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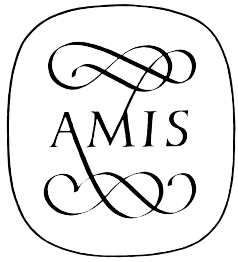

The Beginnings of the Violin Bow: Distinctive Capped Specimens for a New Instrument

Daniel Crespo Alcarria

The birth of the violin was the natural result of the evolution of other instruments such as the viola *da braccio*, its more direct antecessor.[1] Even though some theories place the violin's appearance at the end of the fifteenth century, it is not until the sixteenth century that the violin began to be named in the archives of different courts: in the French court during the reign of Francis I (1516–47) or in the court of England from 1540.

Among the first artisans involved in its creation, we find Giambattista Rolini (active in Pesaro in 1471) and Pietro Dardelli (in Mantua around 1500). It was, however, Andrea Amati from Cremona (ca. 1505–77) who established its standard form, in the opinion of most authorities. Amati's violins are the oldest ones preserved. The first two, dating from 1542 and 1546, reportedly had only three strings until the nineteenth century, when fourth strings were added to each. The third violin (with four strings) is dated from 1564 and is now kept in the Ashmolean Museum in Oxford.[2] These exemplars by Amati document an early state of the violin, and thanks to them we can trace the evolution of this instrument in an empirical way.

The bows used with these violins did not have the same fortune. In the written history of the violin, the sixteenth century was the probably the darkest period, and our knowledge has been restricted to iconographic evidence. As Walter Kolneder explains: "the oldest conserved bows date back to the beginning of the seventeenth century; their pictorial representation and some few references in written works are our only and few sources of information."[3] In addition, David Boyden mentions that "we depend completely on the iconography for the knowledge of the bow in

1. Allan W. Atlas, *La Música del Renacimiento* (Madrid: Akal, 2002), 211. Robin Stowell, ed., *The Cambridge Companion to the Violin* (Cambridge: University Press, 1992), 6.

2. Sheila Nelson, *The Violin and Viola: History, Structure, Techniques* (London: Benn, 1972; *R* New York, 2003), 11.

3. Walter Kolneder, *The Amadeus Book of the Violin* (Pompton Plains, NJ: Amadeus Press, 2003), 44.

the sixteenth century."[4] Sheila Nelson indicates: "we do not have the bows from the sixteenth century, just paintings."[5]

According to Boyden, there is no reason to think that the bow used with the first violins differed significantly from its predecessors.[6] We find this statement expanded when Robin Stowell[7] and Kolneder[8] concur that the earliest violinists and viola players adopted these types of bows for their instruments due to their familiarity with other existing instruments. Finally, Carel van Leeuwen shares this hypothesis and asks: "for which string instrument was this bow intended?"[9]

Amid a lack of documentary evidence and little fresh debate regarding the nature and existence of renaissance bows, previously neglected evidence of a distinctive capped model of violin bow has emerged, giving rise to the following discussion.

The Need for Iconographic Material for the Study of Sixteenth-Century Bows

Were the earliest violin bows similar to bows used in playing ancestors of the violin? Through analysis of relevant paintings from the era, an answer to this question can be offered. A few early writers have followed this path, although studies of the bow are limited in number compared to studies dedicated to the violin, according to Joseph Roda.[10] My own doctoral thesis uses the analysis of pictorial material as a primary source.[11]

An example of such praxis in the nineteenth century is the work of Henry Saint-George, a pioneer when it comes to this topic. Saint-George

4. David Boyden, *The History of Violin Playing from its Origins to 1761* (Oxford: Clarendon Press, 1990), 45.

5. Nelson, *The Violin and Viola*, 9.

6. Boyden, *The History of Violin Playing*, 45.

7. Robin Stowell, *The Early Violin and Viola: A Practical Guide* (Cambridge: University Press, 2001), 38.

8. Kolneder, *The Amadeus Book of the Violin*, 230.

9. Carel van Leeuwen, *The Carel van Leeuwen Boomkamp Collection of Musical Instruments* (Amsterdam: Frits Knuf, 1971), 55.

10. Joseph Roda, *Bows for Musical Instruments of the Violin Family* (Chicago: William Lewis & Son, 1959), 39–40.

11. Daniel Crespo Alcarria, "La Evolución del Arco del Violín a través de la Iconografía Pictórica" (University of Granada, 2017).

made some drawings of sixteenth-century bows based on paintings by artists contemporary with Andrea Amati. After the analysis of this representations, he considered that it is "quite out of the question to suppose that such bows were used in that era,"[12] since the bows were archaic. He also wrote that "even the most reliable drawings and sculptures do not show by any means a gradual improvement in the shape of the bow."[13]

In the twentieth century, Roda deemed these bows seen in the canvases to be "very primitive."[14] Additionally, William Retford, in the third of the works (by date) dedicated to this topic, limits himself to say: "there is nothing about its artisan practice in its beginnings."[15]

With regard to the bow's evolution, none of the treatises from the end of the nineteenth century until the middle of the twentieth century adds anything new to the comments previously published by François-Joseph Fétis, who showed in a table the successive improvements made in the seventeenth and eighteenth centuries,[16] starting with the so called "Mersenne bow" corresponding to 1620. This shows the lack of attention toward bows from the renaissance period. Fétis based his investigation on "the drawings from some manuscripts and in some architectural monuments."[17] Fétis did not clearly identify his sources; in regard to the sixteenth century, he only explains that the bow began being improved: "we can see a round bow and in others a pentagonal one, making it much smaller as it got closer to the tip and then enormously elongated."[18]

One of the most relevant contributions to this topic can be found with David Boyden, from whose work we can obtain the most significant information.[19] After acknowledging the renaissance bows present in iconographic images,[20] he asserts that no such bows survive. He warns of a form and size variation in the images, keeping in essence the same character-

12. Henry Saint-George, *The Bow, Its History, Manufacture and Use* (London, 1895; *R* London: Orpheus Publications Ltd., 1998), 22.

13. Saint-George, *The Bow, Its History, Manufacture and Use*, 17.

14. Roda, *Bows for Musical Instruments of the Violin Family*, 42.

15. William Retford, *Bows and Bow Makers* (London: The Strad, 1964), 15.

16. Fétis, *Antoine Stradivari, luthier célèbre* (Paris: Vuillaume, 1856; *R* 2005), 104.

17. Ibid., 103.

18. Ibid., 103.

19. Boyden, *The History of Violin Playing from its Origins to 1761*, 45–46.

20. Other authors suggest, however, that the aspect change is not due to the "carelessness of the artists." See Kolneder, *The Amadeus Book of the Violin*, 230.

istics as archers' hunting bows: a curved stick, at the ends of which the hair is attached and the tension regulated by a notch or wedge.[21] Boyden clarified that the extensive curvature was countered in the bottom end by a horn-shaped piece of metal inserted, to keep the hair separated from the stick. A standard solution was not found until the seventeenth century, when an element performed a similar function in the top end or tip of the bow. He adds that a predecessor of this design can be seen in paintings prior to 1650.[22]

John Dilworth corroborates this through a review of the same type of sources: despite some variations, the bow was always represented as a simple curved stick, where the hair was fixed "in any possible way" on both extremes, being kept always in tension. It was not until the sixteenth century that the curvature became smooth due to the use of a frog.[23] Stowell also notes the diversity in morphologies, coinciding in the convexity of the stick and in the elementary tying up of the horsehair, pointing out that as a whole they are short bows.[24] Nelson states that bows from this era haven't endured precisely because they were very simple, easily replaceable when improved versions arrived. She concurs with previous authors in finding that the early models resembled hunting bows.[25]

Knowledge of this first stage in the history of violin bow demands the study of the available pictorial material,[26] a praxis that, even today, some experts consider lacking in academic prestige.[27] Even in the view of a proponent, Thomas F. Heck, "the adequate study of the historic material is based in resources and methodologies with a wide range of other human

21. The possible evolutionary process from the hunting bow to the musical bow is a theory in the prehistory of the violin explored by Henry Balfour in *The Natural History of the Musical Bow* (Oxford: Clarendon Press, 1899).

22. Boyden, *The History of Violin Playing*, 114. This date is quite late, given the demonstrable earlier occurrence of such bows. For example, the one that appears in *Christ Surrounded by Angels* (fig. 22) by Hans Memling is datable to the end of the fifteenth century. In the bow, one can see perfectly a tip that allows the hairs to be detached from the stick and, at the same time, achieves a greater straightness and therefore a better handling.

23. Stowell, ed., *The Cambridge Companion to the Violin*, 24.

24. Stowell, *The Early Violin and Viola: A Practical Guide*, 38.

25. Nelson, *The Violin and Viola: History, Structure, Techniques*, 9.

26. Werner Bachmann, *The Origins of Bowing* (London: Oxford University Press, 1969), 3.

27. Tim Shephard and Anne Leonard, eds., *The Routledge Companion to Music and Visual Culture* (London: Taylor & Francis, 2013).

studies aside from the history of art,"[28] because "the images rarely inform us with the construction details like materials used, the thickness of the wood used or the tension of the strings."[29] This makes the evaluation of any visual image require its own complement of interdisciplinary study to give more scientific rigor to the conclusions obtained.

Surviving Bows from the Sixteenth Century

None of the books cited so far attests the possible existence of renaissance models that have survived the passing of time. This makes it necessary to pursue relevant inquiries from the catalogs of the main collections of available instruments.[30]

In 1998, Rudolf Hopfner[31] conducted an inventory of bows for string instruments displayed in the Kunsthistorisches Museum in Vienna (KHM). The collection (Sammlung Alte Musikinstrumenten = SAM) contains two examples from the sixteenth century, of Italian origin. Both have convex sticks of palm wood, with total lengths of 645 mm (SAM 81) and 525 mm (SAM 84) (figs. 1 and 2).

At the top end, the stick tapers thicker, and the hair is looped around a small conical extension. This evokes simpler models, such as the *Zulú* bow described by Henry Balfour[32] (fig. 3). We can suspect that in these Italian models a missing component originally covered the small elevation; as Robert Seletsky observed, "its caps have been lost."[33] In his commentary, Hopfner considers it possible that at some point in their history the hair was held in the bottom end similarly to the top end.[34] This would involve the addition of clip-in or slot-notch frogs to regulate the tension, and

28. Thomas F. Heck, *Picturing Performance: The Iconography of the Performing Arts in Concept and Practice* (Rochester: University of Rochester Press, 1999), 84.

29. Stowell, *The Early Violin and Viola: A Practical Guide*, 27.

30. Martin Cullingford, "The World's Greatest Musical Instrument Collections," *Gramophone* (4 September 2013). http://www.gramophone.co.uk/blog/the-gramophone-blog/the-worlds-greatest-musical-instrument-collections

31. Rudolf Hopfner, *Streichbogen* (Vienna: Kunsthistorischesmuseum and Hans Schneider, 1998)

32. Balfour, *The Natural History of the Musical Bow*, 15.

33. Robert Seletsky, "New Light on the Old Bow," *Early Music* 32, no.2 (2004): 286.

34. Hopfner, *Streichbogen*, 48.

FIGURE 1. Bow SAM 81 from Kunsthistorischesmuseum, Vienna (detail; the white peg is part of the display, not of the bow). Photo courtesy of M. Ángeles Martín Vera.

FIGURE 2. Bow SAM 84 from Kunsthistorischesmuseum, Vienna (detail). Photo courtesy of M. Ángeles Martín Vera.

FIGURE 3. "Zulú Bow" from Balfour, *The Natural History of the Musical Bow*, fig. 11 (detail).

FIGURE 4. Bow SAM 84 from Kunsthistorischesmuseum, Vienna (frog detail). Photo courtesy of M. Ángeles Martín Vera.

FIGURE 5. Bow 1983-21b, The Danish Music Museum – Musikhistorisk Museum and The Carl Claudius Collection. Photo: Kamilla Hjortkjær.

FIGURE 6. Bow 1983-21b, The Danish Music Museum – Musikhistorisk Museum and The Carl Claudius Collection. Photo: Kamilla Hjortkjær.

a posteriori modification (fig. 4). Even when contemplating them within their exhibition case, one can see that the workmanship of these bows is far from being rough or carefree; to the contrary, they are made "in a very careful way," as Montagu noted.[35] This contradicts Fétis, who highlighted the preference of builders towards instruments rather than bows.[36] It is only logical, however, to assume that bows would receive the same consideration from makers, because they are needed in order to play the violins.

In seeking some examples that include the cap at the bow tip (lost from the bows exhibited in Vienna), we encounter three bows held in the National Museum of Denmark (*Musikmuseet*).[37] These three complete specimens share with the ones in Vienna the same swelling of the stick before the cap at the tip and the clip-in frog mechanism, but differ in that the hair is not tied up, but rather held in an ornamental carving above the cap. This gives the impression that they are secured by tension: through a wooden cleat placed in the stick mortise, as it is done in today's bows. As a bottom finish (fig. 5), a small screw appears, probably with ornamental purpose (both the cap and the screw are of ivory). Here are the three models:

- The one identified with the "1983-21b" number (fig. 6), is dated 1600–1800. The head shape is similar to the pike's head common on bows of that era. The screw is of the same material as this tip. The frog is currently lost. This example has a total length of 480 mm.
- The one identified with the "1983-21c" number (fig. 7), is also dated 1600–1800. As a distinctive feature, we can see that the cap has a spiral form. In addition, the frog, which is very well conserved, is of the same design as the cap.
- The third model, numbered "1983-21e" (fig. 8), differs from the others in its slightly small size (395 mm). Like the first model, its

35. Jeremy Montagu, "Musical Instruments in Hans Memling´s Paintings," *Early Music* 35, no.4 (2007), 512. Montagu's analysis of pictorial works prior to this period illustrates bows that were direct ancestors to the ones used for the early violin.

36. Fétis, *Antoine Stradivari*, 103.

37. In correspondence, Marie Martens, curator of the National Museum of Denmark, mentioned that there was little information about the bows, including the type of wood. In regard to the information that Seletsky provides about these in his article, Martens clarified: "We found four early short bows with an ornamental cap made of ivory or bones in the museum exhibits, but none of them from Claudius," although Seletsky in his article referred to an intact bow in the Claudius Museum of Copenhagen.

FIGURE 7. Bow 1983-21c, The Danish Music Museum – Musikhistorisk Museum and The Carl Claudius Collection. Photo: Kamilla Hjortkjær.

FIGURE 8. Bow 1983-21e, The Danish Music Museum – Musikhistorisk Museum and The Carl Claudius Collection. Photo: Kamilla Hjortkjær.

FIGURE 9. Circle of Willem Pietersz Buytewech, *Musical Company in an Interior* (detail). https://www.sothebys.com/en/auctions/ecatalogue/2012/important-old-master-paintings-n08825/lot.173.html.

head resembles a pike's head. The frog has been preserved very well, like the second example.

Analysis of the Pictorial Works: The Historical Context

These five bows from the sixteenth century (two of them surviving only in an incomplete state) are the only tangible evidence of this early capped type. These bows used the finial cap during an experimental period prior to the appearance of the standard Tourte model at the end of the eighteenth century. Through analysis of the iconography and the comparison of one image with another, this article will demonstrate the customs of this artisan practice linked to the early history of the violin.

The violin was born in the sixteenth century, but the iconography of that century mostly shows earlier instruments like the rebec or lira. Early iconographic evidence of the violin comes mainly from artists of the seventeenth century. In paintings of the Dutch Golden Age, genre scenes are a distinctive feature, documenting the early acceptance of the violin within different strata of society. Examples can be seen in the *Musical Company* by Willem Pietersz Buytewech, in *Family Portrait* by Jan Miense Molenaer, and in *Young Flute Player* and *The Happy Couple*, both by Judith Leyster.

Pursuing a taste for realism inherited from primitive Flemish painting, The Haarlem artists of the time frequently sought to capture a moment of activity. This can be seen in *Daniel van Aken Playing the Violin* and *Fisherman Playing the Violin*, two paintings by Frans Hals, where one can see the intention to create the sensation of a fleeting moment. Musical subjects are particularly appropriate to convey such passing moments, because music is perhaps the most transitory of the arts, and as such, the player "could not be maintained as an indefinite pose."[38]

Other creations arise within the Flanders School, where collaborations between independent great masters stand out, as well as a tendency to represent historical, religious, or mythological themes, as in *Le Banquet des Dieux*, an oil painting by Jan Brueghel de Velours and Hendrick van Balen, which combines both characteristics. Within this same school, Brueghel also followed the Renaissance tradition of depicting *Wunderkammern* (plu-

38. Christopher Atkins, *The Signature Style of Frans Hals* (Amsterdam: Amsterdam University Press, 2012), 33–36.

ral), where nobles or bourgeois exhibited their collections of all kinds. Thus in *Hearing*, produced in collaboration with Peter Paul Rubens, musical instruments of the moment are exhibited. Marck Eemans calls these representations "*gabinete d'amateur*," a Flemish genre born in Antwerp in the seventeenth century.[39] Another artist of Flemish origin and with similar themes is Nicolas Regnier, considered one of the first to introduce Caravaggio's chiaroscuro techniques in Flanders. In his *Divine Inspiration of Music*, objects are imbued with the melodramatic chiaroscuro so typical of the Milanese.

Musical Company in an Interior, circle of Willem Pieterz Buytewech, beginning of the seventeenth century (fig. 9). In this oil on canvas, we can identify a cap in the shape of a poppy, probably made of ivory or bone, its lighter color contrasting with the rest of the bow. Saint-George was already wondering if the violinists realize "how many remote parts of the earth have contributed to this little magic wand. Wood from the west, ivory from the east . . . .[40] In the image, the hair emerges from under the cap; these would earlier have been attached to the small knob or protrusion embedded in it, as seen in the KHM models. This would cover the tie to beautify the tip of the bow.

Le Banquet des Dieux, Hendrick van Balen and Jan Brueghel de Velours, ca. 1606–1610, Musée des Beaux-arts d'Angers (fig. 10). The bow is only a minor ingredient in this large oil on copper painting, and therefore we cannot clearly capture the details that interest us. However, it is enough to point out that it is a relatively sophisticated specimen, contrary to the general opinion of authors quoted above, who spoke of rudimentary bows. The tip is also made of another material, bone or ivory, with the hair emerging from the middle.

Hearing, Jan Brueghel the Elder and Peter Paul Rubens, 1617–18, Prado Museum (fig. 11).[41] In the first third of the seventeenth century,

39. Marck Eemans, *Breughel de Velours* (Brussels: Éditions Meddens, 1964), 77.

40. Saint-George, *The Bow, Its History, Manufacture and Use*, 77.

41. A common practice in the work of artists is the observation of real objects for the elaboration of their works; in this way the fidelity of the object is captured to greater effect. In *Hearing*, this practice is clear from the inclusion of the left side of a keyboard bearing Ruckers's Antwerp signature. The degree of detail reflected in the rest of the instruments implies the use of real models; this presumably extends to the bows depicted.

FIGURE 10. Hendrick van Balen and Jan Brueghel de Velours, *Le Banquet des Dieux* (detail). Museum of Fine Arts of Angers.

FIGURE 11. Jan Brueghel the Elder and Rubens, *Hearing* (detail). Prado Museum, inventory number P001395.

FIGURE 12. Jan Brueghel the Elder and Rubens, *Hearing* (detail). Prado Museum. inventory number P001395.

a standard bow model was not yet developed. The diversity of styles is well illustrated in this work because different endings can be recognized: the termination with a cap (as in the bow on the stool accompanying the violin) and the termination without a cap (in this case carved in the shape of "pike's head," which was the most widespread configuration). Focusing on the first case, the hair emerges from under the cap as in the example in fig. 9, but unlike that one, the head plate seems to be made of wood similar to the stick. The straightness of it, added to a kind of curved frog, of a different color from the stick, makes us think that the maker used the clip-in mechanism to regulate the tension. To the right of the violin, perched on the floor, there is a lira da braccio. Next to this, another bow is represented (fig. 12), in which it is better appreciated how the head that crowns the upper end of the stick has a dual purpose: to cover the grip of the hair to this section and to serve as a decorative element.

The Coronation of the Virgin, Guido Reni, 1626, Museum of Fine Arts, Bayonne (fig. 13). Apart from the example of the violin in worldly life, as reflected in Dutch genre scenes, we find other, more spiritual pictorial concepts. Guido Reni, an exponent of the Bolognese School, shows in his works a Classicist predilection for mythological and biblical subjects, which also help with our investigation.

At the lower end of the bow, just below the angel's hand in the lower left corner of this oil on panel, the stick inserts into a dark wooden cylinder, to which the frog is joined. The cylinder is in effect a deep thimble, under which the mortise is hidden, making the design more aesthetically pleasing. At the lower end, a button or screw of a different material completes the bow, giving the impression of careful manufacture.

Fisherman Playing the Violin, attributed to Frans Hals, ca. 1630, Thyssen-Bornemisza Museum (fig. 14). ***Daniel van Aken Playing the Violin***, Frans Hals, ca. 1640, Nationalmuseum Stockholm (fig. 15). In the first work (oil on canvas), this cheerful and carefree fisherman holds a bow in which the different color given to the finish at its upper end implies the choice of a contrasting material for its elaboration, the same typology as the previous ones. The shape corresponds to the "pike's head," resembling the shape shown in fig. 8 (1983-21e, *Musikmuseet* in

Copenhagen). Judging by the number of painters who captured it, we can deduce that it had become one of the designs preferred by artisan bow makers. The same artist, when portraying *Daniel van Aken playing the Violin*, shows a bow (without finial cap on this occasion), whose stick ends in this way, which we can also call the "pike's head," now inverted.

Self-Portrait with Family Members, Jan Miense Molenaer, ca. 1636, Frans Hals Museum in Haarlem, Netherlands (fig. 16). The artist again shows a violin bow with the same peculiar cap on the top of the stick, with the hair beginning below the cap, so it must be a model like the one in the Vienna Museum. Its conical shape and overall appearance are similar to the Buytewech and the Reni, and the bow's cap matches the button at the bottom of the stick. In this work, the degree of detail with which the instruments are painted allows us to clearly appreciate the construction quality of the bow,[42] at odds with the dismissive comment of Fétis, previously mentioned, on the unremarkable quality of bows prior to 1730: "It was around 1730 that the composer and violinist Tartini made some improvements to the bows."[43]

Young Flute Player, Judith Leyster, ca. 1630, *Nationalmuseum*, Stockholm (fig. 17). Here is one of the best examples of the use of caps in the construction of the tips of violin bows. In this bow, the cap used for the upper part of the stick is clearly seen, in bone or ivory, as in the previous cases. The wood is inserted into the thimble-like cap, and the hair emerges through a slot in the cap, as in the Frans Hals bow or in fig. 8 (1983-21b, from the Copenhagen Museum). Thus this section could be detachable, allowing the bow hair to be dismounted from the head. A frog, made of what seems the same material, must be of "clip-in" design, thus regulating the tension of the hairs. Again, the great detail with which the artist has depicted the violin and recorder allows us to appreciate the construction quality of the bow.

42. The quality and detail seen in the instruments that appear in this work comport with the long tradition of representing musical themes in the Dutch Golden Age. It is also notable that a violin was among the belongings registered after Molenaer's death, although there was no specific mention of a bow. In this work, Molenaer portrayed himself together with members of his family as a group of musicians, since family celebrations commonly implied some musical act like singing popular songs.

43. Fétis, *Antoine Stradivari, luthier célèbre*, 103–04.

FIGURE 13. Guido Reni, *The Coronation of the Virgin* (detail). © Museum of Fine Arts, Bayonne / cliché A. Vaquero.

FIGURE 14. Frans Hals, *Fisherman Playing the Violin* (detail). Thyssen-Bornemisza Museum, inventory number 178 (1930.30).

FIGURE 15. Frans Hals, *Daniel van Aken Playing the Violin* (detail). Sweden National Museum. inventory number NM 1567.

FIGURE 16. Jan Miense Molenaer, *Family Portrait* (detail). Frans Hals Museum.

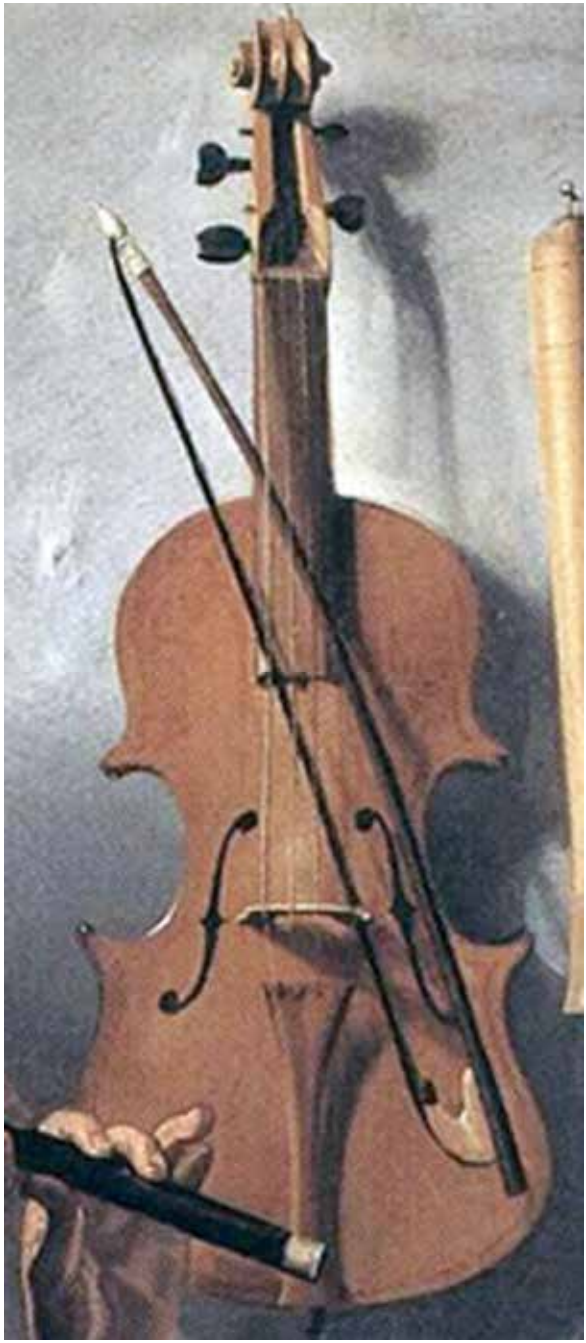

FIGURE 17. Judith Leyster, *Young Flute Player* (detail). Sweden National Museum, inventory number NM 1120.

FIGURE 18. Judith Leyster, *The Happy Couple* (detail). Louvre Museum, inventory number RF 2131.

FIGURE 19. Nicolas Regnier, *Divine Inspiration of Music* (detail). Los Angeles County Museum.

FIGURE 20. Hairs at the head of the bow are fastened with a wedge. Author's photograph.

The Happy Couple, Judith Leyster, 1630, Louvre Museum (fig. 18). Although the image is not very clear, it seems that the hairs come out from the tip, as in fig. 17, in turn recalling those of the Copenhagen specimens. In the sharpness of the bow tip, it is reminiscent of the example of Frans Hals.

Divine Inspiration, Nicolas Regnier, ca. 1640, Los Angeles County Museum of Art (fig. 19). The pointed shape of the tip appears to be of another material, and the hair emerges from the cap. In this last example, it is clear that the hairs run over the frog as in the KHM bows (fig. 4); it must be a similar system of tension by means of "clip-in."

Conclusions

A central idea in this article contradicts what is written in the main works on the history of the violin bow. Contrary to the claims of several specialists, it is indeed possible to find surviving examples of bows from the Renaissance. Investigations led me to the KHM in Vienna and the Musikmuseet in Copenhagen, where one can find specimens from the sixteenth century, which may be the oldest preserved violin bows. They are tangible evidence, and a starting point to document this period. However, some specimens are incomplete or modified from their original state, so that it has been necessary to analyze iconographic images in search of plausible suggestions of the missing parts. The broadly dispersed geographical origins of the respective paintings confirm a widespread use of bows with an ornamental cap on the head, accompanying the violin from its very birth.

Given the morphological diversity seen in this space of time, we infer that the bow was in a phase of experimentation. During this period of development, some of the earliest violinists would also be using bows intended for other established instruments. A unique and distinguishing feature is the finial cap on the tip of the bow, a peculiarity not represented in paintings later than the mid-seventeenth century. Investigating the direct antecedents of the violin, we see different ways of securing the bow hairs in the fifteenth-century iconography: tying them directly to the stick,[44] or ap-

44. *Musical Angel*, Melozzo da Forli, 1472–74, Museum Vatican. https://catalogo.mu-

parently tied under a small spherical wooden knob[45] which, if attached to the bow, would fulfill a similar function (if not the same design) as the cap described here. Even acknowledging this antecedent from the fifteenth century, the bow with distinctive cap can be considered a specific model, created for use with the sixteenth-century violin.

There would be two ways to complete the bow at its upper end: (1) one in which the hair, previously tied to the stick, exits the cap through the same socket drilled for insertion of the bow stick, as in the bows of the KHM in Vienna, which would make it possible to loosen the hairs, or (2) something later in time, in which the hair exits through an additional slot, carved into the cap itself, probably being secured by an inserted cleat (fig. 20), such as the examples from the Copenhagen Musikmuseet. In the first design, the function of the cap is purely decorative, since it is used to hide the knotting of the hairs to the stick. In the second design, in addition to the beautifying the tip of the bow, the rectangular slot in the cap flattens the hairs into the form of a ribbon, thus providing the player with a broader usable sliding surface. This design is more in line with later models, in which the "pike's head" is sculpted in the wood of the stick itself, so this type of bow presents an improvement in terms of weight distribution and definition of the center of gravity. Boyden gives an explanation:

> Today, we know from surviving specimens that they are superior in some respects to modern bows when used to perform music from their own time. . . . The balance point is lower towards the performer's hand . . . [and] produces a beautiful "*non legato*" in the middle . . . , clearer for repeated notes, arpeggiated chords, and speedy string changes.[46]

Regarding the specimens kept at the Vienna KHM, Hopfner reports a possible modification in the bow SAM 84. It involves the incorporation

seivaticani.va/index.php/Detail/objects/MV.40269.14.5 . *Santa Cecilia*, Raffaello Sancio, 1514, National Gallery of Bologna. https://www.pinacotecabologna.beniculturali.it/it/content_page/item/291-estasi-di-santa-cecilia-fra-i-santi-paolo-giovanni-evangelista-agostino-e-maria-maddalena

45. *Conversazion*, Giovanni Bellini, 1505, Church of San Zaccaria (Venice). https://es.m.wikipedia.org/wiki/Archivo:Pala_di_San_Zaccaria_(Venezia).jpg. *Hearing*, Jan Brueghel the Elder and Rubens, 1617–18. Prado Museum. https://www.museodelprado.es/coleccion/obra-de-arte/el-oido/074adedf-40f0-476f-b132-fe450e71e0f3. Both bows are seen next to a lira da braccio.

46. Boyden, David, "The Violin Bow in the Eighteenth Century," *Early Music* 8, no.2 (1980): 203.

of a clip-in frog at the lower end, through whose channel the hairs run from the fixed point of attachment grouped in the form of a ribbon, and thanks to this, a more stable tension is achieved. It was not ruled out for Kolneder that these same bows were previously tensioned by some type of pin or wedge[47] (fig. 21), which the mechanism of the clip-in frog could have replaced, assuming a small evolution. (Hopfner omits this possibility of the pin in his detailed analysis of these bows.) Both the Renaissance pictorial works analyzed and the surviving bows of the period show us that the "clip-in" would become the most used system for regulating tension.

Jeremy Montagu cites the work *Christ Surrounded by Musician Angels* by Hans Memling (fig. 22) to refer to the bow that accompanies the vielle, another direct antecedent of the violin. The small wedge that can be seen at the upper end leads him to consider that it could have the same purpose as the clip-in frog, since "there is no indication of how the hair is attached to the stick or how it is tightened."[48] The possibility that the tension was regulated at the upper end would relate this bow to those that have the cap at their termination, recalling the comment made by Hopfner about the KHM models. Before being modified (as at least one of the two was), both ends were similar, so it would be feasible to tension them equally from each of the ends. In still other models, the hair tension was regulated manually, something common in the bows that were held with the palm up as seen in a bow depicted by Gaudenzio Ferrari[49] (the position of the thumb between the hairs and the stick, gives the feeling that the tension is regulated with this finger). The sixteenth century was a period of resourceful experimentation in terms of design and development of bows.

The finial caps seen in the paintings of the early seventeenth century make it possible to deduce that the surviving specimens from the sixteenth century kept in the KHM are incomplete: the missing caps would serve to cover the mooring of the hair that would otherwise be exposed. Seletsky considers that they were used in an attempt to solve the problems of balancing the bow due to the rapid development of the technique around 1625.[50] However, chronologically speaking, this characteristic cap will

47. Kolneder, *The Amadeus Book of the Violin*, 231–32.

48. Montagu, "Musical Instruments in Hans Memling's Paintings," 512.

49. Gaudenzio Ferrari, *Madonna Degli Aranci*, in the Church of San Cristoforo in Vercelli, Italy. See https://www.piemonteorientale.it/luoghi-e-monumenti/vercelli-e-dintorni/gli-affreschi-di-san-cristoforo-a-vercelli/la-pala-della-madonna-degli-aranci/

50. Seletsky, "New Light on the Old Bow," 286.

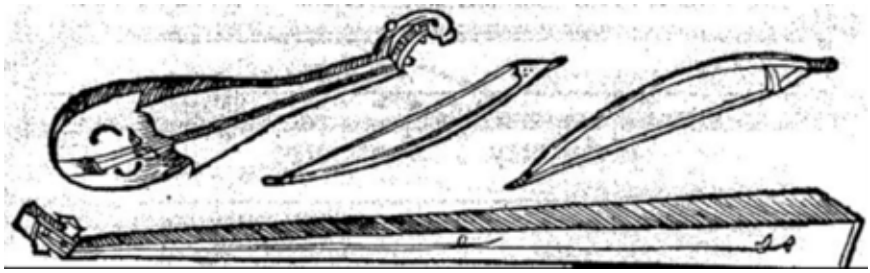

FIGURE 21. Sebastian Virdung, "Trumscheit und clein Geigen," from Virdung, *Musica Getutscht* (Basel, 1511; detail). In the bow at right, a wedge adds tension to the hairs.

FIGURE 22. Hans Memling, *Christ Surrounded by Musician Angels* (detail). Royal Museum of Fine Arts, Antwerp, inventory number 778-780 Photo courtesy of Ángel Crespo Alcarria. At the upper end of the bow, a small wedge adds tension to the hairs.

cease to be seen in iconography from the mid-seventeenth century (which makes difficult to support this statement), appearing more frequently as a purely ornamental resource, like the button to the end of the stick.

The sixteenth century can be considered as a period in which both the bow and violin were under continuous experimentation. Thanks to iconographic images, we can appreciate the diversity of forms of the time. The first pictorial representations of the violin are found in the frescoes in the *Hall of the Treasure* in the Palazzo Costabili in Ferrara (also known as the *Palazzo di Ludovico Il Moro*), decorated between 1503 and 1506 by Benvenuto Tisi da Garofalo,[51] and in the fresco *La Madonna Degli Aranci* from the most important Renaissance painter of Piedmont, Gaudenzio Ferrari, in the Church of San Cristoforo located in Vercelli. In the Garofalo painting, the bow that accompanies the violin is very short (around 40 cm)[52]

51. It is no coincidence one of the first pictorial representations of a violin is found in the Palazzo di Ludovico "Il Moro" Sforza, a known patron for artists of all kinds. It was said that his court was "full of men of all trades and talents, especially musicians and poets." See Denys Hay, *La Época del Renacimiento* (Barcelona: Labor, 1972), 69. In addition, Sforza had a music school in Milan. Similarly, the House of Este in Ferrara was also known for patronage of the arts.

52. Daniel Crespo Alcarria, "La Evolución del Arco del Violín," 88–90.

compared to this one, a thick arched cylinder with black hairs; altogether, it gives the feeling of a primitive stage. The Ferrari bow measures about 45 cm,[53] drawing a curved line from end to end that ends in a rounded point; the white hair is merely tied. This bow shape is reminiscent of the second type that Saint-George drew for the sixteenth century.

By the first third of the seventeenth century, although a standardized bow did not yet exist, a model began to be reiterated in iconographic images. Its characteristics are reflected in the work *Vanitas Still Life* by Pieter Claesz, from 1628. These bows are around 50 cm in length[54] and mainly use black hair, which runs in the form of a ribbon through the channel of the clip-in frog used to tighten them. The rectilinear stick is quite thick, and its tip—pointing downwards or drawing a pronounced curve at its top—is almost a defining feature. As with the capped bows, they are completed with a button at the bottom, creating a balanced aesthetic effect.

This article has tried to show that several assertions about early violin bows, found in major works about the violin's history and evolution, are inaccurate or unfounded. Of surpassing importance is that several sixteenth century bows do indeed survive, even if some have deteriorated due to the passage of time and later modifications. Secondly, regarding the supposed lack of attention that the bows received from luthiers of the time, it turns out to be the opposite: their appearance is as careful as that of the instruments they accompany, and their assured designs and construction qualities belie the dismissive comments that have been spread by authoritative writers. Some are incomplete specimens, whose missing components might have resembled those seen in the paintings of the time. Finial caps become the most characteristic and distinctive element of these bows, created specifically for the newly invented violin. Despite the small number of physical copies that remain in museum collections, a large number of iconographic images are available for analysis. The clear indication of these images is that the bow with ornamental finial cap was a frequent companion of the sixteenth-century violin.

53. Ibid.

54. Ibid. See https://commons.wikimedia.org/wiki/File:Pieter_Claesz._-_Vanitas_with_Violin_and_Glass_Ball_-_WGA04974.jpg