



RESEARCH PAPER

The unplayable notes of JS Bach

An investigation into the range of oboe parts in the Leipzig Cantatas

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There are numerous instances where Bach composed music which goes out of the range of the oboes that were used during his lifetime. Why did Bach write notes that are generally regarded today as unplayable, or perhaps rather 'unperformable' due to the quality of both sound and intonation when produced on a contemporary copy of a historical instrument? This is a problem which has been somewhat confined to the footnotes of Bach scholarship but it nonetheless poses very important and relevant questions for the historical oboist, and in fact potentially for the Bach musician and scholar at large.

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The unplayable notes of JS Bach

Objectives

The objectives of this study are as follows:

1. To survey the range of Bach's oboe parts in the Leipzig cantatas
2. To review past publications on the subject
3. To attempt to establish if the 'unplayable' notes could have been performed. If so to what extent.
4. To lay the foundation for further research into the topic.

Summary

There are numerous instances where Bach composed music which goes out of the range of the oboes that were used during his lifetime. Why did Bach write notes that are generally regarded today as unplayable, or perhaps rather 'unperformable' due to the quality of both sound and intonation when produced on a contemporary copy of a historical instrument? This is a problem which has been somewhat confined to the footnotes of Bach scholarship but it nonetheless poses very important and relevant questions for the historical oboist, and in fact potentially for the Bach musician and scholar at large.

- *How many examples of these notes did he write?*
- *Are the notes an error or deliberate?*
- *Did he intend the oboist to play the notes written out of range?*
- *Did Bach's oboists have a different instrument at their disposal for playing different ranges?*
- *Were they simply more skilful at producing these notes than we are today?*
- *Were the reeds used different enough to the reeds we use today that they were more flexible in intonation?*

My initial question regarding these 'unperformable' notes very quickly grew from a simple question of 'how did they play these notes' into an enormous topic clouded by numerous complications. In the forthcoming pages I will explore the basic premise of my question, alongside these complications, the issue of range, Bach's oboists, historical reeds and historical oboes.

Chapter 1

Introduction to the problem - Range:

The range of the oboe in use during the period of Bach's working life is accepted today as fingered middle c¹ (described henceforth as c') to the d two octaves and one note above (d'''). c#['] is today largely considered an 'unperformable' note. Of the eight surviving fingering charts² from the date 1688-c.1758 none gives notes above d''', although a Paris copy of the Eisel chart has undated fingerings for notes c'''-f''' drawn in by an unknown hand.³

The c#['] problem

In the absence of a c#['] key, the historical oboist can play c' and d' but there is no keyed or other reliable way of producing a c#['].

- The fingering is given in Bismantova and La Riche (1) as 1234568, which is the same fingering as for c'.
- The fingering is given in Bannister, La Riche (2) and Freillon-Poncein as 123456-8.

In order to half close key 8, one must assume that something be inserted between key and wood to prevent the key completely closing. In order to produce c#['] with the same fingering for c' the oboist must use their embouchure to lip up c' a semitone. Today this produces a note which has poor intonation and unsatisfactory tone colour.

Other known ways today to produce a c#['] include: ⁴

- Turning the bell upside down
- Removing the bell
- Lipping the fingering 123456 down a semitone from d'
- Using an instrument with a low note tuned to c#['].

Of these possibilities both turning the bell upside down and inserting something to allow the key to close only half way both require preparation time. Lipping the fingering 123456 down produces a slightly more satisfactory result than lipping up 1234568 but is still out of tune and has a poor tone.

E''' and F'''

The additional fingerings in Eisel mentioned above give e''' 124567 and f''' 12567⁵. These do not work on copies I own of a German Denner or an English Stanesby.

¹ Fingered middle c' on oboe is A on oboe d'amore and F on oboe da caccia. The same problem with fingered c#['] applies of course to oboe, oboe d'amore and oboe da caccia.

² Bismantova 1688, Banister 1695, La Riche 1692 (1), La Riche 1692 (2), Second Book of Theatre Music 1699, Freillon-Poncein 1700, Hotteterre 1707, Eisel 1738. Haynes, Bruce *The Eloquent Oboe* p478 Oxford University Press

³ Haynes, Bruce (2001) *The Eloquent Oboe* p199 Oxford University Press

⁴ Haynes, Bruce (2001) *The Eloquent Oboe* p203 Oxford University Press

⁵ Haynes, Bruce (2001) *The Eloquent Oboe* p199 Oxford University Press

Bach's range

That Bach was well acquainted with the range of the oboe cannot be questioned, because he overwhelmingly wrote music that is within the parameter of what we consider 'playable' today. However he wrote numerous examples of c#' and examples of exposed fingered eb'', e''' and f''. Denton, Haynes and Terry all provide examples of these⁶, with some reference as to context. Please refer to Chapter 4 for my full survey of Bach's oboe range in the Leipzig Cantatas.

⁶ Haynes, Bruce (2001) *The Eloquent Oboe* p197-201 Oxford University Press, Denton, John William (1977) *The Use of Oboes in Church Cantatas of Johann Sebastian Bach* (DMA University of Rochester), Terry, C.S (1932) *Bach's Orchestra*, Oxford University Press

Chapter 2

Existing literature

In order to assess existing literature I have divided it into the following categories:

- Contemporary research - range
- Contemporary research - historical reeds
- Contemporary research - historical oboists
- Bach's music in manuscripts and modern editions
- Historic fingering charts

Contemporary research on range

The most detailed discussions on range come from Terry, Denton and Haynes⁷. Terry, Haynes and Denton give specific examples of range, but neither provides information that suggests they have completed a full and meticulous survey of oboe range. Terry provides a list of Cantatas that have a c#. He documents these as 2, 17, 24, 25, 28, 29, 30, 31, 34, 35, 43, 44, 45, 50, 57, 68, 70, 86, 94, 104, 110, 113, 128, 129, 136, 148, 149, 152, 157, 169, 171, 174, 185 and 193. (Terry p95-6). Despite listing 51 instances where Bach used a c# Terry claims that Bach had an 'aversion' to the note. Although it is useful to have this list of Cantatas which use a c# Terry's list is in many ways an unhelpful one. Are the notes doubled with other instruments or voices? Are the notes exposed, solo or doubled between oboes? Does the key and range actually suggest oboe d'amore rather than oboe? It is not possible to determine the problem that the oboist faces without this information, or whether there is in fact any problem at all.

Denton explains the prominence of the oboe in Bach's writing, particularly during the Leipzig years, and how the oboe is frequently used as a ripieno instrument, doubling the string parts. He goes on to explain notational and range difficulties, explaining the special transpositional complications of Bach's writing pre-Leipzig. He claims that Terry is misled in his assertions regarding range because he used the Bach-Gesellschaft edition for Cantatas dating from the pre-Leipzig. In this edition the transposition can be categorically proven to be wrong because Bach wrote for oboes which were kammerton instruments, and hence were written as transposed parts. The editors of the Bach-Gesellschaft failed to understand this, and so the pre-Leipzig Cantatas are mis-transposed, meaning that the oboe is frequently carried out of range in this edition. Denton claims that once the transposition is made correctly, this means that at no time is the oboe carried out of its range⁸, above d''' or below c'. He goes on to give examples of oboe d'amore music which is in fact written out of range, including c''', c#''' and d'''. (Fingered eb''', e''' and f'''). He explains that the oboe d'amore is mostly doubled or 'similar' to the violins during these moments but specifies two Cantatas where the high notes are used. He provides examples of Cantata 37, 133, 151 and 195 where the part goes out of range and the oboe is instructed either not to play or alternative notes are provided. Denton states "when the oboes d'amore are not doubling the strings, and when Bach did not provide alternate pitches, the players would probably leave out the notes or substitute playable ones in their place". Denton suggests that Bach was aware

⁷ Terry, CS (1932) *Bach's Orchestra* Oxford University Press, Haynes, B(2001) *The Eloquent Oboe* Oxford University Press Denton JW (1977) *The Use of Oboes in Church Cantatas of Johann Sebastian Bach* DMA

⁸ Denton JW (1977) *The Use of Oboes in Church Cantatas of Johann Sebastian Bach* DMA p5

of the difficulties of playing c[#], and that the occasions that he used it without doubling in another part were an oversight on his part.

Bruce Haynes discusses the wider issues of range on the baroque oboe out-with the works of Bach. He quotes the acoustic scientist Sauveur writing in 1701 as follows⁹

‘For the majority of the wind instruments we have determined the extremes of range with the advice of Mr Ripert and Mr Jean Hotteterre the younger, who are among the best makers in Paris. The extremes sometimes vary, depending on the aptitude of different players.’

This means that as early as the beginning of the 18th century it was recognised that the skill of the oboist had an important impact on the range they could play. Bruce Haynes also points out that Hotteterre’s fingering chart of 1707 indicates that oboists might occasionally play above d^{'''}, quoting Hotteterre as writing “It should be said that one rarely plays higher than d^{'''}”. Bruce Haynes continues by indicating solo and exposed parts by Sammartini, Graun and Hasse which use eb^{'''}. He also refers to works by Dreyer and Fasch which use solo and exposed e^{'''}.¹⁰ (p198). He gives examples of Bach’s works which go out of range for oboe d’amore, including Cantata BWV55 and BWV201. Haynes suggests an unwillingness on Bach’s part to go beyond d^{'''} on oboe, as indicated by the writing in BWV 37, 133, 151, 154 and 195, where Bach omits the highest notes in the oboe part, or gives alternative notes. Haynes gives some examples of Cantatas with fingered low c[’]/c[#]’ or d[’]/db’ combinations.

Contemporary research on historical reeds

Today any discussion on the historical oboe and its sound and capabilities will always be coloured by the fact that there are no confirmed oboe reeds from Bach’s time, and early reeds in general are extremely rare.

The paucity of original specimens has meant that modern oboists have relied more on empirical investigation in their search for reeds for historical oboes than on copying original specimens. While this has certainly yielded positive results, the extent to which authenticity has been compromised remains a moot point.’¹¹ (Geoffrey Burgess and Peter Hedrick).

This vital part of the oboe therefore remains something of a mystery. The few historical reeds that do exist are too fragile to be played and therefore the sound and response must be hypothesised. Paul Hailperin describes an extremely rare reed which he believes is associated with an oboe d’amore (by J. Denner) that dates from the time of Bach.¹² He expresses a cautious opinion that the reed is contemporary with the oboe, but is clear that it is impossible to be certain. The staple is in two parts, together giving a length of 95-95.5mm. The reed is scraped in a U and is 26 long. It is cut at a slant and has a width of 10.7 at the tip and 5.4 where the thread was tied. The tip of the reed is 0.2 thick. This would make the reed longer and wider than oboe d’amore reeds made by most oboists today.

⁹ Haynes, Bruce (2001) *The Eloquent Oboe* p197 Oxford University Press

¹⁰ Haynes, Bruce (2001) *The Eloquent Oboe* p198 Oxford University Press

¹¹ Burgess, Geoffrey and Hedrick, Peter (August 1989) *The Oldest English Oboe Reeds? An examination of 19 surviving examples* *The Galpin Society Journal*, Vol. 42, p32-69

¹² Hailperin, Paul (April 1975) *The Galpin Society Journal* Vol. 28 p35-36

Geoffrey Burgess and Peter Hedrick present a fascinating paper¹³ in which they examine the oldest existing English reeds, describe the problems that face the modern oboist attempting to create a historically informed reed, and provide a detailed examination of 19 examples by the English reed maker Thomas Ling. However all the information in this paper refers to reeds, players and instruments of the late 18th and early 19th centuries. The paper gives some general information regarding the internal scrape of the reed, which could have been used in Bach's time. In general there is some conjecture that the baroque reed could have been a little wider and more flared in shape than the reeds typically created for historical oboes today. There is some iconographical evidence to support this. N. Post discusses early iconography in detail.¹⁴

There are modern accounts of reed making for the baroque oboe by Harry vas Dias *Making Reeds for the Baroque Oboe*¹⁵ and Bruce Haynes *Making Baroque Oboe Reeds*¹⁶. A list of surviving historical oboe reeds by Burgess and Hedrick is detailed in Burgess and Hedrick's article in the Galpin Society Journal.¹⁷

Contemporary research on historical oboists

During Bach's time at Leipzig he struggled both with the musicians available to him, and with their calibre.¹⁸ On the 23rd August 1730 Bach submitted a 'short but most necessary Draft for a well-appointed church Music' to Leipzig Town Council, where his 3rd oboist position is listed as vacant. The Stadtpfeifern gave Bach 8 musicians; two trumpeters, two oboists, three violinists and an apprentice who played bassoon.

'The number of persons appointed to play the church music is 8, namely, 4 town pipers, 3 professional fiddlers and one associate. Modesty forbids me to speak at all truthfully of their qualities and musical knowledge. Nevertheless it must be remembered that they are partly *emeriti* and partly not at all in such practise (*exercitio*) as they should be.' (J.S. Bach 23rd August 1730)¹⁹

Bach's oboists were Johann Kaspar Gleditsch and Johann Gottfried Kornagel, as listed in the document of 1730. Gleditsch played for Bach from 1723 until he died in 1747²⁰ and Kornagel from 1723 until approximately 1735²¹. We can surmise from their longstanding relationship with Bach and the technical difficulty of the music he wrote for them that they were probably players of a high level of technical accomplishment, in spite of what is written in the letter. Gleditsch in particular was a player who we know was very interested in the contemporary music of his time, and is documented as one of the original subscribers to Telemann's

¹³ Burgess, Geoffrey and Hedrick, Peter (August 1989) *The Oldest English Oboe Reeds? An examination of 19 surviving examples* The Galpin Society Journal, Vol. 42, p32-69

¹⁴ Post, N. (1985) *The Seventeenth-Century Oboe Reed* Journal of the International Double Reed Society XIII p. 57

¹⁵ Vas Dias, Harry, (1981) *Making Reeds for the Baroque Oboe*, Journal of the International Double Reed Society IX p.48

¹⁶ Haynes, Bruce (1976) *Making Baroque Oboe Reeds* Early Music p.31 and 173

¹⁷ Burgess, Geoffrey and Hedrick, Peter (August 1989) *The Oldest English Oboe Reeds? An examination of 19 surviving examples*, The Galpin Society Journal, Vol. 42, p59-62

¹⁸ David, Hans T and Mendel, Arthur, revised Wolf, Christoph (1998) *The New Bach Reader*, WW Norton New York and London p145-151

¹⁹ David, Hans T and Mendel, Arthur, revised Wolf, Christoph (1998) *The New Bach Reader*, WW Norton New York and London p147

²⁰ Terry, CS (1932) *Bach's Orchestra* Oxford University Press, Haynes, B(2001) *The Eloquent Oboe* Oxford p10

²¹ Denton, John, source Arnold Schering 'Die Leipziger Ratsmusik von 1650 bis 1775, New York Dover Publications (1951) p232

‘Tafelmusik’.²² It is extremely important to remember that Bach’s oboists were contemporary players of their time, apparently with a passion for new music and, perhaps one can again surmise, a corresponding desire to experiment.

Bach’s music in manuscripts and modern editions – rationale for edition used in this research

One of the most confusing aspects of the problem of range in Bach’s oboe music is due to the transposition issue that Bach had within his orchestra, and most particularly with *Kammerton* and *Chorton*. These names refer not to any absolute pitch but to the higher and lower pitch between instruments. *Chorton* is normally a major second or a minor third higher than *Kammerton*. In Bach’s time in Weimar and Mühlhausen the oboes were *Kammerton* and the organ was *Chorton*, therefore the oboes parts were transposed. When early 19th and 20th century editors identified the problem of oboes in one pitch, and string, voice and organ parts in another they simply transposed the oboe parts to the pitch of the rest of the orchestra, thus creating parts where the oboe was regularly taken too low in range. However in Leipzig Bach treated the organ and trumpets as transposing instruments, meaning that the oboes, strings and voices were all notated at the same pitch. The early Bach Bach-Gesellschaft is therefore an accurate source and extremely close representation of Bach’s manuscripts for the Leipzig Cantatas, as confirmed by examination of corresponding autograph scores.²³

This edition is particularly useful for my purposes in addressing range as the editor is scrupulous in maintaining the original clefs that Bach used and following the idiosyncrasies of occasional transpositions for the oboe d’amores. Modern editions are written with the oboe parts transposed, but since Bach did not have a completely consistent system for the names of oboes the clef can be useful in certain situations in identifying the oboe required.

Historic fingering charts

Bruce Haynes has a comprehensive survey of all surviving historic oboe fingering charts. Please see Appendix 1.

²² Denton, John William (1977) *The Use of Oboes in Church Cantatas of Johann Sebastian Bach* (DMA University of Rochester)

²³ www.bachdigital.de

Chapter 3

Research process and methodology

Whilst there is a considerable amount of information and discussion regarding the issue of range in Bach's oboe parts I have been unable to source a complete survey of the range that Bach employs throughout his writing and the context of the notes which Bach wrote. Haynes, Terry and Denton all give examples, but I remain unconvinced that the examples they give tell the whole story, and that these examples are the only examples in Bach's writing. I was interested to investigate other questions that they do not answer – if Bach wrote 'extreme' notes, i.e. fingered c#' or above d'', did he write them within the same piece, or movement? Or if Bach wrote above d'' did he also write c'? If there is c#' does that mean there are no c's in the same piece? A simple list of cantatas in which a c#' or notes above d'' are used does not answer these questions.

My unease with both Denton and Terry as complete sources was compounded because both Terry and Denton are in some sense dismissive of these extreme notes as anomalies. They are 'oversights' or editorial error²⁴, notes to which Bach was 'averse'²⁵. This did not seem to acknowledge what I was beginning to find as I started to examine Bach's cantatas. There did in fact seem to be a small but undeniable percentage of instances where Bach wrote notes that go outside the range we consider playable today.

As many oboists will know reeds can be adjusted to play well on the lower register or the upper register. Reeds very rarely play extremely strongly in both the upper and lower register. Does Bach take this into account in his writing? Today many oboists, including the most eminent players of our time will leave out a doubled 'unplayable' note. Yet how many undoubled and exposed 'unplayable' notes exist? Are they few enough to be dismissed as mistakes or oversights? Bach was an entirely practical composer, writing for oboists that he knew, for particular occasions and at speed. This would indicate to me that he would not deliberately have written music that he knew could not be performed. However it could also indicate that he trusted them to work out a solution if by an oversight he included an 'unperformable' note. Many oboists today will dismiss these notes because they are doubled, suggesting the oboist should not play, and that in this situation the oboe is merely providing colour to the orchestra. One low or high note that is left out is not noticeable within an orchestra and in a church acoustic. However the fact that Bach was writing for single strings would mean that the oboe was much more prominent and audible. Also, why would Bach continually write a note which he knew the oboists would not play, no matter if it is doubled, when he did not generally write notes further out of the range of the oboe? Further, when we see this note appearing in an undoubled context does this strengthen the argument that it must somehow have been played? In my opinion it is too easy to assign these notes to a mistake on Bach's part without some further information.

My research process has been to take a large sample of some of the most challenging and virtuosic music that Bach wrote for oboe – that is his output of sacred cantatas featuring oboes from his time at Leipzig – and to analyse the range of each oboe part, and the style of writing (oboes doubled with strings, flutes, voices, oboes doubling with each other, independent parts or solo parts). When an 'unplayable' note appears I have considered the

²⁴ Denton JW (1977) *The Use of Oboes in Church Cantatas of Johann Sebastian Bach* DMA

²⁵ Terry, CS (1932) *Bach's Orchestra* Oxford University Press

context – is it doubled or solo or exposed in some way? I have recorded the main tonality of the work, and I have also recorded the date of each work in case we can see a particular time in which Bach was perhaps experimenting with range.

To examine the entirety of his works was a project that was outside the remit of master's research. I believe the vast body of the Leipzig Cantatas is enough to give an outline of the problem and to potentially allow for a further investigation into the solution. Of course this does not mean that other works do not feature these notes. There are several well known and high profile examples from works including BWV 201, BWV232 and BWV 244. I must reiterate that this research is simply a sample of Bach's enormous output and not an exhaustive investigation.

Chapter 4

*The range of all oboe, oboe d'amore and oboe da caccia parts in Bach's sacred cantatas 1723-1750*²⁶

<i>Number</i>	<i>Key</i>	<i>Date</i>	<i>Writing style</i>	<i>Range of oboe 1</i>	<i>Range of oboe 2</i>	<i>Range of oboe 3</i>	<i>Range of oboe 4</i>	<i>Range of oboe 5</i>	<i>Additional comments</i>
BWV 1	F major	25 March, 1725	Independent and doubled with violins first movement, solo aria	Oboe da caccia F- f''	Oboe da caccia F-c''				
BWV 2	D minor	18 June 1724	Doubled and doubling aria with violin and oboes	Oboe B – d'''	Oboe B-d'''				No c#. B doubled by violins in oboe 1 and 2
BWV 3	A major	14 January 1725	Independent, doubled aria with violins	Oboe d'amore B-b''	Oboe d'amore B-b''				
BWV 5	G minor	15 October 1724	Doubled first movement with violins Doubled and doubling aria with violin and oboe	Oboe c'-d'''	Oboe c'-bb''				
BWV 6	C minor	2 April 1725	Independent first movement, solo aria	Oboe d'-bb''	Oboe c'-bb''	Oboe da caccia F-f''			
BWV 7	E minor	24 June	Doubled first	Oboe	Oboe				

²⁶ All pitches given are exact pitches and are not transpositions, in accordance with Bach's writing as oppose to modern editorial practise. All fingered oboe c#, d'amore A# and da caccia F# are additionally noted in the range column.

		1724	movement, doubled and doubling aria with violin and oboe d'amore	d'amore A-b''	d'amore B-b''				
BWV 8	E major	24 September 1724	Independent first movement, solo aria	Oboe d'amore A-b''	Oboe d'amore A-a''				
BWV 9	E major	c.1732-5	Independent and doubled with flute first movement, independent aria	Oboe d'amore A-b''					
BWV 10	G minor	2 July 1724	Doubled first movement, aria doubled violins and doubling oboes, Duetto doubling oboes and trumpet.	Oboe c'-d'''	Oboe Bb-d'''				Doubled Bb with strings
BWV 13	D minor	20 January 1726	Independent first movement	Oboe da caccia F-eb''					
BWV 14	G minor	30 January 1735	Doubling oboes first movement, independent aria	Oboe c'-c'''	Oboe c'-bb''				
BWV 16	C major	1 January 1726	Oboes doubled with violin first movement and aria, solo oboe da caccia aria	Oboe G-c'''	Oboe B-a''	Oboe da caccia F-d'			Oboe I: G & A doubled with violins Oboe II: B doubled with violins
BWV 17	A major	22 September 1726	Doubled oboes and violins first movement	Oboe (d'amore) B-b''	Oboe (d'amore) A-b''				Marked in score as Oboe, but key and range strongly suggest oboe d'amore

BWV 19	C major	29 September 1726	Doubled first movement with violins independent aria	Oboe d'-b''	Oboe B-g''	Taile c'-f''	Oboe d'amore B-b''	Oboe d'amore A-b''	Oboe II: B doubled with violin
BWV 20	F major	11 June 1724	Independent first movement and solo independent aria	Oboe c'-c''	Oboe c'-c'''	Oboe c'-a''			
BWV 22	G minor	7 February 1723	Independent first movement, solo aria, doubled choral	Oboe c'-c'''					
BWV 23	C minor	7 February 1723	Independent first movement, doubled with violins, independent choral	Oboe c'-c'''	Oboe c'-c'''				:
BWV 24	F major	20 June 1723	Independent doubled with violins first movement, solo independent aria, oboes doubling and doubled with violin	Oboe c'-d'''	Oboe Bb c#'-bb''	Oboe d'amore A-a''	Oboe d'amore A-f#''		Oboe II: Bb, c#' doubled by violins
BWV 25	E minor	29 August 1723	Doubled independent with violins first movement and aria	Oboe (d'amore) e'-b''	Oboe (d'amore) A-a''				Range of oboes suggests oboe d'amore; marked as hautbois in manuscript
BWV 26	A minor	19 November 1724	Doubled with strings and flute first movement, independent solo aria	Oboe c'-d'''	Oboe c'-c'''	Oboe c'-c'''			
BWV 27	C minor	6 October 1726	Independent first movement, independent aria	Oboe c'-c'''	Oboe c'-a''	Oboe da caccia F-eb'			

BWV 28	A minor	30 December 1725	Independent first movement, doubled with voices, strings and brass	Oboe e'-b''	Oboe c' c#'-f''	Taile G-f''			Oboe II: C#' undoubled
BWV 29	D major	27 August 1731	Independent doubled with violins first movement, doubled aria with violin	Oboe G-b''	Oboe G-f#''				Described as oboe parts; range fits oboe d'amore better but very bad key. Notes out of range in oboe parts I & II doubled by strings throughout.
BWV 30	D major	24 June 1738	Mainly doubled first movement flutes and violins, solo independent recit, doubled aria with violin, doubled chorus	Oboe d'-d'''	Oboe c#'-a''	Oboe d'amore d'-b''			Oboe II: c#' doubled by violins; no c'
BWV 32	E minor	17 January 1726	Independent first movement, independent and doubled with violin aria	Oboe d'-c'''					
BWV 33	A minor	3 September 1724	Independent except for chorale	Oboe c'-d'''	Oboe c'-c'''				
BWV 34	D major	c.1746-7	Independent parts 1 st movement	Oboe d'-d'''	Oboe c#'-a''				Oboe II: c#' doubled in 2 nd violin but line goes in opposite direction, i.e. not a doubled part; why write c#' in Oboe II?

BWV 35	D minor	8 September 1726	Mainly doubled by strings	Oboe Bb c#'-d'''	Oboe B c#'-bb''	Oboe F-e''			Oboe 2: Solo c#' in Aria, although briefly sounds octave above in organ. Range in Aria c#'-a'' Oboe 1 and 2 B, Bb and c#' doubled by strings.
BWV 36	D major	2 December 1731	Independent parts; oboes doubling in 1 st movement	Oboe d'amore A-b''	Oboe d'amore A-b''				
BWV 37	A Major	18 May 1724	Independent parts 1 st movement, Aria doubled by violin	Oboe d'amore c#'-b''	Oboe d'amore B-b''				
BWV 38	A minor	29 Oct 1724	Independent solo parts	Oboe e'-c'''	Oboe c'-g''				
BWV 39	G minor	23 June 1726	Independent parts, some doubling with violins first movement, independent aria	Oboe c'-c'''	Oboe c'-a''				
BWV 40	F Major	26 December 1723	Mixed independent, doubled or independent doubled	Oboe 1 c'-d'''	Oboe c'-c'''				
BWV 41	C major	1 January 1725	Independent and solo independent	Oboe e'-d'''	Oboe c'-a''	Oboe c'-a''			
BWV 42	D major	8 April 1725	Independent with some doubling	Oboe d'-c#'''	Oboe c'-a''				
BWV43	C major	30 May 1724	Doubled by strings Solo independent aria	Oboe G-e'''	Oboe G-d'''				All out of range notes doubled Aria range Ob 1 e'-d''' and Ob 2 c'-g''
BWV 44	G minor	21 May	Independent 1 st	Oboe c'-	Oboe				Oboe 2 last movement

		1724	movement, doubled	d'''	(G,A, Bb doubled) c'-bb'' c#'				G-Bb doubled by violins c#' undoubled
BWV 45	E Major	11 August 1726	Doubled	Oboe e'- c#'''	A, B, c#'- c#'''				Oboe 2 doubled by violin 2 throughout. Parts that are out of range for flutes marked one octave up, but not oboes.
BWV 46	D minor	1 August 1723	Doubled with voices first movement	Ob da caccia F- e''	Ob da caccia F- e''				
BWV 47	G minor	13 October 1726	Independent, some doubled by violins, solo	Oboe d'- d'''	Oboe c'- a''				
BWV 48	G minor	3 October 1723	Oboes independent doubling first movement, solo aria, doubled aria	Oboe d'- c'''	Oboe d'- a''				
BWV 49	E major	3 November 1726	Solo aria, doubled by violins otherwise	Ob d'amore A-c#'''					6 doubled c#'''s
BWV 50	D major	St Michael	Independent first movement	Oboe e'- d'''	Oboe c#'- b'' (c#' doubled in violins and voice)	Oboe A, B, c#'- g#''			Oboe 3 is probably an oboe d'amore part as there are undoubled and audible As and Bs.
BWV 52	F major	24 November 1726	Independent and doubled with violin first movement, solo independent aria	Oboe c'- d'''	Oboe c'- a''	Oboe c'- f''			
BWV 55	G minor	17	Independent first	Ob					One c''' exposed and

		November 1726	movement	d'amore d'-c'''					undoubled.
BWV 56	G minor	27 October 1726	Doubled first movement	Oboe c'-d'''	Oboe Bb doubled – ab''	Ob da caccia D doubled F-e''			
BWV 57	G minor	26 December 1725	Ist movement doubled independent	Oboe d'-c'''	Oboe c#'-g''	Ob da caccia F, F#-eb''			Oboe c#'' doubled by violin, oboe da caccia F# doubled by viola.
BWV 58	C major	5 January 1727	Doubled independent	Oboe c'-d'''	Oboe c'-g''	Taille F-d''			Where out of range the oboes rest.
BWV 60	D major	7 November 1723	Independent oboe parts	Ob d'amore A-b''	Ob d'amore A-b''				
BWV 62	B minor	3 December 1724	Mainly independent first movement, doubled independent aria with violins	Oboe d'-b''	Oboe d'-a''				
BWV 64	B minor	27 December 1723		Oboe d'amore					A version exists with d'amore but have been unable to find it
BWV 65	C major	6 January 1724	Independent, doubled independent and solo independent	Ob da caccia G-e''	Ob da caccia G-e''				Oboe da caccia 2 has 1 F# doubled by viola
BWV 66	D major	10 April 1724	Independent, doubled and doubling	Oboe d'-d'''	Oboe d'-d'''				
BWV 67	A major	16 April 1724	Independent and partially doubled final aria	Ob d'amore c#'-b''	Ob d'amore A-b''				
BWV 68	D minor	21 May 1725	Independent doubled, 2 nd	Oboe c'-d''' (c#')	Oboe c'-g#''' (c#')	Taille F-d''			c#'' in Oboes doubled by violins

			movement independent solo						
BWV 69	D major	1742-8	Independent	Oboe d'-d'''	Oboe d'-a''	Oboe d'-b''			
BWV 70	C Major	21 November 1723	Independent and doubled	Oboe G-c'''					G, A, B. c#' doubled by violin. One c#' crotchet sustained over violin c#' quaver plus two different semiquavers
BWV 72	A minor	27 January 1726	Independent	Oboe c'-d''	Oboe d'-c'''				
BWV 73	G minor	23 January 1724	Independent	Oboe c'-c'''	Oboe c'-b''				
BWV 74	C major	20 May 1725	Independent and solo independent aria	Oboe c'-d'''	Oboe d'-b''	Oboe da caccia G-f'			
BWV 75	E minor	30 May 1723	Doubled independent and independent	Oboe d'-d'''	Oboe c'-c'''	Ob d'amore c#'-b''			
BWV 76	C major	6 June 1723	Doubled independent with violins first movement, second part sinfonia independent	Oboe c'-d'''	Oboe G-b''	Ob d'amore A-a''			Oboe 2 could be oboe d'amore due to range (G and A doubled with violins)
BWV 77	A minor	22 August 1723	Doubled independent and solo independent	Oboe c'-c'''	Oboe c'-b''				
BWV 78	G minor	10 September 1724	Independent and doubled independent, doubling	Oboe c'-d'''	Oboe c'-d'''				

BWV 79	G major	31 October 1725	Doubling, and independent doubled	Oboe d'-c'''	Oboe d'-c'''				
BWV 80	D major	1727-31	Doubling and solo	Oboe d'-f#''	Oboe d'-f#''	Ob d'amore G#-b''	Ob d'amore A-b''	Oboe da caccia G-f#'' (F#)	G# oboe d'amore 1 doubled by violin Oboe da caccia F# solo and undoubled twice
BWV 81	E minor	30 January 1724	Independent	Ob d'amore c'-a''	Ob d'amore A-a''				
BWV 82	C minor	2 February 1727	Independent and doubled independent	Oboe 1 c'-db'''					
BWV 83	F major	2 February 1724	Doubled and independent	Oboe f'-c'''	Oboe c'-a''				
BWV 84	E minor	9 February 1927	Independent	Oboe d'-d'''					
BWV 85	C minor	15 April 1725	Independent	Oboe 1 d'-c'''	Oboe c'-c'''				
BWV 86	E major	14 May 1724	Doubled and independent	Ob d'amore B-b''	Ob d'amore B-b''				
BWV 87	D minor	6 May 1725	Doubled and solo independent	Oboe d'-c'''	Oboe Bb'-bb'' Including c#'	Ob da caccia Ab-eb'	Ob da caccia F-bb'		Oboe 2 Bb and c#' doubled
BWV 88	D major	21 July 1726	Solo and doubled independent plus doubling	Ob d'amore A-b''	Ob d'amore A-b''	Oboe da caccia	F-c''		
BWV 89	C minor	24 October 1723	Independent and doubled independent Solo aria	Oboe c'-d'''	Oboe c'-d'''				
BWV 91	G major	25 December	Independent and solo independent	Oboe d'-d'''	Oboe c'-c'''	Oboe c'-g'''			

		1724							
BWV 92	B minor	28 January 1725	Independent and doubled independent Solo aria independent	Ob d'amore A-b''	Ob d'amore A-b''				
BWV 101	D minor	13 August 1724	Independent and solo independent	Oboe d'-d'''	Oboe c'-Bb''	Ob da caccia	F-e'		
BWV 102	G minor	25 August 1726	Independent and solo independent	Oboe c'-d'''	Oboe c'-bb''				
BWV 103	B minor	22 April 1725	Independent and doubled independent	Ob d'amore B'-b''	Ob d'amore A-b''				
BWV 104	G major	23 April 1724	Solo independent, independent and doubled independent with choir	Oboe d'-c'''	Oboe c'-a'' (c#')	Ob d'amore G-a'' (A#)	Ob d'amore A-f#''	Ob da caccia G-e''	Oboe 2 solo c#' doubled by choir. Predominantly low register. Oboe d'amore 1 G and A# doubled by violins
BWV 105	G minor	25 July 1723	Independent, doubled independent and solo independent	Oboe c'-d'''	Oboe G, B, Bb, c#'-Eb''				Oboe 2 G, B, Bb, c#' all doubled by violin
BWV 107	B minor	23 July 1724	Independent and independent solo	Ob d'amore c#'-c#'''	Ob d'amore A-b''				Oboe d'amore 1 c#''' doubled by violin and flute
BWV 108	A major	29 April 1725	Solo independent and doubled independent	Ob d'amore A-b''	Ob d'amore b-e''				
BWV 109	D minor	17 October 1723	Independent and doubled independent	Oboe c'-c'''	Oboe c'-c'''				
BWV 110	D major	25 December 1725	Doubled independent and solo independent	Oboe c#'-d'''	Oboe d'-b''	Oboe c'-g''	Ob d'amore A-a''	Ob da caccia G-d''	Oboe 1 c#' doubled by violin

BWV 111	A minor	21 January 1725	Independent and doubling independent	Oboe e'-d'''	Oboe c'-c'''				
BWV 112	G major	8 April 1731	Independent doubled and solo	Ob d'amore A-b''	Ob d'amore c'-a''				
BWV 113	B minor	20 August 1724	Independent and solo independent	Ob (d'amore) B-b''	Ob (d'amore) A-g''				The manuscript does not make clear the music is written for oboe d'amore but the range undoubtedly suggests d'amore
BWV 114	G minor	1 October 1724	Doubling and doubled independent	Oboe c'-c'''	Oboe d'-c'''				
BWV 115	G major	5 November	Independent and doubled independent	Oboe d'amore A-c'''					Doubled c''' by violin in aria. The oboe part is marked with a staccato while the violins are not.
BWV 116	A major	26 November 1724	Doubling and doubled plus solo independent	Ob d'amore A-b''	Ob d'amore A-b''				
BWV 117	G major	1728-31	Doubled with flutes and solo independent	Oboe d'-d'''	Oboe d'-d'''	Ob d'amore B-a''	Ob d'amore A-f#''		
BWV 119	C major	30 August 1723	Independent doubling and doubled, independent doubled and solo independent	Oboe d'-c'''	Oboe c'-a''	Oboe c'-a''	Ob da caccia G-d''	Oboe da caccia G-d''	
BWV 120	A major	29 August 1729	Independent and doubled independent	Ob d'amore A-d'''	Ob d'amore a-b''				Oboe d'amore 1 numerous doubled c''', c#''' and d'''

BWV 121	B minor	26 December 1724	Doubled and solo	Ob d'amore A-a''					
BWV 122	G minor	31 December 1724	Doubled throughout	Oboe d'-c'''	Oboe c'-a''				
BWV 123	B minor	6 January 1725	Independent, doubling and solo independent	Ob d'amore B-b''	Ob d'amore A-a''				
BWV 124	E major	7 January 1725	Independent	Ob d'amore A-b''					
BWV 125	E minor	2 February 1725	Independent	Oboe c'-c'''	Ob d'amore A-b''				
BWV 126	A minor	4 February	Independent, doubled and solo independent	Oboe c'-d'''	Oboe c'-d'''				
BWV 127	F major	11 February 1725	Doubling independent, independent and solo	Oboe d'-d'''	Oboe c'-c'''				
BWV 128	E major	10 May 1725	Doubled independent, solo	Oboe d'-e'''	Oboe B-b'' (with c#')	Ob d'amore A-a''	Ob da caccia G-e''		Oboe 1 e''' doubled by violin Oboe 2 B and c#' doubled by violin
BWV 129	D major	16 June or 31 October 1726	Doubled independent, solo independent, doubling independent	Oboe d'-d'''	Oboe c#'-a''	Ob d'amore A-a''			Oboe 2 no c', Register generally low, numerous solo c#'s completely undoubled in line. Range suggests ob d'amore, or possibly instrument in

									c#''.
BWV 130	C major	29 September 1724	Independent	Oboe g' - d'''	Oboe c' - b''	Oboe c' - a''			
BWV 133	D major	27 December 1724	Doubled strings in first movement, aria solo independent	Ob d'amore B-b''	Ob d'amore A-f#'				
BWV 134	Bb major	11 April 1724	Independent, doubled with strings and doubling	Oboe c' - c'''	Oboe c' - c'''				
BWV 135	A minor	25 June 1724	Independent	Oboe e' - c'''	Oboe c' - b''				
BWV 136	A major	18 June 1723	Independent, doubled by strings and solo aria	Oboe c#'-d'''					c#' once, doubled by strings
BWV 137	C major	19 August 1725	Independent, solo aria	Oboe d' - c'''	Oboe c' - a''				
BWV 138	B minor	5 September 1723	Independent	Ob d'amore e' - a''	Ob d'amore A-f''				
BWV 139	E major	12 November 1724	Independent, solo aria	Ob d'amore A-b''	Ob d'amore B-g#''				
BWV 140	Eb major	25 November 1731	Independent, solo aria	Oboe c' - bb''	Oboe c' - g''	Taille F-eb''			
BWV 144	B minor	6 February 1724	Solo aria	Ob d'amore A-a''					
BWV 145	D major	Easter Tuesday? 1729?	Independent, doubled and doubling first	Oboe (d'amore) d' - c#'''	Oboe (d'amore) d' - c#'''				c#''' doubled in violins French violin clef and transposed part strongly

			movement						indicates d'amore
BWV 146	D minor	12 May 1726 or April 1728	Independent aria, doubled duet	Oboe c'-d'' (c#')	Oboe c'-d'''	Ob d'amore B-b''	Ob d'amore A-e''	Ob da caccia F#-e''	Oboe 1 c#' doubled in violin Oboe da caccia one bar of repeated F# doubled in viola
BWV 147	C major	2 July 1723	Doubled, solo aria	Oboe c'-c'''	Oboe c'-c'''	Ob d'amore A-g''	Ob da caccia c'-e''	Ob da caccia F-c''	
BWV 148	G major	19 September 1723	Solo aria	Oboe (d'amore) c#'-a''	Oboe (d'amore) c#'-f''	Ob da caccia G-f#''			Marked in score as three oboes but most likely two d'amores and da caccia due to range. Many exposed and solo c#' in Oboes 1 and 2
BWV 149	D major	29 September 1728 or 1729	Independent	Oboe d'-d'''	Oboe c#'-a''	Oboe d'-f#''			Oboe 2 instrumentally undoubled exposed c#'. Voice doubles.
BWV 151	G major	27 December 1725, oboe d'amore added 1727	Doubled and solo	Ob d'amore A-b'' (A#)					1 solo A# in aria. 1 doubled A# in aria.
BWV 154	B minor	9 January 1724	Solo aria and doubled aria	Ob d'amore A-a''	Ob d'amore A-g#''				
BWV 156	F major	23 January 1729	Solo, and solo independent aria	Oboe c'-d'''					
BWV 158	D major	Easter Tuesday after 1723	Oboe col voce	Oboe c'-c#''					

BWV 159	C minor	27 February 1729	Oboe col voce and solo aria	Oboe c'-c'''					
BWV 164	G minor	26 August 1725	Doubled aria	Oboe c'-bb''	Oboe c'-bb''				
BWV 166	Bb major	7 May 1724	Doubled, solo aria	Oboe c'-c'''					
BWV 167	G major	24 June 1723	Solo da caccia, doubled oboe	Oboe c'-d'''	Ob da caccia G-f''				
BWV 168	B minor	29 July 1725	Solo	Ob d'amore A-a''	Ob d'amore A-a''				
BWV 169	D major	20 October 1726	Independent doubled first movement	Oboe (d'amore) A-b''	Oboe (d'amore) G#-f#''	Ob da caccia G-d''			Called oboe in score but range indicates d'amore. Oboe (d'amore) 2 G# doubled in continuo
BWV 170	D major	28 July 1726	Doubled throughout	Ob d'amore A-b'' (A#)					Oboe d'amore 1 – one A# doubled by violin
BWV 171	D major	1 January 1729	Doubled and doubling	Oboe d'-d'''	Oboe c#'-g''				Oboe 2 c#' doubled
BWV 174	G major	6 June 1729	Independent first movement Independent solo aria	Oboe d'-d'''	Oboe c'-a'' (c#')	Ob da caccia G-d#''			Oboe 2 c#' undoubled (played octave above in violin 3)
BWV 176	C minor	27 May 1725	Independent and doubling	Oboe Eb'-a''	Oboe c'-f''	Ob da caccia F-f''			
BWV 177	G minor	6 July 1732	Independent and solo aria	Oboe d'-Bb''	Oboe c'-c'''	Ob da caccia F-f''			

BWV 178	A minor	30 July 1724	Independent, solo independent aria	Oboe d'-d'''	Oboe c'-d'''	Ob d'amore B-b''	Ob d'amore A-f#''		
BWV 179	G major	8 August 1723	Aria doubled and doubling, da caccia aria solo independent	Oboe c'-d'''	Oboe c'-d'''	Ob da caccia F-d''	Ob da caccia F-d''		
BWV 180	F major	22 October 1724	Independent and doubled	Oboe d'-d'''	Ob da caccia G-f''				
BWV 181	E minor	13 February 1724	Doubled flute and violin 1	Oboe d'-c'''					
BWV 183	A minor	13 May 1725	Independent	Ob d'amore A'-a''	Ob d'amore c#'-e''	Ob da caccia G-f''	Ob da caccia G-f''		
BWV 186	G minor	11 July 1723	Doubled first movement by violin, solo aria, independent choral, independent aria	Oboe c'-d'''	Oboe c'-bb''	Ob da caccia D-e'' (F#)			Oboe da caccia two solo D's although doubled in bass instrument. Solo F# F# and E doubled by viola
BWV 187	G minor	4 August 1726	First movement independent, doubled aria, solo aria	Oboe c'-d'''	Oboe d'-Bb''				
BWV 188	F major	17 October 1728	Doubled	Oboe c'-d'''					
BWV 190	D major	1 January 1724	Solo aria, independent	Oboe c#''-g''	Oboe e'-e''	Oboe d'-d''	Ob d'amore A-g#''		
BWV 192	G major	1730	Doubled with violins, doubled with flutes and violins	Oboe c'-d'''	Oboe A-d'''				Oboe 2 A and B doubled by violin

			verse 3						
BWV 193	D major	25 August 1727	Doubled with violins Doubled and independent aria, solo aria	Oboe d'-d'''	Oboe d'-d'''	Oboe (d'amore) A-a'' (c#')			Oboe 3 (d'amore) part described as oboe but range strongly suggests d'amore (solo and exposed A, B and numerous solo and exposed c#')
BWV 194	Bb major	2 November 1723	Independent and doubled first movement, doubled aria, solo independent aria	Oboe c'-c'''	Oboe c'-bb''	Oboe c'-bb''			
BWV 195	D major	1727-31, rev. c1742 and 1747-8	Doubled with flutes and violins, aria doubled with violins, independent recit,	Oboe d'-b''	Oboe A-a''	Ob d'amore B-d'''	Ob d'amore G (A#)-a''		Oboe 2 A doubled by violins Oboe d'amore 1 c''', d''' doubled by violin Oboe d'amore 2 G and A# doubled by violin
BWV 197	D major	1736/7	Doubled and independent first movement, independent arias	Oboe d'-d'''	Oboe d'-a''	Ob d'amore A-a''	Ob d'amore A-e''		

Chapter 6

Analysis of findings

Cantatas surveyed: **149**

Cantatas with all notes in range: **101**

Cantatas with notes out of range: **48**

Table 1 Number of Cantatas with the following range issues:²⁷

	Oboe	Oboe d'amore	Oboe da caccia
Undoubled fingered c#'	8	1	2
Doubled fingered c#'	15	4	4
Undoubled below c'	5	0	1
Doubled below c'	16	3	1
Undoubled above d'''	0	1	0
Doubled above d'''	1	6	0

²⁷ Given as fingerings in c for clarity.

Chapter 7

Critical discussion

To begin this critical discussion it is important to revisit the questions posed in the initial summary:

- *How many examples of these notes did Bach write?*
- *Are the notes an error or deliberate?*
- *Did Bach intend the oboist to play the notes written out of range?*
- *Did Bach's oboists have a different instrument at their disposal for playing different ranges?*
- *Were they simply more skilful at producing these notes than we are today?*
- *Were the reeds used different enough to the reeds we use today that they were more flexible in intonation?*

How many examples of these notes did Bach write?

From the 149 cantatas surveyed here, Bach used notes that today we consider 'un-performable' in 48 cantatas. This is nearly a third of all works surveyed. 13 of these cantatas contain notes which are undoubled, solo or exposed. While this is a relatively small number of cantatas, it nevertheless reveals a distinct percentage of works that Bach wrote which have notes we cannot play satisfactorily today.

Are the notes an error or deliberate?

If the notes are an error then Bach made a substantial number of errors – this would mean that statistically every third cantata he wrote in Leipzig Bach was repeatedly making mistakes with the oboe range. I find it unlikely that in the oboe parts alone Bach made this number of mistakes. This is particularly considering that Bach often appears to be careful of the other parts, for example the flutes, which frequently rest or play an octave up when the notes go out of range in a doubled context. Due to the number of notes we must assume that at least a substantial proportion is deliberately written.

Did Bach intend the oboist to play the notes written out of range?

Did Bach's oboists have a different instrument at their disposal for playing different ranges?

There is a strong and practical argument amongst modern day historical oboists that a note which is doubled and goes out of range can be omitted. The oboe's function is to provide a colour within the orchestra and one low note that is left out will be audible to no-one except perhaps whoever sits directly next to the oboist. This argument could be claimed to be supported when we examine the number of notes that Bach wrote which are obviously out of range for the oboe (fingered A, B) We can also surmise that Bach considered fingered c#' a problem note – whilst fingered c' is used in the 129 of the 149 cantatas surveyed fingered c#' is used un-doubled in only 11 cantatas.

However this hypothesis does become in some sense artistically unsatisfying when we can see that Bach wrote several examples of 'unperformable' notes which are solo and exposed. This is most notably the oboe c#'. Where the notes are written, particularly within a solo aria, I would suggest that we have a responsibility as performers to examine every avenue that might be open to us before we dismiss these notes as unperformable.

For the sake of argument let us suppose that Bach did intend every one of these notes to be played. How could this have been achieved? Did Bach's oboists indeed have a different instrument at their disposal, which they used to play c#'? It is of course possible that Bach's oboists had an instrument tuned to c#'. Of the 8 undoubled oboe c#'s 4 have no c', and 4 have both c' and c#'. So this could solve half the instances of undoubled c#'s. However one must question why, if Bach's oboists had c# instruments, he did not make a fuller use of the c#'? The same question must be asked that, if original instruments and reeds made lipping c' up possible, why there are not more c#'s?

Here is where a more detailed analysis of the results of my survey is interesting. What if Bach never intended the oboe to play these notes? What if Bach in fact intended all the arias with undoubled c#'s to be played on oboe d'amore? We have only one instance of an undoubled A# on oboe d'amore and two undoubled F#s on oboe da caccia. Let us examine the results in more detail:

Table 2 Number of cantatas where oboe range could suggest oboe d'amore

	Undoubled below c', ²⁸	Doubled below c'	Undoubled c#'	Doubled c#'
Clearly oboe		7		9
Possibly oboe d'amore		8 (of which 3 cantatas already have d'amore playing in other movements)	5 (of which 1 already has a d'amore playing)	5 (of which 2 already have a d'amore playing)
Certainly oboe d'amore	5		3 (1 of which already has a d'amore playing)	

Whilst of course the results of the survey are to an extent very much open to interpretation, this would indicate to me that every example I have found of an undoubled c#' is in a range and key entirely suitable for an oboe d'amore. Bach's oboists were clearly used to reading oboe d'amore parts without a transposition (as this was very much the norm), just as a recorder player will do with instruments in different keys. Faced with a part which went out of range would it not make sense to simply play it on an instrument where it fitted perfectly? It is perhaps especially compelling if that instrument was already to hand for a different movement in the cantata. I suggest that the fact that Bach did not write an explicit instruction to play oboe d'amore cannot be considered proof that it was not played on oboe d'amore. There are several examples of cantatas which are surely written for oboe d'amore, including BWV 25, BWV 113, BWV 129, BWV 148, BWV 169²⁹ and BWV 193. These are not marked specifically for oboe d'amore, but instead for 'hautbois',³⁰ (as are many oboe parts).³¹ All the keys of these works are equally good on oboe d'amore as on oboe. We may also ask whether Bach sometimes used other methods to tell his oboists what instrument to use, rather than by simply writing the instrument name. BWV 145 (in D major) is potentially of interest

²⁸ Actual c', not fingered c'

²⁹ See Appendix 3 Examples

³⁰ In my survey these are written as oboe (d'amore)

³¹ BWV 148 is marked for three hautbois, despite the oboe parts clearly being oboe d'amore parts, and the da caccia part clearly being da caccia both in range and in the use of alto clef.

because unusually the oboe d'amore parts are in French violin clef, meaning that he has already transposed the part for the oboe d'amore player. However, whilst this would make the cantata a special one, no original autograph exists, (the earliest source is a 19th century copy of the autograph) so it has been impossible to check the name of the instrument instructed by Bach, or whether the transposed part is in fact original. If the transposition is original then in my opinion this indicates that Bach is providing an explicit instruction to his players – while the range is better for oboe he is essentially making it clear to his oboists that he wants oboe d'amore by transposing the part for them in the cantata. Possibly he considered this more definitive than simply using a written instruction. In my opinion this could be considered at least some evidence that Bach might take a definite step to make certain his players used the oboe d'amore.

Were they simply more skilful at producing these notes than we are today?

In spite of what I write above, it is undeniable that we have three instances of fingered c#³² in oboe d'amore and oboe da caccia writing, one in d'amore and 2 in da caccia. BWV 186 is particularly baffling for the oboe da caccia, which features D and F# in a solo context. The D is very confusing, a whole minor 3rd below the range of the da caccia. For the oboe d'amore solo A# in cantata BWV 151³³, the part was added later, two years after cantata was originally written. It is also very confusing, and both these examples could certainly refute my suggestion that fingered c# was not played in a solo or undoubled context.

There also remain several examples of notes doubled below c', and doubled c#'s that are clearly written in an oboe part. (See Table 2 above) For the notes doubled below c' the oboist frequently has no option at all today but to leave them out, and for the doubled c#'s, (of which 9 examples remain) the oboist must decide whether to attempt to lip them up from c', down from d', leave them out, or attempt some kind of upside down bell effort. For these notes, where the oboe part is often mirroring the violin or flute part, it could be argued that the copyist was simply copying out parts, to be played at the discretion of the various musicians, as oppose to the solo or independent parts. Or Perhaps players were indeed more skilful at producing these notes? Although this must again beg the question why in this case there are not more of these notes.

Were the reeds used different enough to the reeds we use today that they were more flexible in intonation?

It is very possible that both reed making and reed materials (i.e. the quality of the cane and the way staples were constructed) were different enough to produce a more flexible or differently sounding reed to what we use today. As I have demonstrated, the historical reed remains something of an enigma. However from my findings in the range survey I have not found wide spread evidence of 'unperformable' notes that cannot be explained in other ways. Therefore the question as to the flexibility of the reed, the size of the reed and the argument that a more flexible reed allows for easier bending of pitch in a low register must remain unanswered.

³²That is A# for oboe d'amore and F# for oboe da caccia

³³ See Appendix 3 Examples

Chapter 8

Conclusion

In conclusion I hope that this paper can cast a glimmer of light on a topic which is clouded with confusion and hearsay amongst modern day historical oboists. In conversations with colleagues on the subject I have heard numerous conflicting claims as to just how many of these notes exist. The only thing that I have been able to gather from these conversations is that no-one is absolutely sure of the extent of the problem, and no-one has been able to suggest a fully satisfactory solution.

I hope that this survey can provide a sample of Bach's oboe range and perhaps some clarity on his use of fingered $c\sharp$, eb''' and e''' . I also hope that the information provided here can pave the way into further research for a topic which has been dismissed and swept under the carpet for far too long. Eminent Bach scholars have dismissed this problem as something of an anomaly that can be discounted as a mistake or editorial issue of some kind, or a problem that is too small to be concerned with. I believe that none of this is true. While it seems that there is no one cure-all solution, it is undeniable that the instrument which has the most solo fingered $c\sharp$'s is the oboe, and we can entirely dispel every one of these examples in the Leipzig cantatas if we make one small mental shift – we already know that Bach did not always mean that 'hautbois' was oboe only, so perhaps we should be open to the possibility that Bach did not always indicate where a change in instrument might happen. The experienced oboist will already know that there are numerous places (particularly chorals and some choruses) in works such as BWV 245 Johannespassion and BWV 244 Mattheus Passion where an oboe d'amore will be played instead of an oboe as prescribed by the editor, simply because it makes more sense either for range or to warm an instrument prior to playing a more exposed part.

For myself the result of my research was not what I expected. I suspected that there might be enough of these unperformable notes to make it undeniable that these notes must have been performed. However the conclusion I have drawn from my research is rather that our obsession today with exact scoring for certain instruments might cloud how we see Bach's oboe parts. And often for many oboists this will come down to a simple editorial decision. As historical performers we are accustomed to treating what we see on the page with a healthy caution, thought, respect and analysis; we are accustomed to questioning time signatures, articulation markings, ornamentation and a whole host of other important information which will affect our interpretation. I would contend that we should add to that list the decisions on choice of instrument made by editors of Bach's works: the decision of whether to transpose for d'amore or not. In so doing, perhaps we stay closer to Bach's intention, and to the practical workings of a busy musician so long ago, and the trust he placed in his oboists.

Appendix 1

Bruce Haynes overview of oboe fingering charts³⁴

Collation of fingering charts

The charts are identified as follows:

Bi	1688 Bismantova
Ba	1695 Banister
L1	c.1692 La Riche
L2	c.1692 La Riche
S	1699 <i>Second Book of Theatre Music</i>
F	1700 Freillon-Poncein
H	1707 Hotteterre
E	1738 Eisel

c1	123 456 8	Bi Ba L1 L2 ('loud'), ¹ S F H E
c#1	123 456 8	Bi
	123 456 8	Ba L2 ('soft'), ² F
	123 456 8	L1 ('louder')
d#1	123 456 8	Bi
	123 456 8	F
d1	123 456	Bi Ba L1 L2 S F H E
d#1	123 456 7	Bi ³ Ba L1 L2 F H E
	123 45 7	S ⁴
e#1	123 456 7	Bi Ba ⁵ F H
	123 45 7	L1 L2 S ⁶
e1	123 45	Bi Ba L1 L2 S F H E
e#1	123 4 6	Bi F
f#1	123 45	F
f1	123 4 6	Bi Ba ⁷ F H
	123 4 6 7	L1 L2 S E
f#1	123 4	Bi
	123 4 7	S H

¹ The c1 and c#1 fingerings are evidently reversed.

² Bi gives 123 456 8 but this is probably a mistake.

³ Unlike the d#1 fingering, 6 is mistakenly left open here.

⁴ This appears to be a mistake, as it is the fingering for e#1 and adding 7 raises it slightly rather than lowering it. It is interesting that the mistake (if it is one) is shared by these three sources.

⁵ The f1 and f#1 fingerings are transposed on the chart.

⁶ The c1 and c#1 fingerings are ~~exactly~~

⁷ Cf. S, L1, and L2 on e#1.

³⁴ Haynes, Bruce (2001) *The Eloquent Oboe* p478-481 Oxford University Press

	123 ♯	L1 L2 [*]
	123 ♯ 6	Ba F (H)
	123 5	E (also in upper octave)
g _b 1	123 4	Bi
	123 ♯ 6	F H
g1	123	Ba L1 L2 H E
	123 6	Bi S F
g _# 1	123 ♯ 6	Bi
	123	Ba L1 ⁹ S H
	123 6	F
	12 4	E
a _b 1	123	Ba L1 L2 H
	123 6	Bi F
	12 4	S
a1	12	Ba L1 L2 H E
	12 6	Bi S F
a _# 1	1 3	F
	1 3 6	Bi
	1 3 4 6	L1 ¹⁰
	1 3 4 5	H
b _b 1	1 3	Ba F E
	1 3 6	Bi S
	1 3 4 6	L1 L2
	1 3 4 5	H
b1	1	Ba L1 L2 H E
	1 6	Bi S F
b _# 1	2 6	F
c _b 2	1 6	F
c2	2	Ba L1 L2 H E
	2 6	Bi S F
c _# 2	123 456 8	Bi ¹¹
	23 456 8	Ba L1 L2 S H
	♯23 456 8	F
	3 7	E
d _b 2	123 456 8	Bi
	23 456 8	H
	♯23 456 8	F
d2	123 456	Ba (L2) S F E
	♯23 456	L1 ('loud') ¹²

* Given as 23 ♯, which appears to be a mistake as it produces c2.

⁹ L2 gives 1 3 ♯ 6, but this is probably a mistake. Cf. L2 on a_b1.

¹⁰ Not provided in L2.

¹¹ This produces g2 as a harmonic.

¹² L2 gives 123 ♯, which is probably a mistake.

	23 456	Bi H (as on traverso)
		From this point on up the scale, L1, L2, and S require louder blowing
d ₄ 2	123 456 7	Bi ¹³ Ba L2 S F H E
	+23 456 7	L1
e _b 2	123 456 7	Bi Ba L2 S F H
	+23 456 7	L1
e2	123 45	Bi Ba L1 L2 S F H E
e ₄ 2	123 4 6	Bi F
f _b 2	123 45	F
f2	123 4 6 7	Ba L1 L2 S E
	123 4 6	Bi F H
f ₄ 2	123 4	Bi
	123 4 7	H
	123 56	Ba L1 ('flat') S F H
	123 #	L1 ('sharp') L2
	123 5	E
g _b 2	123 4	Bi
	123 56	F H L2
g2	123	Ba L1 L2 S H E
	123 6	Bi F
g ₄ 2	12 4 6	Bi
	12#	Ba L1 L2 S H
	12# 6	F
	12 4	E
a _b 2	12# 6	Bi F
	12 4	Ba L1 L2 S
	12#	H
a2	12	Ba L1 L2 S H E
	12 6	Bi
	12 6 8	F (possibly to help response)
a ₄ 2	1 3 6 8	Bi
	1 3	F H
b _b 2	1 3 6	Bi
	1 3	Ba L1 L2 S F H E
b2	1 6	Bi
	1	Ba H E
	2	L1 L2 S F
b ₄ 2	2	F
c _b 3	2	F
c3	2 6	Bi
	-o-	Ba ('all open', 'blow hard') L1 ('all open') L2 ('open all') S F H

¹³ Bi gives 123 456 8 but this is probably a mistake.

	456	(H; this is not his traverso fingering)
	2 7	E
c ₃	6 8	Bi
	23 4 8	E
	23 4 6 8	F
	456	H (= c ₃ , but 'en forçant le vent & serrant l'Anche avec les Levres')
		Note lack of †
d _{b3}	23 4 6 8	F
	23 456 8	H ('en forçant le vent & serrant l'Anche avec les Levres')
d ₃	23 8	F (E)
	23 456	Bi H

Appendix 2

Bruce Haynes survey of independent fingered c# in other works³⁵

Examples of independent c#1s

The following list of c#1s not doubled by other instruments is not meant to be complete but merely representative:

1688. Philidor, *Mariage de la grosse Cathos*, 'Entrée des filles de la nopce', Taille de hautbois, final of first half.

1690. Collasse, *Énée et Lavinie*, aria 'Chère ombre' (Act V, Sc. ii, p. 209), bar 4, Taille de hautbois.

1700. Freillon-Poncein, preludes. Three c#1s as well as c#1.

1735. Rameau, *Les Indes galantes*, trio for hautboys and bassoon, in second hautboy. (Geoffrey Burgess, pers. comm.)

Dreyer, Sonata 4, next-to-last note.

Sammartini, Rochester Sonata 5/3 (c#1 appeared in the first and second movements).

Stölzel, quartets with horn and violin, no. 4, second movement, bars 39, 47.

Sher, solo sonata in F.

There are later examples, such as Gassmann's Quartetto (H.483/II) and the Prover Sonatas of c.1767.

³⁵ Haynes, Bruce (2001) *The Eloquent Oboe* Appendix 7 Oxford University Press

Appendix 3 - Examples of relevant cantatas

BWV 186 oboe da caccia solo aria.

Note D in bar 7 is a solo note, although doubled by continuo, but surely audible if not played by the oboe.

A handwritten musical score for BWV 186, titled "Aria Oboe da Caccia. n. 5". The score is written on ten staves. The first staff is for the Oboe da caccia, with a key signature of one flat and a 3/4 time signature. The second staff is for the Continuo, with a key signature of one flat and a 3/4 time signature. The third staff is for the Soprano, with a key signature of one flat and a 3/4 time signature. The fourth staff is for the Alto, with a key signature of one flat and a 3/4 time signature. The fifth staff is for the Tenor, with a key signature of one flat and a 3/4 time signature. The sixth staff is for the Bass, with a key signature of one flat and a 3/4 time signature. The seventh staff is for the Oboe da caccia, with a key signature of one flat and a 3/4 time signature. The eighth staff is for the Continuo, with a key signature of one flat and a 3/4 time signature. The ninth staff is for the Soprano, with a key signature of one flat and a 3/4 time signature. The tenth staff is for the Alto, with a key signature of one flat and a 3/4 time signature. The score includes various musical notations such as notes, rests, and ornaments. There are also some handwritten annotations in German, including "Hob. 1. Viol. 2.", "Tobacco", "piano", and "piano Solo".

Could be a d'amore part but in a bad key (transposes as B major).

187

CHOR. (Vers 1.)

Tromba I.

Tromba II.

Tromba III.

Timpani.

Flauto traverso.

Oboe I.

Oboe II.

Violino I.

Violino II.

Viola.

Soprano.

Alto.

Tenore.

Basso.

Continuo.

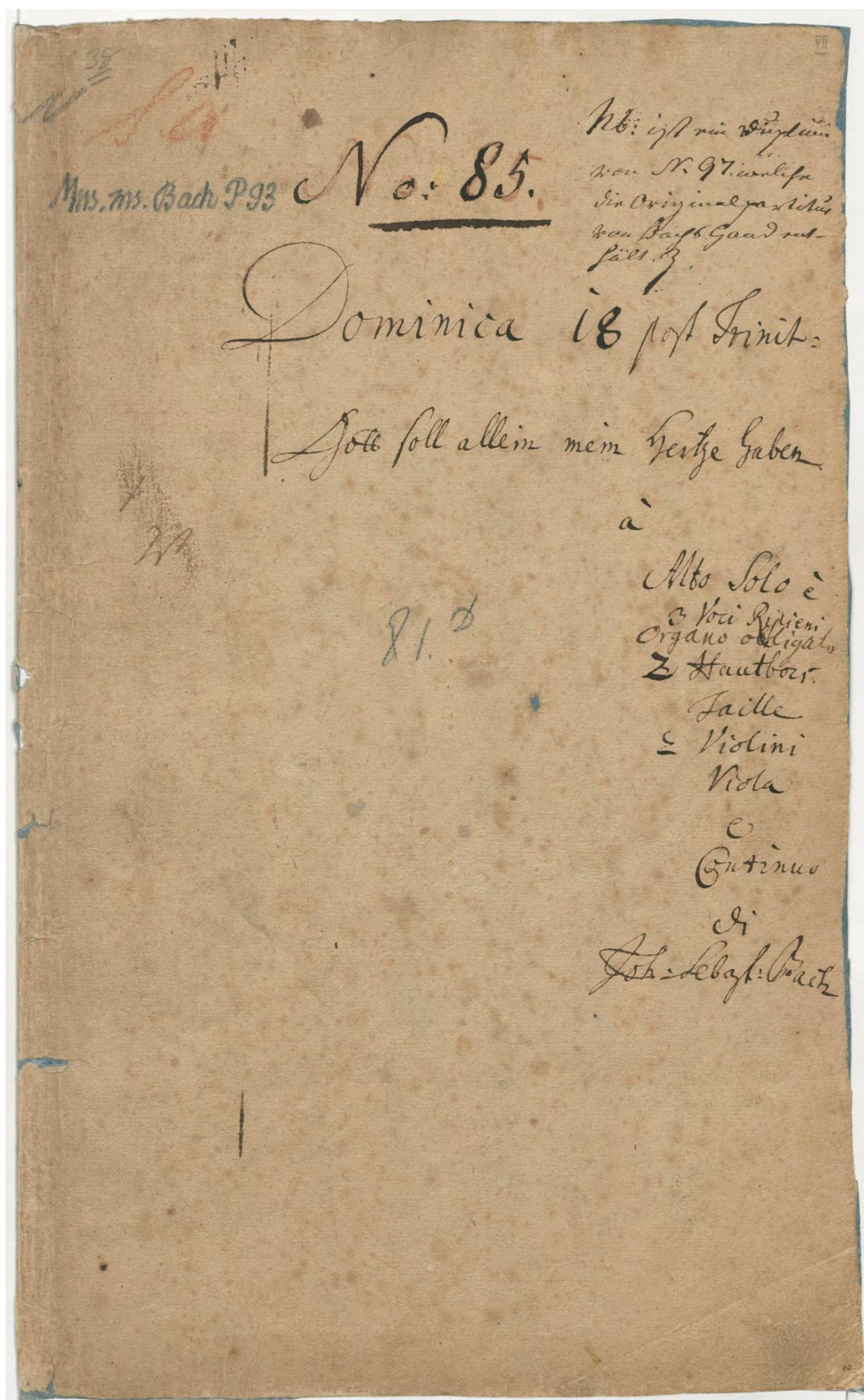
B. W. XXVI.

[illegible]

41

BWV 169 Title Page

An example of a work clearly written for d'amore, which is scored for 'hautbois'. Two further copies of this work have the same scoring on the title page.



BWV 169

This cantata is clearly written for oboe d'amore, due to independent As and Bs.



BWV 44 Undoubled c# in Oboe 2: 2nd system, 2nd bar

This part fits very well on d'amore.

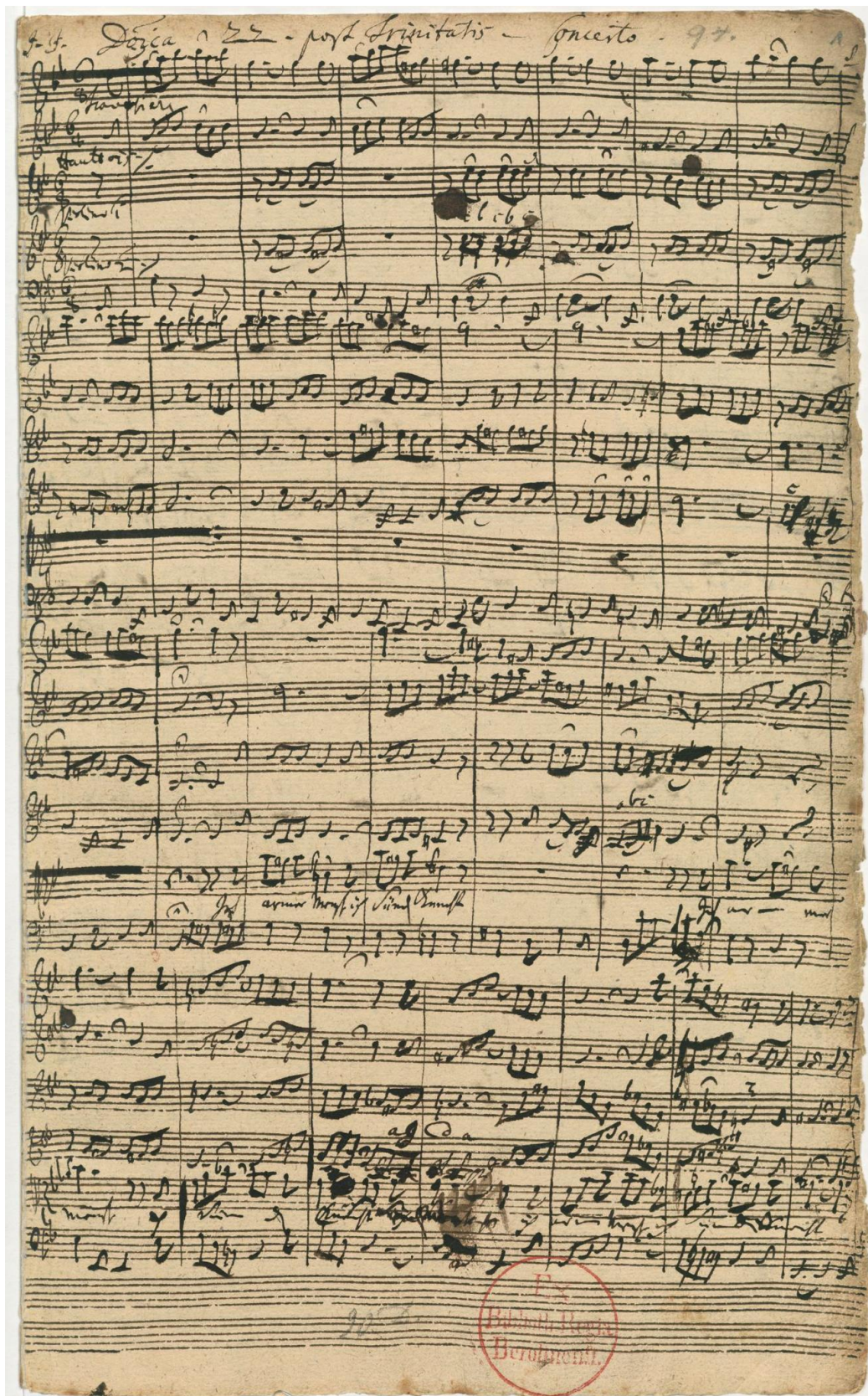
131

The musical score is presented in three systems. The first system shows the vocal line and piano accompaniment with the lyrics 'in den Bann, euch in den Bann thun,'. The second system continues the vocal line with 'sie wer-den euch in den Bann,' and the piano accompaniment with 'sie wer-den euch in den Bann,'. The third system shows the vocal line with 'in den Bann, euch in' and the piano accompaniment with 'in den Bann, euch in'. The score is marked with 'forte' and 'piano' dynamics. The piano part includes figured bass notation at the bottom of the staves.

B. W. X.

BWV 55 Undoubled c''' in oboe d'amore

Title page specifies "hautbois d'amour".



BWV 35

Undoubled c#⁷ in oboe 2 second system, first bar. Doubled the octave above in the organ part.

194

The image displays two systems of a musical score for BWV 35. Each system consists of nine staves. The top five staves in each system are for vocal parts (Soprano, Alto, Tenor, Bass, and a fifth voice), and the bottom four staves are for instrumental parts (likely organ or strings). The first system includes the following lyrics: "Geist und See-le wird ver-wir-ret, wenn sie dich, mein Gott, be-tracht;". The second system includes the following lyrics: "Geist und See-le wird ver-". The score is written in a standard musical notation with various notes, rests, and accidentals. The key signature is one sharp (F#), and the time signature is common time (C). The page number 194 is printed at the top left of the first system.

Geist und See-le wird ver-wir-ret, wenn sie dich, mein Gott, be-tracht;

Geist und See-le wird ver-

B. W. VII.

BWV 151

Solo and exposed oboe d'amore A#, first system 4th bar. A# doubled by violin follows on the second system 3rd bar.

12

Trost, in seiner Ar-muth Reich-thum fin-den, in Je-su De-muth kann ich Trost, in seiner Ar-

forte *piano*
- muth Reich-thum fin-den. Mir macht des-

sel-ben schlechter Stand nur lauter Heil und Wohl be-kannt, ja sei-ne wun-der-vol-le

forte
Hand will mir nur Segenskränze win-den.

B.W. XXXII.

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