Journeys of a Coronelli Celestial Globe
André HECK
ahj.heck@gmail.com
http://www.aheck.org/

Summary
I show that the Coronelli celestial globe of Strasbourg Astronomical Observatory was a piece of booty (in favor of the French authorities) at the outcome of WWI. Half a century earlier, it was part of another war booty (then to the benefit of the German army) after the Franco-Prussian war of 1870-1871. I traced back to 1910 the arrival of the globe at Strasbourg Astronomical Observatory, as a donation from the Kriegsschule in Metz and from what was left from the French École d’Application de l’Artillerie et du Génie at the same location, itself having been created in 1794 by merging several institutions in a post-revolutionary rearrangement of the French military schools. Thus the globe might have come from one of those components.

Introduction
When I arrived in March 1983 at Strasbourg Observatory on a position of Astronome Associé [Associated Astronomer], the only office that could be made available to me – after clearing it from garbage and pushing some pieces of old furniture on the sides – was a large room next to the rotonde, a round hall on the main floor of the Grande Coupole [Big Dome].

I was then the only permanent occupant of the building, mainly used for courses, lectures and meetings. Under the dome itself, the large refractor (487mm) had fallen into disuse, only occasionally shown to visitors of the nearby planetarium, school or other groups. One of the bays giving onto the rotonde, just outside my door, was hosting a 108cm Coronelli celestial globe that had suffered from time and from whoever felt obliged to play with it.

The current paper is describing my attempts to protect the globe from further damage and – more importantly from a historical point of view – how I could trace back to 1910 its arrival at the observatory, then under German rule. I am also providing hints on its earlier itinerary.

But before going further, a few words on Coronelli and his globes are in order.

Vincenzo Coronelli and his globes
Born in Venice on 15 August 1650, Vincenzo Coronelli entered at the age of 15 the convent of the Minor Brothers of San Nicolò della Lattuca.

At 21, he joined the great convent of Santa Maria Gloriosa dei Frari where he established in 1685 an etching workshop very active in cartographic production. He received his degree in theology in Rome (Santo Bonaventura College).
His cartographic career really took off in 1678 when he went to Parma to build a couple of 175cm\textsuperscript{1} globes for Duke Ranuccio Farnese. These drew the attention of César Cardinal d’Estrées\textsuperscript{2} who invited Coronelli to Paris.

Thus, in 1681, Coronelli arrived in the French capital with the task of building two 384cm globes – one terrestrial, one celestial – for King Louis XIV (BNF 1999). This was commissioned by d’Estrées, apparently following a suggestion by Jacques Borelly from the recently created Academy of Sciences. Stars and planets were positioned at their locations corresponding to the birth of Louis XIV, which induced the popular comment that the globes reproduced the King’s horoscope.

César Cardinal d’Estrées (1628-1714) who literally launched Coronelli’s career in France and beyond. [public domain]

Those globes are currently located at the Bibliothèque Nationale de France [French National Library]. If they were exceptional for their size and for the wealth of information they carried for the time, that very size made them cumbersome, difficult to appreciate and almost impossible to read. This explains why they have been stored away in boxes for many years. The King had also to get the texts reproduced separately for the benefit of his guests.

\textsuperscript{1} The sizes given in this paper correspond to the diameters of the globes.

\textsuperscript{2} His brother, François-Annibal 1\textsuperscript{st} d’Estrées, was then the French Ambassador in Rome.

\textsuperscript{3} A celestial globe surrounding a smaller terrestrial one.
Coronelli remained two years in Paris, then worked in various European places, including Paris again in August 1686 where he signed contracts with Jean-Baptiste Nolin (1657-1725) for etching (on copper) a 108cm celestial globe and other maps. In 1688, the globe saw a first release⁴, with a second version in 1693.

There were in total four editions for the terrestrial globe and six for the celestial one (two in Paris and four in Venice).

⁴ Together with a terrestrial globe etched in Venice. They were scaled-down versions of the globes for Louis XIV.

They largely replaced in European libraries the smaller and older globes by Dutch Cartographer Willem Janszoon Blaeu (1571-1638).

In 1684, Coronelli had founded in Venice what was perhaps the very first geographical society, the Accademia Cosmographica degli Argonauti. The purpose was before all to ensure a large distribution of his globes, maps and atlases.

Pelletier & Roger (1993) list some of the eighty-four members of the society who were based in Paris (almost as many as in Venice), including Astronomer Jean-Dominique Cassini. The society was dissolved at the death of its founder. Coronelli returned to Venice in 1705 where he stayed then permanently and died in 1718.
Pelletier & Roger (1993) comment that excessiveness – be it for the size of his globes\footnote{In 1708, he considered building globes four times bigger than those for Louis XIV.} or the number of volumes he published – was a constant feature of Coronelli’s projects. This even led him to some difficulties with his religious order, especially about the induced expenses.

There is an extensive literature on Coronelli and his works and only a handful of references are listed in the bibliography of the present article, including some papers by Coronelli himself\footnote{See e.g. Coronelli 1693 & 1701, Milanesi 1988, as well as the section on Coronelli in the volume “L’opera del genio italiano all’estero – Gli scienziati in Francia”, Libreria dello Stato, Roma (1941) XX.}. Lists of the globes produced by Coronelli have been compiled (see e.g. Duprat 1970), but they are not exhaustive. Since prints can be obtained till today from the original plaques etched by Nolin, recent true-false globes can exist.

The Big Dome of Strasbourg Observatory in an early XX\textsuperscript{th}-century photograph. Two other buildings made up the original (German) observatory inaugurated in 1881. Another building was added by the French in the 1930s. [public domain]

The globes played an important educational role in course of centuries, following the geographical exploration of the planet. The Dutch globes, conditioned by the needs of a maritime country with an immense commercial empire, penetrated the whole of Europe till about 1670. Then came Coronelli’s globes, leaving a historical mark thanks to the mercantile dynamism of their conceiver.

However Coronelli has been criticized, not only for his expensive undertakings, but also on scientific grounds, his production not always including the latest knowledge of the time. If it is unmatched by its decorative sumptuousness, his work is questionable as to its exactitude and its underlying documentation.

\section*{The Strasbourg Coronelli Celestial Globe}

It was difficult to fully appreciate the aesthetical qualities of the globe next to my office: its upper part had been blackened by dust and by whatever had fallen on it over time, not to forget the fingers of whoever, when passing by, was rotating it. Some texts had become illegible and quite a few drawings were difficult to identify. A large fragment was missing from the Southern hemisphere, as well as bits here and there at the junctions of sectors.
Cartouche (split over Northern Sectors 4 & 5) of the 1693 celestial globe mentioning the title Cosmographer of the Republic of Venice bestowed onto Coronelli on 12 March 1685 by the Senate of the Serenissima. Etcher Nolin is also mentioned, as well painter Arnould de Vuez (1644-1720) whose name has been spelled there as Devuez.

The Strasbourg globe has been made from plates of the 1693 series as indicated by its cartouche. More precisely, the globe belongs to the 1693 production: the bronze circle holding it carries “fait par Gatellier fabricateur des instrumens de mathematique 1697 Paris” [made by Gatellier, manufacturer of instruments for mathematics 1697 Paris, in old French].

It had obviously not moved since caught in a photograph appearing in a report published in 1926 by Ernest Esclangon, the first French Director who was put in charge just after WWI, following the expulsion of the German scientists.

Strasbourg Observatory has a multinational history that has been the matter of a dedicated book with the collaboration of a dozen scientists, both French and German ones (Heck 2005a).

Built by the German Empire towards the end of the XIXth century together with a fully new university, the observatory became French when Alsace-Moselle went to France after the 1918 armistice, then was anew under German rule during WWII, to be French again at the outcome of this latter conflict.

Thus there is a visual proof for the presence of the globe at Strasbourg Observatory at the beginning of the 1920s.

Did it come along with Esclangon or was it already there earlier, piece of war booty as were all other German instruments and equipments taken over by the French authorities at the end of WWI?
The "rotonde", a circular hall on the ground floor of Strasbourg Observatory Big Dome in the early 1920s. The 1693 Coronelli celestial globe is visible on the left. [Esclangon 1926]

Ernest Esclangon (1876-1954), here in a portrait dated 13 January 1930, was Director of Strasbourg Observatory from 1919 to 1929 before taking up the directorship of Paris Observatory. History remembers him as the father of the so-called speaking clock entering public service on 14 February 1933. [public domain]

The edited volume on the multinational history of Strasbourg Astronomical Observatory.

http://www.venngeist.org/journeys_coro_globe.pdf

http://www.venngeist.org/journeys_coro_globe.pdf
To prevent further damage to the globe, especially from the comings and goings in the rotonde, I requested it be moved into my office which became the directorial room, by then refurbished, when I took charge as Director of the Observatory. The globe became a reasonably decent piece of decoration of the room when the missing fragment and the most blackened parts were oriented towards the wall. At least there, nobody would be playing with it during several decades.

In parallel to my scientific activities (Hube 2016), I investigated the possibilities to restore the globe, but in vain as would be also the attempts of my immediate successors to the directorship. University and scientific funding had other priorities. Sponsorship and patronage were not the in things then.

I visited several places where similar Coronelli globes had been splendidly restored, such as those then displayed at the Musée des Beaux-Arts [Museum of Fine Arts] in Lille, as well as, geographically closer, the celestial globe of the Société Industrielle de Mulhouse [Mulhouse Industrial Society, SIM].

From my dealings with the French Musées Nationaux, I could obtain – paid from my own money – a set of prints from the original plaques etched by Nolin7. They will be part of my bequest.

7 12 sectors for each hemisphere and 2 polar caps.
A War Booty, Twice

While looking for a way to restore the globe, I also attempted to trace its history.

Was there any record of its birth, in other words any document allowing to identify its purchaser via an archived order? Was there somewhere a directory gathering together the initial owners of the 1693 globes?

If existing, such a compendium could be in a Venetian repository or at the Biblioteca Nazionale Centrale [National Central Library] in Rome. I investigated the latter one as well as a range of archive vaults in Venice and Padua (cf. the acknowledgements), exchanging also with a number of local specialists, but vainly. Since the 1693 series was produced in Paris, the French archives were also searched ... with the same result.

If inventories of the current locations of globes can be found (see e.g. Duprat 1970), nothing seems to exist on the first destinations of the 1693 globes. It must also be kept in mind that, since the Nolin plates can be re-used, a number of so-called 1693 globes have been produced much later, such as the SIM celestial globe.

I was luckier when going backwards in time.

On 16 February 2010, I was researching local archives on the first astronomical observatories in Strasbourg when I stumbled, at the Archives Départementales du Bas-Rhin [Lower Rhine Departmental Archives, ADBR], on a bundle gathering together internal and external correspondence from the new university installed in the city by the German Empire at the end of the XIXth century.

And there – golden nugget – an exchange from about a century earlier explained how the 1693 Coronelli globe arrived at Strasbourg Observatory. In his letter of 04 April 1910, Lieutenant Colonel von Harwitz, commanding Kriegsschule zu Metz [Metz war school] was saying in educated and simple words that three globes, a celestial one from Coronelli and two terrestrial ones from Vaugondy, have no value for his school, wondering whether they could be of some scientific interest for the university institutions in Strasbourg.

Dated 04 April 1910, this letter from Lieutenant Colonel von Harwitz, head of the Königliche Kriegsschule in Metz, proposes three globes to Strasbourg University. [ADBR 103AL1009]

The Kriegsschule [military school] of Metz where was the Coronelli celestial globe before being shipped in 1910 to Strasbourg Astronomical Observatory as a donation.

In his answer, Observatory Director Bauschinger offered to accommodate them within the observatory collection of globes and even to pay for the transportation. Followed more exchanges fixing the practical arrangements for the transfer.

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See e.g. Heck 2011a, b & c, as well as the references therein.
Here is a verbatim transcription of von Harwitz's initial letter:

Metz, 4. 4. 10.

An das Kuratorium der Kaiser-Wilhelm-Universität
Strassburg i/E.

In der Bibliothek der Kriegsschule befinden sich nachbezeichnete Globen, welche seiner Zeit mit den Beständen der französischen Militärschule übernommen worden sind:

1. Orbis coelestis tipus opus a P. Coronelly 1698,
2. Globe terrestre dressé par R. de Vangondy 1751,
3. Globe coeleste dressé par R. de Vangondy 1751,
da die Globen zwar für die Kriegsschule keinen Wert haben, wohl aber für eine wissenschaftliche Anstalt, könnten dieselben zur Abgabe gelangen. Es wird deshalb ergeben angeregt, ob die Universität bereit ist, die Globen unter Fragung der Versendungskosten zu übernehmen.

von Harwitz
Oberstleutnant und Kommandeur.

And here is Bauschinger's answer:


Bauschinger

Julius Bauschinger (1860-1934) was the third Director of Strasbourg Observatory, from April 1909 till January 1919 when he was expelled following the clauses of the armistice at the end of WWI. He was authorized to carry along only a limited volume of personal belongings, all equipment of the observatory remaining in place.

[Courtesy Astron. Gesellschaft]

This fully identified the globes appearing on a page of the Inventar der Kaiserlichen Universitäts-Sternwarte Strassburg [Inventory of the Imperial Strasbourg Observatory] and simply listed without any specific name attached to them, only with the comment that they were a Geschenk [present or donation] from the Kriegsschule. The Coronelli celestial globe was one of them.

In this answer (08 April 1910), the Observatory Director Bauschinger offers to include the globes in the observatory collection. Note the speed of the exchange, taking into account that there was an intermediary step from the university administration (Kuratorium der Kaiser-Wilhelm-Universität) on 06 April 1910. [ADBR 103AL1009]
Page from the Inventar der Kaiserlichen Universitäts-Sternwarte Strassburg [Inventory of Imperial Strasbourg Observatory] mentioning globes received as presents from the Kriegsschule [Military School] in Metz. Note that neither Coronelli’s nor Vaugondy’s names are mentioned.

As another interesting point for our subsequent research, von Harwitz was saying that the globes were among what was left from the French military school earlier in the same premises and taken over by the German army in the course of the 1870-1871 Franco-Prussian War, some forty years earlier. I shall come back to this in the following section.

Notice also the misspelling in Coronelli’s and Vaugondy’s names, as well as the year 1698 flagged for the Coronelli globe. A mistake? Not necessarily as the globe is dated 1697 on the circle holding it. It may have been in the hands of the initial owner only the following year and recorded as such in an inventory.

An inventory that von Harwitz would have had at hand and from which he would quote the details? There would be nothing extraordinary in this. When Strasbourg Observatory passed into French hands after WWI, these continued – in French – the inventory mentioned earlier and initiated by the German founders of the observatory, thus creating a bilingual and somehow extraordinary document (cf. pp. 28-30 in Heck 2005a).

And Earlier?

Thanks to von Harwitz’s letter of 04 April 1910, we know that the Coronelli celestial globe was at the French military school when the German armies took over the place at the outcome of the siege of Metz9 during the 1870-1871 Franco-Prussian war. The globe seems to have become by then a cumbersome piece of decoration that the Commandant wanted to get rid of. Perhaps, without the German way of doing things in an orderly and efficient manner, the globe might have disappeared forever in some black hole.

The Königliche Kriegsschule zu Metz had opened in 1872 in the buildings of what was the French École d’Application de l’Artillerie et du Génie, itself installed there in 1794 after expelling the monks from the Abbaye Royale de Saint-Arnould as decided by the revolutionary Comité de salut public.

This abbey itself, founded in the VIth century and formerly located just outside the city walls, had been destroyed during the 1552 siege of Metz by the Holy Roman Emperor Charles V and was subsequently transferred into what was a Dominican convent within the walls. It is unlikely – but never impossible, of course – that the monks had acquired a Coronelli celestial globe and that it would have remained at the military school after their eviction. I found no indication in that direction in the documents and books10 I could peruse on the royal abbey.

A Coronelli celestial globe is more credible as an educational element in a military school, even if its interest as such had been decreasing over time due to the progress of knowledge, something openly said in von Harwitz’s letter (no value for his school).

Since it was a piece of war booty, did it appear somewhere in an inventory seized or made by the German militaries? With this in mind, I spent quite some time in examining archives from the Franco-Prussian War, both in Strasbourg and in Berlin (cf. acknowledgements), but vainly, as was also the case when investigating the municipal archives in Metz and those from the Département de la Moselle in Charleville-Mézières.

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9 From 20 August to 28 October 1870.
10 See e.g. Le Puillon de Boblaye (1857).
The French École d’Application de l’Artillerie et du Génie had been created in 1794 by merging the École Royale d’Artillerie (already in Metz, founded in 1720) and the École Royale du Génie et des Mineurs based in Mézières (founded in 1749), de facto closing the latter. Later on, the new school also absorbed the École d’Artillerie based in Châlons (founded in 1791). We could assumed that the globe belonged to one of those schools.

First page of a document instructing the gathering in Metz of items useful to military training (18 February 1794). [SHA 1VO9]

The following document gives an idea of how the new school was equipped by removing the relevant equipment from the Mézières school:

A An 2
Nº 18
18 février 1794

Copie de la lettre de l’adjoint au ministre de la guerre Mazurier, dattée [sic] de paris le 29 Pluviose 14, l’an 2ème de la République française une et indivisible

Au Citoyen Labarrere directeur des fortifications a Mezieres

Liberté  [Stamp from the École du Génie]  Egalité

Le Ministre me charge de t’adresser une copie du décret qu’ordonne que tout ce qui dépend des écoles du Génie et des mineurs Réunis sera transféré à Metz au 1er Ventozé prochain, Et en même temps de te recommander de proceder aussitôt à la Réception de ma Lettre à la séparation de tous les objets utiles à l'instruction – militaire et pratique de l'école de siège qui doit être établi à metz, d’avec tous ceux qui ne concernent que la théorie de la science des ingénieurs et les diverses constructions qu’ils sont dans le cas de diriger.

Tu dresseras un inventaire exact et détaillé de tous les objets et tu feras transporter à metz tous ceux qui sont nécessaires à l’école de siège, quant aux objets qui ne regardent que la théorie relative aux constructions, le ministre te charge de les adresser au Ministre de l'intérieure pour être remis à l'école Nationale des ponts et chaussées.

J’observe que tu dois correspondre avec le Cen Silly, commandant en Chef de l'école pour l'envoy de tout ce qui y est relatif, et pour tout ce qui sera nécessaire a l'installation des eleves qui doivent être envoyés sur le champ a mézieres.

Aussitot la reception de ma lettre le ministre t’engage de te concerter avec les Representans du peuple et les autorités constituées sur les moyens les plus prompts a employer pour remplir les dispositions prescrites par le décret. La mission etant remplie tu te rendras à Cambray pour y reprendre ton service de directeur en cette place

Salut et fraternité

Signé Mazurier

11 See e.g. Belhoste & Picon (1995) that includes floor maps.
12 At what is currently 10 rue Winston-Churchill.
13 See e.g. Chalmin (1951).
14 17 février 1794.
15 19 février 1794.
As highlighted in red, an inventory has been made of all objects moved from Mézières to Metz. This is confirmed by Pullion de Boblaye (1862) mentioning (p. 81) the first article of the removal decree dated 24 Pluviôse An II [12 February 1794]:

Art. 1er. À compter du 1er ventôse prochain [19 février 1794], tout ce qui dépend de l’établissement des Écoles du Génie et des Mineurs, réunies par décret du 2 brumaire, actuellement à Mézières, sera transféré à Metz

followed by a reference to the document transcribed above, instructing to draw up inventories. Further down (p. 84), we learn that some 600 volumes from the library were moved to Metz.

I did find two library inventories (ref. 14R156 & 14R157) at the Archives Départementales des Ardennes in Charleville-Mézières, but with surprisingly blank pages under the headers maps, plans, atlases. There is no mention of globes, in spite of a pretty furnished astronomy section in one of the inventories. But, as alluded earlier, the basic question here would be whether a 100y-old Coronelli celestial globe would be then considered as a library element or an ornamental piece.

Thus, as of today, the question remains open as to when, how and/or from where the Coronelli celestial globe arrived in Metz and, well beyond all this, who was the initial owner of the Strasbourg Coronelli celestial globe.

Acknowledgements


References

– Coronelli, V. 1690-1701, Atlante Veneto, 13 folios.
– Coronelli, V. 1693, Epitome Cosmografica, Andrea Poletti, Colonla, 420 pp.
Addendum

At about the same time the current paper was finalized, the regional daily *Dernières Nouvelles d’Alsace (DNA)* published, in its 09 October 2020 issue, the article reproduced on next page on the restoration – finally achieved! – of the celestial Coronelli globe of Strasbourg Astronomical Observatory.

The DNA editor’s attention was called on several unfounded assertions and inaccuracies in the newspaper article, such as (cf. yellow highlights) "stored in an office where the globe was deteriorating" and "one does not know how it arrived at Strasbourg Observatory". As explained in the present paper, as well as in the references quoted (especially Heck 2005b & Hube 2016, p. 268), on one hand, the globe was protected from further damage by being moved into an office and, on the other hand, the place where it was coming from (*Kriegschule zu Metz*) was known since 2010.

For the record, it should be mentioned here that no acknowledgement was ever received from the newspaper, nor from the current management of Strasbourg Astronomical Observatory, neither from the local *Direction Régionale des Affaires Culturelles (DRAC)* involved in the restoration, both quoted in the newspaper article and to whom the information was copied.
Le globe céleste de Coronelli est de retour à l’Observatoire

Le ciel de Louis XIV

Le globe céleste est un objet d’exception. Il est le plus grand modèle de globe céleste jamais fabriqué. Il mesure 2,34 mètres de diamètre et pèse 300 kg. Il est composé de 123 objets en cristal de roche. Chaque objet est gravé à la main par un artiste. Le globe céleste de Coronelli est un véritable chef-d'œuvre de l’art et de la science.

Le globe céleste a été exposé au musée de l'Homme à Paris en 2016. Il est actuellement exposé à l'Observatoire de Paris, où il a été restauré et restauré à sa taille d'origine. Il est ensuite monté sur un support en métal pour être présenté au grand public.

Pour la première fois, le globe céleste de Coronelli est exposé à l’Observatoire et à l'Observatoire de Paris. Il est la première fois que le public peut découvrir l'œuvre d'un des plus grands artistes de l'histoire de la science.

Le ciel de Louis XIV est un grand événement scientifique. Il permet de découvrir les secrets du ciel et de comprendre les étoiles et les planètes. Il est l'occasion d'apprendre à connaître la science et les astrophysiciens.

Le ciel de Louis XIV est une expérience unique. Il permet de découvrir le monde des étoiles et des planètes. Il est l'occasion de découvrir les secrets du ciel et de comprendre les astrophysiciens. Il est l'occasion de découvrir la science et les étoiles et les planètes.