

Abstracts of Articles in GSJ Volume LXXII (March 2019)

How Mathias Müller Incurred the Displeasure of his Colleagues with the Ditanacclasis: Beatrix Darmstädter

Abstract: The Viennese piano maker Mathias Müller, spent at least a part of his apprenticeship in the piano workshop of Anton Walter. At the start of 1801, Müller announced his newly invented ditanacclasis with two keyboards, and in the summer of that year applied for a patent. The documents submitted to the Lower Austrian government were incomplete and did not provide all the information concerning the instrument's construction. Thus, the patent was awarded mainly on the basis of comments received from various renowned composers—including Koželuch, Salieri and Hummel—who had played the instrument. In default of a clear technical description of the instrument, the patent protected Müller's production of both single- and double-manual upright pianos. The Guild of Piano Makers responded by taking legal action against Müller, which led to a protracted and complicated court case. At the end of 1806, the Lower Austrian government ruled that Müller should hold the exclusive privilege for making the ditanacclasis, but that other piano makers could make upright pianos with a single keyboard. As a result, members of the Viennese Guild of Piano Makers could exploit the growing market for upright pianos and Müller's reputation was left undamaged.

Restoration and Reinvention: Reviving the Piano-Viole: Pierre Gevaert, Elisabeth Salverda & Michel Terlinck

Abstract: This paper discusses how considering playability affected the choices we made in the restoration of a *Piano-viole*, a mechanically-bowed keyboard instrument preserved at the Musical Instruments Museum (MIM) in Brussels. The first part of the paper is devoted to the history and background of Herman Lichtenthal's instrument; the second part provides technical details of the project itself. Exploring the tensions between conservation and restoration, this article shows how our exploration of the instrument's sound potential helped inform our understanding of, and provided clues to, the *Piano-viole's* original operating principles.

'Island Drum': Heritage and Transformation in Amami, Japan: Henry Johnson

Abstract: The *chijin*, which is sometimes referred to as 'island drum', has a distinct heritage in southern Japan in the Amami Islands. In Amami, this type of musical instrument has a particular historical connection with the folk performing arts where it is performed as a hand-held drum and usually while the player is dancing. In contemporary culture, the instrument is also played in other settings and often on a stand and might take on a percussive role similar to some other types of Japanese drums. This article studies the cultural heritage and transformation of the *chijin* in Amami. Focus is given to the ways in which the instrument acts as an emblem of Amami heritage in the present day. While the *chijin* is found in different performance settings and numbers across the Amami Islands, it is often used on occasions that represent the islands more broadly, including rituals, festivals and tourism contexts. Drawing on ethnographic fieldwork in Amami, this article offers a study of the form, performance settings and cultural transformations of the *chijin* in modern-day island life. The article reveals how this small percussion instrument has an important role in present-day Amami culture, both in terms of its place in the soundscape of the islands and its significance in cultural heritage construction in traditional and transformative ways.

Elisha Gray and the Musical Telegraph: Roderic Knight

Abstract: Elisha Gray (1835–1901), was an inventor, professor, and author. A contemporary of Bell and Edison, his field was telegraphy. From humble beginnings as a Quaker farmer, he attended Oberlin College, co-founded Gray and Barton (soon renamed Western Electric), and produced a printing telegraph with a keyboard. On 14 February 1876, Gray and Bell both filed patents for a speaking telephone. In the ensuing court battles, Bell won every case. Undaunted, Gray pursued electrophonics. He advanced multiplex telegraphy by sending eight messages at once on different

tones. This led to the Musical Telegraph, the world's first electric musical instrument. The small keyboard produced sounds by setting steel reeds in motion with electromagnets. The signal was simultaneously sent by telegraph, to be reproduced by loudspeakers, also of Gray's design. Gray premiered the instrument in 1874, then showcased it in a Philadelphia to New York concert in 1877. This article delineates the different models of Gray's keyboards and loudspeakers and how they worked. It also recounts the short history of the instrument with quotes, period engravings, and photographs of Gray's devices. Also briefly covered are other inventions, such as a violin reproducer, organ pipe transmitters, and the world's first fax machine, the Telautograph.

A Real Instrument or Historical Fantasy? The 'Old Organ' of Christian IV, and Michael Praetorius: Darryl Martin

Abstract: Michael Praetorius' book *Syntagma Musicum*, and the associated illustrative plates (published as *Theatrum Instrumentorum* in 1620) have long been studied by organologists, and it is generally considered one of the most important historical publications of its type. Of particular interest and importance to researchers, the plates often include rulers to enable accurate measurements to be taken directly from the plates themselves. The first of the plates shows a highly decorated, but quite extraordinary, small organ which Praetorius indicates had one set of pipes but three registers. When writing about the instrument in *Syntagma Musicum* Praetorius states that it belonged to King Christian IV of Denmark – even today considered Denmark's most important king. There is, however, no record of the instrument ever existing other than what is shown in the plate, and no reference of an instrument of that nature has been found in Danish court records. This article explores the relationship between Praetorius and the Danish court of Christian IV, and shows that the two figures were personally acquainted. It also takes an in-depth look at the illustration to determine if it could be designed to work as described by Praetorius, despite his own failure to understand the organ fully.

Why Mouthpieces?: Jeremy Montagu

Abstract: A discussion of the necessity for, typology of, and use of mouthpieces on trumpet-type instruments from antiquity to modern times, with examples from many cultures around the world.

Historical Bows in the Collections of the Czech Museum of Music – National Museum in Prague: Vít Nermut

Abstract: The article explores the important collection of historical bows preserved in the collections of the Czech Museum of Music – National Museum in Prague. The main aim of this study is to examine bow types with regards the development of bow making, and to classify them within an historical context with a focus on those made prior to c1850. The study comprises 24 bows – seven violin bows, three pochette bows, two viola bows, one viola da gamba bow, seven cello bows and four double bass bows. Many of these come from the estate of the prominent Czech violin maker Karel Boromejský Dvořák (1856–1909) who assembled a significant collection of historical instruments during his lifetime, a great part of which passed to the National Museum in Prague after his death. An appendix provides a list of measurements, model types, frog movement methods and materials.

A New Organological Approach used in the Analysis of the Nuremberg Virginal Attributed to Gianfrancesco Antegnati, Brescia, c1558: Grant O'Brien

Abstract: The instruments of Gianfrancesco Antegnati are little known by modern organologists. To redress this situation I approached it in three ways: 1) a detailed and accurate biography of Gianfrancesco Antegnati is given, 2) the Nuremberg Germanisches Nationalmuseum instrument is illustrated by giving a normal catalogue description including the characteristic and individual identifying features which can be used to recognise an unsigned instrument and 3) a new approach to analyse the design of this instrument has been introduced to study the longitudinal and lateral spacings of the jackslots. These have been investigated using a linear regression analysis by the

method of least squares. This is the first time that this type of analysis has been used in the study of an early stringed keyboard instrument. The linear regression analysis gives unsuspected results including an extremely accurate determination of the size of the Brescian *oncia* used by Antegnati, it reveals how he designed his instruments using simple numbers and spacing a given number of notes in a given number of Brescian *once*, and it confirms the original compass to have been E,F,G,A to f³. It would not have been possible to establish any of the latter features without the use of this new approach.

Ali-Ben-Sou-Alle's Turcophone Patent (1860): the Closest Bridge between Clarinet and Saxophone: José-Modesto Diago Ortega

Abstract: Charles-Jean-Baptiste Soualle, also known as Ali-Ben-Sou-Alle, studied clarinet under Klosé and was renowned as one of the few saxophone virtuosos of the nineteenth century, who toured throughout Europe, Asia, Africa and Oceania. He was also an active inventor, the first to apply Boehm-system keywork to the saxophone and to develop the first automatic octave key mechanism. All these improvements were applied to his *turcophone*, a new instrument that overtook many of Adolphe Sax's designs, and some of which are present in today's modern saxophones. This article is an in-depth analysis of his patent (1860) and certificate of addition (1861), contrasting them with the clarinet and saxophone. It highlights Soualle's original features, such as the use of the clarinet's duplicate keys on the saxophone, and also highlights some crude aspects of the design and problems associated with the mechanism.

The Earliest English Five-Key Clarinets: Their Characteristics and Importance: Albert R. Rice

Abstract: The article briefly reviews the use of the clarinet in England and Great Britain from 1726 through the 1750s; and describes construction characteristics of two of the earliest extant English clarinets by John Mason (c1765) and Thomas Cahusac (i) (c1767) purchased by collectors in 2015 and 2016. It highlights differences in both clarinets' construction and design and compares them to eight English eighteenth-century clarinets, an anonymous English clarinet (c1760–80), clarinets by George Miller, John Muræus, Thomas Collier, Henry Kusder, and to two German clarinets made during the 1770s for the English market by Heinrich Carl Tölcke and Carl Hesse. The discovery of the Mason and Cahusac clarinets provides crucial evidence about the design and development of the earliest English instruments, and gives us points for comparison with English clarinets made later in the eighteenth century. Dating of the English clarinets has been refined by referring to the date of the maker's clarinet advertisements; a comparison of John Hale's 'IH' stamp placed under the keys; and the maker's purchases of insurance from the Sun Fire Office in London, indicating the beginning or an early part of their production. Five additional English makers who made or advertised clarinets during the 1760s and 1770s are listed before the conclusion of the article. This analysis sheds some light on the evolution of the English clarinet during the 1760s and 1770s.

The Gamba Oboe – a Forgotten Organ Stop Rediscovered: Owen Woods

Abstract: Labial reeds are flue pipes scaled and voiced to imitate reed tone. They were common in the late nineteenth and early twentieth centuries, especially for small organs in remote locations, where tuning and maintenance was expensive or difficult. This paper gives a brief overview of labial reeds and investigates the 'Gamba Oboe', a labial reed imitating the Oboe invented by Harrison & Harrison Ltd (H&H) of Durham. The stop is placed in context with other similar stops of the period through examining the scaling and voicing characteristics. The H&H instruments featuring the Gamba Oboe are then used to chart the changing tonal ideas of the firm and to explain the eventual demise of the stop. An Appendix at the conclusion of the article provides a summary of organs containing the Gamba Oboe.