A STUDY OF STYLE AND INFLUENCE IN THE EARLY SCHOOLS OF VIOLIN MAKING CIRCA 1540 TO CIRCA 1800

THESIS

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Chapter I of this thesis details contemporary historical views on the origins of the violin and its terminology. Chapters II through VI study the methodologies of makers from Italy, the Germanic Countries, the Low Countries, France, and England, and highlights the aspects of these methodologies that show influence from one maker to another. Chapter VII deals with matters of imitation, copying, violin forgery and the differences between these categories. Chapter VIII presents a discussion of the manner in which various violin experts identify the maker of a violin. It briefly discusses a new movement that questions the current methods of authentication, proposing that the dual role of "expert/dealer" does not lend itself to sufficient objectivity. The conclusion suggests that dealers, experts, curators, and musicologists alike must return to placing the first emphasis on the tradition of the craft rather than on the individual maker.
TABLE OF CONTENTS

LIST OF FIGURES ........................................ viii
LIST OF TABLES ........................................... x

Chapter

I. INTRODUCTION ........................................... 1
   Problems in Descriptive Terminology ............ 3
   The Origin of the Violin ............................ 5
   Nomenclature ........................................ 7

II. ITALY .................................................. 14
   Cremona ............................................. 14
      Amati
      Stradivari
      Rugeri
      Guarneri
   Brescia ............................................... 46
      Gasparo da Salò
      Maggini
      Rogeri
   Venice ............................................... 53
      Goffriller
      Montagnana
      Gobetti
      Seraphin
   Milan ............................................... 57
      Grancino
      Alberti
      Guadagnini
      Landolfi
      Testore
   Naples ............................................... 63
      Gagliano
      Eberle
   Rome ............................................... 66
      Tecchler
   Mantua ............................................. 67
      Camilli
      Dall'aglio
   Bologna ............................................ 68
      Tononi

iv
III. THE GERMANIC COUNTRIES

Absam
   Stainer
   Albani
Mittenwald
   Klotz
   Hornsteiner
Füssen
Markneukirchen and Klingental
   Pfretzchner
   Edlinger
   Eberle
Vienna
   Kögl
   Thir
   Geissenhof

IV. THE LOW COUNTRIES

Amsterdam
   Jacobsz
   Rombouts
   Boumeester
Antwerp
   Hofmans
   van der Stagmeulen
The Eighteenth Century French Influence
Lefebvre
The Hague
   Cuypers
   Boussu

V. FRANCE

Mirecourt and Nancy
   Nicolas
   Aldric
Paris
   Pierray
   Bocquay
   Guersan
   Salomon
   Pique
   Lupot
   Gand

69
71
71
75
78
79
81
84
85
87
88
89
89
93
93
96
Bernardel

VI. ENGLAND .................................. 101

London ....................................... 101

Norman

Cross

Wamsley

Banks

Forster

Duke

Parker

Fendt

VII. INFLUENCE OR IMITATION ............. 108

VIII. PROBLEMS IN AUTHENTICATION ...... 117

Identification ................................ 117

Authentication .............................. 122

IX. CONCLUSION .............................. 124

APPENDICES

A. THE PARTS OF A VIOLIN ................. 158

B. EVOLUTION OF THE VIOLIN NECK ....... 159

C. SOUNDHOLE STYLES ....................... 160

D. QUARTER-CUT vs. SLAB-CUT WOOD ...... 161

E. THE MYTH OF "SECRET" VARNISH RECIPES . 162

BIBLIOGRAPHY .............................. 163
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Gaudenzio Ferrari, detail of the fresco (Santuario, Saronna)</td>
</tr>
<tr>
<td>2.</td>
<td>Gaudenzio Ferrari, detail of the fresco (Santuario, Saronna)</td>
</tr>
<tr>
<td>3.</td>
<td>Pierre Woeiriot, engraving of Kaspar Tieffenbrucker (Lyons), 1562</td>
</tr>
<tr>
<td>4.</td>
<td>Violin, unknown, 1575</td>
</tr>
<tr>
<td>5.</td>
<td>A. Violin, Gasparo da Salò, 16th century</td>
</tr>
<tr>
<td></td>
<td>B. Violin, Zuan Maria da Bressa, 16th century</td>
</tr>
<tr>
<td>6.</td>
<td>Violin, Andrea Amati, before 1577</td>
</tr>
<tr>
<td>7.</td>
<td>Violin, Andrea Amati, before 1577</td>
</tr>
<tr>
<td>8.</td>
<td>Violin, Andrea Amati, before 1577</td>
</tr>
<tr>
<td>9.</td>
<td>Violin, Antonio Stradivari, 1693</td>
</tr>
<tr>
<td>10.</td>
<td>Violin, Antonio Stradivari, 1693</td>
</tr>
<tr>
<td>11.</td>
<td>Soundhole and Corners of the &quot;Betts&quot; (1704) and the &quot;Muntz&quot; (1737)</td>
</tr>
<tr>
<td>12.</td>
<td>Violin, Giuseppe Guarneri del Gesù, 1742</td>
</tr>
<tr>
<td>13.</td>
<td>Violin, Giuseppe Guarneri del Gesù, 1742</td>
</tr>
<tr>
<td>14.</td>
<td>Viola, Gasparo da Salò, before 1689</td>
</tr>
<tr>
<td>15.</td>
<td>Viola, Gasparo da Salò, before 1689</td>
</tr>
<tr>
<td>16.</td>
<td>Viola, Gasparo da Salò, before 1689</td>
</tr>
<tr>
<td>17.</td>
<td>Violin, Giovanni Paolo Maggini, before 1632</td>
</tr>
<tr>
<td>18.</td>
<td>Violin, Giovanni Paolo Maggini, before 1632</td>
</tr>
<tr>
<td>19.</td>
<td>Violin, Giovanni Paolo Maggini, before 1632</td>
</tr>
</tbody>
</table>
20. Violin, Pietro Giacomo Rogeri, 1715 . . . . . . . 146
21. Violin, Pietro Giacomo Rogeri, 1715 . . . . . . . 147
22. Violin, Pietro Giacomo Rogeri, 1715 . . . . . . . 148
23. Violin, Sanctus Seraphin, 1742 . . . . . . . . . 149
24. Violin, Sanctus Seraphin, 1742 . . . . . . . . . 150
25. Violin, Hendrik Jacobsz, 1690 . . . . . . . . . 151
26. Violin, Hendrik Jacobsz, 1690 . . . . . . . . . 152
27. Violin, Dutch School (?), c1789 . . . . . . . . . 153
28. Violin, Dutch School (?), c1789 . . . . . . . . . 154
29. Violin, Jean-Baptiste Lefebvre, 1767 . . . . . . . 155
30. Violin, William Forster, Jnr., c1800 . . . . . . . 156
31. Violin, William Forster, Jnr., c1800 . . . . . . . 157

(Photographs courtesy of Bein and Fushi, Inc.; The Shrine to Music Museum, Vermillion, South Dakota; Stephen P. Alcorn, and Donald Farrell.)
LIST OF TABLES

1. Mortised linings typical of Cremonese instruments ........................................... 32
2. Comparative Dimensions of Stradivari and Maggini ........................................... 38
CHAPTER I
INTRODUCTION

Descriptive terminology is a difficult matter. For example, how does one use precise terms to describe elegance? Most such adjectives describe an aura, a feeling, or a general impression and by their very nature are imprecise. Text alone will never accurately portray the elegance of an Amati violin or the masculinity of one made by Guarneri del Gesu, but clarification can be achieved by observation and comparison. By studying the instrument itself, the desired precision can be more closely realized. When one actually sees a Stradivari instrument, the adjective "graceful" suddenly becomes precise. When one actually compares the Mantovan purfling such as that of Pietro Guarneri "da Mantova" with Brescian purfling, one suddenly comprehends the meaning of "delicate," and no other word will suffice. Description will always be a poor substitute for the close study of the instruments themselves, and as poor a substitute as they are, photographs have been included here to aid in this process. True understanding, however, of such terms as "Brescian solidity" comes only with years of handling Brescian violins, with studying hundreds of photographs, and with years of hands-on experience and dedication to the art and craft of violin making. Unfortunately,
the privilege to do so is afforded to relatively few. It is hoped that this thesis will provide at least a valid starting point in the study of violin making.

Considering the state of our present knowledge, it is pointless to attribute the "invention" of the violin to any single person or any single country. In reality, the violin was not an "invention," but the "final product of a long and variegated process of development, a combination or fusion of many patterns and elements contributed by a number of different bowed instruments."¹ The early history of the violin is baffling in nearly every respect. The earliest violins were a combination of features derived from other instruments that were popular around 1500.² Its general size and form came from the Renaissance fiddle while the lira da braccio contributed to its sonority and ease of performance (because of its middle bouts), and the rebec with its three strings and uniform tuning in fifths added to its simplicity. Contrary to popular belief, the viols were not ancestors of the violin "in any decisive aspect of construction, tuning or playing technique."³ These instruments continued in use for another

³ Ibid., 771.
century and a half after the origin of the violin, whereas the violin's ancestors, the rebec, lira da braccio, and Renaissance fiddle, gradually became obsolete.

Problems in Descriptive Terminology

Even in such a small matter as names it is difficult to precisely indicate a specific instrument. For example, viola did not originally indicate the "alto violin" of today, but was a general term used in reference to all string instruments or even occasionally to the Renaissance fiddle. When the Italians wanted to distinguish between instruments of the viol and violin families, they used viola with a qualifier as in viola da gamba (leg viola) which designated the viol family, or viola da braccio (arm viola) which was applied to the violin family. Individual members were further described by their voice parts. For instance, soprano di viola da braccio, is the soprano arm viola, or violin.

According to Boyden, the Italian diminutive form, violino, had appeared by 1538, but its French equivalent, violon, is found in France some fifteen years earlier. Boyden suggests that the French violon seems to have been derived by adding the augmentative "-one," signifying "large," to the stem, but that the Italian violino, suggesting a diminutive, was derived from the French. He explains this apparent
paradox by stating that the sixteenth-century Italian violone referred to viols as a class. Jambe de Fer, he writes, first called violins violone da braccio or simply violone. The French simply adopted the Italian violine da braccio since they already had a term commonly used for "viol" (viole), dropping da braccio as redundant and leaving violon(e) to mean violin. The assimilation into French probably came about because France was, at this time, the political master of northern Italy and since French was the official language of its provinces, it seemed necessary to gallicize the Italian name.

Freimut Friebe disagrees with Boyden, suggesting that Boyden's theory is based on the "unsound assumption" that the French suffix "-on" often has augmentative force; and consequently, violin must be derived from Italian sources. He suggests, rather, the word violon is probably a combination of the French viole and suffix "-on" which has diminutive force).

After 1550, the terminology tended to stabilize; violino came to be used in Italy, and violon in France. The viol and violin are clearly distinguished in England, though both have a variety of spellings. The German Geige was a generic term

4. Ibid.

for bowed strings in the sixteenth and seventeenth centuries, but from the eighteenth century on, it was used only for the violin.  

The Origin of the Violin

A study of the visual arts dating from 1500 to 1560 provides many interesting clues in solving the mystery of the violin's origin. A painting by Bartolomeo Montagna, dated about 1500, depicts an enthroned Madonna attended by saints and angel musicians. One of the angels is playing what is clearly a viol, but whose general outline and modeling is very violin-like. In the first decade of the sixteenth century, Garofalo painted what is obviously a "true" violin. Gaudenzio Ferrari may be our most reliable early artist in terms of trustworthy detail. Although his goal was not photographic reproduction, Winternitz believes he had more than simply a great interest in musical instruments. He is convinced Gaudenzio was also a competent performer and instrument builder because of the way his work reveals a real familiarity with both the instrumental forms and with the instruments' functions. Gaudenzio's fresco in the cupola of the Santuario

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in Saronna was commissioned in 1534 (See Figures 1-2). Fifty-six instruments are reproduced in the fresco, including several viols, lira da braccio, rebecs, a Sicilian cane violin, and a number of instruments showing mostly violin characteristics. The violins depicted in all of the paintings of Gaudenzio and his pupil Bernardino Lanini give voice to a perplexing variety of shapes and proportions, leading one to strongly suspect that the period had yet to reach a point of formal crystallization (see Figure 2). An engraving by Pierre Woeiriot (Lyons, 1562) depicts Kaspar Tieffenbrucker (called Gaspar Duiffobrugcar by the Italians) amid a group of instruments, some of which have distinct


10. Winternitz notes that the linear projection in this fresco is far from optical exactness (see Figure 1). Most of the instruments are asymmetrical—for example, the middle bouts do not correspond and the necks curve slightly upward so that the strings could not run parallel.

11. The nearest "true" violin is played by this angel. The majority of the violin's features are quite typical, one exception being the soundholes which are placed high at the top of the middle bouts. In addition, the lower part of the instrument is much wider than the top, and it has no purfling. Gaudenzio did not paint the instruments' strings, perhaps believing the viewing distance of the cupola would render such detail useless. Instead, he suggests the strings through finger positions on the fingerboard. Because only three pegs are visible, some have speculated that these instruments are not so closely related to the "true" violin, after all. Note, however, that four peg shafts are clearly shown inside the pegbox. It seems more likely that the remainder of the fourth peg is not visible simply because of the angle, not because it did not have a fourth peg.
violin traits (See Figure 3). One instrument, in the lower left center, though early in form is doubtless a "true" violin. Surviving instruments by makers such as Tieffenbrucker (fl. c1510), John Kerlino (fl. c1449), and Venturi Linarolli (fl. 1520), are extraordinarily violin-like. These usually turn out to be viols of various kinds and sizes, rebuilt to form tenor violins. Even today one will occasionally see a viola built from one of these instruments.

Nomenclature

The term "violin," in its various forms, can be found in treatises dated around 1530. Giovanni Maria Lanfranco's Scintille di Musica (Brescia, 1533) speaks of the "violino," but there is some question as to whether this is a reference to the violin as we know it, or to a "little viol." Van der Straeten thinks the violon in both Lanfranco and Silvestro Ganassi's Lettione seconda (Venice, 1543) is actually the violette da arco senza tasti, an improved form of the rebec

12. A translation of the treatise can be found in Barbara Lee, Giovanni Maria Lanfranco's Scintille di Musica and Its Relation to 16th-Century Music Theory (Ph.D. dissertation, Cornell University, 1961). The relevant section can be found on page 259 of the translation.

which uses several features of the more advanced viol.  

By about 1550, the four-string "true" violin seems likely to have been familiar. Jambe de Fer, in his Épitome musical des tons, sons et accordz, es voix humaines, fleustes d'Alleman, Fleustes à neuf trous, violes, & violons (Lyons, 1556), explicitly describes its tuning as g, d', a', e'', but does not mention the instrument's form. Judging from the sixteenth-century violins shown in Figures 4 and 5, it appears obvious that the form was only tending toward standardization but had not yet achieved it.

Because the compass of an instrument (G-b'') cited in Lodovico Zacconi's Prättica di Musica (1592) does not agree with any known viol, Fétis suggests that this is the first precise reference to the violin. Sachs, however, suggests that both the violin and viola were included in Zacconi's


usage of the term "violino." If the violin was indeed familiar by the time of Jambe de Fer and Zacconi, it is surprising to realize that Cerreto did not include the violin in his 1601 discussion and analysis of musical instruments. Whatever the reason for Cerreto's omission, it was not because the "true" violin still had not been formed, because a 1564 violin of Andrea Amati, fully developed in all respects, still survives. Further substantiation can be found in the second volume of Praetorius' *Syntagma Musicum* (Wolfenbüttel, 1619) which provides both drawings and text of the fully-developed instrument.

For many years, Monteverdi's *L'Orfeo* (Mantua, 1607) was believed to be the first score calling specifically for violins and early researchers concluded that Monteverdi's "duoi violini piccoli alla francese" were small violins tuned a fourth higher than usual. By 1940, however, Sachs was

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22. Such instruments did exist; a surviving example by
writing that if this had been the case, the ensemble would have had no alto or tenor. An alternative view which presents no inconsistencies interprets violino ordinario as a viola and the violino piccolo as a violin in the modern sense. Later researchers, particularly Boyden and Howard Mayer Brown, suggest that Monteverdi's violini piccoli indicated pochettes which were tuned an octave higher than the violin and were treated as transposing instruments in that their notation was written an octave lower than it would sound. Accordingly, violino ordinario would have meant the violin. More than likely, violins were used to double the upper voice parts in Giovanni Gabrieli's Sacrae Symphoniae (1597), but precise instrumentation is not given. The title page reads, "Any combination of strings, winds, or brass may be used for the instrumental parts." One of the first usages of the violin

Stradivari is in the Witten-Rawlins Collection at the Shrine to Music Museum, Vermillion, South Dakota. Violini piccoli have a clear, bright sound at higher tunings and allowed for comfortable playing in higher registers by retaining a lower left hand position with limited shifting. J.S. Bach scored for violino piccolo in his first Brandenburg Concerto, but by 1756 Leopold Mozart was writing that the instrument was already out of date because violinists had learned how to play in higher positions on ordinary violins.


25. Ibid.
specifically occurs in Giovanni Gabrieli's *Sonata per tre violini* (1615). Here he has written idiomatic violin passages and relatively simple fioriture. Octavio Mario Orandi's opus 2 (1620) has some of the earliest examples of double stops; and by the time of Monteverdi's *Combattimento di Tancredi e Clorinda* (1624), tremolos, pizzicato, and tonal gradation with the bow were required.²⁶

In the nineteenth century, scholars attempted to prove that Gasparo da Salò of Brescia invented the violin. As the basis for this theory, they used a statement in Gasparo's tax return: "Item son debitor al Rdo. P.D. Gabriel frate in Sto. Peiro de L60 per tanti a me prestadi per non andar l'arte mia nella Franza secondo il solitio: £60 s.d."²⁷ Nothing in this sentence seems to call for such an interpretation. Rather, the context indicates that Gasparo was experiencing financial difficulties and had considered France as a more lucrative location for his business. The inference is that his friends simply lent him the money, as did some monks in 1588 and again in 1589. Nothing in the transaction suggests that, because Gasparo had invented this instrument and the monks wanted to keep the invention and inventor in Italy, they were paying him to remain in the country.²⁸

²⁷. Ibid., 32.
²⁸. Ibid., 33.
Since Gasparo was not born until c1540, he could hardly have constructed many violins before the 1560's. However, the earliest violin by Andrea Amati, who was born c1511, is dated 1564, though Francis Farga lists a 1551 violin as an authentic Amati. The latest surviving Amati violin is dated 1574, "the period in which Gasparo was only beginning his work in Brescia. Presumably Andrea had been working well before that time since his fame had reached the French court before 1547, but labelled instruments have not survived to confirm this."

Although much of the evidence points to northern Italy as the birthplace of the violin, there are references to the violin in Poland and France as early as 1508 to 1529. During the period of Andrea Amati's work, Nancy (capitol of Lorraine) was home for the luthier families of Renauld and Médard, while Tywersus and Dieudonne Montfort worked in Mirecourt. According to such authors as Fétis and Jules Gallay, from 1566-1572, Nicolas Renault worked between 1566 and 1572 with Andrea Amati and two members of the Médard family in Paris. During this time they constructed instruments for the Chapel


of Charles IX. Jacquot suggests, without attempting to pinpoint a date, that the violin developed in Lorraine concurrently with the Italian violin.


33. Ibid., viii.
CHAPTER II
ITALY

Cremona

Amati

The work of Andrea Amati (b Cremona, before 1511; d Cremona, before 1580) marks the beginning of a long period of uninterrupted supremacy in violin making for the masters of Italy and, specifically, of Cremona. The Amati family, whose instruments span a period of nearly two hundred years, more or less founded the Cremonese style of violin making. Many of the constructional principles developed in Andrea's violins were changed over the years, but some aspects have remained the same.¹ Little is known about Andrea Amati except what has been deduced from his few surviving instruments.² As mentioned before, the earliest surviving instrument is a violin dated 1564, but he had presumably been working long before this time as by then his reputation had already reached the French court.

¹ Carl Becker, Telephone interview, 3 March 1987. The style of the f-holes changed quite dramatically, for example, but the design for the scroll was "pretty hard to improve on."
² Most of the extant Andrea Amati instruments (violins of two sizes, large violas [tenors], and large cellos) have a coat of arms of Charles IX of France painted on the back (see Figure 8).
Amati instruments demonstrate a carefully thought-out shape that was designed with dividers and compasses. The curves are very smooth and elegant, especially in comparison with the violins produced in Brescia at approximately the same time. Andrea's work is delicate and the resultant violin is lighter in substance than those of the later generations of Amatis. His varnish is a soft golden to golden-brown, colors that varied little in the family shop until the time of his grandson Nicolo Amati. The upper holes of the soundholes are larger than normal by today's standards, while the wings are small and slender. The middle notch was also rather large (See Figures 6-8).

Andrea had two sons, Antonio (b Cremona, c1540; d Cremona) and Girolamo, called Hieronymus (b Cremona, 1561; d Cremona, 1630). They inherited their father's business in 1580 and, in 1588, Girolamo bought out Antonio. Nonetheless, until 1630 all but a very few instruments to leave the Amati shop bore printed labels indicating that the two worked together, and they became known as the "Brothers Amati."

The Brothers Amati picked up where Andrea had left off. They improved the soundhole by broadening the wings and giving the "f" a more graceful shape as well as modifying the middle notches. They experimented with the outline, arching, and with the visual aspect of the edge and purfling, but always retained the basic "Amati" quality. To have established an
instrument simply as visually beautiful as the early Amati, some have speculated about the possibility of Andrea and his sons having received some form of artistic training. If not, and since such certainly cannot be proven, it must suffice to say they had a remarkable eye for beauty.

Girolamo died in the plague of 1630, leaving the business to his son, Nicolo (b Cremona, 3 December 1596; d Cremona, 12 April 1684), who had had a dominant hand in the business since 1620. The plague had been preceded by two years of famine that had devastated Cremona, and both disasters spread rapidly through the entire country. Personal grief alone may have kept Nicolo from extensive work during the 1630's, but the rest of his country was equally crushed under the weight of the disasters, and the demand for violins probably declined as is evidenced by the paucity of instruments from this decade. The 1630 plague which cost Nicolo both parents and two sisters killed Maggini two years later in Brescia and suddenly left Nicolo the only violin maker of any significance in Italy.

By 1640 Italy had recovered from the disasters and when the demand for violins increased, Nicolo Amati's workshop led the way. This is borne out by the census returns of 1640 which show that Nicolo's shop had a number of pupils that included Andrea Guarneri, Francesco Rugeri, Giovanni Baptista Rogeri, Giacomo Gennaro, and Antonio Stradivari.

3. Ibid.
Although the pre-1640 Amati violins had been of varying dimensions, Nicolo now favored a wider model known as the "Grand Amati." These violins were strongly curved with very long corners and distinct, clean purfling. The curve and angle of the soundholes have more swing than those of the Brothers Amati, and Nicolo's varnish tends to contain more orange than the characteristic Amati golden-brown. His varnish was apparently quite soft for the top coat now has usually worn away. The flanks of Nicolo's violins are thinner than is tonally desirable due to his tendency to "scoop" near the edges -- a characteristic greatly exaggerated by his imitators. Violins of his workmanship are responsive and have a relatively balanced, full sound, although comparison with later instruments such as those of Guarneri del Gesù tends to negate this latter observation.

By 1670 Nicolo was less active in the shop, and few of his later-dated instruments are the work of an old man. The late period instruments (after 1665) show the handiwork of Andrea Guarneri, Giovanni Baptista Rogeri, and Francesco Rugeri, but there are no elements strongly characteristic of Antonio Stradivari except one instance of a Stradivari head on an Amati instrument--the Hills suggest that Stradivari may have been more involved with varnishing, fitting, or super--

4. "Scooping" here refers to a rather sudden dip in the belly's arch as it approaches the edge of the instrument.
vision. Only in these later works does one see exterior woods other than the native Cremonese maple, though Nicolo often used pine for the blocks and linings. After 1670 the Grand pattern became more rare, but the varnish remained unchanged.

The work of Nicolo's son, Girolamo, called Hieronymus II (b Cremona, 26 February 1649; d Cremona, 21 February 1740), has been called "distinctly less inspiring." His instruments lacked the dimension of his father's, and after the latter's death, the varnish lost its golden brightness and became a less transparent reddish-brown. Hieronymus II corrected his father's scooping, and the instruments became quite full in the upper and lower flanks. By 1700, Hieronymus was making only a few instruments a year; examples made after this time are rare. Hart doubts that Hieronymus II ever made violins and attributes instruments labelled between 1703 and 1723 to Sneider of Pavia or G.B. Ruggeri of Brescia.

Stradivari


6. All of the Amatis showed a preference for slab-cut wood, a practice that continued with Nicolo's son, Hieronymus II.


The year of Antonio Stradivari's birth (b Cremona, 1644; d Cremona, 1737) was deduced from a handwritten label in an instrument in Count Cozio de Salabue's collection. On that label Stradivari gave his age as 92 and the year 1736. Accordingly, he was born in 1644. The records of his birth are lost or perhaps were destroyed in the suppression of the Cremona churches. Stradivari's working life may be divided into five periods:

1. to 1690: Amatisé
2. 1690-1700: Long Pattern
3. 1700-1725: Golden Period
4. 1725-1730: Decline
5. 1730-1737: "sub disciplina Stradivari"

Nothing is more difficult than to determine the precise features in Stradivari's work that are strictly original. "In a broad sense," wrote the Hills, "the whole is so; yet the more we analyse, the more do we discover that he was very deeply indebted to those who had preceded him." 9 Because instrument making had flourished in Cremona and Brescia for nearly two centuries, Stradivari was taught in an established tradition that was based on thorough experimentation. He apparently was closely involved with the performers and received practical suggestions from many of those who played his instruments. Visconti, a follower of Corelli, is also

said to have offered his advice to Stradivari.

For many years there was a lack of documentation showing Stradivari's apprenticeship with Nicolo Amati. Although the Amati influence is pervasive in Stradivari's instruments before 1690, he, unlike the other students, did not note his apprenticeship on his labels. For instance, Andrea Guarneri wrote "Alumnus Nicolai Amati," as did Francesco Rugeri and G.B. Rogeri. Giovanni de Piccolellis mentions that Andrea Guarneri and others were residents of the Amati household\textsuperscript{10} and the absence of Rugeri, Rogeri, and Stradivari may be because they were not "indoor apprentices."

The British violin firm, W.E. Hill and Sons eventually turned up an authentic Stradivari violin label reading, "Alumnus Nicolai Amati, faciebat anno 1666," thus proving Stradivari's apprenticeship with the house of Amati. The labels of 1667 do not mention his mentor; but since Stradivari violins dated before 1684 are extremely rare, he may have continued to help Nicolo Amati until the latter died.

Stradivari's skills were slow to develop, and when compared with Maggini who died when he was fifty-one, Stainer who died at sixty-six, and Guarneri del Gesù who died at forty-six, he was relatively old by the height of his Golden period. Most of his contemporaries relied heavily on assistants in

\textsuperscript{10} Giovanni de Piccolellis, \textit{Liutai antichi e Moderni} (Firenze: Le Monnier, 1886), cited in \textit{Fétis, op. cit.}, 55.
their later years and even Nicolo Amati, who lived to be eighty-eight, depended on his son and pupils the last fourteen years of his life. Stradivari, on the other hand, continued to build violins until his death in 1737 at the age of ninety-three. The comparative quality of his work did decrease, but then most of the work was from his own hand.

Stradivari used the dimensions of Amati's smaller form until about 1670 (the earliest known Stradivari violin is dated 1666), and then with only slight alterations until 1684. Since Stradivari did not build according to the Grand Amati pattern, he evidently had some doubt about the superiority of increased dimensions. Stradivari's necks have Amati dimensions, though they vary in length from 4 3/4" to 4 7/8" (measured from under the nut to the edge of the belly). The width at the top ranged from 1" to 1 1/16" and at the bottom from 1 5/16" to 1 3/4".  

11. The modern proportions are:
   Length - 5 1/16" to 5 1/8"
   Width - 0 7/8 " (top)
   - 1 1/4 " (edge)

The differences indicate that modern makers lengthened the neck 1/4" to 3/8" and narrowed it by 1/8". They also cant the neck back about 2 degrees and adjust the height so that the face stands up from the belly about 3/16 of an inch. Early makers, however, set the neck so that the plane of the neck was parallel with the top plate. A wedge was then inserted under the fingerboard to raise it to the proper height; the wedge was often notched in order to allow the base of it to clear the belly. (See Appendix 2 for diagram.) To determine if the neck was placed straight, Stradivari used two small pegs which pass through the back into the top and bottom blocks. Invariably, these pegs were inserted exactly in the pur-
Sometime between 1660 and 1665, Stradivari had his first labels printed. This is not to be taken as an indication that he had loosened his ties with the Amatis, but simply that he had achieved a certain level of competence in the craft.\(^{12}\)

Stradivari's early instruments reflect the Amati influence most strongly in the modeling, although he eventually reverted to a flatter and less curved arching similar to that of the viol. Stradivari's curves were less rounded than Amati's, giving a stiffer, more masculine appearance especially in the treatment of the corners and bouts. The edges appear broader and heavier because of the wide margin that resulted from setting the purfling farther in. The corners were short and blunt while the sound hole wings were a fling groove. Similar pegs were inserted in the belly, to allow him to fix the belly exactly; and after adjusting and gluing the neck, he removed the belly to drive the nails into the head. [Measurements are from Hill, Antonio Stradivari, 204.]

\(^{12}\) The history of the Stradivari label is most interesting. On the labels, both "Antonius" and "Antonins" appeared. When it was finally realized that the third "n" was an upsidedown "u," the use of movable type was proven. Apparently, the first set of label blocks had "166" set and Stradivari penned in the fourth digit. At the turn of the decade, he removed the second "6" from the label (probably with a fine knife) and wrote in the "7" and the next figure. In the 1680's, rather than scraping off the printed "6," he simply closed the top part to form an "8." In the 1690's, he scraped off the top part of of the "6" and added a tail to the lower portion to make a "9." New labels were printed in 1700 with only the "1" printed, the rest of the year left to be penned. The third and last label change occurred in 1729 or 1730 in which a Roman V is used rather than the cursive "Stradivari" as before. Hill, op. cit., 36.
little wider, placed closer together, and look more upright because the soundhole ends do not curve as much as Amati's.13

Stradivari paid more attention to blocks and linings than had his predecessors, but his principles were those of the Amatis. Sometime before 1600 Andrea Amati began to mortise the bout linings into the corner blocks, presumably to add strength to the sides and to make the linings less likely to come unglued (see Table 1).

13. It is difficult to find two instruments with identical soundholes. Stradivari used a series of compass circles to fix the exact position for the top and bottom openings and then used a template to roughly trace the longitudinal opening, trusting his eye for the formation of the wings and the exact curve of the top and bottom holes.
Table 1. Mortised linings typical of Cremonese instruments

Stradivari's blocks were made of the traditional willow which was light, tough, and easy to obtain but he reduced their size to what was only necessary for strength, his object being to leave the sides as free as possible for vibration. He usually used three nails which passed one-quarter to three-eighths of an inch into the base of the neck to help hold it in place. This Italian practice, used by the Brescians and the Amatis as well, continued until around 1800. Later makers often reduced the number of nails to two or even just one while others used
four.

Until 1690 Stradivari's work sustained no major change, though he experimented extensively during this period. The dimensions varied from the large over-all proportions of the Hellier to violins with full length but diminished widths or lower sides. The heads display considerable variation, at times being too small for the body, but always showing absolute symmetry between the scroll faces. Stradivari transferred the head design to the wood block before carving and probably pricked out the scroll with a fine point, removing all traces of the point in the carving. On many Italian instruments, notably those of Guadagnini, one can still see puncture marks around the scroll tips. On some Stradivari instruments the puncture is visible from the foot of the compass he used to keep the line dividing the head fluting in

14. Stradivari never exceeded the dimensions of the Hellier:

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length A to A</td>
<td>14 1/8&quot;</td>
</tr>
<tr>
<td>Width B to B</td>
<td>8 3/8&quot; full</td>
</tr>
<tr>
<td>Width C to C</td>
<td>6 3/16&quot; full</td>
</tr>
<tr>
<td>Sides D to D</td>
<td>1 1/4&quot; full</td>
</tr>
<tr>
<td>Sides E to E</td>
<td>1 3/16&quot; full</td>
</tr>
</tbody>
</table>

In the measurement of violins, the terms "full" and "bare" are often used to indicate a fraction over or under the given measurement.
the center. By 1688 he was making a more pronounced bevel and outlining the curves of the head in black. At one point Stradivari even experimented with the violin's shape, making a violin (dated 1681, though the label reads 1718) with a guitar shape.

Stradivari did use molds; some of them have survived. Knowing this, the question arises: how did he end up with ever-changing variations of the outline curve? The Hills speculate that he drew a fresh design and made a new mold for each decided change. However, he must have had some simple plan that allowed for basic alterations (i.e., in the curves, especially at the bouts and corners), while still using the old mold. The surviving molds provide no real clue to any such method, but Stradivari may have continually reshaped them, adding shims of wood or canvas to alter their outline.15 Before 1690 Stradivari tended more toward the Amati preference of maple cut on the slab, though the sides, head, and belly were sometimes quarter-cut (see Appendix D).

1690 marks the advent of the Long Pattern, apparently in answer to a quest for greater power and perhaps as a result of the influence of Maggini's violins.16 The Long Pattern increased the body length from 14" to 14.3" but kept the upper and lower bouts narrow, giving the impression of an elongated

instrument. To retain visual proportion in the outline, however, the bouts were made longer and less curved, the corners shorter and less drooping, and the edges less heavy. The Long Pattern model is flat but swells imperceptibly from the purfling. The soundholes are more open, set a little straighter, and the heads are slightly lengthened with the throat cut higher up (so the peg box, which carries the extra length, is in proportion with the scroll). The backs are more frequently in one piece and rarely slab-cut. Long Pattern stops (the distance from the soundhole notch to the button) are 7 3/4" which is 1/8" more than the majority of Stradivari violins and 1/4" to 3/8" more than other makers (See Figures 9-10).

The over-all modeling, shorter corners, open soundholes, and air of Brescian solidity in the Long Pattern has been attributed to Maggini's influence. "It is scarcely possible to doubt that Stradivari, about 1690, had met with a violin by Maggini and, struck with its great superiority in volume and richness of tone, set himself to obtain these qualities without sacrificing the brilliancy and more soprano-like quality of the Amati school." 17 As shown in Table 2, in the two most important dimensions, the body and stop lengths, the Long Strads are nearly the same as Maggini's. 18

17. Ibid., 72.
18. Ibid., 77.
Table 2. Comparative Dimensions of Stradivari and Maggini

<table>
<thead>
<tr>
<th></th>
<th>Pre-1690</th>
<th>Long Pattern</th>
<th>Maggini</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Length</strong></td>
<td>13 14/16&quot;-14&quot;</td>
<td>14 5/16&quot;</td>
<td>14 9/16&quot;</td>
</tr>
<tr>
<td><strong>Stop Length</strong></td>
<td>7 10/16&quot;</td>
<td>7 13/16&quot;</td>
<td>7 13/16&quot;</td>
</tr>
<tr>
<td><strong>Top Width, Body</strong></td>
<td>6 11/16&quot;bare</td>
<td>6 6/16&quot;</td>
<td>6 14/16&quot;</td>
</tr>
<tr>
<td><strong>Bottom Width, Body</strong></td>
<td>8 4/16&quot;bare</td>
<td>8&quot;bare</td>
<td>8 9/16&quot;</td>
</tr>
<tr>
<td><strong>Top Height, Sides</strong></td>
<td>1 2/12&quot;</td>
<td>1 3/16&quot;</td>
<td>1 2/16&quot;</td>
</tr>
<tr>
<td><strong>Bottom Height, Sides</strong></td>
<td>1 3/16&quot;</td>
<td>1 4/16&quot;</td>
<td>1 2/16&quot;</td>
</tr>
</tbody>
</table>

In 1698 Stradivari reverted to the Amatisé form and until 1700 continually varied the outline by a different treatment of the curves, corners, and even the model. He gave up the Long Pattern for good about 1700, probably because the greater length and longer stop made the violin difficult to handle. He returned to the 14" model of classic proportions and by 1703 had abandoned the Amati "scoop." In its place he developed a model that was fuller and more strongly arched model, though not necessarily higher. The "Betts" of 1704 represents his final return to classic proportion and the beginning of the true Golden Period. The 1704 violins were the last instruments with pronounced long corners (in the Amati style). The longer corners made the bouts slightly more curved and caused more of a "drooping" effect, especially in
the top corners since these tended to be even a little longer
than the bottom ones. Stradivari pushed the purfling miters
to the extreme limit in the corners so they would not appear
too protruding. In the several instances in which he failed
to get the purfling far enough in, he filled the groove with
black mastic.19 The Betts soundholes are relatively upright,
the head is somewhat lacking in squareness and the fluting in
breadth; and the throat is hesitatingly-cut. The two-piece
back and the sides are of a well-pronounced and broad-curled
maple. The pine belly has a more open grain than previously
(See Figure 11).

Sometime shortly after 1704, Stradivari settled on
certain points of construction, and thereafter rarely deviated
from them. The 1705-1710 instruments are characterized by a
compact form in which both the edges and corners are light,
the latter are short and less blunt. The purfling is fairly
close to the edge and the miters point cross-ways (as opposed
to the nearly vertical miters in most of the instruments from
1698 to 1704). The arch tends to be flattened, but the
soundholes retain the gracefulness of the 1700 period,
although they are now more open and the top and bottom holes

19. Stradivari apparently cut purfling in the same method used
today, but the time of insertion was different. He
inserted the purfling only when the body was glued
together (and, therefore, basically finished), leaving him
free to correct or alter the curves at any point in the
construction.
are more pear-shaped than round. The heads have bolder proportions with a more masculine appearance (partly because of the heavier bevel).\textsuperscript{20}

Stradivari's violins from 1705 to 1709 show a preference for one-piece backs and the 1707 to 1709 instruments are even from the same tree. Before 1708 Stradivari had never exceeded a length of $14\ 1/16"$ while otherwise retaining full proportions, but in 1708 and 1709 he increased the length to $14\ 1/8"$ with the fullest widths. He did not, however, stop making the standard $14"$ length; but continued with those until 1713 when he returned completely to the previous length of $14\ 1/16"$ with full width and depth of the sides.\textsuperscript{21}

After 1710, Stradivari's advancing age is apparent in the breadth and solidity of his style.\textsuperscript{22} Until almost 1725 his instruments are characterized by broader edges and purfling, appearing so mostly because the edges were less rounded and the purfling was generally of full thickness, and set in slightly farther. The corners are broader, which causes them to appear shorter. The curves, especially from the middle bouts, are more square looking. The arching resembles that of the 1704-1710 violins, but the soundholes are well open (no sharp curves as on the Betts.) The head still has a heavy

\textsuperscript{20} Hill, \textit{op. cit.}, 200.
\textsuperscript{21} Hill, \textit{op. cit.}, 203.
\textsuperscript{22} Hill, \textit{Antonio Stradivari}, 57.
bevel and the throat is well open.\textsuperscript{23}

The 1720 to 1725 violins (when Stradivari was in his eighties) begin to show even more distinct signs of old age. His work continued on a very broad and square basis, and now with a little less precision in cutting. In addition, the varnish has a less rich appearance, a drier texture, and is laid on more sparsely. The modeling rises rather quickly. After 1720, the right soundhole is often slightly higher than the left, presumably because of Stradivari's failing eyesight.\textsuperscript{24}

The period from 1725 to 1730 produced instruments that were even less sure in craftsmanship, lacking Stradivari's characteristic precision. In fact, the outline of the belly and back often disagree. The instruments dating from 1730 to 1737 are of varying type and character. Apparently, Stradivari's contribution to the actual construction decreased from year to year, but the vast majority of instruments still have some part or parts undoubtedly from his own hand. For instance, the cutting of the soundholes can be quite palsied, probably because of trembling hands and failing eyesight. The Muntz Stradivari has irregular purfling and sandpaper marks on the sides (See Figure 11).

The identity of Stradivari's pupils has created something

\textsuperscript{23} Hill, op. \textit{cit.}, 206.

\textsuperscript{24} \textit{Ibid.}, 87.
of a dispute. On Vuillaume's authority, Fétis lists Giuseppe Guarnerius del Gesù, Lorenzo Guadagnini, Carlo Bergonzi, Francesco Gobetti, Alessandro Gagliano, Michel-Angelo Bergonzi, Omobono Stradivari, and Francesco Stradivari. Of this list, only Omobono and Francesco Stradivari were without doubt pupils of their father. No solid evidence can be found to support the apprenticeship of Giuseppe Guarneri del Gesù. It is difficult to assume other than that he studied with his uncle, Giuseppe filius Andrae Guarneri. If Gobetti and Gagliano were ever students of Stradivari, it was in the master's very early days, because they were in Venice and Naples, respectively, by 1700. Michel-Angelo Bergonzi would almost certainly have been a pupil of his father. That Guadagnini may have been a pupil of Stradivari is based on an original label reading, "Laurentius Guadagnini, fecit Placentiae, Alumnus Antonius Stradivarius, 1740." However, the executors of the late Charles Reade, in whose collection the label was found, note, "N.B. At Piacenza it was easy to call himself a pupil of Stradivari--he dare not have said so at Cremona." Because of the faithfulness Guadagnini showed to the details of Stradivari, it is more likely that the claim on this label, if it is false, was made out of respect for Stradivari rather than any attempt at deceit. Until only very recently, most

25. Fétis, op. cit., 93.
scholars have cited Carlo Bergonzi (b ?Cremona, 1683; d Cremona, 1747) as the third pupil in Stradivari’s workshop. Because he began to label his instruments relatively late in life (toward 1730), the implication is that Bergonzi spent many of his years as a minor figure in another workshop, but now it is believed the workshop was that of Giuseppe Guarneri filius Andreae rather than that of Stradivari. Although his early violins possess a delicacy of detail not typical of Guarneri work (particularly in the Stradivarian scrolls and soundholes), their waists are narrow and their upper corners project squarely, in the Guarneri tradition. Bergonzi’s finest instruments date from 1730 to 1740, an apparent indication that he had set up on his own, or, if he had been a Stradivari assistant, that he had left by the time Stradivari’s pupils had become more active in the construction process.

Because no traces of apprentices’ work are clearly obvious on Stradivari instruments, the sons, Francesco (b 1671) and Omobono (b 1679), may have roughed out the work for Antonio to go over after them, thereby removing all traces of their work. Other hypotheses suggest that Antonio’s sons made


28. The details of these instruments gain in strength from the earlier period. The violins are broader and flatter, soundholes more pointed, and the edges are heavier, sometimes almost massive.
bows, though none bearing their names have survived; or that they made fittings or cases, or perhaps repaired and varnished the instruments. Although violins with labels of Francesco and Omobono Stradivari do occur, Jalovec writes that the Hills once declared they had never seen an instrument by Omobono which they could guarantee as genuine. Recognized instruments by Francesco are extremely rare. Stradivari probably left a number of parts and unfinished instruments when he died, and it is likely that his successors used these parts giving us the violins we find that are made partly by Stradivari and partly by someone else.

From our point of historic vantage we can see that ten to twelve years Stradivari was due for a change of one type or another. In the early years his work was quite heavy but it tended to grow lighter with each set of changes. For centuries now, speculation and theories have run rampant concerning what makes a Stradivari violin so superior. Some claim it is the wood but this hardly seems likely. Stradivari's choice of wood was based on two factors, first the projected price of the instrument and the second depended upon his current stock of blanks. Paralleling the increase in the importance of violin making in Cremona was the increase in the prices attached to these violins. Violins were built on

commission, and when Stradivari received a high-paying commission, he could afford to send for foreign maple. When the remuneration was less, he used local wood (marked by a smaller and weaker curl). In contrast to Amati, Stradivari generally chose wood with a broader and plainer curl, and it is rare to find the wood of the sides and heads matching, he probably considered it unnecessary.

Among the hypotheses offered for our contemporary inability to duplicate the Stradivari sound is one that suggests that the species of maple and pine used by the Cremonese makers is now extinct, but the Hills thought this to be rather ridiculous. J.B. Vuillaume, a nineteenth-century French maker and one of the finest copyists of all times, theorized that Stradivari's secret was the age of his wood; and he made a Stradivari copy from the wood of an old chalet. Though he failed to find Stradivari's "secret," his ability to make instruments look old started a dangerous trend.

Perhaps the latest proposal for a solution to Stradivari's secret is that offered by Dr. Joseph Nagyvary, professor of Bio-chemistry and Bio-physics at Texas A&M University. Nagyvary believes Stradivari's wood contained a bacterial fungus, that entered the wood when it was floated downriver. Although Nagyvary has read papers on some of his findings at various conferences, his specific findings and

wood analysis have not yet been published, indeed, the information is presently shrouded in secrecy. At this stage, however, it seems unlikely that this bacteria alone could be the secret of Stradivari's success.

One of the most popular speculations attributes to Stradivari the use of a superior varnish. However, his varnish is not decidedly different from that used by any other Cremonese maker. The Hills suggest that it is one thing to have a fine varnish and another to apply it with the perfect success of Stradivari. Some have postulated that Stradivari used only three coats of varnish: the first being a ground treatment, the second a light, almost transparent coat, and the third a rather heavy, colored coat. This is extremely improbable because of the difficulty in applying thick layers of varnish evenly. The Hills, of course, have declared it "beyond controversy" that Stradivari used a pure oil varnish comprised of a gum soluble in oil, possessing good drying qualities, with the addition of coloring ingredients.

32. Hill, op. cit., 171.
33. Becker, op. cit.
34. Hill, op. cit., 174. Oil varnish gradually disappeared from use as the art of instrument-making declined in Italy. New and easier methods of dissolving gum by spirit were introduced, enabling makers to varnish faster with a quicker drying period. The decay in the quality of instruments began with Stradivari's death, partly because of the Church's waning prosperity in Italy and partly
Perhaps the basis of Stradivari's secret is no secret at all. Fétis cites the research of Felix Savart who claimed Stradivari's greatness resulted from a combination of factors:
1. Excellent choice of wood
2. Relations of sonority between the different pieces
3. Capaciousness of the chest and the proportions of the back and belly thickness
4. Exact precision of workmanship
5. Varnish

This seems much more believable, for one element alone does not make a masterpiece. It is, rather, the combination of meticulous precision in craftsmanship, an eye for beauty, and the soul of a craftsman that made Antonio Stradivari one whom many regard as the greatest violin maker of all time.

Rugeri

Francesco Rugeri (b Cremona, 1620; d Cremona, 1695) is thought to have been the first pupil of Nicolo Amati, but it is likely that he had left the Amati shop by 1641 since the census returns after 1640 do not include him. Rugeri's labels do not specify his tutelage, but his work is thoroughly because of the already existing large number of fine instruments. Consequently, cheap and quick production became the norm and the spirit of artistic emulation died.

35. Fétis, op. cit., 77.
Amatisé; and he is known to have inserted Amati labels into his own instruments. In Chapter VII is cited an instance in 1685 in which a Modena citizen brought a law suit against Rugeri for a violin he had purchased as an Amati. Ironically, Rugeri's instruments are today considered nearly equal in quality to any of Nicolo Amati's. After 1670, Rugeri's instruments are usually signed in his own name, "detto Il Per." Toward the end of the century he was helped more and more by his sons Vincenzo and Giacinto, both of whom worked from about 1675 to 1730. Giacinto is a somewhat unknown entity; his instruments are quite rare. Vincenzo, however, is known as an excellent workman, building on his father's experience to make violins of a more delicate nature, especially in the deeper fluting near the edges and the narrow purfling set closer to the boarder.

Guarneri

Andrea Guarneri (b Cremona, c1626; d Cremona, 7 December 1698) was another of Nicolo Amati's apprentices. He studied with Amati from 1641 (when he was fifteen) to 1646, and after a hiatus of four years, until 1654. Andrea's hand is distinctly recognizable in several Amati violins, and his own

37. Ibid.
early work is essentially copied after Nicolo Amati, generally on the Grand Amati pattern. Bein suggests that he may have even worked with molds originally from the Amati shop.\textsuperscript{38} However, Andrea Guarneri made some violas (three of which are known) which are based on the Amati style, but the dimensions are unlike any previously made violas except Maggini's, which suggests a Maggini influence. Some have extended the sphere of influence back to Gasparo da Salô, noting the slanting soundholes with a peak at the top and bottom, the outline with short corners, strong semi-circular middle bouts, the model rising immediately from the purfling with more or less of an absence of edge hollowing, the solidity of the head, and similarities in volume and basic tone quality.\textsuperscript{39} Nonetheless, Andrea Guarneri created his own distinctive style. From the first it consisted of an occasional lack of symmetry, a slightly extra scoop at the purfling, roughness of finish (especially in the scroll), and purfling miters that often point across the corners rather than into them. Typically, in the last decade of his life, Andrea left most of the construction to his sons, primarily to the younger Giuseppe Giovanni. The elder son, Pietro Giovanni (b Cremona, 15 February 1655; d Mantua, 26 March 1720), was called "da


\textsuperscript{39} Hill, Gio: \textit{Paolo Maggini}, 73.
Mantova" to distinguish him from a nephew by the same name. Pietro "da Mantova" probably began work in his father's shop before 1670 (fourteen or fifteen years appears to have been a typical age to begin apprenticeship). Some of Andrea's instruments dated after 1670 show signs of Pietro's work. Pietro married in 1677 and left home soon afterward, settling in Mantua by 1683. His activities as a Mantuan court musician may account for the rarity of his instruments.

In comparison with his father, Pietro was a meticulous craftsman, yet he retained all of the details characteristic of the family. The purfling is rather close to the deeply and delicately-worked edge. Pietro's scrolls appear more solid than those of his contemporaries, and over the years, the ears become heavier. His soundholes are very elegant. The varnish is of excellent quality: a soft, lustrous, transparent orange-red. Pietro's instruments have a full, rich tone, but sometimes lack any sort of edge, perhaps because of the full model. He apparently had no pupils although the later Mantuan makers Camilli and Balestrieri show an obvious Pietro Guarneri influence in their work.

Giuseppe Giovanni Battista (b Cremona, 25 November 1666; d Cremona, 1739) was the younger son of Andrea, known as filius Andreae. Giuseppe remained in Cremona as his father's assistant and his is the dominant hand in many of the Guarneri instruments after 1680. His style is more like his brother's
than his father's, and although his life was lived in the shadow of Stradivari, he was a fine maker. His materials were rather ordinary, but just before 1700 he learned to make an orange-red varnish similar to Pietro's that improved the appearance of his instruments a good deal. Bein has suggested that Giuseppe was forced to use more ordinary materials because the finest and most expensive wood was usually reserved for Stradivari. Yet, as mentioned earlier, Stradivari often used rather common materials himself.

The 1697 "Primrose" viola demonstrates a tradition in instrument making in which instruments continued to be labelled with the master's name even when the principal responsibilities had been turned over to the next generation. The Primrose carries Andrea Guarneri's name, but is clearly the work of Andrea's son, Giuseppe. An interesting constructional feature of the Primrose is its one-piece back with four added wings on the upper and lower bouts.

From 1715 on, Giuseppe had substantial help from his sons, Pietro ("da Venezia") and Giuseppe ("del Gesù"), and most likely from Carlo Bergonzi. No violins with an original label of Giuseppe filius Andreae are known dated after 1720, though he lived another twenty years. Pietro "da Venezia" (b Cremona, 14 April 1695; d Venice, 7 April 1762) left the Casa

41. Ibid., 9.
Guarneri about 1718 and went to Venice. His first Venetian labels are dated around 1730. How the intervening years were spent is unknown. Matteo Goffriller, Domenico Montagnana, and Carlo Tononi were the major Venetian makers when Pietro first arrived, and he may worked with one of them, but by 1740, his success rivalled any of these masters. After 1750 he slowed his production and his inspiration seems to have waned. Despite his Cremonese training, Pietro's work became quite Venetian and presents an interesting blend of the two schools. His soundholes have a typically flamboyant Venetian swing, but he maintained the broad scroll of his family, with distinct gouge marks in the volute.

Bartolomeo Giuseppe "del Gesù" (b Cremona, 21 August 1698; d Cremona, 17 October 1744), was the youngest son of Giuseppe filius Andreae. Giuseppe's training was undoubtedly with his father, but almost immediately he showed a sharp eye and quick mind that assessed the work of others and incorporated what he observed into his own instruments. Unlike his father, who ignored Stradivari for the most part, Giuseppe incorporated and adapted Stradivarian elements— which partly explains the popularity of some of his father's late period instruments, which are often called early del Gesù, anyway.

In 1722 or 1723, Giuseppe left the family to set up on his own and before 1730 was having his own labels printed. These labels bore the "IHS" cipher, hence his nickname "del
Gesù." The reason for the "IHS" is not known, but Beare suggests that Giuseppe may have been a Jesuit, although he would have hardly had time in his thirty-two years to learn his trade as well as undergo the rigorous discipline of the order; it is, of course, possible that he may have been a lay brother. On the other hand, the use of the cipher may have been only a reverence in the same way that composers often concluded their works with the expression, soli Deo gloria. By the early 1730's, Giuseppe's work differed markedly from either his father's or Stradivari's.

The amazing amount of Brescian influence that permeates his work is seen in the full arching near the edges in the center part, in the long waist, and in the long, pointed soundholes. Some violin experts see so much similarity between the soundholes of Gasparo da Salò and del Gesu that they are positive Giuseppe's base pattern must have been that of Gasparo, yet others see no connection at all between the two, believing del Gesù wa "more a creator than an imitator." To this, the Hills write that del Gesù probably cut his soundholes by fixing the top holes and cutting the remainder at random, without any particular effort to closely

42. Beare, "Guarneri," The New Grove, II, 84.
43. For instance, Carl Becker, Karel Jalovec.
44. Dario D'Attili, Telephone interview, 5 March 1987.
uphold any traditional design.\textsuperscript{45} They go on to say, however, "we do not hesitate to claim for Maggini that Giuseppe Guarneri was his spiritual pupil and successor; and that his finest violins represent to us what Maggini would probably have produced could he have lived long enough."\textsuperscript{46} Charles Beare suggests, as a sort of compromise, that Giuseppe may well have been trying to create a Cremonese version of the Gasparo-Maggini instruments, which were probably then known for a strong sound.\textsuperscript{47} Del Gesù manage to combine these features with tonal beauty and ease of response such as that found in the Stradivaris, and because of this combination, his instruments are sometimes preferred to the Stradivaris. Del Gesù may well have seen Stainer sometime around 1730 or 1731 when he made several fully arched violins with a short stop, but other than this possibility, Cremona was untouched by the Stainer influence.

Guarneri del Gesù reached his peak about 1735 but by 1737 or 1738 began to show an erratic nature. Nonetheless, the 1737 violin called the "King Joseph" is one of del Gesù's finest works. Here he successfully combined his early style, based on his father's teaching, and his own later work of a more rugged and individual character. The outline,

\textsuperscript{45} Hill, \textit{Antonio Stradivari}, 199.

\textsuperscript{46} Hill, \textit{Gio: Paolo Maggini}, 74.

\textsuperscript{47} Charles Beare, "Guarneri," \textit{The New Grove}, I, 84.
soundholes, and subtle arching exemplify vintage del Gesù, but the delicate and painstaking craftsmanship, particularly in the head, are reminiscent of his father. The outline is flatter with shorter corners than filius Andreae, but is typically del Gesù and, significantly, suggestive of Amati. The middle bouts are wider than either Amati or filius Andreae, but still retain an unmistakable Amatiásé flavor. The soundholes are characteristically placed with the notches 19.3 cm from the upper end, and the points of the upper wings lean outside the center of the upper end of the soundholes. The arching maintains a flat center and the corner blocks and linings are mortised in the usual Cremonese manner. Stradivari’s customary back center thickness was 4.5 cm, but the King Joseph measures 5.9 mm at the back center, diminishing to about 3 mm toward the flanks and sometimes even reaching a measurement as low as 2.5 mm. Stradivari’s customary top thickness is more in keeping with other makers, this is it ranges from about 2.2 to 2.5 mm, though at the purfling it measures a full 3.0 mm. The King Joseph’s back is one-piece and slab-cut, unusual for del Gesù.48

After the King Joseph, del Gesù continued with his earlier principles but began to wield his knife and gouge with an increasing abandon. This abandon often produced

48. John P. Waters, of Brooklyn, New York, bought the King Joseph on 30 August 1868, making the King Joseph the first known Cremonese instrument to reach America.
magnificent, if slightly outrageous results. Del Gesù probably had patterns similar to those of Stradivari or filius Andreae, but it is always rare to find the two sides of his instruments in agreement. Charles Beare wrote, 49

However wildly Guarneri appears to have lashed out with his tools," writes Charles Beare, "that same inimitable tonal result is still present (See Figures 12-13). Even the unhappiest, most mutilated examples retain something of it, something that died, apparently forever, in 1744.

Brescia

Gasparo da Salò

Gasparo da Salò (b Salò, baptized 20 May 1540; d 14 April 1609) moved to Brescia in 1562 and first worked with Girolamo Virchi. By 1568 he was describing himself as a "maestro di violini," though there is some debate as to whether the term violini had a specific importance or was simply generic for instrument makers. 50 Most of Gasparo's products seem to have been tenor violas. His reputation for crude craftsmanship is based more on erroneously attributed instruments than on actual fact. He was actually fairly meticulous and achieved a

49. Beare, op. cit., 84.
level of quality in his instruments that is quite high when one considers that he was working in the very early stages of violin development. He made rather elongated soundholes, undercut the scrolls, and liked to double purfling and inlay his instruments. The tone of his violins is quite full and strong (See Figures 14-16).

**Maggini**

In a legal document of 1602, Giovanni Paolo Maggini (b Botticino, c1581; d Brescia, c1632) called himself a garzone Signor Gasparo which suggests he was still an apprentice at the age of about twenty-one. What little is known of Maggini has been gleaned primarily from the study of his instruments. The growing popularity of the violin was evidenced in the number of violins Maggini made, a great increase over the output of his teacher. There are no more than fifty Maggini instruments extant, though there are several late period Gasparo instruments could be more precisely termed early Magginis.

Maggini's work can be roughly divided into three periods, but it is difficult to date these periods since Maggini never dated his labels. His first period represents a basic repro-

51. According to the Hills (Gio: Paolo Maggini), Maggini apparently had very little formal education, judging from the character and penmanship on several legal documents.

52. The Hills cite twelve violins, six or seven violas, and one cello, op. cit., 59.
duction of typical Gasparo features: heavy, ungraceful modeling; short, unpronounced corners; poorly inlaid purfling with badly prepared grooves and indifferent miters; heads that were very rough and lacked trueness in curve and form (one side differing significantly from the other); both the back and belly are slab-cut, but the soundholes are a little more open than Gasparo's, which is better for the tone. Maggini's method of making soundholes was similar to that of the violin makers in the beveling of the inside edges. Amati was the first to discard this and cut the soundholes with a perpendicular edge. Another violin characteristic of Maggini's violins is found in their ornamentation. Most of Maggini's instruments are double purfled. On one violin, Maggini double purfled the belly but only imitated the back purfling, drawing the double line with ink or paint.\(^3\) The square and blunt appearance typical of nearly all Brescian instruments was achieved by thick miters at the middle joints which were never finished as pointedly as those of later makers.

Gasparo's influence is not as readily apparent in Maggini's second-period instruments which display close attention to more basic principles of violin construction. There is a pronounced, raised border which is usually accompanied by an arching higher than that on his earlier and later

\(^3\) Drawing on the back purfling was never terribly uncommon, but certainly not frequent. Because the wood is stronger, purfling is not as vital to the back.
instruments. The substance of the purfling is thicker and inserted with more precision than previously. The soundholes and head are more graceful and a bit truer in curve and cutting. The wood is rarely cut on the slab any more, and Maggini was one of the first to use quarter-sawn bellies.

The third period is marked by an obvious determination to produce high quality instruments. It is possible that Maggini may have been inspired by the meticulous work of the Brothers Amati or that by this point he simply had a better idea of what would and would not give the best results. Maggini's work in this period is true, the purfling is finely inserted, and the soundholes are as sharp as any Amati. He builds less of an arch and adds a more graceful appearance by making the edges lighter. The head is, at last, very symmetrical. In all of Maggini's heads, however, the scrolls have from one-quarter to one-half a turn less than those of any other great maker. A small ridge on each side of the head at the point where the scroll emerges from the peg box, another throw-back to the viol, is another characteristic of the entire Brescian school, but by Maggini's third period, this ridge has disappeared. The quality of Maggini's varnish remained constant through all three periods, and it is a quality equal to that of the Cremonese. The color changed between periods, however, beginning with a brown tone similar to Gasparo and later turning to a more orange and red mix (See Figures 17-19).
Maggini was among the first to use corner blocks and linings, though the latter were initially canvas. His violins are usually rather large causing the sides to look lower than they actually are. In reality, the neck-end height is nearly the same as many Amatis and some Stradivaris. The tail-end, though, is about 1/16" lower than Amati and Stradivari violins. The back interiors show the original rough finish of the toothing plane, another characteristic common to the Brescian school.

Maggini's tax returns provide evidence of his increasing success. Salaries were raised and he paid boarding expenses for an assistant and maid servant. The trade stock grew larger, and by 1626 he had a second house and shop, called Contrada delle Bombasari. Because there is no mention of them in his returns, it is assumed that Maggini kept the old house and shop which were located across from the Old Palace of the Podesta. He had three additional properties: one of about ten acres on the hills, one of about seven acres on the plains, and another of about four acres in Botticino. It is not likely that affluence of this sort was achieved through nine years of making instruments and one concludes that he

54. Hill, op. cit., 43.

55. It is difficult to pinpoint the exact year of an event if it is recorded only in tax returns (polizze d'estimo). The filing of such documents was not done annually, but simply whenever the town administration issued a proclamation calling for it.
likely had some independent source of wealth. In 1588 his father listed no profession, and the means which supported him must have passed on to Giovanni Paolo—probably about the time he opened his own business. The properties of ten and seven acres were probably part of his wife's dowry. Both are described as bordering the estates of Messer Faust Foresto, Anna Foresto's father, and her dowry documents value the fields at 3,250 livre of "starred" coin. No mention is made of an apprentice or pupil.

Piccolellis' Liutai Antichi e moderni (Firenze, 1885) shows a facsimile of a violin label reading, "Giovan Gaetano Pazzini allievo de Maggini di Brixiae, fecit Firenze anno 1630." The text calls Pazzini a little-known Florentine maker. If the label is authentic, it would seem that Maggini did indeed have a pupil. However, nothing is known of Pazzini beyond this, and none of his instruments have survived. Some sources list Maggini's son, Pietro, as his successor, but town records show that Pietro Maggini died in infancy. Carlo Francesco was Giovanni Paolo's only surviving son, and he was not born until 1626 making him only six years old when his father died. No evidence is available to suggest that Carlo Francesco took over the business. In fact, in his tax returns of 1661, he listed himself as a silk merchant.

Maggini's tax return of 1626 is the last direct word from

him. By the returns of 1632 he was already dead. Although he was probably still a resident in the parish of S. Lorenzo when he died, the church has no record of his death. Anna Foresto Maggini's death in 1651 is thoroughly documented, however, and it would seem strange if so much was recorded about Maggini's wife and not about Maggini himself unless the entry is contained in some missing church records or his death resulted from unusual circumstances. That he died when his son was young may be suggested by references to Carlo as "filius quondam Johannis Pauli." A plague nearly destroyed Brescia in 1632 and it is possible that Maggini was one of its thousands of victims. Those who contacted the illness were taken to separate houses for the sick that had been organized at public expense, and when they eventually died, they were simply thrown into the streets. Such a fate would have resulted in the lack of any note of his death or burial.

Assuming Maggini lived as late as 1632 he still would have been only fifty-one. This premature death may account for his small output, but, since he was apparently affluent most of his life, he may not have felt the need to increase his production.

Rogeri

Giovanni Battista Rogeri (fl. c1670-c1750), originally from Bologna, arrived in Brescia by 1675 after having been a
pupil of Nicolo Amati. Rogeri brought to Brescia the Amati system of design and construction in addition to Amati's great neatness with the wood. In some of his Brescian instruments, Rogeri attempted to integrate traits of Maggini. By 1690 Rogeri's visual elegance was surpassed by few. Giovanni Battista was probably assisted by his son, Pietro Giacomo (fl. c1690-1720), though no pre-1705 instruments by Pietro Giacomo are known.

Pietro was more of a craftsman than is usually appreciated, although he had a preference for almost chubby corners which were, along with his heavy, flat scrolls, a simple exaggeration of his father's work. Many of Pietro's backs are unpurfled (See Figures 20-22). Because Pietro sometimes spelled his name "Rugerius" it has been suggested that his family could have been related to the Rugeris of Cremona. However, the craftsmanship is very different and does not seem related in any aspect.57

Venice

In the second half of the seventeenth century there was a dramatic increase in the popularity of music written for the violin. Much new music was written for it, and the instru-

ments were at a premium. In response, violin makers with varying degrees of skill and talent set up shop in most all of the larger Italian towns. Reflecting on these circumstances, Charles Beare concluded that "the only people who really thought hard about acoustics were the great Cremonese and the Venetians, and of course, Stainer. Just about everyone else was more or less a copyist."58

Venice was a powerful, political city that abounded with people of genius in the arts as well as in government. The guilds were especially strong in Venice and governed violin making with a heavy hand. Each guild had a "presidential" figure who had two assistants. These three authorities visited each instrument maker four times a year, inspecting the shop's work and charging a fine each infraction of Guild standards. The guilds often stipulated that the master's name must appear on his students' labels in effort to ensure that the master would keep a close watch on student work.

Goffriller

Matteo Goffriller (b Bressanone, c1659; d Venice, 23 February 1742) went to Venice in 1685, and one presumes that he learned the craft from Martin Kaiser mainly because he married Kaiser's daughter in 1686 and by 1690 had inherited the Kaiser business. During the two decades after 1680, Goffriller had little serious competition in Venice and was able to work out a considerable variety in patterns and general quality for his wide range of clients. Like most of the Venetians, Goffriller's instruments were basically Cremonese, differing only in minor details such as the soundholes, which tended to be more Staineresque than Cremonese. Goffriller instruments rarely carry his own label.

Montagnana

Domenico Montagnana (b Lendinara, c1687; d Venice 7 March 1750) went to Venice around 1699 and was more than likely a pupil and assistant of Goffriller. About 1711 he opened his own shop, and during this period may have had close ties with Francesco Gobetti. Montagnana's instruments from before 1720 are extremely rare, but after that time his reputation seems to have spread quickly, accompanied by a considerable increase in output. He built a number of different patterns, some with small dimensions and some showing the distinct Stainer influence that had become popular in Venice in 1717.
Montagnana was especially well-known for his very powerful cellos.\(^59\)

**Gobetti**

Francesco Gobetti (b Udine, baptized 4 January 1675; d Venice, 10 July 1723) moved to Venice with his family in the early 1690's. The family was evidently in shoemaking for when Francesco married in 1702 he described himself as a shoemaker. It is plausible that Gobetti was a pupil of Goffriller, who lived in the same parish. He was, however, signing his own instruments by 1710 and gave up the craft sometime after 1717 because of poor health. In spite of his small output, he was one of the finest Venetian makers. He was a meticulous workman and his instruments show much influence from Goffriller and Montagnana. In 1717 he made a Stainer copy—a reproduction that was exact to the smallest details—but he unfortunately got the color wrong and varnished it with a beautifully rich and deep Venetian orange-red.\(^60\)

**Seraphin**

It is thought that Sanctus Seraphin (b Udine, 1 November 1699; d after 1758) went to Venice around 1720, but his


\(^60\) Charles Beare, "The Influence of Stainer's Instruments on the Italian and English Schools," Transcript of his paper read at the Jacob Stainer Tag, Innsbruck (1983), 56.
earliest known label is dated 1725. Sanctus developed a very individual style based on the Amati pattern, and he combined this with distinctly Venetian designs. Judging from the tax returns, he was, for a time, Venice's leading maker. Just before 1740 Sanctus' designs began to change. He exaggerated certain details, and the result was not very desirable. In 1744 he placed a request with the Guild to stop making violins. Whatever the reasons for the request (which was evidently granted), it was not a matter of deteriorating faculties, because city records of 1758 show that even then he was still fully able to sign his name (See Figures 23-24).

Giorgio Seraphin (b Venice, c1726; d Venice, 25 January 1775) was Sanctus' nephew and probably his pupil as well. Giorgio was working on his own as early as 1742 and eventually married Domenico Montagnana's daughter. He inherited the Montagnana business, but apparently exerted little effort. There are no signed instruments by Giorgio from the period after 1750.

Milan

The Milanese makers are generally regarded as imitators of the Cremonese school, particularly of Amati. They deviate from the Cremonese pattern in their tendency to enlarge the upper portion of the violin so that the middle bouts are short in relation to the rest of the instrument.
Grancino

Giovanni Grancino (fl. Milan, c1675-c1726) was one of the most important early makers and often collaborated with his brother, Francesco, and the instruments were labelled "de Gracinis." These instruments differ from those made solely by Giovanni, but they cannot be considered inferior.

Giovanni's patrons were less wealthy than those of the Cremonese makers and he built his instruments accordingly. He used an inexpensive wood for the backs, sides, and scrolls, but the bellies are usually a very attractive wood with a strong grain. His early varnish was dark red-brown or orange and was quite soft and thick. After 1700, however, he changed to a hard, thin varnish of light yellow-brown. Giovanni's soundholes are not partially Amatisé, but had more of an individual cut with broader wings than those of Amati. His scrolls have an elegant curve to them and are deeply and cleanly carved. In addition to his violins, Giovanni made a large number of cellos.

Alberti

According to his labels, Ferdinando Alberti (fl. Milan, c1737-1763) took over Grancino's shop. These labels read, "Ferdinando Alberti in Contrada / Largo di Milano a Segna della / conona F. L'anno 17__" or "Ferdinando Alberti fece in Milano / nello Contrada del pesce al Signo / della Corono
l'anno 17__". His violins are reminiscent of Grancino's in that they have his model, but not the symmetry. Alberti's craftsmanship lacks any real degree of refinement, but the tonal quality is still quite full. On his better instruments, the varnish is reddish-brown; the other instruments are varnished in a clear yellow-brown.

Guadagnini

The Guadagnini dynasty began with Lorenzo (b Piacenza, before 1690; d Piacenza, 1748) in Piacenza, near Cremona. On his labels, Lorenzo calls himself a student of Stradivari, but that seems unlikely because of the heavy Guarneri influence evident in his instruments. If he ever did work in Cremona, it was probably with Giuseppe Guarneri filius Andreae or Carlo Bergonzi. Lorenzo's edgework is deeply grooved and the backs tend to be pointed. He made magnificent scrolls but, like Guarneri, carved them without any apparent attempt at symmetry.

Giovanni Battista Guadagnini (b Piacenza c1711; d Turin, 18 September 1786) was Lorenzo's eldest son and a very prolific maker. He worked in five different cities: Piacenza, Milan, Cremona, Parma, and Turin, building his greatest reputation when he went to Milan in 1749. By the time he had reached Milan the character of his work was already well-defined though the basic appearance was gradually modified
during his stay there. He used a Stradivarian outline with slope added to the shoulders. The shape of the perpendicular soundholes with their pear-shaped lobes remained unvaried, but for a time Giovanni experimented with the placement of the notches. Although his father used a dull orange-brown varnish, Giovanni preferred a red varnish that had an extremely bright tint. Giovanni worked in Milan until 1758, and during this time he used magnificent wood and modified his varnish so that it was more transparent, yet retained the red color. He achieved a very powerful sound with his violins, but the tone lacks warmth. He was in Cremona only during 1758 and few of his violins from this period have survived. They resemble the Milan period but the shoulders slope more from the back button and the varnish is a peculiar shade of orange.

From 1759 to 1771 Giovanni worked in Parma under the patronage of the ducal court. His careful craftsmanship and interest in fine materials seemed to have waned during this period. His wood was acoustically excellent but not very handsome, having the narrow flame found in a regional wood that was used by most Cremonese makers at one time or another, and the varnish is an uninspired brown-red. By placing the soundhole notches low he could place the entire soundhole higher on the instrument without shortening the stop. This feature is peculiar only to Giovanni Guadagnini and only in his Parmesan violins. He moved to Turin in 1771 and within
the first few years the less admirable Parmesan qualities, including the high soundholes, had faded. He became well-acquainted with Count Cozio di Salabue who in 1775 acquired the instruments and effects Antonio Stradivari left in his workshop when he died. Giovanni's work sustained radical changes that year, adopting Stradivari's outline and soundhole form, even leaving the pear-shaped lobes for round ones, in addition to his return to centrally placed notches. The lower wings of the soundholes are hollowed out in an exaggerated Stradivari fashion. Only his scrolls retained his own individual character, but for some years even they had the chamfers picked out in black in typical Stradivarian fashion.

After 1778 Giovanni's work is that of an old man imitating Stradivari. In these later instruments he describes himself as "alumnus Antonii Stradivarii," though it is not known if this was done out of respect for the great master rather than as a representation of historical fact.61

Landolfi

Carlo Ferdinando Landolfi (fl. Milan, c1750-c1775) may have been an assistant to one of the Testores, but it is more likely that he associated with G.B. Guadagnini from about 1749. Landolfi's instruments show a greater degree of Guadagnini's individual characteristics rather than the style

of the main-stream Milanese makers. He used a rich varnish that was sometimes a Venetian red, but was usually a lighter orange-brown. His pupils were Pietro Giovanni Montegazza, who was independent before 1760 and his son, Pietro Antonio Landolfi. Pietro Landolfi made acceptable violins but tended to destroy their good qualities with a high profile and a hard varnish.

Testore

The Testores are one of the many families that gradually succumbed to the demand for inexpensive instruments. This family has often been called "Milanese Cheapjacks," a term coined in reference to makers who resorted to cheap, mass-produced violins. Carlo Giuseppe Testores (fl. Milan, 1690-c1720) was a very skilled maker whose labels claim that he had been a pupil of Grancino. His violins are often mistaken for Grancino's, but Carlo's instruments had slightly longer, more sweeping corners and less distinct soundholes. Grancino's scroll volutes are perfectly rounded, but Carlo Testore's tend to bulge diagonally. The varnish is similar to Grancino's and varies from a rich, dark orange-brown to a pale yellow.

Carlo Antonio (fl. Milan, c1720-after 1760) was the elder

son of Carlo Giuseppe. He followed his father's style quite closely, but his instruments never had the "charm" of his father's.\textsuperscript{63} He used a brittle, light-colored varnish and painted false double purfling on the back, a feature seen occasionally in Grancino and Carlo Giuseppe Testore violins as well. It seems that Carlo Antonio made some good instruments, but few of these are found. Pietro (fl. Milan, c1750-1760), a careless, sloppy maker, is the next link in the Testore's chain of cheapjack luthiers. The Testore continued in the business for several more generations, but the results of their work were cheap and apathetic.

\underline{Naples}

For the most part, the Neapolitan school consisted of the Gagliano family, whose violins, except for those of Alessandro, were based on a Stradivari model. Like the Testores, the family was firmly entrenched in cheap mass production by the end of the nineteenth century. After Alessandro, all of the Gaglianios used a varnish which was harder than most other eighteenth- and nineteenth-century varnishes. The finer instruments are an attractive golden-orange color, but with the onset of sloppy work the orange acquired a gray-green tinge.

\textsuperscript{63.} Beare, "Testore," \textit{The New Grove}, III, 570.
Gagliano

Alessandro (fl. Naples, c1700-c1735) is the first known Neapolitan maker, but there is no information as to where or by whom he was taught. His work differs from his descendents in nearly every aspect, particularly in the varnish. Alessandro's varnish was soft and oily, a glowing and transparent deep red. He was only an average workman, but he made good, original violins are in three sizes. The scrolls on these instruments look a little pinched and are crudely carved though he sometimes ornamented the peg box.

Nicola (fl. Naples, c1740-c1780), Alessandro's son, made Stradivari copies that were much sought-after. The quality of his work was consistently high, but several of the violins are built a little too broad and too arched. Some of his labels note a collaboration with his son, Giuseppe.

Gennaro (fl. Naples, c1740-c1780) was also Alessandro's son, and is often considered the best of the Gaglianos. Gennaro's was influenced mainly by Stradivari, but he also made a number of Amati copies with facsimile Amati labels. He is the creator of the narrow cello design typical of Neapolitan makers.64

Ferdinando (fl. Naples, c1770-c1795) was Nicola's son but

probably studied with Gennaro. His outline is typical of Gennaro, with slightly stiffer and more open soundholes. His violins vary in quality. Giuseppe (fl. Naples, c1770-c1800), Nicola's second son, made some excellent instruments in his early years, but his work declined very rapidly. Antonio (fl. Naples, c1780- c1800) was Nicola's third son and often worked in collaboration with Giuseppe, although Antonio's skill is inferior to his brother's. Giovanni (fl. Naples, c1785-after 1815) was Nicola's fourth son and the last of the Gaglianos to make any attempt at careful, original instruments. He began working with Giuseppe and Antonio but was on his own by 1800, making instruments after those of his uncle and Ferdinando, while retaining his own personal style. Giovanni's sons, however, were ensnared by the call of fast and cheap output.

Eberle

Tomaso Eberle (fl. Naples, c1753-1792) was probably of Tyrolean ancestry. He was a very careful craftsman, and his precision is especially notable in details such as the purfling and soundholes. Although his scrolls have a smaller line than those of the Gaglianos and his soundholes are closer to the Amatis, Eberle followed the Gagliano school quite closely, and perhaps had studied with Nicolo Gagliano. Eberle's violin tone is slightly warmer than Gagliano's, but it also lacks the Gagliano "punch." His varnish is typically
Neapolitan in texture and varies from yellow-brown to red-brown. Eberle often attached a small label to the corner block that read, "Gesù, e Maria."

**Rome**

Seventeenth-century Rome was an independent Papal State and the center of the Roman Catholic world. Roman church music was highly developed, but instrumental music and even secular opera were equally dominant forces. Pope Innocent XI (1676-1689) banned much of the musical activity, but it slowly resumed its place with the primacy of Pope Alexander VIII (1689-1691). Because of the city's active participation in all types of music, foreign musicians abounded. Even in violin-making, Rome was a melting pot of various nationalities. Here the Italian makers met up with French, Tyrolean, and German craftsmen. The influence of the latter two countries was more prevalent in Rome than anywhere else in Italy, and it is through Rome that much of the foreign influence filtered into other Italian cities.

**Tecchler**

David Tecchler (b Augsburg, c1666; d Rome, after 1747), for example, was an Italian maker of German birth who probably learned violin making in Augsburg before moving to Rome. A
number of German makers had immigrated to Rome in the late sixteenth and early seventeenth centuries, but until Tecchler, there was no bowed instrument maker of any particular significance in the city. Tecchler's arrival was timely in that the market for violins was just expanding. While allowing a bit of Cremonese influence in certain features, he seems to have based his violins mainly on a Stainer model, but he was certainly not a Stainer copyist.

Tecchler and his pupils Michael Platner and Francesco Emiliani carried the Stainer tradition to Rome, just as it was going out of style in Venice.

The Roman varnish differs from the Cremonese in that the former has a light red layer with a yellow layer underneath. They sometimes used four layers in the sequence red, yellow, golden-yellow, and deep red.

Mantua

Camilli

As might be expected, Camillo Camilli (b Mantua, c1704; d Mantua, 21 October 1754) shows the influence of Pietro Guarneri "da Mantova." He was probably a pupil of Antonio Zanotti, but his work imitates almost all of the specifically Guarnerian features such as a rather high profile, to narrow, deeply set purfling, and the distinctive Guarneri soundholes.
The scrolls are his own, though they show a certain degree of Amati's influence. Camilli used a small-grained wood that was rather brittle.

Dall'aglio

Giuseppe Dall'aglio (fl. Mantua, 1795-1840) built robust instruments that were fashioned primarily after Pietro Guarneri though a certain amount of Camillo Camilli is also evidenced. Dall'aglio's middle bouts are unique in the deep swing to the middle of the curve. His better instruments were more flattly arched, but most of his work has a relatively high arching. His varnish varies from a rich golden yellow to golden red.

Bologna

Tononi

Giovanni Tononi (d 1713) worked in Bologna during the period of greatest demand for violins in northern Italy. Giovanni's violins are on an Amati pattern and in some respects his instruments foreshadow the Venetians.\(^65\) Tononi's soundholes are long and elegant, but the scrolls are roughly cut. His varnish is a bright orange-red which contributes to the generally excellent tone of his instruments.

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Carlo (d after 8 March 1730), Giovanni's son, worked in a style closely related to his father's. Carlo moved to Venice sometime between 1715 and 1720 and his Venetian instruments are quite different from those made in Bologna. Although it is not possible to identify them, the work of at least two or three makers is visible in Carlo Tononi's violins, and Carlo's own role in the construction process is a matter of conjecture.

Florence

Gabbrielli

Florentine violins reflect the style of Nicolo Amati in their tendency to be slender and highly arched. Giovanni Battista Gabbrielli (fl. Florence, c1740–1770) is the most significant eighteenth-century Florentine maker, and it is generally believed that most of the other Florentine makers learned the craft from him. Much is written about Stainer's influence but today Gabbrielli is considered desirable because he resisted the temptation to exaggerate Stainer features. Gabbrielli's outline conforms to Cremonese dimensions with a well-balanced model, but very high-built instruments are sometimes incorrectly attributed to Gabbrielli. The soundholes have a Stainer slant at each end; and the varnish is either yellow or yellow-brown.
Gragnani

Antonio Gragnani (fl. Florence, c1765-1795) was originally from Livorno, though he probably studied in Florence. He is known for his neat Stradivarian models, but the interesting feature of his instruments, is the whalebone purfling--common enough in the Low Countries, but extremely rare in Italy.
CHAPTER III
THE GERMANIC COUNTRIES

Absam

Stainer

Most scholars seem to believe that Jacob Stainer (b Absam, 1617; d Absam, 1683) learned his craft in Cremona, possibly at the Amati workshop. Beare said that¹ if he did not study in Cremona, his excellent taste and understanding of the Amati character is even more remarkable...he had, for a time anyway, the same stylistic ideals...[that] gave his instruments a Cremonese appearance.

Senn, however, sees nothing Cremonese or even Italian in Stainer’s work. He thinks Stainer was apprenticed to a German maker, albeit in Italy. He quotes Hart in saying, “I am convinced that Stainer was assisted by neither the Brothers Amati nor Nicholas Amati, and I am strengthened in this opinion by the steadfastly German character of a model which no pupil of Amati could have persisted in using.”² Regardless of whether Stainer’s general character had a greater degree of the

¹ Beare, “The Influence of Stainer's Instruments on the Italian and English School,” Transcript of his paper read at the Jacob Stainer Tag, Innsbruck (1983), 55.

² George Hart as quoted by Walter Senn, “Stainer, Jacob,” The New Grove III, 444.
Italian or German, Stainer had almost an "influential monopoly" in Germany and Austria. The only other family exerting much influence in Germanic violin-making was the Klotz family, whose instruments are reminiscent of Nicolo Amati although they have a flatter arching and more classical soundholes. Nearly every violin to come out of England in the eighteenth century was copied after Stainer or Amati. Jacques Francais goes as far as to say that outside Cremona, the rest of Italy was more influenced by Stainer than by Amati, Stradivari, or Guarneri del Gesu until the nineteenth century when the French rediscovered the classical Italian violin school. The Stainer school also gave rise to the schools in Augsburg, Vienna, and Nürnberg which in turn exerted strong influence on the following generations of German makers. Even the Mittenwald school and eventually the Klotz family show a degree of Staineresque features through the influence of Matthias Klotz (fl. c1656) who may have studied with Stainer at some point.

The oldest known Stainer violin is dated 1638, and the latest is dated 1682. Until 1655, Stainer travelled to monasteries, church choirs, and court chapels to sell his instruments and to repair instruments already there. Among other cities, his journeys took him to Salzburg, Munich, Venice.

Buxen, and Bolzano Stainer's fame increased and as he became better known he stopped travelling and settled into his own house in Absam. Over the next years he received many commissions, of which the most important came from the Spanish court. However, he fell afoul of the Church and in 1669 was denounced as a heretic. Though he denied the allegation, it severely disrupted his relations with such staunchly Catholic regions as Italy and Nürnberg, the Bishop of Olomouc and the monasteries at Rottenbuch and Lambach. After 1675, Stainer struggled with bouts of temporary insanity that probably resulted from acute manic-depression, but in those years he made some of his finest instruments.

Stainer violins are typified by a relatively broad lower back and modified contours at the waist. At first he used a highly arched model, but after 1665 he lowered it considerably. His wood is excellent and the varnish is of the best quality, similar to that of the Brothers Amati in its golden-brown ground. The precision of his craftsmanship is on a par with Stradivari's. His heads and purflings are finely carved, and the former often represent the heads of angels, lions, or women. The edges on his violins are rounded and the soundholes are short and curving while the outline is rather round. Combined, these features to make a brilliant, transparent sound with a pure quality in the soprano register. The key to Stainer's success could be his sense of balancing
Baroque curves while at the same time retaining transparency and lightness.

Toward the end of the eighteenth century, fashion again dictated a change in what was considered to be the "ideal tone." The smooth timbre of the Cremonese instruments returned to favor so that during the nineteenth century, Cremona completely superceded Absam. In the 1770's, Felice Giardini, active in England, was the last leading player to champion Stainer instruments.

Albani

The name of Mathias Albani (b St. Nikolaus in Kaltern, 28 March 1621; d Bolzano, 7 February 1712) has sustained a great deal of fraudulent usage by unscrupulous dealers and labels bearing his name turn up in many run-of-the-mill eighteenth century German instruments. These false labels began to appear consistently after 1639, and from 1690 even original labels appeared in cheap instruments, continuing to do so until the year he died.

It is also possible that Albani's sons, Michael and Joseph, were responsible for the instruments passed off as their father's. Genuine Albani violins have little in common with Stainer violins. Albani worked along the lines of the Brothers Amati with a quite Italian varnish or orange

craquele. The varnish was slightly more brittle than Italian varnish, and may be the reason Albani's instruments do not have quite the tonal quality or response of the Italian instruments. Albani had a great deal of influence on various Tyrolean makers, particularly the Jais and Mayr families.

**Mittenwald**

Mittenwald is on one of the two roads built by the Romans to connect northern and southern Europe; and is only seventy miles south of Munich and about thirty miles from Innsbruck. Therefore, Mittenwalders had relatively easy contact with most of the large European cities, and, along with the Roman violin makers, integrated a large number of foreign elements in their instruments.

**Klotz**

The first school at Mittenwald based its violin construction on the principles of derived from the lute makers at Füssen, and one of the first and finest Mittenwald masters was Matthias Klotz (b Mittenwald, 11 June 1653; d Mittenwald, 16 August 1743), who learned his craft in Padua with a Füssen lute maker, Giovanni Railich. Klotz did not study violin making with Railich, and some scholars believe Klotz may have

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studied violin-making with Stainer. sometime between 1678, when he left Railich, and 1683, when he returned to Mittenwald. His return to Mittenwald started a tradition that culminated with over two hundred violin makers working in the city. It is interesting to note, however, that an estimated ninety percent of the instruments found with Mittenwald labels were not made in Mittenwald at all, but were cheap, mass-produced instruments.

Klotz's earliest violins are dated several decades later than the year of his return to Mittenwald, leading one to deduce that he spent some twenty years making instruments other than violins. One of his earliest known violins, dated 1714, is more Italian than Staineresque, but his 1727 instruments have much more of a German look. The Italian connection continued to be quite strong, if in methods of construction more than outward appearance. For instance, Stradivari constructed his ribs first. He made them on a form laid out with compass curves and then modified it by hand. The ribs were built up on the form and then the top and back materials were pinned to the ribs to hold the wood in place so


the rib outline could be traced onto the top and back. These were then removed to be cut and shaped, and with the help of the pins were put back in the same place on the ribs. The Mittenwald method was very similar to the Cremonese. Klotz did not necessarily use pins all the time, but sometimes he made a center mark drawn on the top and back that became known as the "Mittenwald notch;" the connection with the Cremonese pins is obvious.9

Another example of the Italian connection is found in the Guadagninian wooden nails Sebastian Klotz (b Mittenwald, 1696; d Mittenwald 1797) used to stabilize the plates at the button. He placed these in the center of the joint, but his brother Karl gave them a different placement. Aegidius Klotz began the practice of using notches at the button for the alignment of the plates; this was continued by George Klotz.

These two aspects of construction demonstrate how one generation could base its work on someone and each succeeding generation could modify and alter those practices until eventually a markedly individual or nationalistic style could well emerge—one whose foundations are quite foreign.

Hornsteiner

The Hornsteiners, were another of the Mittenwald families producing a long line of violin makers. Matthias II (b

Mittenwald, 1760; d Mittenwald, 1803) studied in the Klotz school and used a Stainer model though the long middle bouts, short corners, and small sloping soundholes were his own. He used a varnish on a water-sensitive yellow base. Many of the older Mittenwald instruments have a distinctly brown tinge that resulted from the deposits left by the burning wood on the walls of the open fireplaces in which the Mittenwalders shaped their instruments. As a general rule, Mittenwald violins have stops that are shorter than usual: 90 1/2 mm. as opposed to the more usual 92 or 95 mm.

The Mittenwald school worked almost exclusively with either Stainer or Amati models, but in the nineteenth century, Mittenwald took the lure of mass production and quickly ruined the tradition with cheap violins. These instruments rapidly tainted the reputation of all German violins, and even though Mittenwald "reformed" its methods in the early twentieth century, it is only recently that the area has begun to regain its high esteem.

Füssen

The makers of Füssen never quite achieved the importance as violin makers that they had achieved as lute and viol makers. Only a few Füssen makers created distinctly

outstanding instruments, and these makers often emigrated, establishing schools elsewhere, that were often supported by courts or wealthy patricians.

Balthasar Kögl, for example, introduced violin making to Prague around 1628. Hanns Kögl went to Vienna in 1660; Hans Lindner was evidently the first violin maker to arrive in Augsburg, and Peter Kopff moved to Munich in 1650. Sympert Nigell (b Füssen, 1710; d 1785) is an example of a maker who combined Stainer's outline with an arching that recalls Nicolo Amati.

**Markneukirchen**

and **Klingental**

Vogtland cities such as Markneukirchen and Klingental became havens in the seventeenth century for Bohemian refugees who were fleeing political oppression. In 1677 the refugees in Markneukirchen formed a guild of violin makers but in general, the makers of Vogtland and Sudentenland were quite minor.

**Pfretzchner**

Markneukirchen makers such as Johann Gottlob Pfretzchner (b Markneukirchen, 1753; d Markneukirchen, 1823) tended to work either along the lines of a Stainer model or an elongated
Stradivari model. In Klingental, however, the Höpf family worked with an original model that turns up in other Klingental shops as well. A brittle yellow varnish is typical of both regions.

**Edlinger**

When Thomas Edlinger (b Augsburg, 23 November 1662; d Prague, 20 January 1729) established himself in Prague in the 1680's, he became the founder of violin making in that city. Most of Edlinger's pupils were German immigrants and he taught them a loosely-followed Stainer model. Joseph Joachim Edlinger (b Prague, 7 March 1693; d Prague, 30 May 1748) inherited his father's workshop and continued to use his father's Germanic model despite visits to several Italian cities including Cremona and Venice. His work was generally less refined than his father's.

**Eberle**

Johann Ulrich Eberle (b Vils, Tyrol, 2 July 1699; d Prague, 2 July 1768) apprenticed in Vils before he moved to Prague and continued his study with Thomas Edlinger. Eberle's violins are similar to his teacher's but his finest works are more Italian in character and surpass Edlinger's instruments. Eberle showed a preference for bird's eye maple which lends a rather striking appearance to his violins. His varnish was a
brown-red color applied over a yellow ground. Much of Eberle's work carries the label of Matthias Alban (b Bolzano, 1621; d Bozen, 1712). Eberle's son, Wenzel Michael (b Prague, 1738; d Prague, 1770), inserted his father's label in his own inferior violins and his best work is that made from what Johann had left unfinished when he died.

Vogtland and Sudetenland eventually became the worst offenders of the eighteenth-century turn toward cheap violins. They began with some fine instruments, but declined rapidly into the worst kind of mass production [that] was no longer violin making at all, but the manufacture of toys which, with their false labels and trade marks, were sold in great quantities everywhere, to the detriment of true violin making in the musical Vogtland and throughout the world...one good maker after another was forced to turn to organized piecework and mass production in order to supply the wholesalers and export merchants with cheap goods. Fewer and fewer violin makers were able to carry on their profession as a fine art.

Vienna

Kögl

Hans Kögl (b Füssen, 1630; d Vienna, 1679) was an important maker in the Viennese school though only a few of

11. Hamma, op. cit., 2.
his instruments actually bear his own label. His work was styled after the Brescians with a small model and full arching. He cut short corners, long soundholes, and flat scrolls.

**Thir**

Various members of the Thir family worked in either Pressburg or Vienna. The family patriarch, Anton I (fl. Pressburg, 1750-1790), worked in Pressburg using a highly arched Stainer model made of excellent wood. He originally used a glowing red-brown varnish that has turned black in some cases, but after 1774 apparently changed to a better quality varnish recipe that was also more light resistant. Anton's son, Andreas (b Pressburg, 1765; d Pressburg, 1798) worked with a flatter Amati model. Johann Georg (b Vienna, 1738; d Vienna, 1781) remained with the Stainer model as did his brother, Matthias (b Vienna, 1770; d Vienna, 1798). Matthias's varnish has shown the same tendency to blacken as did the first varnish recipe of Anton I. Matthias's son, Anton (b Vienna, 1765; d Vienna, 1837), was the first in the Thir family to work with a more Stradivarian model.

**Geissenhof**

Franz Geissenhof (b Vienna, 1754; d Vienna, 1821) studied with Johann Georg Thir, and his violins that are dated between
1780 and 1790 are very similar to his teacher's with their high arch and dark varnish. From 1790 to 1800 he built a flatter arch but his varnish remained dark. His finest violins were made between 1800 and 1820. They are cleanly and precisely cut, the excellent quality of his materials matching the elegance of his craftsmanship. Geissenhof had a number of students including Franz Werner (b Vienna, 1813; d Vienna, 1825) and Johann Baptist Schweitzer (b Vienna, 1790; d Budapest 1865).
CHAPTER IV
THE LOW COUNTRIES

It is not known where the Low Country makers received their training, but their instruments display an Italian foundation that has led many scholars to believe that either that some of them apprenticed in Italy or that an Italian maker worked in the Low Countries. The Low Country makers could have become very familiar with the Italian style by observing violins in the possession of the Italian musicians who travelled through the country, but the degree of refinement shown in these instruments could not have been self-taught. In addition, Guild regulations required that they be properly trained by a master. Wherever and from whomever they learned the craft, "it may be stated that the seventeenth century Antwerp and Amsterdam violin makers are justly considered, throughout the world, to be the biggest rivals of the famous Italian luthiers." Before 1720, anything Italian was held in high esteem and all of the Low Country instruments were Italian-based. Similarly, Italian music was extremely popular and numerous Italian architecture books were published in

2. Ibid., 16.
Amsterdam.

Jacobsz

Hendrik Jacobsz (b Amsterdam, 1629 or 1630; d Amsterdam, 1699) is the best known of the Netherland makers, but instruments entirely by him are quite rare. His Amati copies were veryy exact, and many have speculated that he had been a pupil of Amati, but it is not very likely that either he or any of the Dutch makers spent time in Italy. The Amati features on Jacobsz’s violins are exaggerated, which leads Möller to conclude that these create too strong an individual character for Jacobsz to be considered a mere copyist.3 The corners are longer than Amati’s and the soundholes are too round to be considered Amatisé. The scrolls are not exact, and he used the typically Dutch purfling material of whalebone. Apparently, Jacobsz himself placed Amati labels in his instruments, but, as seems to be the case with several other makers, he may have done so as an acknowledgement of the model.4 Jacobsz made these Grand Pattern Amati instruments until about 1670, after which his execution became somewhat more bold and broad. He married in 1676, and adopted his wife’s son, Pieter

3. Ibid., 17.
4. Ibid.
Rombouts (b Amsterdam, 1667; d ?Booetermarkt, ?1740), who eventually inherited the Jacobsz shop. The period from about 1685 until Jacobsz death in 1699 is known as the "Rombouts period." Rombouts would have been about eighteen when Jacobsz began to leave a substantial amount of the work to him. As an artist, he was nearly equal to his step-father, but had different taste in the instruments' appearance. While Jacobsz's varnish was a soft Italian, Rombouts used an aggressive orange-red or burgundy. Rombouts used a wide purfling set in farther than usual; his heads widen quite noticeably toward the lower end. He gradually adopted more and more Stainer characteristics, such as high arching, curving scrolls, and short, round soundholes. He continued to use the Jacobsz label until at least 1705, and by 1708 he was inserting his own name, though he seems to have been much less productive after Jacobsz died (See Figures 25-26).

**Boumeester**

Jan Boumeester (b Quakenbruck, 1629; d Amsterdam, 28 January 1681) moved to Amsterdam in 1653. His violins, patterned after a modified Amati model, look so Italian that they have often been relabelled as Italian. Boumeester made violins in both large and small sizes, as did most of the makers of the time. The clear and responsive tone is not very powerful but is typical of the Dutch makers of that period.
Boumeester’s work differs from Jacobsz’s chiefly in the soundholes, which are a little more open than Jacobsz’s. His whalebone purfling is inserted more inside the outer edge. Because the scroll button is usually not as elegant as the rest of the violin, it appears somewhat massive. The varnish is either a clear yellow or an extremely dark red, always soft, and at times having a "craquèlé" like some of the famous Italian violins.

Antwerp

Hofmans

Matthijs Hofmans (fl. Antwerp, 1650-1680) was another very influential violin maker. He followed the Italian school in a general way, but he worked with a little more originality than most of the Belgian makers. Hofmans’ outline was extremely rounded at the upper and lower bouts, making the middle bouts appear long because of their narrow corners. The purfling follows deeply into the corners and is inlaid immediately inside the edges on both the top and the back. Hofmans’ soundholes are set quite vertically. The varnish is Italianate in its soft composition and rich color. Very few of Hofmans’ instruments contain original signatures.

van der Staghmeulen

Joannes Baptista van der Staghmeulen (fl. Antwerp, c1650) was a contemporary townsman of Hofmans. It is thought by some
that if any of the Low Country makers had been trained by an Italian, it was probably van der Stagheule, because of the rare Brescian influence he showed in such aspects as his use of double purfling and extra decoration. His varnish was Italian-soft, and he used an Italian Christian name.

The Eighteenth-Century
French Influence

The eighteenth century brought with it a fashion change that deeply affected violin making in the Low Countries. The trends in fashion declared everything Italian to be passé and everything French to be in vogue. In the new style of French living, the Belgian center of violin-making moved from Antwerp to Brussels and in the Netherlands from Amsterdam to The Hague. Accordingly, the aim of the eighteenth-century makers changed. They now strived for bigger tone at the expense of sound quality and used a harder varnish to create this louder and more penetrating sound. In addition, the new varnish dried quickly and was easy to handle. It is difficult to determine whether the new French-inspired period meant a decline in the art of violin making, but the eighteenth-century violins are a more placid yellow reminiscent of Guersan⁵ rather than the beautiful warm colors of earlier years. Eighteenth-century architecture also experienced a

5. Ibid., 70.
decline parallel with the arrival of French styles. Apparently, the makers were forced to devote much of their time to repairing the already existing instruments and one of the ways they attempted to save valuable time in making new ones was by using faster-drying varnishes (one of the elements that led to the Italian decline) (See Figures 27-28).

**Lefebvre**

Jacques B. Lefebvre (b ?France, cl701; d Amsterdam, after 1772), though probably of French origins, had reached Amsterdam by 1725 and replaced Rombouts as the city's leading maker, the latter apparently no longer working by 1727. Lefebvre was not directly influenced by the Italians though traces of Italian style, especially Neapolitan, are apparent in the work of his French mentors, Guersan and Benoist Fleury. Lefebvre marks the turning point from the Italian to French in Dutch violin making. He worked with corners that were shorter than the earlier Dutch instruments and his scrolls are full with remarkably sharp chamfers although the head as a whole is rather small. Lefebvre was the first Netherlands maker to use wood rather than whalebone for the purfling (See Figure 29).
The Cuypers family of The Hague is the best known of the eighteenth-century Dutch makers. Certain violin experts have claimed that Johannes Cuypers (b The Hague, 1724; d The Hague, 1808) went to Paris as a carpenter but learned the craft of violin-making when he could not find employment in carpentry. He probably was trained by either Guersan or Benoist Fleury. Even his early work (before 1775) shows remarkable refinement. The purfing follows the long corners right to the end and the scrolls are small and elegant in a very vertical style with a flat back that Cuypers retained throughout his life. His early work is almost dainty when compared with his later instruments whose heaviness in the last decade of the century was probably contributed by Johannes' two sons. Möller suggests that Cuypers, aware of the heaviness, began printing his age on his labels as a way of excusing the clumsiness. The late period scrolls are somewhat longer and the tops are now in one piece rather than two. These instruments have a small hole in the scroll button that was probably made by a pin used to steady the scroll model when tracing it onto the wood.

Johannes Franciscus Cuypers (b The Hague, 1776; d The Hague, 1828) was the eldest Cuypers son. Aside from the heaviness mentioned earlier, his violins differ from those of his father's late period only in the somewhat longer miters of the

7. Möller, op. cit., 137.
purfling. Both Johannes Franciscus and his younger brother Johannes Bernardus (b The Hague, 1781; d The Hague, 1840) used spruce from their father's stock which lasted them until 1840. Johannes Bernardus is distinguished by the sharper roundings of his tops and backs.

Boussu

Joseph Benoit Boussu (fl. Brussels, c1740-c1780) was the chef d'école of the Belgian school. His work is similar to the early Cuypers instruments, though the arch is sometimes higher. The soundholes are very erect with fairly large holes. The purfling follows far into the corners and, like Cuypers, the varnish is always yellow to light brown. The scroll is strongly hollowed out along the sides and ends in a large button.

The beginning of the nineteenth century saw a rapid decline in both productivity and quality. A well-made, carefully-used violin has an almost unlimited life span, and by that point, the market was well saturated. By the time Johannes Franciscus Cuypers died in 1828, the Low Countries were afloat with cottage-industry violins. Möller notes, however, that an occasional hint of past glory was seen in such as Cornelis Weel (Utrecht, 1809-1871),8 whose work is not startling in its originality, but is a rare example in

8. Ibid., 62.
that era of a fine and careful craftsman.
CHAPTER V

FRANCE

Mirecourt and Nancy

Next to Cremona and Brescia, Mirecourt and Nancy are among the oldest centers of violin making. Mirecourt began to develop as a center about the time the violin supplanted the rebec. The aristocracy began to adapt it from its secular environs for for use in chamber music, as well as for military affairs and processions in which violins preceded the congregation.

The craft began slowly in France. In Nancy, the earliest home of violin makers, there were two important families: the Renaults and the Médards and although they are known to have succeeded the earliest make, Tywersus, practically nothing else is known about the origin of violin-making in these cities. Unfortunately, these important families, although contemporaries with the Italians, have been hidden in the shadows cast by Andrea Amati and Gasparo da Salò. All that is known of Tywersus, for example, is that he may have been a pupil of Andrea Amati and that he was in the employ of the Duke of Lorraine, Charles IV. By the beginning of the seventeenth century, at least seven violin makers were working in Mirecourt, and later in the century there may have been more,
for contemporary records indicate that Nancy and Mirecourt shared some forty-three violin makers; such records also demonstrate the close ties between the two cities. It is the eighteenth century that marks the explosion of violin making in Nancy and Mirecourt. By 1700 Mirecourt alone had thirty-one violin makers, a quite significant number in the wake of the plague and famine. In 1732 Duke Francis III granted a charter designed to insure that only violins of exceptional quality would be produced in Mirecourt. This charter stipulated that St. Cecile was to be the patron saint to whom the luthiers must show a certain devotion. After an eighteen-month apprenticeship, the young makers were required to build a "chef d'oeuvre" for examination master makers. As with the Italian guilds, a head violin maker and two magistrates paid periodic visits to the various workshops. Defective parts were confiscated, and the maker was charged a fine. Each instrument was required to bear the Master's name first with the maker's name printed below it. Yet, despite these precautions, the use of a lesser quality wood and a mediocre varnish crept in and, consequently, not all of the Mirecourt makers have survived with their reputations intact.

Nicolas

Didier Nicolas (b Mirecourt, 23 January 1757; d Mirecourt, 1833) was known as Didier Le Sourd ("the deaf"). He served the required apprenticeship in Mirecourt before
setting up his own shop which he called "à la Ville de Cremonne." This name also appears inside a triangular brand in the label area of his instruments. Nicolas used Stradivari models as a starting point, but his violins tend to be more full and heavy; for example, the distance between his soundholes is usually in excess of any other maker. His later instruments are mostly the work of apprentices, so that the quality of late Nicolas instruments varies considerably. Violins made by Nicolas himself are usually inscribed in ink by the soundpost, "D. Nicolas ainé Mirecourt."

Aldric

Jean-François Aldric (b Mirecourt, 28 April 1765; d Paris, 1843) also patterned his violin after a Stradivari model but with greater fullness in the outline and arch. The varnish is generally a red-brown that is attractive but somewhat hard and lacking in clarity. When his instruments are varnished a lighter golden yellow or an orange-brown, it usually indicates a violin of slightly lesser quality.

As elsewhere, the nineteenth century brought change to Mirecourt. Three categories of workmen developed: assembly line factory workers, craftsmen still making complete violins, and craftsmen who made only accessories.¹ Some makers remained in Mirecourt, but many moved to Paris during the early part of

the century. Mirecourt had one hundred and four maitres-luthiers in the nineteenth century which indicates that approximately 1,000 craftsmen were still involved.

The tradition at Mirecourt continues today. Its history is a fascinating story of a declining industry that rose again to the point that it now represents the finest in French violin making.

Paris

Pierray

Claude Pierray (fl. Paris, c1710-c1750) was one of the finest eighteenth-century French makers. Pierray worked with a modified Amati model, and in earlier times his instruments were often passed as Italian. Pierray's instruments look very similar to those of his contemporary, Jacques Bocquay (b Lyons; fl. Paris, 1710-1725), who also used an Amati model. Pierray, however, tended to use a better quality wood for the fronts and managed extra elegance in the detail.

Bocquay

Bocquay's wood was selected from a local variety, and while it worked well, it was not tonally ideal. His varnish is very Italian in appearance though a little more brittle in substance. Because of the Italianate varnish, Bocquay instruments (especially his cellos) are often found with more well-known names attached.
Guersan

Louis Guersan (b c1713; d Paris, after 1781) was a pupil of Pierray and eventually took over his business. By the time Guersan reached maturity, only traces of Pierray's influence remain and the model is more affected by Stainer's high barrel arching and curving Baroque lines. Guersan also made viols, quintons, and pardessus viols, but the quality of these is inconsistent. When at his best, Guersan's craftsmanship is excellent.

Salomon

Jean-Baptiste Deshayes Salomon (fl. Paris, c1740-1772) made instrument of varying quality. His finest work was done before 1750 and follows a slender model similar to that of G.B. Gabbrielli. Some of Salomon's finest work has been relabelled with Gabbrielli's name. However, Salomon's details differ from Gabbrielli's in that he used a thin spirit varnish a cut excessively hollow scroll throats.

Pique

François-Louis Pique (b Roret, 1758; d Charenton St.

2. According to Francais, Jacobus Stainer, regardless of the Amati presence at the court of Henry IV, the eighteenth century French school practice of high barrel arching depends on Stainer to a greater degree than Andrea or Nicolo Amati.
Maurice, 1822) apprenticed in Mirecourt and moved to the Paris area in 1778. He eventually was named as Luthier du conservatoire and established a shop in Paris. He was a contemporary of Nicolas Lupot, and their work is similar enough to be often confused. Pique's violins are a little over-sized compared with Lupot's, his front wood has a broad grain, and his scrolls are relatively unimpressive. The degree to which Pique influenced Lupot and vice-versa is a matter of speculation, but the history of French violin making probably owes more to Pique than is usually acknowledged.³

Lupot

François Lupot (fl. Orleans c1769) was a rather mediocre maker from Vosgien, near Mirecourt, who settled in Orleans in 1769. The name is known mostly through his son, Nicolas (b Stuttgart, 4 December 1758; d Paris, 14 August 1824), who had made substantial progress with his Stradivari model by the time he joined Pique in Paris in 1794. In 1798 Nicolas opened his own shop, and until 1806 showed steady improvement, doubtless inspired by the abundance of Stradivari instruments in the city. Around 1810 he reached his highest level of achievement which he sustained the rest of his life. Despite his devotion to Stradivari, Lupot was not a Stradivari copyist; though he occasionally did copy those of Guarneri del Gesù.

Gand

Charles François Gand (b Versailles, 5 August 1787; d Paris 10 May 1845), nicknamed Grandpère, was the eldest son of a little-known Mirecourt maker who moved to Versailles around 1780. Charles François apprenticed with Nicolas Lupot from 1802 to 1810 and then worked in his father's shop through 1815. In 1816 he went to work for Koliker in Paris and in 1820 purchased that business. He married Lupot's adopted daughter and succeeded Lupot in 1824. Charles François' instruments are excellent, but rare. Guillaume Charles Louis Gand (b Versailles, 22 July 1792; died Versailles, 31 May 1858), Charles Louis' brother, also worked for Lupot, but he returned to Versailles, succeeding his father in 1820.

Charles Adolphe (b Paris, 11 December 1812; d Paris 24 January 1866) and Charles Nicolas Eugène Gand (b Paris, 5 June 1825; d Boulogne 5 February 1892) were the sons of Grandpère. Charles Adolphe inherited the family business in 1845. He was an excellent workman, but his instruments are relatively rare, apparently because he was occupied with the business aspects of the shop. When Charles Nicolas Eugène became his partner in 1855, the firm became known as Grand Frères. Charles Adolphe died in 1866 and the house merged with the Bernardels, becoming Gand and Bernardel Frères with Charles Nicolas Eugène Gand as the senior partner.
Bernardel

Auguste Sebastien Philippe Bernardel (b. Mirecourt, 24 January 178; d. Bougival, 1870) is known as Bernardel père. He apprenticed in Mirecourt before moving to Paris where he worked for both Lupot and Charles François Gand. In 1826 he opened his own shop, following mainly Stradivari but occasionally Guarneri or Maggini. Though his violins can appear bulky, he was a fine workman who chose excellent materials. He retired in 1866, leaving the shop to his son, Ernest Auguste (b Paris, 1826; d Cherbourg, 1904).

As mentioned, the Bernardel Frères and the Gand Frères merged in 1866, becoming Gand and Bernardel Frères. The firm produced fine instrument with a striking red appearance. Ernest Bernardel retired in 1886, and when Charles Nicolas Gand died in 1892, Gustave Bernardel was left as the sole proprietor. Gustave passed on the business to Albert Caressa in 1901.
An old adage circulating in the violin world says that if a violin looks Italian and if the varnish looks Italian--almost--it is probably English. During the seventeenth century, English makers worked almost exclusively from Italian models and what was not Italian was taken from Stainer. They made extremely playable instruments that were very popular with performers, perhaps because, as Poidras points out, most of the English makers had "realized the necessity of learning to play the instrument they are called upon to manufacture."

Barak Norman (b c1670; d London, c1740) began his career with Staineresque violins. These have a beautiful modeling and good wood, the backs usually cut on the slab. He used a very dark brown varnish and his instruments produce a rich and relatively strong sound in spite of the high arching. In his


later years, Norman turned to Maggini for inspiration. This was not a terribly drastic change in style, but perhaps more of a modification. He lowered the arching slightly and began to use elaborate double purfling with floral designs on the back and belly. His soundholes are serpentine-looking c's or f's. He made both conventional scrolls and human or animal heads, exquisitely worked in either case. Only one Barak Norman label is known, and that was found in a viol. Norman's monogram is generally engraved at the top center of the back and under the wide part of the fingerboard on the belly. English makers tended not to use molds. They traced the design on the slabs and roughly cut it out with a bow saw. After shaping the model they finally trued the curves of the outline and hollowed the back. The six blocks were glued on next and the sides were bent into the blocks.

Cross

Nathaniel Cross (fl. London, c1720-1751), who was Norman's partner after 1715, patterned his work almost completely after Stainer. The exception is his purfling which he set into a pronounced groove. Early Cross violins are not particularly refined, but his work improved significantly after he entered into a partnership with Barak Norman around 1715. Despite his association with Norman who was working after Maggini by then, Cross continued with a Stainer model. Cross's varnish varies from a clear yellow to a golden brown,
both of good quality but rather brittle. The tone is not strong but is clean and warm. His instruments are usually branded inside with St. George's cross, the upper arms bearing his initials.

**Wamsley**

Peter Wamsley (fl. London, c1725-1745) was the other excellent Stainer copyist, and apparently a student of Nathaniel Cross. He had a tendency to exaggerate Stainer archings by hollowing the edge too drastically. His varnish is similar to Cross's, including its brittle consistency. Wamsley eventually developed a much softer dark brown oil varnish much like the Forsters' in every aspect but color. Wamsley's reputation took some severe blows with the publication of *The History of the Violin* by Sandys and Forster. The authors criticized his wood as being worked too thin, and the repetition of this accusation tended to obscure the many good qualities his work does have.

**Banks**

Benjamin Banks (b ?Salisbury, 14 July 1727; d Salisbury, 18 February 1795) was a major figure in raising the standards of English violin making in the second half of the eighteenth century. He seems to have studied in London, possibly with

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Wamsley. His woodworking is visually similar to Duke's and Joseph Hill, but even more similar to that of William Forster. Both Forster and Banks used a thick, dark red oil varnish that was previously unknown in England. Banks was so skilled a copyist of Nicolo Amati that his violins often pass as Italian. Occasionally he copied Stainer as well.

Forster

The gamut of the Forster family's activities in the music business ran from violin making to music publishing. William Forster (b Brampton, Cumberland, 1739; d London, 14 December 1808), called Old Forster, moved to London in 1759. By the early 1770's his Stainer copies were in great demand, although he eventually became more influenced by the Cremonese. He used a thick dark red varnish that became the norm for all the Forster instruments. Around 1785 he achieved the royal patronage of the Prince of Wales and Duke of Cumberland. Old Forster was also active as a music publisher.

The earliest known violins of Old Forster's son, William (b ?London, 7 January 1764; d ?London, 24 July 1824), date from 1779. William worked with his father for many years, and their labels are printed "Senr" and "Junr." The instruments are also signed in ink on the rib above the tail button with the date and serial number. Around 1800 Forster instruments begin to show a Stradivari influence. William junior took over the family publishing business after his marriage in July
of 1786 (See Figures 30-31).

Duke

Richard Duke (fl. London, 1750-1780) was practically a household name in England, and today violin experts are not exactly certain why. He made some fine instruments, which have been both flattered and insulted by nineteenth-century imitations of his work. Scores of almost worthless factory violins are carelessly branded DUKE, LONDON.4

Parker

Daniel Parker (fl. London, c1700-1730) was probably a student of Barak Norman. Parker worked with a Stradivari model—logical when one remembers that Parker's work coincides with Stradivari's Golden Period. In 1687 a set of Stradivari instruments were ordered for James II and it is very likely that Parker would have had an opportunity to study these. He copied Stradivari outlines and arching as well as scroll and pegbox layout and placement of the soundholes. The varnish is very Italianate in substance, though quite a bit thicker, and varies in color from a light orange-brown to a bright clear red. Parker followed the practices of his English contemporaries in details of workmanship.

Fendt

The Fendt family was another of the violin-making dynasties active in England (although the family was originally from Austria) in the late eighteenth and early nineteenth centuries. Bernhard (b 1756; d London, 1832) worked for Thomas Dodd (b London, 8 February 1834) along with John Lott. Dodd's label appears in all of these instruments, but Thomas Dodd himself never made violins. Bernhard Simon Fendt (b London, 1800; d London, 1851) worked for John Betts (b Lincolnshire, 1755; d London, March 1823). Betts had studied with Duke, and both of these makers became absorbed in Stradivari's style. Many of the best Stradivari imitations labelled with Betts' name are actually by Bernhard Simon Fendt. It was Bernhard Simon, by the way, who introduced in England in 1864, the techniques of making a new instruments look old and used. Jacob Fendt (b London, 1815; d London, 1849) rarely labelled his instruments, which were copies of Guarneri. They are recognizable, however, by a rather unattractive red varnish.

England had an abundance of violin makers working in the country (mainly in and around London) from the very late seventeenth century--many more than whose names appear here. However, England did not produce a maker of international significance such as Tyrol's Stainer or Italy's Amati, Stradivari, or Guarneri or even as the Low Countries' Jacobsz.
The craft of violin-making reached England quite late: Italy had been making violins for nearly a century before Barak Norman began his work. The English became copyists—perhaps because the "real advances" in the field had already been made or were currently being made under the genius of Stradivari, Stainer, and Guarneri. But the English were fine and careful workmen, dedicated to their craft and continued to produce violins of admirable quality well after countries such as Germany, Sudentenland, and Vogtland had turned to factory mass production.
CHAPTER VII

INFLUENCE OR IMITATION?

In any creative activity the dividing line between influence and imitation is extremely thin and even thinner yet is the line between imitation and forgery. In determining whether a seventeenth- or eighteenth-century instrument is a forgery or a copy, one is placed in great danger of committing the intentional fallacy: of wrongly determining a maker's intentions. Even identifying the major influences in a maker's work presents numerous difficulties. Unless a maker is deliberately copying a specific style, his violins seldom show the influence of only one master. Lines of influence are rarely direct or parallel, but more frequently they are indirect and criss-crossing. Charles Beare refers to these criss-crossing lines as tree branches. In general, he writes,¹

I think everything begins with the Amatis and Gasparo da Salò, and all subsequent makers were especially influenced by individual examples that they came across. As more branches came out of the tree there was, of course, a much greater variety of inspiring patterns to follow.

Carl Becker agrees that the vast majority of makers

¹ Beare, letter to the author.
"followed" existing patterns, but stresses that they followed and modified. "People tend to copy something that is successful yet will interject their own ideas as, for example, the Dutch school." ²

Further, each school that was influenced by Amati was influenced by a different aspect of Amati's work. The instruments of Gofriller, Ruggeri, and even Stainer and Jacobsz all show influence from Amati, but the final result was quite individual. Different features pleased and inspired different makers, but it was the aspect of the features that was adapted, not the features themselves. In other words, the influence is found more in one's approach to his craft than in his result. ³

For the most part, makers learned these features from seeing the actual instruments as they passed through the various cities. Theoretically, it is possible that a given maker may have never seen a Stainer violin himself, but built Stainer barrel archings because he had seen it in the work of another maker who had seen a Stainer violin. Second hand influence was very common.

In the nineteenth century makers began trying to replicate actual instruments. They then wanted to make exact copies, not individual creations within a classical framework.

2. Becker, telephone interview.

3. Ibid.
One of the problems with copyists, however, is that they tend to exaggerate certain features of the model. Becker said that it is difficult to say whether the features are exaggerated because of conscious choice or because the copyist missed the point. 4 According to Beare, the problem was so bad in England that "the temptation to make caricatures of certain Stainer features ruined our nation's violin making for more than half a century." 5 The failure in copying came when makers neglected to note the similarities between instruments' various nationalities as well as their differences. 6 For example, they saw that by comparison, Stainer's soundholes had a rather sharp turn at the top and bottom. Therefore, they exaggerated that feature totally out of proportion.

As a rule, makers are taught by someone and tend to show the influence of their teacher. Beyond that is the story of a fad. Who these makers copied is a question of changing fashions in much the same way that clothing goes in and out of fashion today. Until about 1670, everything was more or less Amatisé. Thereafter, Stradivari was the height of fashion, and Stainer rose up right alongside him. In fact, until the beginning of the twentieth century, Stainer violins brought

4. Ibid.
6. Ibid.
prices as high or higher than Stradivari and Guarneri del Gesù. Forster and Sandys' book, published in 1864, tells the story of Cervetto being unable to sell a Stradivari cello in England for five pounds. It was only when the concert hall became so much larger than the nineteenth century halls that the less resonant Stainer violins began to fall out of favor. Venice turned from Cremonese models to Stainer models around 1717 and One recalls a similar change in favor from Italian to French instruments in the Low Countries at the beginning of the eighteenth century. In the nineteenth century, Paganini brought Guarneri del Gesù back to favor; and in the 1830's to 1840's, there was a sudden passion for Maggini instruments. By 1850 Stradivari was again in vogue but today the trend seems to prefer the powerful sound of a Guarneri del Gesù.

A number of makers carried copying a good deal farther when they affixed labels or copies of labels of popular makers

9. It is interesting to take note of the original Cremonese prices of violins:
   1. 1572, Cremona violin (Andrea Amati?) = 1,440.00
   2. 1637, Cremona violin (Nicolo Amati?) = 1,680.00
   3. 1637, older Cremonese violin = 1,920.00
   4. 1637, Brescia violin = 480.00
   5. 1662, two Cremona violins = 4,800.00 each
   6. 1685, Nicolo Amati violin = 3,360.00
      (N.B.: Amati died in 1684)
   7. 1685, Francesco Rugeri = 840.00
      (This information was originally given in Hill, Antonio Stradivari, 244, in pound sterling at the turn of the century. I have adjusted it to 1987 values.)
in their own instruments in order to make more money on the sale. This practice was widespread by the 1660's, and is adequately documented. The Italians were among the first to falsify labels and as early as 1685, Tomasso Antonio Vitali of Modena petitioned the Duke of Modena to appoint legal counsel so he could prosecute Francesco Ruggeri for placing a false Amati label in a violin that turned out to be one of Ruggeri's own works.

Luigi Tarisio was a nineteenth-century Parisian dealer who began travelling through the tiny Italian villages in search of Cremonese instruments. When he found one, he took


11. Hill, Stradivari, ix.

12. Ibid., 211. "Your Most Serene Highness --
Tomasso Antonio Vitali, your most humble petitioner, now at the service of Your Most Serene Highness, bought of Francesco Capilupi, through the medium of the Rev. Ignazio Paltrinieri, a violin for the price of twelve pistoles because the violin bore the label of Nicolo Amati, a maker of great repute in his profession. Your petitioner has, however, discovered that the said violin was falsely labelled, he having found underneath the label one of Francesco Ruggieri, called 'Il Pero,' a maker of much less repute, whose violins at the utmost do not realise more than three pistoles. Your petitioner has, consequently been deceived by the false label, and he appeals to Your Most Serene Highness for the appointment of a legal representative, who, without many formalities and judicial proceedings, and after ascertaining the petitioner's proofs of his assertions, should quickly provide, etc., etc. That God may long preserve Your Most Serene Highness's precious life, etc., etc.
Tomasso A. Vitali
advantage of the trusting and simple-minded villagers by offering to trade them a non-descript violin that was visually beautiful and in perfect playing condition for their old, beat-up instrument. He took these home, repaired them and sold the best for large profits, keeping the remainder to trade on his next trip through the villages. Tarisio eventually resorted to label falsification as well.

Erroneous ideas were circulated about some Stradivari periods being superior to others. These exaggerated theories led some dealers to alter the dates on Stradivari labels to the more favored Golden period. These changes are usually quite obvious. When changes appear so obvious, one wonders why such falsification was not suspected immediately, or at least much earlier. Most likely it was because the prices asked for violins were quite modest, especially in comparison with the astronomical amounts charged today. The higher the price, the more the incentive for research into the history of the instrument.

To guard against the deception of false labels, it is obvious that an expert finds it necessary to know a great deal about peripheral issues like paper and handwriting analysis.

15. Ibid., 216.
16. Ibid., 213.
However, even experts have been fooled: many standard violin references include labels that have since proven to be forgeries. Again, one must not assume that "false" ticketing is always fraudulent. Many makers "reproduced and offered what they considered to be a faithful copy, label included." In many of these cases, the true maker's label is found elsewhere in the instrument--on the interior of the belly, on the top block, on the ribs--or sometimes under the master's label. The practice, "injudicious and also objectionable as it was, was perfectly distinct from that of the unscrupulous dealer who inserts and withdraws labels for a very different reason." 

An example of an outright forgery is the "Balfour Strad," an instrument made by Arthur, Charles, and William Voller. It is difficult to find any significant information about these three brothers; however, they were active in the early 1890's, retiring around 1935. About 1892 they became associates of London dealers Hart and Son, who commissioned them to make copies of their shop's finest instruments. Instruments bearing Hart and Son labels are excellent, original instruments; but around the turn of the century, the brothers' 


18. Ibid.

19. Ibid.
awareness of their ability to deceive the eye led them to leave Hart.\textsuperscript{20} They made new instruments as well as upgrading the appearance of older instruments, and their Balfour Strad deceived many experts, until it was eventually exposed by Alfred Hill.\textsuperscript{21} After the Balfour Strad exposé, the Voller Brothers resorted to reproducing lesser names: Rugeri, Rogeri, Tononi, and Grancino, among others. Some of these were offered as their own work, but "there were certainly instances of their copies being offered and passed off as originals."\textsuperscript{22}

Maggini forgeries have been made primarily from existing violins. The Hills listed types of instruments susceptible to a Maggini "re-make:"

1. All violins of large dimensions and antique appearance

2. Double purfled violins were \textit{de rigeur}

3. French violins of the Bocquay-Pierray period (1700-1740)

4. English violins of the Rayman-Urquhart period (1630-1700)

5. German violins of all periods.\textsuperscript{23}

\textsuperscript{20} Beare, "Voller," \textit{The New Grove}, III, 826.

\textsuperscript{21} Ibid.

\textsuperscript{22} Ibid.

\textsuperscript{23} Hill, Gio: \textit{Paolo Maggini}, 54-55.
If the instrument was large enough, an inner line of purfling could be inserted. If it were too small, the original edge and purfling were removed and a new rim (about 3/8" wide) was added all around, joined to the old part by an underlapping joint. The rim was then purfled and the rim joint was hidden by the second purfling line. Clover leaves and center designs were added, but the scrolls were invariably turned too far.\textsuperscript{24} Forgers had a great deal of trouble with Maggini (and Gasparo) labels. The very early makers never dated their instruments—the forgers did.\textsuperscript{25} The colon (Gio: Paolo) always appears on original Maggini labels, but the forgers tended to omit it.\textsuperscript{26}

Violin experts seem to agree that a forgery will always be detected in the long run, though one sometimes doubts the individual abilities of the experts, for one can easily find features that are disputed by them, for example, the soundholes of Guarneri del Gesù that were discussed above. Nonetheless, Walter Hamma asserted that, "In my opinion, it is impossible for a maker to copy a master's work in such a way that an expert will not be able to tell the difference."\textsuperscript{27}

\textsuperscript{24} Ibid.

\textsuperscript{25} Ibid.

\textsuperscript{26} Ibid.

\textsuperscript{27} Walter Hamma, "Old Violins and Books about Violins," The Journal of the Violin Society of America, VII (November, 1982), 68.
CHAPTER VIII
PROBLEMS OF AUTHENTICATION

Identification

"Since violin makers are human beings and not machines producing objects exactly alike in every detail, the problem of identification is getting more and more difficult...Fortunately, many master makers have some typical features or characteristics that are to be found in virtually all their work."¹ One can make an analogy between luthiers and painters, for example, whose paint, brushes, and canvas are common to every master, yet each develops his own technique.² In order to determine an instruments' authorship, one must be familiar with these resultant techniques. The only reliable traits are the physical ones; the sound is far too subjective to allow it to be used to identify a maker, date, and country of origin.³

With regard to the national identification, the determination must be within a context of age.


2. Ibid.

To say that there is a common characteristic between, for instance, eighteenth century Parisian violins . . . and nineteenth-century French makers . . . would not be accurate . . . One would, for example, say a Jacobs violin made in Amsterdam in 1690 had more in common with a [seventeenth century] Italian violin than a Scarampella made [in Italy] in the twentieth century would. 4

Each violin expert has his own method of identifying an instrument. In some cases, the same techniques are used by several experts, perhaps in a different chronological order. Hamma writes that the recognition of a master work is in the comparison of various aspects: the cutting of the soundholes, the workmanship of the edges and corners, the purfling, and, in particular, the scroll (often the most personal element, showing typical points which relate to the handling of the tools.) 5 Often, however, characteristic details of construction have been obscured or obliterated by the hands of pupils or through later repairs. Characteristic details can also vary with a maker's age (Stradivari being a case in point). Aspects such as the arching and outer form are less telling because they have usually been copied. 6 On the other hand, a maker is often detected by his manner of copying (though the more he tries to hide his personal work, the harder the task) in that it is sometimes possible to recognize

4. Ibid.
5. Hamma, op. cit., 29.
6. Ibid.
a style acquired by copying many instruments in the same way. 7

The varnish is often typical, and "mostly the first indication of school, locality, or town of origin. One can even tell the date by [the varnish.]" 8 After determining the school and approximate date through the instrument's over-all picture, Hamma discovered the maker, his workshop, and his school through the analysis of the workmanship, use of tools, edges, purfling, soundholes, scroll, etc., one observation leading to another. "However, long years of experience are needed and above all an intuition and a greatly developed sen-
sitivity." 9

Dario D'Attili begins with the violin back so he can see the outline (which should tell the country or school it is from -- or, importantly, the school it is not from). When a particular school influenced one or two others, it can be any one of the three countries, but elimination is possible by studying the outline. 10 D'Attili next looks at the top for details of construction. The soundholes are quite revealing because even in shops using a common pattern, the "personal touch" is evident in the positioning, the width between the

7. Ibid.
8. Ibid.
9. Ibid.
two, and in the slant.\textsuperscript{11} Proportion, or lack thereof, if a very important feature to observe. Some schools are very symmetrical because they are built on geometric principles (for example, anything out of Cremona or a Cremonese-influenced school). Other schools are out of proportion, usually a result of copying a style without reverting to the original mold (there was a tendency to do a lot of the copying by eye rather than by geometric principle).\textsuperscript{12}

Bein also starts with the general outline which "gives some idea of the esthetic of the maker and doesn't tend to point to one school or another."\textsuperscript{13} Following this is a determination of age, quality of the varnish, and all of the particular details -- f-holes, scroll, purfling, arching, and "last but not least, the label if it can be determined that it is original."\textsuperscript{14}

Beare begins identification by looking at the back, and he continues to do so until he has some sort of impression of it: the way it was designed, how it was made, how it was varnished, the purfling, and the purfling material.\textsuperscript{15} He looks

\begin{itemize}
\item \textsuperscript{11} Ibid.
\item \textsuperscript{12} Bein, op. cit., 2.
\item \textsuperscript{13} Ibid.
\item \textsuperscript{14} Ibid.
\item \textsuperscript{15} Charles Beare, "Violin Appraisal," The Journal of the Violin Society of America, VI (Winter, 1981), 107.
\end{itemize}
next at the scroll to determine if he gets the same impression from it that he got from the back. Very often, the scroll does not belong to the instrument. He then reconsiders the back—especially if the scroll does belong to the instrument. He examines the ribs, and, lastly, the front, mainly the soundholes.

Carl Becker begins the identification process (as most experts seem to do) by gaining an over-all picture (outline and arching, dimensions) before moving to the details of construction (for example, how the ribs were made and put together at the corners, if pins were used, the shape of the corner blocks, if the linings are inlaid, etc.). Lastly, Becker analyzes the varnish; because, for example, the main difference between a Cremonese and French instrument is the varnish. Becker emphasizes that in identifying an instrument, the vital ingredient is a "sum total of various details that all add up to the correctness of the instrument...you can't have just one detail be right...you can find the same feature going from one country to another...what you look for is a combination, a total effect."

16. For instance, Becker says a lot of Italian instruments are a little shorter and smaller than some nationalities, but "you can't get out your tape measure and identify the instrument."

17. Carl Becker, Telephone interview.

18. Ibid.
Authentication

Unfortunately, the authentication of an instrument may not be as cut-and-dried as many violin experts have believed. Museum curators and musicologists have begun to question the actual process by which a violin is identified. The current assumption in the violin world appears to be that an instrument is authentic until it is proven otherwise. Karl Moens, however, is one of those who believes the approach to authentication cannot resemble the criminal law approach of "innocent until proven guilty." This is not to say all attributions are incorrect, but that these violins need to be subjected to systematic research before a conclusion is reached. Moens said that when two violins, fundamentally different from one another, are attributed to one maker, it becomes necessary to question the scientific value of such expertise. The principle guiding this current move toward a more scientific method of identification is that the basic constructional and formal characteristics of a string instrument result more from the builder's place in a certain tradition than from the builder's personal traits. These traditions are primarily determined by the total social, cultural, political, and eco-


20. Ibid.
nomic context in which they are developed.21

This movement proposes that the joint roles of "expert" and "dealer" in one person is objectionable as a guarantee for objectivity. In his research, Moens studied 2,500 instruments from Europe's most important collections. In only ten to twenty percent of these was there no indication of something to call into question the authentication of the violin.

As this type of research continues, the violin world is balanced on the edge of major changes. Museum curators are already hesitant to pay the astronomical prices necessary in order to acquire a sixteenth- or seventeenth-century violin. For the cost of a single violin, an entire woodwind exhibit could be mounted. Understandably, as the authenticity of these violins comes into question, collectors are going to be less willing to pay for an instrument that may not even be what it is claimed to be.

21. Ibid., 82.
CHAPTER IX

CONCLUSION

Every issue is multi-faceted, and the study of style and influence in violin making is no exception. On one side we have violin experts who claim that, in the end, no forgery will pass undetected. On the other side we have museum curators and musicologists who have conducted research which supposedly negates the claim of the so-called experts. The experts purport to have the ability to identify the origin of an instrument based on its artistic and constructional style. In many cases they have convinced us that they have succeeded in doing exactly that, but in others these same experts have trouble agreeing on the country of origin, let alone the town, the school, or the maker.

It seems logical to conclude that violin identification should be highly objective, but instead the high degree of subjectivity involved causes one to doubt the scientific reliability of its conclusion. This is by no means an attempt to impugn the knowledge of the violin experts; but only to question the validity of their subjective evaluations. All too often the evaluators are also dealers and it may be that they are too closely and personally involved with the outcome to expect them to reach an objective conclusion.
The scientific technology at our disposal for use in authentication should not be ignored. These techniques should be employed by competent parties to attempt a reliable identification of these instruments. We must return to an emphasis on the tradition to which these makers belonged rather than only on the makers themselves.

It appears that this latter is the crux of the issue. So much importance has been placed on individual makers that the more crucial aspect of the traditions of the craft has been lost. The amount of attention to the maker is, however, not a twentieth-century invention, for I have already discussed the faddish nature in violin sales that goes back even into the seventeenth century. As to who it was who first lost his sense of priority--the dealer or the buyer--is a moot point, but what is important is a realization that somewhere along the line we lost sight of the goal in violin making: the instrument itself. Dealers tell story after story about clients who have come into their shops and, after playing several violins without being aware of their makers, have declared a certain one to be vastly superior to the others. Upon learning that their choice was a Tononi, for example, and among the remainder had been an Amati and a Stradivari, the client suddenly revises his opinion about which is the superior violin, indicating, perhaps, that the maker's name means too much.
From the point of view of the performer this has long been the case, for the musician can ill afford the exorbitant prices that name violins bring, prices that in many cases have been driven up by the collaborative efforts of the dealers and collectors. To bring some sense of balance to this profession, it is necessary to identify instruments and makers by the most advanced, reliable, and objective means possible, and one must never lose sight of the instrument and the tradition from which it was created.
Figure 2. Cauzenzio Ferrari, detail of the fresco (Santuario, Saronna)
Figure 3. Pierre Woeiriot, engraving of Kaspar Tieffenbrucker (Lyons), 1562
Figure 4. Violin, unknown, 1575
Figure 5.  
A. Violin, Gasparo da Salo, 16th century  
B. Violin, Zuan Maria da Bressa, 16th century
Figure 6. Violin, Andrea Amati, before 1577
Figure 7. Violin, Andrea Amati, before 1577
Figure 8. Violin, Andrea Amati, before 1577
Figure 9. Violin, Antonio Stradivari, 1693
Figure 10. Violin, Antonio Stradivari, 1693
Figure 11. Soundhole and Corners of the "Betts" (1704) and the "Muntz" (1737)
Figure 12. Violin, Giuseppe Guarneri del Gesù, 1742
Figure 13. Violin, Giuseppe Guarneri del Gesù, 1742
Figure 14. Viola, Gasparo da Salò, before 1689
Figure 15. Viola, Gasparo da Salò, before 1689
Figure 17. Violin, Giovanni Paolo Maggini, before 1632
Figure 18. Violin, Giovanni Paolo Maggini, before 1632
Figure 19. Violin, Giovanni Paolo Maggini, before 1632
Figure 20. Violin, Pietro Giacomo Rogeri ("Ruggerius" on label), 1715
Figure 21. Pietro Giacomo Rogeri ("Ruggerius" on label), 1715
Figure 22. Pietro Giacomo Rogeri ("Ruggerius" on label), 1715
Figure 23. Violin, Sanctus Seraphin, 1742
Figure 24. Violin, Sanctus Seraphin, 1742
Figure 25. Violin, Hendrik Jacobsz, 1690
Figure 26. Violin, Hendrik Jacobsz, 1690
Figure 27. Violin, Dutch School (?), c1789
Figure 28. Violin, Dutch School (?), c1789
Figure 29. Violin, Jean-Baptiste LeFebvre, 1767
Figure 30. Violin, William Forster, Jnr. c1800
Figure 31. Violin, William Forster, Jnr. c1800
APPENDICES

APPENDIX A

THE PARTS OF A VIOLIN
APPENDIX B

EVOLUTION OF THE VIOLIN NECK

A. before 1750
B. R. Duke, 1766
C. after 1800
APPENDIX D

QUARTER-CUT vs. SLAB-CUT WOOD

Wood cut on the quarter

Wood cut on the slab

Back in one piece, cut on the quarter

Back in one piece, cut on the slab
APPENDIX E

THE MYTH OF "SECRET" VARNISH RECIPES

As mentioned in Chapter II, varnish recipes are often proposed as the secret of a maker's success. Some have tried to reason that modern violins cannot equal Stradivari's because of Stradivari's "secret varnish recipe." The truth is, however, that varnish recipes were never secret. In the early days a maker did not even prepare his own varnish. He bought it from a specialist or an apothecary and the quality fluctuated with the anticipated price of the instrument. In other words, the more a maker was being paid for the instrument, the more he could afford to pay for a better quality varnish. If the makers had obtained their varnishes from other than local apothecaries, one could not talk about regionl varnishes--they would all be different. For instance, Cremonese varnishes have a golden-brown base without reticulations which appears to be much thinner than the Venetian reticulated varnish which uses a yellow-golden base. Each maker probably had his own ideas about the best proportions of gum, oil, and coloring agent, but beyond that they appear to have been very open with one another. Count Faldrighi, in his


2. Hill, *Antonio Stradivari*, 172. The Hills make an additional point that a varnish recipe could hardly have
Nomocheliurgografia, noted that the Duke of Ferrara wrote to Jacopo de li Tibaldi of Venice for a varnish recipe. On 20 January, 1526, the Duke replied,³

The celebrated lute maker Sigismond Maler has promised to give me in writing by Monday next the recipe of the varnishes he uses, as well as the manner of putting it on the lutes. The master also tells me that he has two kinds of varnish, and that it is his assistants, not he, who make it.

Therefore, it would appear that the varnish recipes could hardly have been valuable secrets, or the master would not have allowed his pupils to make it, nor would he have been willing to part with the recipe.

In a letter dated 14 April 1792, Pique wrote to Lupot:⁴

I would ask you to be good enough to let me have some of your oil varnish, sufficient for several violins, as I have run out of my own and have not the time at present to make any.

Stradivari's varnish became a secret only after his death, and was made so by his ancestors. As a youth, Giacomo Stradivari found the recipe written, in Antonio Stradivari's handwriting, in the cover of the family Bible. He copied it

3. Ibid., 173.
down, but destroyed the original because he did not want to
tell his mother of his discovery and had to devise a less
obvious place to hide the recipe. Giacomo later, of course,
realized the foolishness of destroying the original, but
remarked only, "Young people cannot possess the wisdom of
their elders." Giacomo never released the varnish recipe

even to my wife or my daughters . . . [because] if
by chance other Stradivaris--my sons, nephews,
grandsons, or grandnephews--should turn their
attention to mechanics, more especially to the craft
of our celebrated ancestor, they should then at
least have the advantage of possessing the recipe of
his varnish, the possession of which could not but be of material assistance to them.

For the most part, however, most of the old varnish
recipes disappeared after Stradivari's death, at a time when a
faster-drying varnish was needed for the mass-produced instru-
ments. The phrase "better-quality varnish implied a slow-
drying, expensive varnish, and the extreme importance of such
qualities passed either unnoticed or unheeded. Thus, it seems
most likely that the recipes for superior varnish disappeared
because of disuse, not because they were a heavily guarded
secret.

5. As quoted in Hill, op. cit., 170.
6. Ibid., 169.
7. Ibid., 178.
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