, as Nérée Boubée is the principal focus.

Themes and controversies in the pages of L’Écho

A wide range of subjects filled the journal’s pages, because _le monde savant_ was both varied and diverse: all sorts of technological advancements, the economic impulse for and relevance of railways; discussions on comets; the discovery of Uranus by Herschel; Faraday, and electrical currents; or the speed of the ‘electrical fluid’; research on magnetism; and so on. In addition, several times the presence of women in scientific audiences, or even in the

70 It is certain that until 5 September, 1838 Boubée was at the head of L’Écho, as he signed a demand to the President of the Bureau du Journal des Savants in the name of the journal. See: Nérée Boubée, Dossiers de Demande, BB/11/431, ref. no. 431 X3 (standard), Archives Nationales de France, Paris, France.

71 The Count Adrien de La Valette (Pierre-Marie-Joseph-Adrien Morlhon de La Valette) was born 5 January 1813 in Dunkirk and died 10 January 1886 in Paris. He was a journalist, inventor, and administrator of French companies. An engineer by training, he was also president of the Société des Inventeurs de France. He was involved in the industrial movement, becoming vice-president of the board of directors of the railway Compagnie de la Ligne d’Italie.
learned world, was highly praised, as well as the publication of books such as *La botanique des dames*, by John Lindley. It is relevant to reproduce the mention to the English palaeontologist Mary Anning (1799–1847), a chance for *L’Écho* to optimistically speak about women in science:

> The palaeontological collections of Miss Anning, at Lime-Regis [sic], Dorsetshire, no less than the scholarship of this zealous geologist, have acquired great celebrity in the learned world. Moreover, in England, a very large number of ladies devote themselves with passion to scientific studies and provide science with precious monuments and important observations. In France, this is much less common. However, since recent times, the courses on geology, zoology, botany, in Paris, have been attended by several ladies with boundless application and perseverance, and we could already cite a few fine collections which have been started and grow rapidly. But such progress is still little propagated outside Paris.72

Other journals were noticed repeatedly, from the very moment they saw the light, such as the *Révue du Progrès Social* (*Recueil mensuel politique, philosophique et littéraire*), its growth being a reason for congratulations. This review was published by the utopian socialist, former Saint-Simonian, then Fourierist, and later Proudhonian Jules Lechevalier (1806–1862)73 from 1834 onwards, counting as collaborators, among others, Victor Hugo (1802–1885), Edgard Quinet (1803–1875), the Baron de Férussac (1786–1836), and Aimé des Génevez.

Themes appealing to ‘curiosity’—or ‘oddness’ to present-day audiences—occupied successive editions, for instance the discussions about the reasons, characteristics and geographical extensiveness of frog-rains, ‘one of the questions that most occupied scientists in 1834’.74 It was also possible to follow the life of Jacques, the orangutan that lived in the *Ménagérie* of the MHN. Themes showing an apparent restricted interest merited several pages in several editions of *L’Écho*. That was the case, for instance, for a long letter from Étienne Geoffroy Saint-Hilaire (1772–1844) addressing the feeding of young cetaceans, reproduced *in toto*,75 giving rise to a reply with objections by De Blainville, followed by more letters from each man. Volcanic eruptions in different countries and continents, with particular attention to Vesuvius, were frequently noted—and sometimes discussed—side by side with the Earth’s internal heat, earthquakes, determination of new mineral species, fossils, and stratigraphical debates—especially on the situation in the Pyrenees, domain of Boubée’s expertise. A special place was devoted to the craters of elevation (*cratères de soulèvement*), to which Boubée enthusiastically subscribed, and its main supporters, Leopold von Buch (1774–1853) and Élie de Beaumont. Links between geology—the ‘science of the sciences’, as Boubée considered it to be—and medicine were stressed during challenging events such as the cholera epidemic in the 1830s: ‘The geological progress of cholera—the solution of these various questions was undoubtedly in the domain of medicine, but all the sciences give each other mutual aid, and geology especially, applies to all exclusively.’76 Fossil bones found in caves in France received great attention for a long time, on many occasions compared with the situation in other countries—Boucher de Perthes, as well as William Buckland (1784–1856) and the

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72 *L’Écho du Monde Savant* 30 (24 July 1836), p. 135.
73 See https://en.wikipedia.org/wiki/Jules_Lechevalier (accessed 12 January 2021).
74 *L’Écho du Monde Savant* 59 (15 May 1835), p. 271.
75 *L’Écho du Monde Savant* 3 (17 April 1834).
76 *L’Écho du Monde Savant* 8 (22 May 1834), p. 29. Emphasis in the original.
Kirkdale Cave were cited. Despite the relevance of that subject in France and elsewhere, Boubée seems to take every chance to use the journal to present his views about geology, geological processes, causes of metamorphism or volcanism, or science in general. A detailed analysis of this set of texts would be fascinating and deserves at least another article. However, the articles in which he argues about the concordance between geological facts and the Genesis narrative are noteworthy. He is intensely critical of the so-called mosaic geology, adopting an intermediate view, where science has a paramount weight, as in the passage below:

Reverend John Bampton has established, by bequest, annual sermons to be preached before Oxford University. Doctor Frédéric Nolan was elected by the University to fulfil this wish in 1833. In a sermon entitled ‘Relation of revelation with the sciences’, the preacher strongly attacked scholars and learned societies as tending to overthrow the religions and the whole social order. He compared them to an infernal machine and kept no measure in his expressions. Doctor Daubeny skilfully refuted this preacher in the Literary Gazette of December 7 and 14. Mr. Sedgwick, ecclesiastical and professor of geology, has also published, in sermon form, a refutation of all those mosaic geologies that have appeared in England, which all sin from lack of knowledge of the present state of the physical and natural sciences, and which in this respect do more harm to religious beliefs than they can be favourable to them. Mr. Sedgwick’s high reputation, and his high position in the ecclesiastical order, give much weight to this writing, the edition of which was quickly out of print; we reprint it.

In short, Boubée differentiated the biblical Flood from the geologists’ Deluge. Therefore, he was in the group of naturalists who saw no conflict between a long-lasting history of the Earth and the creation stories in Genesis. As put by Rudwick:

the ‘diluvial theory’ deserves to be taken seriously as an attempted explanation of some extremely puzzling physical features… The ‘geological deluge’ was eventually recognized as having been far earlier in Earth history than any event recorded by literate human societies. Among geologists …, this gradual dissociation … was generally amicable, not acrimonious.

On the other hand, although Boubée defended the importance of facts and field-collected data, he was also critical of the Géologie Positive (Positive Geology), advocated mainly by Constant Prévost, and well accepted by distinguished members of the SGE. While reviewing the book Études sur les dépôts métallifères authored by the metallurgist and geologist Jean-Baptiste Xavier Fournet (1801–1869), he made himself clear, though not citing names:

77 Claudine Cohen, ‘Charles Lyell and the evidences of the antiquity of man’, in Lyell: the past is the key to the present (ed. Derek Blundell and Andrew Scott), pp. 83–93 (Geological Society, London, 1998).
78 L’Écho du Monde Savant 9 (29 May 1834); L’Écho du Monde Savant 37 (12 December 1834).
79 L’Écho du Monde Savant 5 (1 May 1834) p. 17.
80 Martin Rudwick, ‘Biblical Flood and geological deluge: the amicable dissociation of geology and Genesis’, in Geology and religion: a history of harmony and hostility (ed. Martina Kölbl-Ebert), pp. 103–111 (Geological Society, London, 2009), p. 103.
81 Gabriel Gohau, ‘Constant Prévost et la ‘géologie positive’’, Trav. Comité français Hist. Géol. 9, 1–5 (1978) (hal-00956722).
We could only blame the same thing which should be addressed, in general, to all those works produced by current geologists: lack of order and of a clearly defined framework. The first cause of this defect, so general today, is not the essentially false, dominant idea today in the practice of physical and natural sciences, that the sole observation of new facts is what must become profitable to science, and that the inductions of reasoning cannot have any value or merit any confidence.\textsuperscript{82}

In the same text, as well as in others, Boubée made explicit his unified view of nature:

M. Fournet … shows us how important these mineral decompositions and recompositions are, and the immense role they play in nature by their incessant action in an infinite number of veins, rocks, and land. And this is well suited to confirming us in the opinion that we have supported [L’Écho, nos 22 and 23], that we find in the mineral kingdom a life no less active, an organization no less laborious, no less complicated than that the vegetable and animal kingdoms offer us; though under a less hidden appearance, we found the most wonderful phenomena.

That kind of philosophical understanding, repeated in other articles, might place Boubée within the contemporaneous romantic framework described by Tresch, which ‘saw all of nature as united through an underlying force and through archetypal forms.’\textsuperscript{83} Such an interpretation, however, was not the only one present within the scholarly milieu of the time, and it also has a lifelong history. It is not my intention to present it as a ‘novelty’, nor the ‘dominant’ one; rather, I only intend to indicate a possible intellectual alignment to a set of ideas current at that time, which several authors qualify as ‘romantic’.

L’Écho echoed important scientific controversies, too. That was the case, for example, of the one that involved members of the Académie des Sciences, such as Jean-Baptiste Biot (1774–1862) and Gay-Lussac (1778–1850), on the absence of verification of experiments reported in papers presented to this institution.\textsuperscript{84} Boubée joined the vocal critics, writing that ‘if reports cease to be rulings to become simply services or favours, [the Academy] will lose in the eyes of the public the importance and utility that protects it against accusations of privilege and aristocracy.’\textsuperscript{85} Another controversy was that between the mathematicians Louis Poinsot (1777–1859) and Siméon Denis Poisson (1781–1840) on the Earth’s movement and the precession of the equinoxes, transcribed (and commented on) in several issues in 1834.

\textit{Relationship between L’Écho and learned societies}

Two learned societies headquartered in Paris received a major part of L’Écho’s attention, namely the Académie des Sciences and the SGF, though not always in a positive way. Besides the criticisms of the reports produced by the Académie, mentioned above, some discussions seem to have acquired exaggerated importance. That was the case for the nutritional properties of gelatine, a theme that was discussed to exhaustion in several assemblies of the Académie des Sciences, was the object of many memoirs, and was eventually conveyed with irony by the editors of L’Écho when they felt their readers’ patience had been overcome.

\textsuperscript{82} L’Écho du Monde Savant \textbf{57} (1 May 1835), p. 258.
\textsuperscript{83} Tresch, op. cit. (note 14), p. 1.
\textsuperscript{84} Csiszar, op. cit. (note 43), pp. 105–106.
\textsuperscript{85} L’Écho du Monde Savant \textbf{15} (11 July 1834), p. 57.
However, the SGF was the main target, perhaps owing to Boubée’s problems with some influential members—a topic warranting additional investigation that goes beyond the present paper. The weekly scientific meetings were narrated in detail, with all the tensions and fights explicitly exposed, sometimes harshly—no surprise when one knows that those meetings were ‘contentious’.\(^{86}\) Regarding the annual congresses, many events were criticized, even ridiculed, such as the field trip to Auvergne, when participants sang folk songs in a volcanic crater (P’tit Puy du Dôme).\(^{87}\) Understandably, those attitudes generated reactions against the journal, in a vicious circle of varying intensity. Beneath the reproaches, there was a deeper and more acid criticism from Boubée toward part of the academic world—perhaps based on his own experience, as may be inferred from the *Comptes-Rendus* of the SGF:

> Another no less unfortunate consequence is this ridiculous little mind, it is these narrow and petty ideas that govern the works and coteries of our scientific societies. It is agreed in advance that we will listen to such and such a reading, that we will despise such and such other, that we will speak with a neighbour, that we will leave the session, that we will not make any observations to such and such an author after the reading of his work so as not to seem to attach importance to it, that we will always vote against the proposals made or supported by a certain member, that we will never cite the works of another, neither in public courses, nor in works and reports to be printed, if not to harm them; or we will pretend to ignore them; that one will divert his friends from such new publications; that at the replacement of the members of the board of the society, one will be careful not to remind the masses of the name of such and such a member, but that one will elect absolutely such another, etc., etc.\(^{88}\)

Such a situation was not confined to France and may still sound familiar nowadays. It highlights, nevertheless, the ‘topographical profile’ of the academic community, upper and lower echelons dependent on the relative levels of individual expertise and prestige, as well as the interdependence of ‘savants’, ‘amateurs’, ‘Parisians’, ‘provincials’, and science popularizers/publishers, to survive in the scientific world. The public—raison d’être of the journals, and to whom they addressed their pages—played a vital role both in the building of reputations and the survival of this type of press. Csiszar recalls that ‘especially for the nineteenth century, “the public” was a crucial category in debates over the changing basis of the legitimacy of expert communities in general. We might say that there is as much public inside science as outside it.’\(^{89}\)

Other associations also deserved citation in the pages of the journal, varying between the Société des Sciences Naturelles de France, the Société de Phrénologie, and the Académie de l’Industrie, possibly reflecting theoretical alignments of Boubée and the board.

**Courses transcriptions by L’Écho**

As mentioned, a special section of *L’Écho* was dedicated to the reproduction of courses taught at prestigious institutions in Paris, by no less prestigious scholars—a large panoply encompassing different branches of science, whether applied or not. Such an initiative was

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86 Corsi, *op. cit.* (note 20), p. 9.
87 *L’Écho du Monde Savant* 6 (5 May 1834), p. 23.
88 *L’Écho du Monde Savant* 57 (1 May 1835), p. 258.
89 Csiszar, *op. cit.* (note 43), p. 14. Emphasis in the original.
rooted in an old story: ‘Bonneville’s presses put out the edition of the stenographic transcripts of the classes held at the École Normale de l’an III, the Journal d’histoire naturelle edited by Lamarck and colleagues in 1791, and the newspaper Le bien informé.’\(^9^0\) In the first year, \(L’Écho\) started with the lessons delivered by Clément Désormes (1779–1841) at the CNAM on ‘Industrial Chemistry’, his speciality as early as 1834.\(^9^1\) The success of the initiative of Dupin and Poncelet, mentioned above, is well illustrated by the courses taught by Désormes: ‘[the classes] by Nicolas Clément Désormes reach an audience of industrialists and chemists, which in a way confirms Dupin’s correct view on the usefulness of popular scientific education’,\(^9^2\) of which \(L’Écho\) was an enthusiast.

The list of courses is long, but it is worthy of reproduction, according to the sequence of publishing: ‘Philosophical Zoology’, by De Blainville, at the Sorbonne; ‘Zoology of Mammals’, by Étienne Geoffroy Saint-Hilaire (continued by his son, Isidore (1805–1861)), at the Muséum; ‘Archeology’, by Desiré Raoul-Rochette (1790–1854), at the Bibliothèque Royale; ‘Astronomy’, by François Arago, at the Observatoire; ‘Teratology’ and ‘Ornithology’, by Isidore Geoffroy Saint-Hilaire, at the Muséum; ‘History of Political Economy’, by Adolphe Blanqui (1798–1854) (a former Saint-Simonian later converted to liberal), at the CNAM; ‘Geology’, by Élie de Beaumont, at the Collège de France; ‘Ovologie’, by Jacques Victor Coste (1807–1873), at the École Pratique de Paris; ‘Natural History of Insects’, by Jean Victor Audouin (1797–1841), at the Muséum; ‘Botanical Physiology’, by Adolphe Brongniart, at the Muséum; ‘Phrenology’, by François Broussais (1772–1838), at the Société de Phrénologie.

At the end of a course, its lessons were collected and published in a single volume, already revised by the teachers, and sold by \(L’Écho\): ‘These courses are all reprinted separately and form many notebooks which may conveniently be used by the new pupils of these professors and for those who follow, in the faculties and even in the colleges, courses relating to the same specialities.’\(^9^3\) It is not clear, however, if the authors of the courses shared the profits of the sales. Also remarkable is the academic weight of all the lecturers, from which one might infer Bouée’s significant contacts that allowed him to publish and sell the transcripts, and the qualified impact and circulation of the journal. That sort of prestige enjoyed by \(L’Écho\) can also be confirmed by naming some of the scientists who spared their time to write letters to the editors, commenting upon, reinforcing, disagreeing with, or even protesting against published articles, such as Étienne Geoffroy Saint Hilaire, Henri de Blainville, Michel Chevreul (1786–1889), Constant Prévost, Élie de Beaumont, Baron de Férussac, and Frédéric de la Fresnaye (1783–1861).

**Final remarks**

As Alex Csiszar demonstrated in a recent, well-documented investigation on the emergence of the scientific journal in England and France, ‘a cadre of writers actively took on the title of vulgarisateur (popularizer) as a professional identity. Many, like François-Vincent Raspail and Charles-Frédéric Saigey in the 1820s, had come to Paris from the provinces and taken up journalism… They were quicker… and made vulgarisation into

90 Corsi, *op. cit.* (note 33), p. 10.
91 *L’Écho du Monde Savant* 37 (12 December 1834).
92 Fontanon and Grelon, *op. cit.* (note 15), p. 29.
93 *L’Écho du Monde Savant* 52 (28 December 1836), p. 222.
their specialty.’°⁴ In a complementary way, ‘the list of authors trying to enlighten the world on the true principles of nature remained long, and for a long time.’°⁵ Nérée Boubée, who came from the provinces, must undoubtedly be added to that list. Moreover, his production precedes the so-called ‘popularization boom’, but it is by no means an exception. According to Fox, during the ‘long nineteenth century’, ‘science had a consistently prominent place in French public debate and it penetrated exchanges far beyond its own particular realm. … What occurred in the second half of the nineteenth century certainly represented an acceleration, but it was part of a process rather than a fundamentally new departure.’°⁶

Boubée and L’Écho du Monde Savant’s features reflected some trends of the time: several points suggest the sympathy with manifestations of French Romanticism in science and technology topics, as discussed by John Tresch. These included, for instance, the strong appreciation of technological advancements, such as railways, and different sorts of machines; the presence of, or even emphasis on, specific themes, e.g. teratology, phrenology, industrial economy, and electricity and magnetism; the significant connection with faith, religion, superior forces, and the unity of nature; the enthusiasm for social progress. According to Tresch, ‘these “romantics” saw science and technology as the means to build a fairer, free, and more harmonious society.… For some, this meant recovering and reinterpreting the Catholic tradition or rediscovering mystical, illuminist traditions.’°⁷ Moreover, ‘the prevalent belief in those times is that there can be no stable society without a religious foundation.’°⁸

Boubée’s deep commitments to broader popular education, his involvement as a teacher at the Athenée Central, the valorization of the knowledge of workers, and the praise for women’s education and their scientific activity, all present in L’Écho, were aligned to contemporary comprehensive political and social movements. As stated by Bruno Béguet, ‘the dissemination of scientific knowledge… is part of an encyclopaedic and emancipatory project for workers. … Popular encyclopaedism is still close to its theoretical sources, whether it is Comtian thought or the diffuse Saint-Simonism which permeated the entire French labour movement before 1848.’°⁹ Indeed, the Saint-Simonians strongly advocated popular education, and some among them, like Édouard Charton (1807–1890) and Pierre-Euryale Cazeaux (1805–1880), founded a popularization journal that circulated from 1833 to 1888 under their direction.°¹⁰ Others invested in the education of women, as did Claire Bazard (1794–1883).°¹¹ Was Boubée a Saint-Simonian, strictly or broadly speaking? Did he sympathize with socialism or republicanism, as did other popularizers? Thus far, I have not confirmed direct links with Saint-Simonism (although this movement had a substantial number of followers in Toulouse, Boubée’s hometown), but his several points of contact to that doctrine are clear, as cited throughout this text. Also, sympathetic references to republicans (Arago, Raspail) and socialists (Jules André Louis Lechevalier (1806–1862)) appear here and there in the pages of L’Écho, as well as Victor Meunier’s collaboration, over many years. That was not in contradiction to Boubée’s declared Christian faith; on

°⁴ Csiszar, op. cit. (note 43), p. 206.
°⁵ Corsi, op. cit. (note 33), p. 14.
°⁶ Fox, op. cit. (note 4), p. 274.
°⁷ Tresch, op. cit. (note 14), p. 10.
°⁸ Picon, op. cit. (note 39), p. 74.
°⁹ Béguet, op. cit. (note 38), p. 53.
°¹⁰ Picon, op. cit. (note 39), pp. 196–197.
°¹¹ Picon, op. cit. (note 39).
the contrary: for instance, Philippe Buchez (1796–1865), political agitator, physician and republican, was one of the chief promoters of a Catholic Christian socialism, and the well-known politician and revolutionary Louis Blanc (1811–1882) willingly combined Catholicism and socialism.

For all that has been said, Boubée, like many practitioners of science hitherto unknown to historians, and his remarkable life and career deserve deeper appreciation.

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DATA ACCESSIBILITY

This article has no additional data other than those quoted and indicated in the text.

102 Corsi, *op. cit.* (note 33); Tresch, *op. cit.* (note 14).
103 François Furet and Mona Ozouf, *A critical dictionary of the French Revolution* (Belknap Press, Cambridge, MA, 1989).