The Artistic Merits of Incorporating Natural Horn Techniques into Valve Horn Performance

A Portfolio of Recorded Performances and Exegesis

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# Table of Contents

Abstract ........................................ i  
Declaration .................................... ii  
Acknowledgements ............................. iii  
List of Figures ................................ iv  
Recital Programmes ......................... 1  

Exegesis

Introduction .................................. 2  
Recital One ................................... 4  
Recital two ................................... 11  
Conclusion ................................... 25  

Appendix: Concert Programmes

Recital One .................................. 26  
Recital Two ................................... 30  

Bibliography .................................. 34  

Recordings

Recital One ...................................  
Recital Two ...................................
Abstract

The dissertation addresses the significance of how a command of the natural horn can aid performance on its modern, valve counterpart. Building on research already conducted on the topic, the practice-led project assesses the artistic merits of utilising natural horn techniques in performances on the valve horn. The exegesis analyses aesthetic decisions made in the recitals – here disposed as two CD recordings – and assesses the necessity or otherwise of valve horn players developing a command of the natural horn.

The first recital comprises a comparison of performances by the candidate of Brahms’ *Horn Trio*, Op.40 (1865) on the natural and valve horns. The exegesis evaluates the two performances from an aesthetic and technical standpoint. The second recital, while predominantly performed on the valve horn, contains compositions that have been written with elements of natural horn technique taken into consideration. It also contains two pieces commissioned for this project, one by a student composer and the other by a professional horn player. These two commissions are offered as case studies in the incorporation of natural horn techniques into compositional praxis. As such the effectiveness of utilising natural horn techniques in valve horn performance can be assessed.
Declaration

I, Adam Greaves, certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968 except for the two compact discs which may not be duplicated and must be listened to in the Elder Music Library only.

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Adam James Greaves

March 2012
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Thanks also to Silver Moon for her assistance in producing the two CD recordings. The contribution of associate artists Julia Maly, Stefan Ammer, Robert MacFarlane and Monika Laczofy is also greatly acknowledged.

Special thanks must go to Nigel Davies for his continued and generous loan of a natural horn while the assistance of both Darryl Poulsen and Anthony Halstead for lessons on the natural horn was invaluable. I would also like to thank David Lang for contributing a new and original work for the project.
List of Figures

**Figure 1:** Johannes Brahms, *Trio für Horn, Violine und Klavier Es Dur [Trio for Horn, Violin and Piano in E flat major] op.40*

(Wiesbaden: Breitkopf & Härtel, n.d.) movement 1, bars 8-16. 6

**Figure 2:** Johannes Brahms, *Trio für Horn*, movement 1, bars 27-29. 7

**Figure 3:** Johannes Brahms, *Trio für Horn*, movement 3, bars 40-42. 7

**Figure 4:** Johannes Brahms, *Trio für Horn*, movement 2, bars 262-300. 9

**Figure 5:** Johannes Brahms, *Trio für Horn*, movement 3, bars 59-66. 9

**Figure 6:** Benjamin Britten. *Serenade for Tenor solo, Horn and Strings, Op.31* (London: Boosey & Hawkes, 1944) movement 4, bars 41-42. 11

**Figure 7:** Philip Hall, *Horn Quintet* (2006), unpublished score, bars 23-27. 13

**Figure 8:** Philip Hall, *Horn Quintet*, bars 28-31. 13

**Figure 9:** Philip Hall, *Horn Quintet*, bars 41-42. 14

**Figure 10:** Philip Hall, *Horn Quintet*, bars 41-42, with annotations made by the author. 14

**Figure 11:** Philip Hall, *La Chasse du Bachais*, for solo horn (2011), unpublished score, bars 36-41. 15

**Figure 12:** Philip Hall, *La Chasse du Bachais*, bars 36-41, reinterpreted by the author. 15

**Figure 13:** Philip Hall, *La Chasse du Bachais*, bars 73-98. 16

**Figure 14:** Eugène Bozza, *En Forêt; pour Cor en Fa et Piano Op.40* (Paris: Leduc, 1941), bars 36-41. 17

**Figure 15:** Eugène Bozza, *En Forêt*, bars 50-54. 17
**Figure 16:** Eugène Bozza, *En Forêt*, bars 67-72.

**Figure 17:** Eugène Bozza, *En Forêt*, bars 31-34.

**Figure 18:** Eugène Bozza, *En Forêt*, bars 140.

**Figure 19:** Douglas Hill, *Jazz Set for Solo Horn* ((Massachusetts: Margun Music, 1984), ‘Lullaby Waltz’, bar 71.

**Figure 20:** Douglas Hill, *Jazz Set for Solo Horn*, ‘Lost and Found’, bar 1.

**Figure 21:** Paul Dukas, *Villanelle pour Cor et Orchestra* (Paris: Editions Durand, n.d.), bar 150-159.

**Figure 22:** Benjamin Britten, *Serenade*, movement 4, bars 12-17.
Recital Programmes

Recital 1

Johannes Brahms: *Horn Trio in E flat*, Opus 40 (1865)

Played using a Webb-Halstead Natural horn, using an E flat crook.

INTERVAL (15 Minutes)

Johannes Brahms: *Horn Trio in E flat*, Opus 40 (1865)

Played using an Alexander, model 200 Valve Horn in F.

Recital 2

Benjamin Britten: *Serenade for Tenor, horn and Strings*, Opus 31 (1943)

Played using a piano reduction

Paul Dukas: *Villanelle* (1906)

INTERVAL (15 Minutes)

Philip Hall: *Horn Quintet, First Movement* (2006)

Played using a piano reduction

*La Chasse du Bachais* (2011)

World Premiere


Taken from *Jazz Set for Solo Horn*

David Lang: *Variations on a Theme from Papua New Guinea* (2011)

World Premiere

Eugène Bozza: *En Forêt* for Horn and Piano, Opus 40 (1941)
Introduction

The natural horn was always going to be superseded by the valve horn after the valve was invented in 1817. True, it did take a significant length of time in some parts of the world, but the change was an inevitable one. The natural horn remains, however, intrinsic to the design of the valve horn; the latter is, after all, simply several natural horns that can be used interchangeably.

The natural horn demands the command of many specific techniques that, while used in valve horn playing, are of much greater importance on the natural horn. These techniques include:

- A greater awareness of the Harmonic Series
- A high command of the right hand
- An advanced control of air pressure

This study investigates how an awareness of and/or proficiency in these natural horn techniques can be either beneficial or detrimental to performance on the modern valve horn.

The first recital assesses the different ways in which the natural horn and the valve horn affect the interpretation of the same piece, in this case the Brahms *Horn Trio* Op.40 (1865). Brahms was skilled at writing for natural horn and, as Eva Heater notes, ‘puts the different colourings produced by natural-horn technique to brilliant use’. These colourings, the use of ‘stopped’ tones, created by occluding the bell with the right hand, were used with consideration and often help shape the structure, key

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and themes of the music. By presenting these two interpretations side-by-side, direct conclusions will be drawn as to the benefits and shortcomings of each instrument.

The music presented in the second recital comprises a series of valve horn pieces, all of which have explicit references to natural horn technique. Although only one specifically calls for the natural horn to be used, the author has incorporated that instrument into performance in two of the other pieces. The music is presented in an informed manner as the benefits of including natural horn techniques into music intended for valve horn performance are showcased.

Additionally, two pieces have been commissioned for this project; one by a professional horn player and one by a student composer. This has been done to investigate how a composer can approach the task of including natural horn techniques into a composition and to what extent a detailed knowledge of the horn is required for this task.

A number of resources informed both the intellectual and practical approaches taken in this project. With respect to the Brahms Horn Trio, Joshua Garrett’s dissertation is regularly referenced, as he provides an informative formal analysis of the piece with advice to performers and gives particular consideration to the use of a natural horn in performance.  

Of greater implication to the project as a whole is Heidi Wick’s excellent dissertation, which effectively covers the numerous ways in which a performer can use natural horn techniques in their playing on the valve horn. The current study builds on Wick’s findings by assessing the artistic merits of doing so. Thus, the question of how, why and when to utilise these techniques, will be consistently addressed.


4 Wick, Natural Horn Technique
Recital One

The first recital presented consisted of two interpretations of the Brahms Horn Trio; first on the natural horn, the second on the valve horn. Written in 1865, the Horn Trio was the first piece Brahms wrote following the death of his mother.\(^5\) A sense of reminiscence pervades the music, not least in his choice of instruments: an accomplished pianist, he was taught the natural horn and violin in his youth.\(^6\) It is perhaps for this reason Brahms specified the use of the natural horn instead of the valve horn, despite the fact that at the time of composition, the valve horn had superseded the natural horn in Germany.\(^7\) Yet it makes perfect sense that Brahms would write for the instrument he knew and understood intimately during a period of such deep remembrance. When playing the Trio, Brahms’ knowledge of the horn and his artistry in utilising the various timbres the natural horn produces is quite apparent. Writing for the natural horn, however, presented significant problems in finding a natural horn player for the premiere. Yet such was Brahms’ preference to the older instrument, he stated that he would rather a viola or cello be used before considering a valve horn.\(^8\) In this recital, the violin was played by Julia Maly and the piano by Stefan Ammer.

Despite attempts to use a piano from the period, a Chickering, for the natural horn performance (purely to assist in the issue of balance) ultimately it could not be repaired to an adequate standard, so the same piano (a Steinway) was used for both performances. In an attempt to allow the piano to blend more adequately with the quieter natural horn, the piano was used with the lid half open for the natural horn.

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\(^5\) Garrett, Brahms’ Horn Trio, p. 10.
\(^7\) Heater, Why did Brahms write his E-flat trio, op. 40, for natural horn? p. 2.
\(^8\) Graeme Skinner, notes to CD, Horn Trios, featuring John Harding, violin; Hector McDonald, horn; Ian Munro, piano (Glebe, N.S.W: Tall Poppies, 1998) TP 114.
performance, and fully open for the valve horn performance. Additionally, the stage arrangement was altered so that the bell of the natural horn faced the audience, yet in the valve horn performance a more customary arrangement was used, with the horn on the right of the stage and the bell facing away from the audience. This went some, although by no means all the way to addressing the issue of balance in the natural horn performance. Any instrument that changes dynamic and timbre so frequently within a single melodic line presents ensemble challenges. It is my belief that this piece should not sound like a horn concerto with a violin and piano accompaniment; we therefore aimed to fully explore the dynamic intricacies of this work and attempted to present the three instruments as equal voices throughout. The issue of balance will be discussed in greater depth later in this analysis.

For me as the horn player, the two performances were in different keys. The natural horn version is in E flat major, and accordingly I used an E flat crook, which allowed me to perform the music as written (no transposition). As the valve horn is in F, I therefore transposed the written score down a tone. The challenge in juxtaposing performances on the two instruments rested in remaining vigilant when negotiating the transition from one instrument (and key) to the other.

When approaching this task, it was my aim to keep the two performances quite separate; that is, I attempted to not bring elements of valve horn technique into the natural horn performance and vice versa. I made this decision to strengthen my ability to conclude the successes and failures of performance on each instrument so that the extent to which incorporating one into the other is artistically valid could be properly assessed.

Balance and stylistic considerations aside, it is important now to consider the aesthetic decisions made in both performances. As mentioned previously, the Brahms *Horn Trio* was written specifically for the natural horn, and the physical
characteristics of the instrument helped shape my interpretation. The first example of this appears in the first subject:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure1}
\caption{Johannes Brahms, \textit{Horn Trio in E Flat}, Opus 40 (1865), mvt 1, bars 8-16.}
\end{figure}

When analysing the natural horn version, it is important to consider how the alternation between timbres as dictated by the right hand shapes the aesthetic of the music. The regular timbral changes make the melodic line behave in a more organic way and helped dictate the phrasing (CD 1, track 1, 00:14). As a result of these timbral contrasts, the meter becomes ambiguous as the strongest (open) note became dictated by the hand position and not the barline, which Garrett’s believes to be an important structural device.\footnote{Garrett, \textit{Brahms’ Horn Trio}, p. 45.} This effect was obviously missing in the valve horn version (CD 1, track 5, 00:14), with each note sounding equal, and is the first example how the valve horn disguises the structure of the music.

That said there were many occasions when the natural horn presented difficulties. This, the first of these examples, is by no means an isolated case:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure2}
\caption{Johannes Brahms, \textit{Horn Trio}, mvt 1, bars 27-29.}
\end{figure}

Brahms’ diminuendo (CD 1, Track 1, 00:50) counters the behaviour of the natural horn, given that the F is fully stopped and is followed by the open E. This makes the written dynamic very difficult to control. To follow the instrument’s natural tendency would not be artistically valid at this point, as to have the last note of the phrase
louder than those preceding it is nonsensical. As a result, the instrument itself inhibits the phrasing, far from shaping it as in figure 1.

Another and perhaps more obvious example occurs in the third movement:

![Figure 3 – Johannes Brahms, Horn Trio, mvt 3, bars 40-42.](image)

As before, the fully stopped A flat moving to the open G (CD 1, track 3, 03:00) counters Brahms’ diminuendo. This is particularly difficult as the A flat requires the bell to be occluded to a high degree, while also adjusting the embouchure lower than usual. Furthermore, too much air pressure pushes the intonation sharp, meaning the note must be played relatively softly and made the balance with the piano highly problematic.

Garrett suggests an alternative, however. He proposes removing the hand from the bell completely and raising the embouchure in order to raise the pitch of the G by a semitone to produce the A flat required. 10 As Garret explains, this puts strain on the player and instrument, and accordingly on the tone of the note. This, in turn, emphasises the dissonance and also makes the diminuendo easier to control as the player is effectively playing two open notes. The trade off in this instance is that both the A flat and the G to which it resolves exist on the same harmonic, so extra effort to distinguish the two different notes must be made. Theoretically, this is a very satisfying solution to the difficulties associated with playing the A flat. In practice, however, I could not get this method to work satisfactorily as I was not able to manipulate the pitch high enough to produce the desired pitch, even after experimenting with two different natural horns.

10 Garrett, Brahms’ Horn Trio, p. 92.
An alternative strategy is possible, although unsatisfactory for different reasons. There is time, both before and after playing these few bars, to adjust the instrument itself. I experimented with changing the position of the tuning slide, but this changed significantly the tonal consistency of the music, as I had to close off the bell in order to produce the G, which should be an open note. I therefore decided that, while there is some merit in this technique, the more traditional stopped note was most appropriate.

Another structural device Brahms outlines with the assistance of the natural horn is the harmonic structure of the music. The best example of this appears in the second movement. The horn part goes from predominantly open notes in C major to closed notes in A flat major, thus emphasising the change in mood and key through the sudden change in the number of stopped notes, annotated here in figure 4:

![Figure 4 – Johannes Brahms, Horn Trio, mvt 2, bars 262-300, with annotations made by the author.](image)

Obviously this stark change in timbre is clear in the natural horn version (CD 1, track 2, 02:44), but on the valve horn (CD 1, track 6, 02:43) it is less obvious. It was therefore important to find other ways to emphasise the key change at this point. Admittedly the tempo change goes some way to achieving this goal, but playing with a very soft dynamic was also important to offer a stark contrast to the preceding section. Lastly, I tried to make as much as possible of the *espressivo* marking,
shaping each four bar phrase as much as I could. If I were presenting an informed performance on the valve horn, I would certainly investigate the possibility of using the hand to alter the tone colour at this point.

A second example of how the tone of the natural horn alters the feel of the music appears in the third movement (CD 1, track 3, 04:27):

![Figure 5 – Johannes Brahms, Horn Trio, mvt 3, bars 59-66.](image)

The first four bars of figure 5 comprise almost all open notes, while the last four have many more closed notes. The implied echo between the two phrases is enhanced by the change in dynamic. When viewed in context in the movement, the first four bars in this example are the first time that the movement is distinctly rooted in the major key, which Garret considers to be the emotional core of the entire piece. The immediate change in tone is therefore even more obvious as it instantly offsets the brief and long-awaited for arrival of the more positive major key. This caused some problems on the valve horn (CD 1, track 7, 04:15) as I had to show that change in character through dynamics alone. As a result, I was obliged to play the first four bars slightly louder than the molto piano indicated so as to provide a significant enough contrast to the pianissimo.

In this analysis, Figures 2 and 3 are two examples of the balance issues in the natural horn performance given in my first CD recording. While these detract from the overall performance, they do highlight how the natural horn itself can inhibit performance. While better players than I could perhaps make these instances work more effectively, the very fact that such balance issues pervade the natural horn performance aided me in my conclusions regarding where and when considerations

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11 Garrett, Brahms’ Horn Trio, p. 86.
of natural horn techniques is artistically valid. Furthermore, the inability of the valve horn to effectively show the musical contrasts Brahms writes in figures 4 and 5, strongly indicated to me that incorporating the tendencies of the natural horn into valve horn performance could potentially be both helpful to the performer and effective at unlocking some interesting nuances in the music presented. It is with this understanding I approached the second recital.
Recital Two

The second recital was designed to showcase the results of my attempts to find the most aesthetically pleasing method of performing natural horn techniques on the valve horn, as these were called for in the chosen repertoire. The piano was played by Monika Laczofy, with Robert MacFarlane singing the tenor in Benjamin Britten’s Serenade for Tenor, Horn and Strings, Op.31 (1943), in which a piano reduction was used in place of the strings.

One of the most obvious ways in which natural horn techniques are called for by the composers of the pieces presented in this recital is through the use of portamento. This concerns sliding smoothly between two notes using the right hand within the bell to affect the pitch and inevitably the tone. It should not be confused with glissando which concerns sliding between several notes and generally does not utilise the horn player’s right hand. The first time this technique is used is in Britten’s Serenade at the end of the fourth movement, ‘Elegy’:

![Figure 6 - Benjamin Britten, Serenade for Tenor, Horn and Strings, Op.31 (1943) mvt 4, bars 41-42.]

It is very important to note when the portamento instruction appears in this passage (CD 2, track 4, 03:25). It is clear that Britten specifies its use between the final two notes only; thus, a distinction must be made between this and the two slurs from D sharp to D natural that precede it. My proficiency on the natural horn aided me in this regard because, on that instrument, it is common practice to mask the

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change between notes on the same harmonic created by the hand using techniques including soft tongue articulation, a slight huff from the diaphragm and throat obstruction. By masking the note change, I achieved the replication of the natural horn technique I believe Britten to be aiming for. By then juxtaposing this specific natural horn technique with *portamento*, a technique much more commonplace in valve horn playing, Britten creates tension between the old and the new techniques. To emphasise this, during the *portamento* I exaggerated the movement of the hand to make it more obvious. I tried to maintain the same approach in this particular performance despite the slight disadvantage of the percussive nature of the piano which didn’t allow the sustained notes found in the strings, thus reducing the dissonance and minimising the effect.

Both of Philip Hall’s pieces also contain *portamento*, but for different reasons. Hall’s *Horn Quintet* (2006, also performed here with piano reduction) was, according to the composer, originally conceived for the natural horn, but he abandoned this idea when the Allegro, starting at bar 48, became too ‘technically involved’ to be played effectively on that instrument. I was, however, given license to incorporate natural horn elements into the music, as follows.

When experimenting with how best to perform the piece, it was clear that playing it entirely on the natural horn would diminish its effectiveness due to the technical difficulty in performing it at the required tempo. I did, however, decide to include some elements of natural horn technique while performing on the valve horn to acknowledge the composer’s original intent. The first of these examples appear in the opening horn motif, which is highly reminiscent of the natural horn:

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13 Philip Hall, in conversation with the author, 7 November 2011.
From a natural horn standpoint, there are only two stopped notes in these five bars, indicated here in Figure 7 (CD 2, track 9, 00:57). It became apparent that incorporating these would maintain the essence of the piece’s natural horn roots. Yet by still using valves for all other notes, despite all being possible to play without the need for valves, I was able to retain the integrity of the valve horn while, from a practical standpoint, exerting greater control of intonation.

There were some occasions in the opening section that I felt the need to abandon the use of natural horn techniques, such as the use of stopped notes, marked in the example below (CD 2, track 9, 01:10):

I felt that playing these notes as stopped was not only too technically difficult on a heavy, modern horn, but also detracted from the architecture of the music. These four bars see a sudden change from a piano dynamic to the sforzando of the final note. By alternating between closed and open notes, it inhibited this sudden dynamic and stylistic change.

There is one use of portamento that deserves specific mention:
As a general rule in the Allegretto section of the piece, when using *portamento* I tried to maintain the natural horn flavour by masking the note change as much as possible. Figure 9 (CD 2, track 9, 01:43) is one example that, on the composer’s suggestion, I agreed to make a more obvious change between the open and closed notes. As a result I played the passage as follows:

From a practical standpoint, performing in this manner emphasised the diminuendo with a more gradual change. Furthermore, it also foreshadowed the Allegro section, in which I exaggerated the use of *portamento*. Making this distinction between the Allegretto and Allegro sections adds a further dimension to the piece, highlighting the tension between the composer’s musical ideas, his original conception of these as being performed on the natural horn, and their subsequent adaption to the valve horn.

Hall’s *La Chasse du Bachais* (2011) on the other hand, was always intended as a valve horn piece. Here, Hall uses *portamento* to alter the pitch over a much greater range than is customary:
I believe that the exaggerated *glissando* the composer instructs here (CD 2, track 10, 00:55), should be almost trombone-like in its approach. This is made apparent in the composer’s deliberate decision to not call for valves in order to change pitch while the *glissando* markings between notes further confirm that intention. When considering how best to perform this, and in consultation with the composer, it became obvious that it was important to make the distinction of each individual pitch. I therefore interpreted the music to be written as such:

Interpreting the music in this manner allowed each individual pitch to resonate without losing the intended effect. It did, however, create an additional problem. By exaggerating the effect of the hand position when changing between the two notes, it made the change from F to F flat particularly difficult. As this is the only point in the above example in which the pitch change transcends two different harmonics, there is a natural point at which the horn changes the harmonic being produced regardless of the right hand movement. The challenge, therefore, is to mask the change as much as possible. Again, my proficiency on the natural horn assisted me, as I intuitively changed the air pressure and controlled the hand movement in a way that I would not have been able before learning the natural horn. By recognising the point at which
the horn switches harmonic, I could quickly alter my embouchure and reduce the air pressure so as to minimise the severity of the change in pitch. Lastly, by rapidly moving my hand so as to occlude the bell more than is normal for an open note, I was able to go some way to hiding the step from one harmonic to the next with relative success. The *ritardando* marking at this point assisted me in this task.

Hall also reverses the customary definition of *portamento* in this piece: instead of closing off the bell, Hall instructs the performer to remove the hand from the bell during the execution of a note and to refrain from correcting what is the natural tendency for the note to drift sharp (CD 2, track 10, 02:24):

![Figure 13 – Philip Hall, *La Chasse du Bachais*, bars 73-98.](image)

There was one difficult aspect to this action, and that concerned how to hold the horn while the bell was raised. It is customary to hold the outside edge of the bell with the right hand while in this position yet I could not do so in this situation, given the necessity to replace the hand into the bell while it is still raised. After experiments to slide the hand along the inside of the bell proved unsatisfactory (on account of the change not being a smooth one), I discovered that by altering my left hand grip I was able to hold the horn using my left hand only for just long enough to make the change.

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14 Please note that the *mf* marking at bar 82 was added later following discussions with the composer and does not appear in the printed version of the score.
There were other points in the programme when the right hand was required in order to alter the pitch of a note. Notable instances of this emerge in two examples from Eugène Bozza’s *En Forêt* (1941), reproduced below:

In figures 14 (CD 2, track 14, 00:57) and 15 (CD 2, track 14, 02:59), the composer gives the instruction to use *sons naturels* (natural sounds). The obvious question here is what is meant by the instruction. There are many possibilities.

It must be noted that in figure 14, the first instruction of *sons naturels* comes after the player has been playing *sons bouchés* (meaning “handstopped”). This
implies that *sons naturels* simply means to play open again. However, the absence
the *sons naturels* instruction in bar 39, again after a handstopped section, casts this
interpretation into doubt. Furthermore, the notes preceding the *sons naturels*
instruction at the beginning of figure 15 are all open.

Another possibility is that Bozza intends these *sons naturels* sections to be
played entirely without valves on the F horn.\textsuperscript{15} Bar 37 in figure 14 certainly appears
idiomatic of this, although the third paused note D cannot be played on the open F
horn, making this interpretation questionable. The notion is cast aside completely
with the appearance of the A in bar 38 of figure 14 and the many E flats in figure 15.
I believe, therefore, that the only logical explanation of this instruction is that Bozza
intends for these sections to be played using hand horn technique, which is how I
have presented it in the recital, despite the fact the one professional of the piece that I
have located ignores completely the instruction.\textsuperscript{16}

There are two other curiosities in Bozza’s piece. The first of these concerns
the trills:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure16.png}
\caption{Eugène Bozza, *En Forêt*, bars 67-72.}
\end{figure}

According to Wick, Bozza was clearly aware of historical natural horn technique,
particularly through the adoption of trills with *crescendi* (CD 2, track 14, 03:58).\textsuperscript{17}
To highlight this historical point, I also looked at the way in which I started the trill.
Standard practice is for the trill to begin on the written note and then move to the

\textsuperscript{15} This refers to the custom among horn players to use a double horn in the keys of B flat and
F. The author is aware that some may have different configurations of horns, and so this may
not apply to all.
\textsuperscript{16} *Hornocopia*. Richard Runnels, horn; Brachi Tilles, piano; Paul Sablinskis, marimba. CD
(Australia: Move, 1997) MD3172.
\textsuperscript{17} Wick, *Natural Horn Technique*, p. 37.
next note above. However, the reverse of this was true during the late 17th century from which hunting horn themes originate. I therefore decided to use the historical version of the trill, despite the fact that Runnels uses the more contemporary method.

The second curiosity in this piece are the glissandi, as indicated in the two examples following:

![Figure 17 - Eugène Bozza, En Forêt, bars 31-34.](image1)

![Figure 18 - Eugène Bozza, En Forêt, bar 140](image2)

In both instances, Bozza writes out each note he wishes the performer to play. In figure 18 (CD 2, track 14, 06:11), this is logical as each note can be played on the first and second valves of the F horn. The fact that Bozza obviously has such advanced knowledge of the horn therefore makes it curious that in the first two glissandi (in figure 17 – CD 2, track 14, 00:48), it would appear he expects the player to use valves. Indeed, the lack of the word gliss underneath the notes enforces this idea. I chose, however, to play the two glissandi in figure 17 on the F horn without valves. My reasoning for doing this was twofold. First, while it is possible to play all of the notes at the correct speed using valves, the articulation is obscured. Second, playing the glissandi on the F horn using harmonics associated with the harmonic series was in keeping with the references to the natural horn in the piece.

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Contrary to Bozza, Douglas Hill is very specific in his instructions in his *Jazz Set for Solo Horn* (1984) which is littered with examples of extended techniques. He prefaces his *Jazz Set* with explanations of the notations used,¹⁹ some of which incorporate natural horn techniques. Most relevant to this study, Hill does not over-use right hand technique. When instructing the player to ‘fall off’ a note, he suggests this is done by loosening the embouchure at the aperture, rather than using the right hand. In doing so, he retains the references of jazz technique throughout the piece. His use of *portamento* in the ‘Lullaby Waltz’ (CD 2, track 12, 02:18) is particularly effective as it assists the transition between tempi and style:

![Figure 19 - Douglas Hill, Jazz Set for Solo Horn (1984), ‘Lullaby Waltz’, bar 71.](image)

That said, I have questioned his instructions with regard to the opening motif (CD 2, track 11, 00:05):

![Figure 20 - Hill, Jazz Set, ‘Lost and Found’, bar 1.](image)

Hill states that this should be performed using ‘throbbing repetitions of tones using air attacks allowing the pitches to sag’.²⁰ An alternative and, in my opinion, more effective method to produce this effect, however, is to alter the pitch of the A flats using the right hand. This allows for greater control of the air stream and also adds an additional tonal colour to the music.

There was only one instance in the second programme, in David Lang’s *Variations on a Theme from Papua New Guinea* (2011) that specified natural horn. I

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¹⁹ Hill, Preface to *Jazz Set for Solo Horn* (Massachusetts: Margun Music, 1984).

²⁰ Hill, Preface to *Jazz Set*. 
did however decide to use it at two other points. The first of these, in Britten’s 
*Serenade*, is in response to the composer’s instruction to use natural harmonics in the 
‘Prologue’ and ‘Epilogue’. As Wick notes, while it is not necessary to use the natural horn in order to achieve those harmonics, the physical gesture in picking it up 
ensures that the audience is informed that ‘something out of the ordinary is about to happen’. 21

I decided to use a natural horn in Paul Dukas’ *Villanelle* (1906) because I 
concur with Wick’s observation that ‘Dukas’ writing for valveless horn technique 
(signified by the instruction *sans les pistons*) is advanced, typical of the level of technique required of some of the great natural horn pieces’. 22 As the natural horn is 
much lighter than the valve horn, it is less physically tiring to play, and given the 19 bars in which the player has to change instruments, alternating between the two instruments presents no problems. Of greater consideration is how to deal with a later instruction to play *sans pistons* when, in this instance, there is no time to make the changeover (CD 2, track 8, 05:44). With no opportunity to change instruments, this section had to be played on the valve horn without the use of valves. In doing so, the recapitulation of what was an opening theme performed initially on the natural horn sounds tonally much larger on the valve horn than it did on the natural horn. I believe this to be artistically acceptable, however as this recapitulatory passage is 
sandwiched between two loud sections. Even if it was possible to make the swap to the natural horn (and back) the tonal inconsistencies (that is, large, small, large) would erode the melodic line.

The *Villanelle* also includes an echo section:

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21 Wick, *Natural Horn Technique*, p. 31.
22 Wick, *Natural Horn Technique*, p. 37.
Although undated, the most recently published Durand edition instructs the performer to finger a semitone above the note – *Doigtez un ½ ton au-dessus* (CD 2, track 8, 03:52). Oddly, this instruction appears in neither the International Music nor the older Durand editions (c.1906) available to the author. While where this instruction comes from is a mystery to me, I believe there is value in this technique as it forces the use of a half-stopped bell and therefore a softer, less nasal tone. While this makes intonation problematic, it makes the echo Dukas calls for much more effective.

It remains to draw attention to perhaps the most controversial use of natural horn techniques in this programme: an instance in the *Serenade* in which I used a natural horn technique when not instructed by the composer nor implied by the music. This occurs in the ‘Elegy’, at the pianissimo top C:

I began this note with the bell occluded by my hand (CD 2, track 4, 01:11). At this pitch and dynamic, it was very difficult to pick up on any sense of the ‘stopped’ timbre, so the note instead simply sounds very quiet. Furthermore, I found the pitch change relatively easy to control while I opened the hand during the note. This achieves the desired effect – a pianissimo at a high tessitura – with greater assurance and none of the usual drawbacks, such as changes of pitch and timbre.

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This discussion of the second recital concludes with a comparison of the two commissioned pieces. Despite having the same brief, the composers take a very different approach on the basis of their subject matter. Hall chose a traditional hunting motif deeply associated with the natural horn and effectively combined the old and the new by littering it with contemporary techniques and styles. Lang, on the other hand, chose a theme far outside of the horn’s traditional realm. He uses the imperfect notes of the harmonic series to replicate the harmonically slippery nature of his theme, originally an *a capella* chant.

In their respective interpretations of the natural horn techniques that they were asked to include, Lang was understandably more hesitant than Hall. Lang restricted his use of these techniques to *glissandi* and one brief instance of *portamento* (CD 2, track 13, 00:08), called for during the section instructed to be played on the natural horn, despite that fact the natural horn idiom is devoid of this technique. However, variations four, eight, nine and eleven all mimic the traditional hunting horn style associated with the natural horn, as Lang produces an effective and coherent piece with a clear acknowledgement to the natural horn and its associated techniques without being burdened by them.

Hall, on the other hand, included many more examples of natural horn technique, which is not surprising given his intimate knowledge of the instrument. There is, however, a very slight sense that in some small details, his impressive knowledge of the horn and natural horn techniques is perhaps a burden, as he tries to include *too* many of them, as in the discussion of figure 12 on pages 15-16. Thus, the two compositions point up the eternal dilemma this project has sought to answer: when are the incorporation of natural horn techniques artistically valid? While an awareness of and proficiency on the natural horn is undoubtedly an advantage to the modern horn player, it can also act as a disadvantage if not treated with measured
consideration and respect. However, Lang demonstrates that a certain naivety can sometime work in the composer and the performer’s favour.
Conclusion

It is without doubt that my knowledge of and proficiency on the natural horn significantly helped me in the presentation of these recitals. The first recital provided me with significant understanding of the natural horn techniques, while at the same time highlighting the advantages and limitations of the instrument. More poignantly, it emphasised that using the modern horn without any consideration of natural horn techniques limited the performance.

As a result of my knowledge and skill on the natural horn, I was able to present the second recital in an informed manner, suggesting ideas that would otherwise not been considered. By incorporating natural horn techniques on the valve horn I was able to increase performance options and render artistically valid interpretations of the recital repertoire. It is without doubt, however, that inclusion of these techniques must be carefully considered, so as not to detract from the original intentions.

It is my firm belief that developing skill in or, at the very least, gaining significant working knowledge of the natural horn should be a crucial element in the training of all aspiring professional horn players. The benefits of doing so include, but are not restricted to, an increased knowledge of the instrument and its roots, an added awareness of the composer’s intentions of the repertoire (particularly older music), and a heightened proficiency in the use of the right hand, whether that be for minor adjustments for intonation purposes, or to capitalise on the wide tonal palate the horn possesses. A pedagogical approach to the merits of learning the natural horn for the contemporary horn player is certainly a topic that would warrant future investigation.
Brahms Horn Trio: A Comparison

10 October 2011
7:30pm
Hartley Concert Room

Adam Greaves – Horn
Julia Maly – Violin
Stefan Ammer – Piano

Submitted in partial fulfilment of a Master of Philosophy (Music Performance)
The Development of the Horn

The horn that made the transition from the hunt to the concert hall around 1680 was limited to the notes of the harmonic series.

It wasn’t until around 1750 that Anton Joseph Hampl (1710-1771) developed what has become known as the ‘handstopping’ technique. He discovered that by putting the hand in the bell and varying the amount that the hand covered the opening, the horn could play chromatically.

There are many different degrees of handstopping. As a general rule, the player can play a note either:
- Fully open, where the hand is actually removed from the bell
- Open, where the hand is in the bell but not covering it
- Half stopped, in which the palm covers the bell yet the fingers remain free
- Fully stopped, where the whole hand shuts of the bell

Each note then needs individual refining based on a variety of factors, including the size and shape of the player’s hand, the amount of air pressure being used and the shape of the embouchure. As the degree to which the bell must be covered for each note varied, so each note took on both its own individual dynamic and timbre.

Yet despite this seemingly apparent flaw, the natural horn had no real competition for around 65 years until the first valve was invented in 1817. During this time Mozart wrote his four horn concertos and great players such as Giovanni Punto, Hampl’s most brilliant student, gave the horn a special place in music. Moreover, its flaws actually became its greatest quality, as the public and composers alike fell in love with the variations in tone colour the instrument produced. As a result, the transition to the valve was not without controversy, as the very essence of the horn was deemed to be lost when every note took on the same homogenous tone. The benefits of the valve, however, could not be overlooked completely, and by around 1830 it had superseded the natural horn as the instrument of choice. That said, the teaching of the natural horn was not abolished at the Paris Conservatoire until 1903.

Notes on the Research Project

My research is focused on the artistic merits of incorporating natural horn techniques into valve horn performance. It has long been my belief that an awareness of the horn’s roots through a knowledge of and/or proficiency in the natural horn enhances performance on the valve horn. After speaking to many horn players, both professional and amateurs, they generally appear to share this view. However, until recently, no formal, practical studies have been carried out in order to test the hypothesis. My research, of which tonight’s performances forms an integral part, explores the extent to which playing the natural horn helps valve horn performance, and the appropriateness musically of doing so.

As Brahms’ Trio was written for the natural horn by a composer who clearly knew how to write for it, it seemed an appropriate starting point for an exploration of this nature. Specifically, I wanted to find out what worked on the natural horn and what didn’t. My knowledge of the natural horn has undoubtedly shaped the way I have approached the piece, but has also highlighted some areas that the instrument is not particularly suited to the music Brahms has written. Likewise, the valve horn performance, while superior in many ways, also has many strengths and weaknesses. By making this comparison in my first Masters recital, the challenge I now face is how to combine the strengths of both instruments to produce an informed way of performing the pieces presented in my second and final recital next year.
Brahms: Horn Trio in Eb, Op. 40

Brahms wrote his Horn Trio in 1865, at a time when the natural horn in fact had been superseded by the valve horn in Germany. Yet Brahms specified the use of the older instrument in his score, which begs the question as to why he would have done so. The answer is twofold. Firstly, Brahms played the horn as a young boy, and was taught by his father, who played it professionally. It makes perfect sense that he would write for the instrument he knew and understood intimately. When playing the Trio, Brahms’ knowledge of the horn and his artistry in utilising the various timbres the natural horn produces is quite apparent. Second, the Horn Trio is one of Brahms most significant works as it was the first major piece he completed after the death of his mother, and a sense of reminiscence pervades the music, not least in his choice of instruments; in addition to the horn, he also played the piano and violin in his youth. The memory of his mother saw him revisit childhood memories of playing the three instruments. Writing for the natural horn gave Brahms significant problems when trying to find a natural horn player for the premiere of the piece. Yet such was Brahms’ preference to the older horn that he stated that he would rather a viola or cello be used before considering a valve horn.

The first movement, Andante, begins with the violin playing the main theme, which is then taken over by the horn. The first problem for the audience and players alike is to decide where the barline falls. The violin theme is designed to sound as though it starts on the beat, when in fact it doesn’t. The placement of the piano chords on the second beat of the bar intentionally enforce this in order to create a sense of conflict from the outset, something which is not fully resolved until the end of the finale. Furthermore, Brahms utilises the differences in timbre of the natural horn to further emphasise the rhythmic ambiguity of his theme, as the stopped notes often appear on the strongest beats in the bar. This is a perfect example of how Brahms cunningly uses the natural horn to construct the music, as it becomes immediately clear that this is a piece written specifically with the natural horn in mind by someone who perfectly understands all its idiosyncrasies.

Following the unusually slow opening movement Brahms writes a Scherzo (which is traditionally found as the third movement) to provide a stark contrast. The movement is a musical joke, the joke being its stark contrasts. The first example of this is the violin and horn interjection at the beginning, interrupting the piano as soon as it starts to modulate to the minor key. Perhaps clearest contrast is the difference between the first section, which is written in E Major, and the Trio in A Minor. It is also an excellent example of how Brahms constructs his music based on the natural horn’s characteristics. By using the horn in a different key and therefore increasing the number of stopped notes, the music instantly takes on a different character and provides a sense of contrast.

The emotional core of the piece is found in the third movement, where Brahms’ memory of his mother seems ever present. The Adagio Mesto, which literally means ‘sorrowful adagio’, is generally accepted to be based on the Lower Rhenish folk tune, In den Weiden steht ein Haus, which Brahms was taught as a boy by his mother. He presents the tune as a slow lullaby, primarily characterised through the rocking motion in the left-hand piano. This is perhaps a reference to his mother rocking his crib as a baby. Brahms’ sorrow at his mother’s death can be seen in the tension he creates through the unrelenting metric conflict between the duplets and triplets. This is the most technically challenging movement for the natural horn player, with the highest percentage of stopped notes. This in turn makes the open notes all the more prominent, and indeed the emotional heart of both the movement and the piece as a whole, comes at the arrival of the major key, when all the notes are open. The movement also contains some examples of the limitations of the natural horn, not least being a challenging low A and passages where the player must disrupt the phrase in order to allow for hand movement. Yet the chilling quality of the fully stopped E flat at the end is one to savour!

The finale, marked Allegro Con Brio, appears at the outset to be highly reminiscent of the
traditional horn rondos of Mozart that Brahms would undoubtedly have played as a child. The natural horn shines in this movement, which features many traditional horn calls based upon perfect fourths and fifths. Yet the conflict embedded in the earlier third movement is not completely vanquished as the horn seems to be curtailed from breaking into the expected rondo by the other instruments. It is not until two thirds of the way through that the horn finally wins and completes a horn call, yet is instantly reprimanded by a piano ritardando. The conflict subsides soon after, and the final section sees the natural horn in its element, with a mere eight stopped tones in 114 notes and clearly displays Brahms’ undying preference for the natural horn.

Adam Greaves

Adam began studying the horn aged 13 in the UK. Within four months of playing, he was awarded a position in the Leicestershire County Training Orchestra. He then occupied many principal positions in the senior bands and orchestras within the Leicestershire system until he moved to Cardiff to undertake a Bachelor in English Literature and Music. While at University, he studied under Donald Clis and was given the opportunity to play alongside the Welsh National Opera Orchestra. After graduating from Cardiff, Adam was then awarded a scholarship to study at the University of Adelaide on the Masters of Music Performance programme. Adam currently studies with Philip Hall and, in addition to his Masters research, he also teaches the horn and undertakes a variety of freelance work with numerous ensembles, including the Adelaide Symphony Orchestra.

Julia Maly

Julia was born in Austria and started playing the violin at the age of 7. After preparatory studies at the Mozarteum in Salzburg with Prof. Geise, she attended the Yehudi Menuhin School in Great Britain on full scholarship from 1996 – 2001 at Lord Menuhin’s personal request. Following her studies in London, Julia studied with Prof. Helmut Zehetmair at the Mozarteum University and completed her Bachelor degree with High Distinction. From 2006 to 2008 she worked with the renowned soloist Thomas Zehetmair in Graz. Julia has played numerous solo concerts in Europe with orchestras such as the Viennese Chamber Orchestra, the Bruckner Orchestra Linz, the Stuttgart Chamber Orchestra and the Czech Chamber Orchestra under the baton of such prestigious musicians as Lord Yehudi Menuhin, Sandor Vegh, Ola Rudner, Ingo Ingensand, Ondrej Kukal and Dennis Russell Davies. Julia has lived in Australia since 2008 and is currently teaching at Seymour College and St. Peters College. She is also a casual player with the Adelaide Symphony Orchestra, a member of the Adelaide Art Orchestra and, since the beginning of 2011, part of ‘Vicela’ string trio.

Stefan Ammer

Stefan was a professor of Piano at the Freiburg Academy of Music before joining the staff of the Elder Conservatorium in Adelaide. An accomplished concert pianist, he has performed as a soloist and chamber musician in many German and European cities. He has given performances on almost every German radio station. In Australia he has appeared in concerts for the Australian Broadcasting Corporation, the Australian Society for Keyboard Music, the Adelaide Festival of Arts and the Elder Conservatorium.

Special Thanks

Thanks must first and foremost go to Julia and Stefan for all their hard work and enthusiasm in putting this wonderful piece together. Thanks also to Phil Hall, for his patience and guidance. Special thanks must also go to both Phil Paine and Nigel Davis for their help and generosity by allowing me to borrow their instruments. Thanks to Mark, Kimi, Lucinda and Charles for all their help with the logistics of organising this recital. And of course my friends and family for all their support when the horns weren’t doing as I told them to!
Final Masters Recital: 
Utilising Natural Horn Techniques on the Valve Horn

23 February 2012
7.30pm
Hartley Concert Room

Adam Greaves – Horn
Robert MacFarlane – Tenor
Monika Laczofy – Piano

Presented in partial fulfilment of a Master of Philosophy (Music Performance)
Programme

Benjamin Britten:  *Serenade for Tenor, horn and Strings*, Opus 31 (1943)
   This piece will be played using a piano reduction

Paul Dukas:  *Villanelle* (1906)

INTERVAL (15 Minutes)

Philip Hall:  *Horn Quintet*, First Movement (2006)
   This piece will be played using a piano reduction

   *La Chasse du Bachais* (2011)
   World Premiere

   Taken from *Jazz Set for Solo Horn*

David Lang:  *Variations on a Theme from Papua New Guinea* (2011)
   World Premiere

Eugène Bozza:  *En Forêt* for Horn and Piano, Opus 40 (1941)

Britten:  *Serenade for Tenor, horn and Strings*, Opus 31 (1943)
Britten composed his Serenade from his hospital bed after contracting measles in 1943. He wrote it at the request of Dennis Brain, the most eminent horn player of the 1940s and 50s until his untimely death in a car crash in 1957. Britten also included a tenor part intended for his lifelong companion, Peter Pears. It was with these two performers that the piece received its premiere on October 15 1943 at Wigmore Hall in London.

The work is a song cycle in eight movements and feature poems by William Blake, Alfred Lord Tennyson, John Keats, Ben Johnson and Charles Cotton, in addition to one anonymous writer. The Prologue and the Epilogue that open and close the work feature solo horn alone, in which Britten instructs the horn player to use natural harmonics. This means that all the notes are to be played on the ‘open’ harmonics and those that are naturally out of tune should not be adjusted. In this performance I will be using a natural horn for both of these movements. Furthermore, the Epilogue is to be performed off stage, which is why the horn does not feature in the seventh movement, Sonnet.

Dukas:  *Villanelle* (1906)
Dukas composed the Villanelle a mere three years after the Paris Conservatoire abolished the teaching of the natural horn. In addition to the piece’s folkish themes (the title literally translates to ‘Country Girl’) it is perhaps unsurprising that Dukas elected for the introduction to be played without the use of valves in order to invoke the pastoral atmosphere of the natural horn. Whether or not to adhere to this instruction is the first question for the horn player. While the use of hand technique is not overly complex, with no real dexterity required until the very end
of the introduction, Dukas only gives a fast nineteen bars in which to change instruments, something I am only able to do using two separate mouthpieces. There is also a very brief recall of the introduction before the final, explosive end to the work which is also instructed to be played without valves, but there is no time at all to swap instruments. This leaves the player in a quandary as to the extent to which they can adhere to Dukas’ instructions.

There is also one more peculiarity in this otherwise simple piece: an instruction to play a section with the bell covered and transposing a semitone above the written pitch, not below as is the norm. This instruction, curiously, only appears in the Durand edition of the music but will be incorporated in this performance as it enhances the echo effect I believe Dukas had in mind.

**Hall: Horn Quintet, First Movement (2006)**

The first of two pieces by Philip Hall in tonight’s programme, the Horn Quintet was written as part of his Masters in Composition at the University of Adelaide in 2006. Phil is both my horn teacher and secondary supervisor on this project.

The Horn Quintet, according to Phil, was originally conceived for the hand horn. The opening statement of the work is incredibly reminiscent of the hand horn idiom and can be very effective when played on this instrument. I was even given license by Phil to exploit the use of the hand horn throughout this section and have included a few elements of it that were not written in the original part. Phil abandoned writing the entire piece for hand horn, however, when he began working on the Allegro section as he felt the solo horn to be developing a much more chromatic role, which would have required too high a degree of dexterity for a successful performance. Using his knowledge of the horn, however, Phil still worked in several elements of hand horn technique to retain his initial flavor for the piece, despite the piece ending up to be a valve horn composition.

**Hall: La Chasse du Bachais (2011)**

This commission, specially written for this project, incorporates a wide variety of natural horn techniques. Based on an old hunting motif, the short piece begins with a reminiscence of traditional hunting tunes widely associated with the horn. Yet the visual cue of the bell high in the air with the hand out, which pushes the pitch slightly sharp, indicates that it is not as traditional as it first seems. Indeed, throughout the piece the right hand is not only used to adjust the pitch, the tone and play numerous handstopped notes, but is also used to “scoop” notes and perform glissandi, while the main theme also moves from a traditional hunting rondo to a blues melody (and back again!)

**Hill: ‘Lost and Found’ and ‘Lullaby Waltz’ (1984)**

Douglas Hill has been Professor of Horn at the University of Wisconsin–Madison since 1974 and is also a past president of the International Horn Society. An avid researcher, his studies have included the hand horn and extended techniques on the horn. His book, *Extended Techniques for the Horn – A Handbook for Students, Composers and Performers*, methodically lists the numerous techniques possible on the horn, some of which are demonstrated throughout tonight’s recital.

These two pieces, taken from his Jazz Set for Solo Horn, are the most contemporary in this programme, despite being written some thirty years ago! They are filled with numerous extended techniques, not all related to the hand horn. The sheet music contains some three pages of explanations regarding each of the techniques used,
which I have followed for the most part. In some instances however, I have questioned his use of symbols and, as a result of my experiments on the natural horn, have also come up with alternative and, I believe, more natural solutions to performing these techniques, rooted in the hand horn idiom.

Lang: Variations on a Theme from Papua New Guinea (2011)

Note by the composer:
I began with the concept of writing something that would effectively use the characteristics of both the valved and natural horn. I wanted to exploit the notorious ‘slipperiness’ of the instrument, and also to use the odd ‘in-between’ notes (to Western ears) of the harmonic series. Writing in variation form would allow a thorough exploration of many different techniques in the same piece – but first I needed a theme.

In the second year of my degree I had to transcribe a short recording from Papua New Guinea. The notes and rhythm had been very difficult for my classically-trained ears to pin down accurately, but the sound of several high-pitched male voices sliding skilfully around an unusual tune had embedded itself in my memory – and now suggested the sound of Adam’s horn. Perhaps in writing variations on the theme I could finally lose this earworm?

The tests and trials I put the theme under were intense, so I dedicated each variation to an exam that one of my friends or cousins was about to undergo: the ‘grandeur’ of Legal Studies or the ‘dissonance’ of Modern History. But the horn passes it triumphantly – and that tune is still stuck in my head.

Bozza: En Forêt (1941)

A graduate of the Paris Conservatoire, Bozza wrote En Forêt as an examination piece for the same institution in 1941. Technically very demanding, it is one of the standout virtuoso pieces written for the French Horn in the twentieth century.

The piece has been included in tonight’s recital not only because of its adoption of hand horn techniques, but also because of its ambiguity. Bozza’s use of the term ‘natural sounds’, to take the literal French translation, can be interpreted in many ways. Presented here tonight is what I believe to be the most artistically valid representation based on my own research and also by performing the work to a variety of students and staff at the University of Adelaide in order to get their feedback.

Special Thanks
My thanks once again must go first and foremost to Nigel Davies for his generous loan of the natural horn. My thanks also go to Monika Laczofy, for stepping in at the last minute and Robert MacFarlane for singing the tenor part. Thankyou to Phil Hall and David Lang for writing two excellent yet very different pieces of music; and of course extra thanks must go to Phil for his guidance over the past two years. I’d also like to thank Mark Carroll for being a fantastic supervisor and being able to attend at least one of my recitals!
Bibliography


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**Recordings**

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Britten, Benjamin. *Serenade for tenor, horn and strings, op 31; Les illuminations for tenor and strings, op.18; Nocturne for tenor, 7 obligato instruments and strings, op 60*. Peter Pears, tenor; Barry Tuckwell, horn; Benjamin Britten, conductor; The London Symphony Orchestra; The English Chamber Orchestra. Audio CD (London: Decca, 1990) OS 26161.


**Scores**


Brahms Johannes. *Trio in E flat for Piano, Violin & Horn (or violoncello or viola) op.40* (London: Augener, n.d.).


Hall, Philip. *Horn Quintet*, for solo horn, violin, two violas and cello (n.p., 2006).


NOTE:
2 CDs containing 'Recorded Performances' are included with the print copy of the thesis held in the University of Adelaide Library.

The CDs must be listened to in the Music Library.