

# Abstracts of Articles in GSJ Volume LXXIII (March 2020)

## **The Aeolian harp: G. Dall'Armi's acoustical investigations: Patrizio Barbieri**

**Abstract:** The Aeolian harp is an ancient musical instrument, its strings emitting sounds when activated by an airstream. After repeated experiments, starting from the seventeenth century, it was only towards 1910 that the physical aspect of its operation was fully clarified, although the problem still persists from a purely analytical point of view. In this connexion, as early as 1821 the amateur physicist Giovanni Dall'Armi (c.1767–1829) published in Rome a series of experimental results that have so far been overlooked both by organologists and by historians of science. They anticipate, however, important conclusions reached in 1878–79 by Strouhal and Rayleigh. He also applied his discoveries to the design of practical instruments to measure the velocity of both liquid and gaseous fluid currents. The aim of this article is to illustrate his contribution and to contextualise it historically. It is divided into the following seven sections: 1. Evolution of the theory, up to Dall'Armi (1821): an overview; 2. Giovanni Dall'Armi, amateur acoustician and professional lithographer; 3. Strings in an airstream: Dall'Armi's experimental survey; 4. Strings in an airstream: after Dall'Armi; 5. Strings in a waterstream: the early investigations of the problem, due to Dall'Armi; 6. Newly-invented practical devices based on the Aeolian-harp principle; and 7. Conclusions.

## **A Late Medieval Recorder from Copenhagen: Ture Bergstrøm**

**Abstract:** A medieval recorder, found during excavation works in Copenhagen in 1919, is described here for the first time from an organological perspective, and a short comparison with eight other extant medieval recorders is presented. The instrument, which dates from the second half of the fifteenth century, is of boxwood and relatively well preserved. It is 283mm long and has a simple, slightly waisted outer profile with the smallest diameter about two-thirds down from the top. The bore profile is unusual in that it is made up of two cylindrical sections with a marked step 50mm from the top, where the bore contracts from 12.7 to 10.3mm. The rather rough turning and irregular manufacturing of the windway and labium suggest that the instrument may not have been made by a professional maker. Furthermore, a reconstruction of the recorder made by the author shows that the overblown notes are too flat to be usable.

In some respects, the Copenhagen recorder shares properties with other extant medieval recorders, such as the short windway and absence of a 'beak', but it differs by having a major and not a minor second as the interval between the two lowest notes. Generally, it has most features in common with the medieval recorder finds from the rest of the Baltic region (Estonia, Poland).

## **Provenance and Recording of an Eighteenth-Century Harp: Simon Chadwick**

**Abstract:** National Museum of Ireland, Dublin NMI DF:1945-122 is a late seventeenth- or early eighteenth-century harp, traditionally associated with the harpist and composer, Turlough Carolan (1670–1738). Though it has been in the museum collections since the nineteenth century, it is not recorded how it came there. The first part of this paper investigates this association, collating accounts and instruments to confirm that the traditional story has significantly more basis in the records than previously thought. The second part of this paper describes the harp, based on laser-scan, X-rays and photographic survey. The severe damage and working repairs to the instrument are assessed, and the measured string lengths are used to propose a reconstructed stringing and tuning regime in its last usable state. The reconstructed tuning, along with the new account of the current physical state of the harp, is used to investigate a recent proposed alternative association with the harpist Rose Mooney (1739/40–post 1800), which is based on an early nineteenth-century letter describing her harp (Queens University Belfast, Special Collections MS4/35/16). The letter and the instrument are seen not to be a close match, leading to the conclusion that this harp was probably not Rose Mooney's.

## **Reconstructing the History of the 1724 'Sarasate' Stradivarius Violin, with Some Thoughts on the Use of Sources in Violin Provenance Research: Jean-Philippe Echard**

**Abstract:** The reconstruction of the history of individual musical instruments, and violins in particular, is often full of pitfalls. The material history – documenting the dates, the nature of accidents, repairs and modifications – the history of ownership (or provenance) – documenting the names and profiles of the successive owners of the instrument, as well as the dates and conditions of changing ownerships – can strongly benefit from a thorough in-depth examination of the instrument itself, particularly when it is combined with the study of sources that are more conventional to the historian (written and iconographic sources). The 'Sarasate' violin (Antonio Stradivari, 1724, Cremona, coll. Musée de la musique, Paris, E.1729), whose history is somewhat confused and debated in the literature, is presented here as a case study for such reconstruction. This article shows that the successive owners were: Stradivari's sons, Ignazio Alessandro Cozio, Count of Salabue, Niccolò Paganini, Achille Paganini, Jean Baptiste Vuillaume and Pablo de Sarasate, who bequeathed it to the Conservatoire de Paris in 1908. On a more general note, this study also shows the crucial interest of written archives from nineteenth- and twentieth-centuries luthiers (accounting ledgers, correspondence, certificates, etc.), and the need for the proper conservation and accessibility of such archives.

## **Giovanni Racca's Piano Melodico through Giovanni Pascoli's Letters: Giorgio Farabegoli & Piero Garofalo**

**Abstract:** The Piano Melodico was a mechanical musical instrument invented by the Italian Giovanni Racca in 1886. Between 1887 and 1908, Racca & Co. sold over 10,000 Piani Melodici. Purchasers of the instrument included such famous persons as Prince Luigi Amedeo, Duke of Abruzzi, Queen Elena of Italy, the Duchess of Aosta Maria Letizia Bonaparte, and Danilo, Crown Prince of Montenegro. Among these celebrities was the renowned poet Giovanni Pascoli, who acquired the instrument in 1906. Through unpublished letters and documents in the Pascoli Archives emerges the centrality of the Piano Melodico to Pascoli's creative process and his role in defending its use in the copyright infringement case of Ricordi v. Racca in 1907. Moreover, the instrument figured in his relationship with the composer Giacomo Puccini. Pascoli's Piano Melodico remains a fixture in what was the poet's study. Thanks to Mario Mazzei's restoration work on both the instrument and the 34 perforated music storage media belonging to the poet, today it is possible to listen to Pascoli's music collection at the same qualitative level at which he enjoyed it over a century ago.

## **Dominick Mazzinghi, Seller of Clementi & Co. Instruments in New York City: Michael Kassler**

**Abstract:** Dominick Mazzinghi, brother of the composer Joseph Mazzinghi, lived in New York City from about 1802 to 1816 where he sold and lent piano fortes manufactured by Clementi & Co. in London as well as other musical instruments. This article provides some new information about Dominick Mazzinghi's activities.

## **Approaching Non-Western Art Music through Organology: Laurence Libin**

**Abstract:** This informal paper expands upon a talk delivered at the symposium, 'Musicology or Ethnomusicology? Discussing Disciplinary Boundaries in Non-Western Art Music', held on 22 March 2019 at the Faculty of Music, University of Cambridge. I question the validity of the simplistic divisions 'musicology/ethnomusicology', 'Western/non-Western', and 'art/popular/folk'; instead I endorse fluid, permeable categories that better reflect real-life complexity. I criticize divisive aspects of 'critical' organology but advocate systematic empirical study of all aspects of musical instruments worldwide to supplement conventional academic approaches to music. As far back as Praetorius's *De organographia* (1619), organologists have investigated instrument design and aesthetics, craft and

technology, acoustics, extra-musical functions, societal and environmental issues relating to sound production, and other avenues that amplify comprehension of music in all cultures. For example, 'art music' is commonly associated with prestigious instruments, which dignify their players and repertoire. But criteria for judging instruments' qualities differ widely, with tonal qualities not necessarily predominant.

### **Recorders by Oskar Dawson: Douglas MacMillan**

**Abstract:** The article discusses recorders made by Oskar Dawson (1890–1968) during the inter-war period. Dawson was first employed in the Dolmetsch workshops in the 1920s as a keyboard instrument craftsman but he also made recorders, setting up an independent workshop in the 1930s. Few of his instruments survive, but ten of his instruments are located at the Royal College of Music, four are in Le Musée de Musique in Paris, and further parts of Dawson recorders are at present in the care of the author. The recorders range in size from soprano to great bass: all are of the Baroque pattern and some could be restored for museum display or even limited playing. Of particular interest are three 'bass' recorders, a basset in f, a bass in c and a great bass in F: these instruments have an expanded foot joint with associated keyword. Very few bass recorders larger than the basset in f survive from the Baroque era, and Dawson was very much ahead of his time in designing these instruments. These instruments shed further light on the history of the recorder in the 1930s and on the work of an innovative maker.

### **Instrument Making of the Salvation Army: Arnold Myers**

**Abstract:** The Salvation Army has effectively used brass bands to further its evangelical purpose in Britain and overseas. In 1882 the Army set up a Trade Department in London to manage the provision of goods and services for its activities. One operation of the Trade Department was the supply of brass instruments, soon expanded to brass instrument repair and then to the in-house manufacture of the brass instruments used by Salvation Army bands. After occupying workshops in various London premises, a factory was established in St Albans in 1901 which employed over 70 at its peak. The Army ceased manufacture in 1972. This article relates how the Salvation Army commenced instrument making, discusses their business model and staffing, describes their instruments and how these met their own specific requirements. The disruption of two world wars and the reasons for the eventual cessation of instrument making are outlined, and a brief account is given of extant 'own make' instruments.

### **'Cremona Japonica': Origins, Development and Construction of the Japanese (née Chinese) One-String Fiddle, c1850–1950: Nick Nourse**

**Abstract:** Today the Japanese one-string fiddle is likely to be regarded as little more than a curio to be bought for a few pounds at auction. A chordophone of simple construction, they amount to little more than a small, usually wooden, soundbox pierced by a long neck, a wire string, and are played upright like a cello. Despite its name, the Japanese one-string fiddle did not originate in Japan, and it first appeared as the Chinese fiddle in 1853 as a solo turn in a blackface act in New York. Popularised on the British music hall stage in the late nineteenth century by 'The White-eyed Kaffir', George Chirgwin, the instrument faded from view in the 1950s.

Few nineteenth-century examples of the Japanese one-string fiddle survive and the instrument's history must be constructed from newspaper reports, lithographic images and from the twentieth-century amateur enthusiasm for the instrument. It was supplied with factory-made instruments and by the home hobby and handicrafts industries that began in the late 1800s and which distributed a range of Japanese one-string fiddles as free, detailed paper plans, or kits of bundled wood and a string.

## **Networks of Innovation, Connection and Continuity in Woodwind Design and Manufacture in London between 1760 and 1840: Simon Waters**

**Abstract:** This paper attempts to confront the complexity of the various networks of people, ideas, technologies, and materials on the flute's development in London between 1760 and 1840 – a period in which 'semi-artisanal' activity was subsumed into larger-scale business, and characterised both by remarkable expansion and opportunity, but also indicative of particular patterns of family connection, optimism, failure, opportunism, market awareness, and technical conservatism and innovation. By examining the complex connections between the various agents involved, whether these be professional or family ties between individuals, material evidence from instruments, or other aspects of the music business, I hope to uncover and quantify the remarkable degree of connectedness and continuity evident across what seem at first glance to be independent, competing workshops. The study also suggests that digital technologies necessitate changes both in how we gather and interpret data, and in how we acknowledge expertise. The topics which emerge as significant include the ubiquity of instruments; advertising; experimenting and standardisation; cosmopolitanism; modification and ergonomics; volume and projection; and most crucially, the various forms of continuity—of family ties (particularly through women); of chains of business relationships; of workshop locations; and the establishment of differentiated markets—addressed by specialist 'flute makers', by general 'woodwind makers', and by 'music sellers'. From a discussion of these issues in general terms the paper eventually focuses on the various Goulding companies, and the workshops associated with flute maker John Willis.

## **A 1793 Longman & Broderip Harpsichord and its Replication: New Light on the Harpsichord-Piano Transition: John Watson**

**Abstract:** Years after purchasing a pianoforte, George Washington acquired a large full-specification harpsichord that remains well preserved at his Mount Vernon estate. Research during preparation for making an accurate copy of the instrument shed light on the English harpsichord late in its period of co-existence with the piano. Makers of the original harpsichord continued to apply experimental and innovative designs and technologies to harpsichords in service to musical taste that demanded increasing control of dynamic nuance. Through its copy, the Mount Vernon harpsichord offers harpsichordists unusual dynamic control with its soft leather plectra for all four registers along with the more conventional pedal-operated machine stop and Venetian swell. Even with the availability of a pianoforte at Mount Vernon, the harpsichord received greater attention when it arrived and continued in use until the 1820s, suggesting the late English harpsichord may have been considered the expressive equal of contemporaneous pianos.

## **The Swiss Alphorn: Transformations of Form, Length and Modes of Playing: Yannick Wey & Andrea Kammermann**

**Abstract:** The alphorn is considered a Swiss national instrument and has been promoted by the Federal Yodelling Association throughout the twentieth century. However, knowledge of the instrument's development in terms of length and form has remained largely anecdotal and based on narrative accounts. The aim of the present study is to evaluate a comprehensive corpus of data derived from both artefacts and images dating from 1600 to 1950. For this purpose, 37 instruments conserved in museums were photographed and measured, and 250 images were interpreted. The results provide a better understanding of the history of the alphorn and its music, suggesting that at the start of the nineteenth century, when it experienced a period of promotion, the instrument typically measured 1.5–2m; by c1900 the standard length had reached 3–3.5m. This change in length, together with modifications to the bell shape and the introduction of mouthpieces, is discussed, as well as the resulting changes to the tonal range, loudness and timbre of the instrument.