

Strategies to Enhance the Artistic Quality of Piano Recording

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Portfolio of recorded performances and exegesis
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Table of Contents

Abstract.....	iv
Declaration.....	vi
Acknowledgements	vii
Format of the Submission.....	viii
Introduction.....	1
Background to the Study	2
At the beginning.....	2
Further influences.....	3
The form of the project.....	9
Methodology.....	11
How methodology was defined.....	11
Investigative pattern	13
The Repertoire.....	15
About the Recordings	16
Venues, sound engineers and pianos.....	16
Schedule.....	17
Recording equipment.....	18
Listening equipment	19
PART A: Sound Recordings.....	20
Contents of CD1.....	21
Contents of CD2.....	22
Contents of CD3.....	23
Contents of CD4.....	24
PART B: Exegesis.....	27
Introductory Comments	28
Wolfgang Amadeus Mozart: Sonata in B flat major KV 570.....	30
Sergej Prokofiev: Romeo and Juliet, Ten Pieces for Piano Op 75.....	41
Robert Schumann: Symphonic Etudes Op 13.....	63
Johann Sebastian Bach: Prelude and Fugue in G sharp Minor BWV 887	91

Johannes Brahms: Drei Intermezzi Op 117	104
Johannes Brahms: Klavierstücke Op 118	111
Conclusions.....	138
List of Sources	144
Bibliography	144
Musical scores.....	146
Discography	147

Abstract

Many pianists have remarked how interpretations that prove successful in a concert setting do not always fare well when transferred to the medium of recording. This project sought to identify why this is so and to devise strategies that pianists can use to successfully project interpretative ideals to listeners of a recorded product.

For each recording, a performer works within a given studio environment. This project focuses on artistic strategies that may be used when particular interpretative and sound ideals are not well reflected in the recorded product. At the core of the research is an exploration of the performing skills that can be utilised by the pianist to achieve enhanced outcomes in a given recording context. Elements frequently addressed through the project include the quality of *staccato* touch, continuity of *legato* lines, timing through rests, sonority of thicker *ff* textures and the distance through which the sound is best projected.

The project emphasised how important it is for the performer to understand recorded sound and the medium of recording from the perspective of a listener. The main reason for this is that the listener does not hear the sound in the same way the performer does during a performance. They are only privy to what is picked up by the microphone and transferred to the audio format, not the total experience of the sound that fills the performance space and to which the performer reacts. This project has documented some strategies that use the listener's perspective as a starting point for managing the performance inside the recording space. The reader will learn how and why issues of resonance influenced the quality of transmission of interpretative ideals more than any other factor. This research also highlighted the importance of monitoring the optimal levels of expressive engagement during a recording session, brought to attention the importance of the aesthetic value of a recorded sound and suggested a variety of mental strategies and performing approaches for a performer's consideration prior to and during the process of recording.

The primary outcome of this research resides in the recorded performances themselves. While the methodology was structured in a way that enabled testing and evaluation of different strategies and solutions, it was essentially a creative rather than a scientific journey. It was a

performance study carried out through a series of recordings and re-recordings. The outcome of this process is a set of four CD recordings with an explanatory exegesis. The exegesis tracks the creative approach to the repertoire that was performed and addresses the questions that form the core of the research.

Declaration

I hereby declare that the recordings and the supporting exegesis that comprise this submission are my original work.

They contain no material that 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, contain no material previously published or written by another person, except where due reference has been made in the text of the thesis.

I give consent to this copy of my thesis, when deposited in the University Library, being made available for photocopying and loan. It should be noted that permission for copying does not extend to the CDs in Part A without consultation with the author.

Marija Bajalica

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Extended thanks to my co-supervisor, Professor Charles Bodman Rae, for the excellent advice he gave me and for his valuable assistance in formatting the project.

I wish to thank my principal supervisor, Emeritus Professor David Lockett, for his curious engagement and dedicated guidance throughout this research. Without his editorial skills, support and patience during the times when I struggled to bring my concepts to their full potential, this project would be less than I was able to achieve. I would also like to express my gratitude for the profound respect with which he treated me as a musician, pianist and a human being. It was a privilege having him as a mentor.

Format of the Submission

The submission consists of two parts.

Part A represents the primary performance focus of the project and is presented in the form of four CD recordings. The first, second and third CDs contain integral versions of each of the works recorded as part of the project. The fourth CD is a collection of musical examples that are at the core of the discussion contained in Part B.

Part B is an exegesis that examines issues encountered during the project. It is a detailed commentary on the specific challenges that arose and the strategies that were put in place to deal with them.

Given that the primary focus of the project is upon the recorded outcomes, the examiner may wish to commence an exploration of the submission by listening to the integral versions of the works (CD1, CD2, CD3), which represent my overall artistic view of the repertoire. The short examples (CD4) would be best heard within the context of the discussion contained in the exegesis.

Introduction

Background to the Study

At the beginning

Engagement with this project came out of my personal curiosity to understand why my recorded performances seemed scarcely ever to be a true reflection of the performance I thought I had given during a recording session.

At the time that many of my questions were raised with regard to recorded piano sound and to the authenticity of interpretative ideas when projected through the medium of recording, I made several professionally produced studio recordings for broadcast. Repeated experiences of listening to these recordings always prompted the same question: Where has the spirit of the performance gone?¹ The most obvious problems in these recorded performances were the lack of fine dynamic shading as well as a restricted dynamic range. In terms of dynamics, the music appeared as a narrow and somewhat monotonous version of the live experience of the sound. In addition, I noticed that the relationship between the piano sound and the acoustics of the venue was not always satisfactory. Furthermore, some innate deficiencies of the sound of the instrument being used were more exposed in the recorded sound than I was aware of during the performance. As a result, the recorded outcome revealed that some elements of the performance, such as tone quality, articulation or pedalling for example, seemed inconsistent with the interpretative goals I was aiming to achieve. These shortcomings seemed particularly disturbing in slow paced *legato* melodies. I found these issues to be both disconcerting and intriguing.

Following these experiences, I found myself in the role of listener when a colleague of mine, a pianist, was undertaking extensive recording sessions for a CD label. I was pleased to recognise that my concerns were the same whether I was in the subjective role of a listener to my own playing or in the more objective role of auditing someone else's playing. Most of all, I concluded that even the most skilful technical production does not seem able to capture with

¹ The following article is good source of discussion on this topic: Susan Tomes, "A Performer's Experience of the Recording Process", *Beyond the Notes* (The Boydell Press, Woodbridge, 2005) 140.

equal success all different aspects of a live performance. My colleague's recordings were edited to professional standards but as one area of concern was resolved by this process, another was created. As a result of this experience I began to wonder if there were not insights that a pianist could develop concerning the nature of recorded piano sound that would have a positive impact on the delivery of their artistic goals in the final product.

With this awareness, the context of recording became divided in my mind. On one side lie the technical elements of sound engineering that are largely beyond the artist's direct control. On the other are those technical and interpretative elements over which the performer does have control if the relationships between them and their mutual impact are well comprehended. I consider this second category to be what lends life and breath to a recording. This is the aspect of the recording process that captured my attention and which I wished to explore. It is referred to subsequently as the "breathing" element of a recording.

Further influences

Influences that further defined the concepts of this project were based upon introspective views - both my own and those of acclaimed artists - concerning performance in general and the process of recording in particular. Published and recorded interviews with pianists, in combination with attentive listening to their recordings, enriched me with interesting and relevant information that helped me to refine the aims of this project.

One would assume that the piano performing elite use the most suitable venues and instruments, the best equipment and the most experienced recording engineers to secure a truthful artistic outcome in a recording. Yet, I find that their recordings in many instances do not reflect convincingly the artistic aims for which I assume they were striving. I have had the privilege of hearing some of the world's greatest pianists in live performances. When I compare the live experience of their art to what has been transmitted onto a CD, I find that they are, in some cases, worlds apart.

I became aware of the extent of this problem when I purchased a recording of pianist Ivo Pogorelich. Before that time, I had heard him many times in live performances during the 1980s and 1990s. The reason behind my devoted attendance at his concerts was that this

pianist has a rare ability to sustain the length and quality of piano sound to a truly remarkable degree. This ability has enabled him to create and deliver many unforgettable performances of slow pieces, of which I most vividly remember the third movement of Chopin's B flat minor Sonata Op 35. I appreciated his interpretation so much that I purchased an LP recording of it. My listening experience was nothing short of absolute disappointment. His interpretation of the third movement (*Marche funèbre: Lento*), so moving in live performance, was hard to recognise through the recorded sound. I listened to it repeatedly, but all I could hear was a very slow tempo with no convincing interpretative justification for such a choice. Years later, I heard Pogorelich again in a live performance of the same piece. He managed to get even deeper towards the truth than I believed he had already found in this sonata so many years earlier. For his newly discovered interpretation the choice of pulse was even slower than before, yet the apparent speed of motion was unconditionally fluent. After that experience, I thought that I should never again buy his recordings, but I did. I am in possession of a *Deutsche Grammophon* CD containing works of Johannes Brahms.² Since the recording of the Chopin Sonata had been on an LP record, my expectation was that the new digital technology would have provided a better medium for Pogorelich's artistry, but this was not the case. The sound in the slow pieces (the Intermezzo No 2 from Op 118 in particular) is missing the sustained quality so typical of Pogorelic's playing. For this reason, it feels as if the tempo is too slow and that the flow of the melodic line has been compromised. Based on my previous experiences, I do not believe that the live experience of the sound would have been problematic in this way. Furthermore, the recording reveals a lack of resonance in *forte*. I have never heard Pogorelich fail in the delivery of this aspect of interpretation in a live performance.

Interpretation relies on feedback that is received from the acoustics of the performing venue. In this recording I felt that the feedback that the pianist was receiving, and to which his interpretation would have naturally responded, was not transmitted as part of the recorded sound. A significant part of the justification for the interpretative ideas was therefore missing.

² Johannes Brahms, *Intermezzi op. 117, Rhapsodien op. 79, Intermezzo op. 118 No. 2, Capriccio op.76, No. 1*, pianist Ivo Pogorelich, CD (Deutsche Grammophon 437 460-2) 1992.

I had a somewhat different but equally puzzled response when I heard Evgeni Kissin's CD recording of a live performance of Schumann's Symphonic Etudes Op 13.³ This is an example of a performance that would probably require many adjustments to project its artistic aim neatly through a recording. Pedal in Etude VIII, for example, although purposefully used, sounds muddled when captured on a recording. The phrasing he was aiming to achieve with such pedalling is clear to me, and I can imagine that a magnificent result may have been obtained in the acoustics of the hall and in the momentum of a live performance. But recordings sometimes emphasize small imperfections that are an inevitable consequence of a higher interpretative aim. They project a skeletal version of the sound spectrum and through this projection, imperfections act quite aggressively on one's ears. They often make us neglect the more important aspects of a performance, such as the magnificently shaped phrasing of the left hand in Etude VIII.

Etude IX is an example of, what I believe to be, a wrongly selected tempo. Although I can understand the performer's motivation to challenge the limit of *Presto possibile*, especially in a concert setting, I believe that the challenge was taken a step too far and that a less risky choice would have produced a more accomplished outcome in the recorded version. A number of inconsistent tone qualities within one interpretative idea can be easily noticed. These are directly associated with the selected tempo. Inconsistencies of this kind might go unnoticed in a live performance but, in the process of repetitive listening, one begins to question the validity of the artistic aim. This example neatly articulates one of the problems of recording as a medium: that in some respects, it seems to require slightly different interpretative concepts compared with those brought to a live performance.

A similar conclusion can be reached concerning Kissin's generous treatment of *ritenuto* and *rubato* in the second half of Etude IX. It reflects a disturbed emotional input which needs plenty of tolerance from the listener in order to be approved. Once again, this aspect might not become an issue in the context of a single, live listening to the piece. I assume that Claudio Arrau remarked upon such and similar sets of issues when he said:

³ Evgeni Kissin, *The Kissin Collection*, Live recordings CD, (Olympia OCD 621 A+B+C) 1986-1988.

Things that work in a performance are sometimes not good on records and vice versa. Recording has its own laws - that's why I am not very much for the recordings of live performances.⁴

In considering recordings that make a positive impression, one of my favourites by chance happens to be another version of the Symphonic Etudes. This time it is a performance by Georges Cziffra for EMI Classics, remastered for CD.⁵ What in my opinion sets this recording above some others is that it leads me through the creative world of the performer. The sound is captured in a way that emphasises the creative aspect of the interpretation rather than perfection of isolated details. This recording does not amaze me with Cziffra's interpretation, which is occasionally quite eccentric, nor even with his ability to meet the technical demands of the piece. What impresses most is his ability to reach and project the highest aim of the performance, which is the blending of the performer's creative capacities with the restless imaginative world of Schumann.

In addition to Cziffra's powerful performance there is also the aspect of recording production that enabled a successful coming together of such fine materials. This recording has not been cleared of various extraneous noises, both of those emanating from the piano itself and from the surrounding space. Because this noise travels with the piano sound as an integral part of it, the sound is experienced much as we hear it in its live form. In today's world of digital technology and aesthetic ideology it would be a remarkable achievement to obtain this quality in a recording. The sound of digital recordings is often purified of many elements that we recognise in a live experience. In return, there are many options digitally available that add various qualities, for example echo effects that simulate the acoustic properties of world acclaimed performing venues. However, these added qualities are patched to a recording and their effect can never be as genuine or purposeful as those emanating naturally from the hall itself.

⁴ David Dubal, *Reflections from the Keyboard, the World of a Concert Pianist* (New York: Schirmer books, 1997),

⁵ Georges Cziffra, *Cziffra Edition*, CD (EMI 7243 5 65254 2 9) 1994.

I can hardly find a better way to describe the issues regarding the fashion in which recordings are lately produced than Kristian Zimerman managed in his interview for BBC Radio 3. He said the following:

I am realising more and more that music is not an audio experience. It's something more than audio and the digital technique showed me this. It so clearly transmits the sounds that you can't hear the music any more. From the very beginning of the digital technique I had a problem in a studio because I had too many informations concerning the sound and music is not sound. We are using the sound for creating music but music is actually more organising people's emotions in time and is more the story you are telling using the sound. Going by more and more the perfect sound you are not necessarily achieving a better story or are able better to tell the story because there will be a lot of factors which will start to disturb the listener, the perfection of sound which is kind of overexposing itself. And on top of this, I would say there is a very interesting function of a distortion in all of this. We always have some kind of distortion. In a concert hall there is tremendous distortion. There is never total silence in a concert hall so there is kind of distortion which is something we can lean at and we can play with.⁶

These words make much sense to me. Digital technology has taken the recording medium to a different level in a way that often seems to isolate the quality of piano sound from the broader performing context. If the aim of a listener is to become absorbed in these aspects of sound, then that listener will be fully satisfied with the piano recordings that have been produced in recent decades. In my view, the best examples of this type of recording are those made by Murray Perahia for the Sony label. His pianistic excellence is masterfully captured in these recordings. The four Chopin Ballades⁷ and the Bach English Suites⁸, for example, illustrate with outstanding clarity Perahia's awareness of stylistic detail and demonstrate remarkable consistency in achieving an admirable quality of sound. However, I feel that the

⁶ Tom Service, *Krystian Zimerman – An Exclusive Radio Interview with the Enigmatic Polish Pianist* (Basel, Switzerland 2008). <http://www.pianostreet.com/blog/articles/> (accessed 10 November 2012).

⁷ Murray Perahia, *Chopin 4 Ballades*, CD (Sony Classical SK 64 399) 1994.

⁸ Murray Perahia, *Bach Englische Suiten*, CD (Sony Classical SK 60277) 1998.

characteristics of the sound are captured with a kind of perfection that gives these recordings an instructive nature. When pianistic excellence is achieved, as is the case with Perahia's performances, then one can obviously learn a great deal and in this respect these recordings can enrich a person with valuable knowledge. As a listener, they focus my attention upon a perfection of detail to the point where I am at all times conscious of the movement of the piano keys.⁹ This muscular awareness of my body towards the key motion eventually tires me. Sometimes I am in a mood for educational listening and when I am, then I always refer to recordings of this quality. But most other times, I wish for an artistic experience that goes beyond the collection of fine details, of the one that incorporates such fine details into an overall artistic impression.

I doubt that we shall ever again have the privilege of hearing pianists who, like those from the older generation, perform, record and approve their recordings with an awareness that the occasional mistake does not matter.¹⁰ In our modern society with all its advanced technology, mistakes are considered impolite.¹¹ Partially it is so because of the clarity with which digital recording equipment reproduces sound, illuminating the tiniest of imperfections into issues of concern. Furthermore, recordings can be digitally edited until they are "perfect". While sound engineers are working to meet the expectations of a market addicted to superficial perfection, the true art shifts further and further away. Pianists are well aware of this trap and seek different ways out of it. Some solutions are radical, as in the case of Kristian Zimerman, who withdrew from projects of commercial solo piano recording in 1990. Glen Gould abandoned live performances to be able to craft his interpretations to suit the high technological standards of the recording medium. Grigory Sokolov records only live concert performances and in his interview with Willem Boone he explains why:

⁹ See Patrick Shove and Bruno Repp, "Musical motion and performance: theoretical and empirical perspectives", in John Rink (eds.), *The Practise of Performance* (Cambridge University Press, 1995) 71. In this article, the authors discuss the theory of the German musicologist Alexander Truslit, who contended that the musical dynamics and agogics convey movement information directly to the sensitive listener, who can then instantiate these movements by acting them out, if necessary.

¹⁰ See Robert Philip, *Performing Music in the Age of Recording* (Yale University Press, 2004) 43. The author said the following: "Musicians today live with something of a conflict between the need to be perfect and the desire to be real".

¹¹ David Dubal, *Reflections from the Keyboard, the World of a Concert Pianist* (New York: Schirmer books, 1997), 6. Interview with Jorge Bolet.

The interesting thing with old recordings is that they may not sound perfect, but they have a lot of atmosphere, whereas the process of editing has gradually become more and more artificial. It now happens that one take was taken out and replaced by a few other measures. Furthermore, CDs have a sterile sound, you hear nothing, no noise, no atmosphere, there is no life, just a clean sound. And why would one need sterile CDs without personality?¹²

Sokolov records each programme at least two or three times before approving a version for release.

In reflecting upon the matters raised in the preceding discussion, I realised that one of the key sources of concern is the high definition of digitally recorded sound. Either by capturing undesired elements of a sound or by failing to project the desired ones, the result is frequently the cause of significant dissatisfaction. As pointed out earlier, digital production has some wonderful possibilities but I think that a performer needs to understand its nature together with the elements that influence the recorded outcome. In this way, we can take advantage of its good aspects while manipulating or lessening the impact of the harmful ones. Krystian Zimerman is still recording all of his live performances for personal use. He says he does it because “he wants to get friend of this monster which is on the other side of the microphone”.¹³

The form of the project

With a similar thought in mind, I committed myself to this research. In seeking to understand the common causes of dissatisfaction with the artistic outcomes of recorded performances, I anticipated that frequently recurring elements would include acoustical considerations, the nature of the instrument and the repertoire that is performed.

¹² Willem Boone, *Interview for www.piano-news.com with Grigory Sokolov* (Utrecht, 18 February 2003) <http://www.pianistique.com/> (accessed 15 November 2012).

¹³ Tom Service, *Krystian Zimerman – An Exclusive Radio Interview with the Enigmatic Polish Pianist* (Basel, Switzerland 2008). <http://www.pianostreet.com/blog/articles/> (accessed 10 November 2012).

In addition, I thought it possible that subjective factors, such as my own frame of mind on the day of recording, may be relevant.

The strategy was to identify the problems and, through a series of recordings and re-recordings, to propose solutions that would relate to specific aspects of piano performance.

These might include such elements as:

- tempo,
- articulation,
- voicing,
- dynamic range,
- timing,
- agogics,
- phrasing, and
- pedalling.

The results of this process are presented in the form of a reflective journal that tracks the creative approach to the repertoire that was performed and addresses the following questions that form the core of the research aims:

1. What are the factors that influence the quality of the artistic product achieved in a recording?
2. What kind of technical, musical and conceptual adjustments can pianists make in order to achieve recorded performances that represent a faithful image of their interpretative ideals?
3. Do the adjustments differ when recording different types of repertoire, and if so, how?

My hope was that this investigation would enable me to draw some conclusions that would be generally applicable to the process of piano recording.

The project was very much centred upon my own personal artistic aims and philosophies. While it was structured in a way that enabled me to test and evaluate different strategies and solutions, it was essentially a creative rather than a scientific journey. It was intended to target

artistic solutions that might have practical value for a pianist engaged in the process of recording. While issues arose in the context of recording and many are relevant only in that context, others may have an application in other contexts of music making, such as live concert performance.

Methodology

How methodology was defined

My realisation prior to embarking upon this research was that the knowledge derived from performing in a concert setting cannot necessarily be applied unchanged to successfully serve the purpose of recording. What I needed to learn was how to manage the recording process so that its final outcome might reflect more closely the ideals which I was achieving with considerable success in live performance. I needed to devise a methodology that could provide the investigative framework for this learning.

As mentioned before, the context of recording in my mind is divided into technical (i.e. technological) and “breathing” dimensions. On the breathing side are musical and interpretative factors that the performer explores during any performance, whether live or recorded. They include the repertoire that is performed, characteristics of the piano sound in relation to that repertoire, the experience of the piano sound within the acoustics of the performing venue and our own frame of mind on the day of performance. The only factor of a concert performance which is not standard in a recording session is the audience. Lack of audience can cause significant discomfort for a performer during a recording session but, as I pointed out in the case of Kissin’s live recording, it can also initiate unnecessary complications.

The additional influences to which a pianist is exposed in a recording session and which are not present in a standard concert performance are those connected with the technical side of the recording process. I consider these elements to be aspects of recording production rather than anything that can be influenced by the pianist’s performing skills. The vital components include the type, number and positioning of microphones and the quality and settings of other

recording equipment. The post production process also involves many choices that can influence the recorded outcome, but they add more of a “make up” effect into which the pianist may or may not have an input. In addition, they do not require effort or time in the studio itself. This project does not address any involvement that a player might have in the editing process.

While recognising that the technical elements of sound engineering can and do impact significantly on recorded outcomes, the methodology of this project was designed to investigate only those aspects of the recording process that can be directly influenced by the performer’s artistic skills.

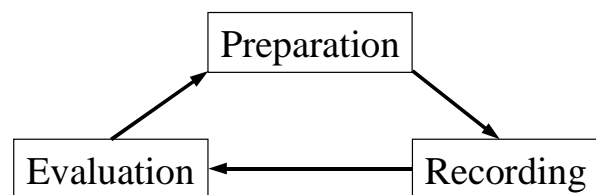
This approach emerged as the result of careful consideration of different perspectives regarding the core idea of the topic. At the most basic level, I took the view that, as artists, we should not become professionally involved in matters in which we are not highly competent. It is beyond my area of expertise to express valid opinions upon the technical aspects of sound engineering. Any investigation of this aspect of recording would need to take the form of an interdisciplinary venture with experts from the field of music technology and possibly acoustic engineering. By contrast, my intent from the beginning was to focus my work as tightly as possible on a single perspective, the most probable practical reality to which a pianist will be exposed during the process of recording.

My experience of this reality is that, on most occasions, the recording engineer and producer have extensive experience with classical piano recordings in the venue that is being used. Furthermore, the engineer and producer are most likely to be familiar with the repertoire that is performed and with the overall quality of recorded sound that the performer is aiming for. Such matters are routinely discussed prior to the recording. With this in mind, I approached this project with trust that professionals on the technical side of the recording would employ the most appropriate production techniques consistent with both the acoustic properties of the venue and the repertoire being performed. The methodology adopted in this project, while embracing a broad spectrum of techniques, is focused firmly on the domain of piano performance which I, as a pianist, am inclined and skilled to implement and discuss.

Investigative pattern

The investigative pattern was designed to facilitate the process of learning. With reference to piano performance, learning is most often achieved through structured and purposeful repetitive cycles. In the context of this project, repetition meant exposing myself to consecutive recording sessions that would provide me with experience and information for further and more genuine understanding of the extent and nature of the impact a performer can have on the “breathing” aspects of a recording.

The pattern I chose and followed uses techniques which pianists are most familiar with: practising, performing and evaluating both live and recorded performances. Having in mind that the purpose of this project was not only to identify the emerging problems but also to solve them, each of the pieces from the chosen repertoire was scheduled for two recording sessions. Basically, the investigative techniques and sequencing pattern for both recording sessions of the same piece were the same but the intention of each was different. The first session was used to perform as I would in a normal concert setting and to identify any problems that arose. The second session attempted to solve these problems. This pattern is visually presented in the form:



Preparation for the first recording of each piece was exactly the same as it would have been for a concert performance. During the first recording, I attempted to perform as if it was a concert performance (including all pieces being performed from memory), though it is important to note that there was no audience present at the time. An integral version of each work was finalised on the day of the first recording. On average, these recording sessions were around two hours long, including time for my warm-up, final placement and adjustment of recording equipment and occasional rests. With each recording session approximately thirty minutes of repertoire was recorded, with the exception of the first session that covered over fifty minutes of the repertoire. Many of these recordings (including almost everything

recorded during the first recording session) were not edited at all. I believe that human error is part of the performing reality and it did not feel right to interrupt the flow of a piece for editing of minor note mistakes. Some pieces were subjected to minor editing but only in large fragments and in convenient places, such as double bars or prolonged rests.

After each integral recording of a piece, a CD was burned. The performances were analysed, problems diagnosed and solutions proposed after which preparation for the second recording commenced.

The second sessions were in duration similar to the first but were dedicated to issues that had raised concern during the evaluation of the initial recording. The integral version of the piece was performed on most occasions, followed by several takes of passages diagnosed as problematic in the first recording session. There was no editing of any material from the second session. After the completion of this stage, another evaluation was made to confirm if the suggested solutions had projected in the way that had been intended.

Selected material from all second sessions is contained in the fourth CD. In general, the content of the fourth CD is designed to isolate problems from the first recording and then to present solutions. Therefore, there are two musical fragments for each discussed example (with just a few exceptions which will be addressed later). The first is the excerpt from the integral version, followed by the same fragment recorded at the second session. In duration, they are identical. However, the main focus of discussion for each example is different. While some concerns were better to examine and comprehend through larger fragments of music, some required to be isolated in very small fragments. Mostly, this is the case where subtle differences of articulation or finesse in respect to other aspects of performance and interpretation were concerned.

I did not audit any of the recordings until the sessions had been completed.

The learning process throughout this research took place in two stages. The first was to identify the problems and to consider their causes and this was achieved through evaluating the results of the first recording session. The second stage was to understand how these problematic elements might be arranged differently and in what ways the approach adopted

for a concert performance might need to be changed to achieve the desired results in the context of a recording. Through this part, which is about creating a new awareness, I did not want to be disturbed. Listening to a recording during a session shifts the focus from the reality of a live experience of a sound to the reality of a recorded sound, and this can be confusing. I took the view that focusing on one reality at a time would be more beneficial for the outcome of this project.

The Repertoire

The repertoire for the project was divided into four sets. Each set was performed over two recording sessions.

Set 1

W.A. Mozart: Sonata B flat major K 570

S.Prokofiev: Romeo and Juliet, Ten Pieces for Piano Op 75

Set 2

J.S.Bach: Prelude and Fugue in G sharp minor BWV 887

J.Brahms: Drei Intermezzi Op 117

Set 3

R.Schumann: Symphonic Etudes Op 13

Set 4

J.Brahms: Klavierstücke Op 118

The choice of repertoire was made with two different objectives in mind. The first was to select pieces that could address some of the issues that had been the subject of my concern before the commencement of the project as I assumed that they would arise again. For this reason, considerable attention was placed on pieces with a slow *legato* concept, a wide dynamic span or lengthy *forte* and *fortissimo* sections in thicker textures. The second objective was to explore the impact of influencing factors on the process of recording through a variety of styles in music. I was confident that diversity of articulation, pedalling technique, textures and forms would provide a wide range of issues relevant for the discussion. One of the aims was also to deal with characteristics of sonority and expression that characterise the

work of each composer and style. In this regard, I expected a great number of issues to arise from the music of Brahms in particular. It is for this reason that the selection of pieces by this composer is somewhat extended.

About the Recordings

Venues, sound engineers and pianos

This heading suggests that more than one recording venue and sound engineer were involved in this project and that more than one piano was used for the recordings. This is indeed the case although it was not my original intent.

When this project was originally devised, I was aiming to complete all of my performances in the same venue and with the same recording set up. There were, however, circumstances beyond my control that prevented this intention from being fulfilled.

My first choice of venue was Studio 520 at the Australian Broadcasting Corporation (ABC) in Adelaide. This recording venue is actually a hall. It is used for professional recordings as well as for live-to-air broadcasts. My performances there were on a Hamburg Steinway Grand (serial number 572762) that was one year old at the time of the first recording. Recordings at this venue were made with the assistance of Kevin Roper, the Senior Music Producer at the ABC. Unfortunately, the producer's extended working hours with ABC engagements caused delays in our recording schedule and, due to the limited time frame of my project, I was compelled to change the setting.

At the time, I was concerned that the objectives of my project would not be met without the originally intended consistency of recording context. I later realised that this change could actually have a positive effect as some of the factors influencing recorded outcomes could be better recognised if experiences from different venues and contexts were compared. As long as recording and re-recording of particular repertoire was undertaken under the same conditions, valid results could be obtained.

The second recording venue was the Elder Hall at the University of Adelaide. Its acoustic properties are similar to those at the ABC. The piano I used there was also a Hamburg Steinway Grand (serial number 518405) but nineteen years old at the time of my recordings. The producer for all recordings made in this hall was Peter Dowdall.

However, before the end of my research, another surprise arose. The piano at Elder Hall was changed. The instrument that I had used until then was taken away and a brand new Hamburg Steinway Grand (serial number 588098) arrived on the stage. This was quite an exciting prospect and I was looking forward to the new experience: the unchanged acoustics and placement of recording equipment but a different instrument.

Schedule

As noted above, I began my recordings at the ABC studio. At the time I encountered problems with the recording schedule at this venue, I had already finalised recordings of the first set of pieces and the integral version of the second set. I was unable to undertake the re-recording of the pieces from the second set. Since it was an imperative to have both recording sessions of the same pieces made at the same venue, I recorded another integral version of the second set in Elder Hall before proceeding with re-recording that part of the repertoire. For the purpose of this research, I found the integral versions of the second set of pieces from both venues to be a source of valuable information for different aspects of discussion. This will be the subject of subsequent examination.

Recording sessions were completed as follows:

Set 1

W.A.Mozart: Sonata B flat major K 570

S.Prokofiev: Romeo and Juliet, Ten pieces for piano Op 75

- First recording , ABC studio 520, 2nd December 2008
- Second recording, ABC studio 520, 18th June 2009

Set 2

J.S.Bach: Prelude and Fugue in G sharp minor BWV 887

J.Brahms: Drei Intermezzi Op 117

Introduction

- First recording, ABC studio 520, 18th June 2009

Set 3

R.Schumann: Symphonic Etudes Op 13

- First recording, Elder Hall, 30th May 2010
- Second recording, Elder Hall, 13th June 2010

Set 2

J.S.Bach: Prelude and Fugue in G sharp minor BWV 887

J.Brahms: Drei Intermezzi Op 117

- First recording, Elder Hall, 14th November 2010
- Second recording, Elder Hall, 22nd November 2010

Set 4

J.Brahms: Klavierstücke Op 118

- First recording, Elder Hall, 11th December 2010
- Second recording, Elder Hall, 18th December 2010

Recording equipment

The following recording equipment was used:

At ABC Studio 520:

- Spaced stereo pair of SENNHEISER MKH 20's at a distance of 2 meters.
- Close pair of SCHOEPS MK 21, wide cardioids.
- The Software was Pro Tools and recorded to Pro Tools HD.

At the Elder Hall:

- NEUMANN TLM 103 and RODE NT-2 coincident cardioid pair in front of the piano.
- A pair of AKG C 414 behind the piano stool.
- A pair of NEUMANN KM 183 S, 12 feet above the floor and 10 feet back into the hall and spaced 3 feet apart.

Each pair of microphones was recorded to its stereo channel in Pro Tools recording software and mixed accordingly.

Listening equipment

In the evaluation of recordings, I mostly used my home stereo equipment that consists of a TASCAM CD-RW 700 player and FAR AV-6 active loudspeakers. At times when I wanted to rest from the acoustics of the room I would use my AKG K 501 headphones. The issues being addressed were equally obvious whether or not I was using the headphones. However, the image of their appearance was slightly different (as was the case with all the other equipment and acoustic spaces I used to confirm the validity of the musical examples).

PART A: Sound Recordings

Contents of CD1

Wolfgang Amadeus Mozart (1756-1791)

Sonata in B flat major K 570

Track 1	<i>Allegro</i>	04:49
Track 2	<i>Adagio</i>	06:42
Track 3	<i>Allegretto</i>	02:46

Sergej Prokofiev (1891-1953)

Romeo and Juliet, Ten pieces for piano Op 75

Track 4	Folk Dance	04:45
Track 5	Scene	01:35
Track 6	Menuet	03:04
Track 7	Juliet's Girlhood	04:07
Track 8	Masquers	02:36
Track 9	Montagues and Capulets	04:02
Track 10	Father Lorenzo	03:08
Track 11	Mercutio	02:23
Track 12	Dance of Girls with Lilies	02:39
Track 13	Romeo and Juliet at Parting	09:13

Contents of CD2

Robert Schumann (1810-1856)

Symphonic Etudes Op 13

Track 1	Theme	01:41
Track 2	Etude I	01:28
Track 3	Etude II	03:55
Track 4	Etude III	01:33
Track 5	Etude IV	00:59
Track 6	Etude V	01:23
Track 7	Etude VI	00:58
Track 8	Etude VII	01:19
Track 9	Etude VIII	02:45
Track 10	Etude IX	00:49
Track 11	Etude X	01:46
Track 12	Etude XI	02:19
Track 13	Finale	06:33

Johann Sebastian Bach (1685-1750)

Prelude and Fugue in G sharp minor BWV 887

Track 14	Prelude	01:54
Track 15	Fugue	06:13

Contents of CD3

Johannes Brahms (1833-1897)

Drei Intermezzi Op 117

Track 1	Intermezzo in E flat major	06:16
Track 2	Intermezzo in B flat minor	05:52
Track 3	Intermezzo in C sharp minor	08:12

Klavierstücke Op 118

Track 4	Intermezzo in A minor	02:02
Track 5	Intermezzo in A major	08:17
Track 6	Ballade in G minor	03:49
Track 7	Intermezzo in F minor	02:44
Track 8	Romance in F major	05:36
Track 9	Intermezzo in E flat minor	06:37

Contents of CD4

Excerpts

Track 1	Example no 1: Mozart Sonata KV 570 (i), bars 23-35	00:34
Track 2	Example no 2: Mozart Sonata KV 570 (i), bars 41-49	00:21
Track 3	Example no 3: Mozart Sonata KV 570 (ii), bars 1-4	01:05
Track 4	Example no 4(a): Mozart Sonata KV 570 (iii), bars 8-22 and Example no 4(b): Mozart Sonata KV 570 (iii), bars 59-62	01:14
Track 5	Example no 5: S. Prokofiev, Ten Pieces for Piano Op 75 (Folk Dance), bars 1-2	01:00
Track 6	Example no 6: S. Prokofiev, Ten Pieces for Piano Op 75 (Folk Dance), bars 137-152	00:37
Track 7	Example no 7: S. Prokofiev, Ten Pieces for Piano Op 75 (Menuet), bars 1-12	00:48
Track 8	Example no 8: S. Prokofiev, Ten Pieces for Piano Op 75 (Juliet's Girlhood), bar 80	00:08
Track 9	Example no 9: S. Prokofiev, Ten Pieces for Piano Op 75 (Masquers), bar 1 and bars 12-13	00:29
Track 10	Example no 10: S. Prokofiev, Ten Pieces for Piano Op 75 (Montagues and Capulets), bars 29-36	00:38
Track 11	Example no 11: S. Prokofiev, Ten Pieces for Piano Op 75 (Montagues and Capulets), bars 63-78	01:25
Track 12	Example no 12 (a): S. Prokofiev, Ten Pieces for Piano Op 75 (Father Lorenzo), bars 1-8 and Example no 12 (b): S. Prokofiev, Ten Pieces for Piano Op 75 (Father Lorenzo), bars 9-24	04:28
Track 13	Example no 13: S. Prokofiev, Ten Pieces for Piano Op 75 (Romeo and Juliet at Parting), bars 1-7	01:13
Track 14	Example no 14: S. Prokofiev, Ten Pieces for Piano Op 75 (Romeo and Juliet at Parting), bars 48-68	03:36
Track 15	Example no 15: R.Schumann, Symphonic Etudes Op 13	

PART A: Sound Recordings

	(Etude I), bars 1-4	00:27
Track 16	Example no 16: R.Schumann, Symphonic Etudes Op 13 (Etude I), bars 10-12	00:24
Track 17	Example no 17: R.Schumann, Symphonic Etudes Op 13 (Etude II), bar 12	00:17
Track 18	Example no 18 (a): R.Schumann, Symphonic Etudes Op 13 (Etude III), bars 1-8 and Example no 18 (b): R.Schumann, Symphonic Etudes Op 13 (Etude III), bars 13-20	01:14
Track 19	Example no 19: R.Schumann, Symphonic Etudes Op 13 (Etude V), bars 1-8	00:40
Track 20	Example no 20: R.Schumann, Symphonic Etudes Op 13 (Etude VI), bars 1-8	00:28
Track 21	Example no 21: R.Schumann, Symphonic Etudes Op 13 (Etude VIII), bars 10-15	01:03
Track 22	Example no 22: R.Schumann, Symphonic Etudes Op 13 (Etude X), bars 1-8	00:43
Track 23	Example no 23: R.Schumann, Symphonic Etudes Op 13 (Finale), bars 17-25	00:34
Track 24	Example no 24: R.Schumann, Symphonic Etudes Op 13 (Finale), bars 50-67	01:07
Track 25	Example no 25: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue), bars 26-27	00:15
Track 26	Example no 26: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue), bars 71-76	00:33
Track 27	Example no 27: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue), bars 84-88	00:32
Track 28	Example no 28: J.S.Bach , Prelude and Fugue in G sharp minor BWV 887(Fugue), bars 97-100	00:32
Track 29	Example no 29: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887 (Fugue), bars 115-118	00:34
Track 30	Example no 30: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887 (Fugue), bars 125-129	00:23

PART A: Sound Recordings

Track 31	Example no 31 (a): J.Brahms, Intermezzo Op 117 no 1, bars 1-9 and Example no 31 (b): J.Brahms, Intermezzo Op 117 no 2, bars 48-51	02:22
Track 32	Example no 32: J.Brahms, Intermezzo Op 117 no 3, Elder Hall and ABC integral versions	14:13
Track 33	Example no 33: J.Brahms, Intermezzo Op 118 no 1, bars 35-36	00:30
Track 34	Example no 34: J.Brahms, Intermezzo Op 118 no 2, bars 16-24	00:47
Track 35	Example no 35: J.Brahms, Intermezzo Op 118 no 2, bars 30-34	01:03
Track 36	Example no 36: J.Brahms, Intermezzo Op 118 no 2, bars 49-56	01:04
Track 37	Example no 37 (a): J.Brahms, Intermezzo Op 118 no 2, bars 64-68 and Example no 37 (b): J.Brahms, Intermezzo Op 118 no 2, bars 93-97	01:22
Track 38	Example no 38: J.Brahms, Ballade Op 118 no 3, bars 10-23	00:53
Track 39	Example no 39: J.Brahms, Ballade Op 118 no 3, bars 41-56	01:10
Track 40	Example no 40: J.Brahms, Intermezzo Op 118 no 4, bars 16-28	00:28
Track 41	Example no 41: J.Brahms, Intermezzo Op 118 no 4, bars 51-67	00:51
Track 42	Example no 42: J.Brahms, Intermezzo Op 118 no 4, bars 99-106	00:24
Track 43	Example no 43: J.Brahms, Romance Op 118 no 5, bars 1-9	02:08
Track 44	Example no 44: J.Brahms, Romance Op 118 no 5, bars 17-19	00:24
Track 45	Example no 45: J.Brahms, Intermezzo Op 118 no 6, bars 13-16	00:59

NOTE:

4 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.

PART B: Exegesis

Introductory Comments

Part B documents the issues encountered and the solutions adopted in recording the repertoire presented on each of three CDs. It is composed of six main sections, each referring to a set of issues arising in one piece from the repertoire list. The format of each section is identical, with the discussion of each work being organised into three parts:

1. The Context (covering such areas as the nature of the work, broad interpretative goals and stylistic considerations);
2. Artistic Challenges: Diagnosis and Solutions (a detailed commentary on the specific challenges that arose and the strategies that were put in place to deal with them);
3. Summary of Issues (a distillation of the above expressed in the form of general principles).

The Context reflects my views concerning the broad artistic idea of each piece and identifies some of the challenges that impact on the general character of the work and the success of the performance. This section is not designed to refer directly to the subsequent discussion of recording issues, but in many instances the artistic values and performing challenges that are discussed here foreshadow those that arose in the process of recording. In such instances, one can feel the connecting thread between the subsequent section and this one. By following the thread, the reader can develop an awareness of the frequency with which the recording process puts in jeopardy some of the main aims of the interpretation.

The sections entitled Artistic Challenges: Diagnosis and Solutions unfold by introducing the biggest challenges of recording as perceived with regard to each particular work. In some cases, these issues reflect the primary cause of a problem, while in others it reflects the consequence of one or more influencing factors.

Issues surrounding piano performance are complex and frequently interdependent. Yet, when facing a problem during a performance, awareness about the nature of the problem comes to our mind in the form of a single issue. Experience and knowledge then enable us to identify and address the aspect of the performance that is causing the concern.

The same applies when auditing and evaluating one's recording. Firstly we recognise the problem in its single aspect, while realisation about the circumstances that caused it comes either instantly or after careful examination of all factors.

The issue that commanded my attention most often during a performance or during a listening session was recognised as being the most prominent in respect of that particular piece.

Some examples trace the ways in which this issue is related to other aspects of the problem, while others examine matters of different concerns. A number of them reflect upon issues that became obvious in the first listening of a piece but others deal with details of interpretation that proved to be of concern only in the process of repeated or very attentive listening. Such issues would not be problematic in the context of a single live performance, but with close and repeated listening (which is normally the case with recordings) they can become disturbing.

Examples follow the chronology of the recordings. Each example is presented in notation and the example number corresponds to the same track number on CD4. Examples are discussed in the order in which they have been recognised and examined through the project. Each CD track has two musical examples with the exception of no 4, no 12, no 18, no 31 and no 37. These have different formatting (including up to four musical examples) which is individually addressed within the context of each.

Each discussion is followed by a Summary of Issues.

Wolfgang Amadeus Mozart:
Sonata in B flat major KV 570

The Context

The Sonata in B flat major integrates three very different characters in one form. The first movement, *Allegro*, has a narrative character suggestive of something that has happened in the past. The second movement is harmonically more wide ranging than the other two. It is layered in such a way that its orchestration can be easily imagined. The third movement is marked only *Allegretto* but it is the liveliest of all. A unique kind of energy shapes its character. If this kind of energy is not within the performer's natural character, then it takes dedication to maintain it throughout the performance.

To communicate the form of this Sonata is not a particular challenge. The major weight is found in the second movement, with the other two movements providing a balance on either side.

1st Movement: *Allegro*

The extensive use of minims and crotchets in the theme makes it difficult to project the *Allegro* character naturally. One of the challenges is to avoid making the longer note values sound *Moderato*, and the semiquavers *Presto*. If the movement is played precisely in one tempo that is exactly what happens: the movement is divided into slow and fast episodes. The natural solution to this problem is to allow certain fluctuations in tempo, which introduces some elasticity in an otherwise rigid rhythmical layout.

The time signature for the movement is 3/4. To ensure that a genuine *Allegro* feeling is achieved, the smallest unit of pulse to be observed is one bar. Occasionally, in the case of the opening theme, for example, one needs to treat two or more bars as a single beat. This is the remedy that integrates the "slow" and "fast" episodes. If a broader time unit is adopted, it allows more comfort for different rhythmical patterns to breath, with consistent and logical pulsation throughout the movement being achieved.

The sound I prefer to create is colourful but of a velvety texture with more contrast introduced in "dialogue" sections.

2nd Movement: *Adagio*

The *Adagio* is the most intriguing movement of this Sonata. The theme has two antipodes. The first one is deep and deceptively confident, while the second brings nurture, grace and relief. If performed without repetitions, the theme appears four times. It is like a cradle that every time provides safety.

The themes are separated by step-wise movement in all voices. Not in a single instance is any part of the texture treated as an “accompaniment”. All voices have significant substance and in order to differentiate between them and give them the importance they deserve, I treat them as if the piece has been written for a variety of instruments.

The unit of pulse changes throughout the movement. The tempo remains the same, but not the pulse. The dynamic span of the *Adagio* is quite small. Excitement and tension are created by the variety of sound and by the pianist’s treatment of the inner processes and relations within the melody.

3rd Movement: *Allegretto*

The light-hearted character of the theme dominates this movement. The theme appears every time in a fresh and carefree mood. However, although the movement’s closing harmony is tonic, it is not convincing. It leaves puzzled thoughts and a question mark for its main protagonist in the end.

I like to hear the third movement as a quick attempt to celebrate an easy way of life. It is quickly suggested and quickly resolved. Its thinking process does not allow either time or space for elaborate developments. Therefore, it should be treated with patience for the time it takes for the music to speak out, but with no delays.

A great variety of detached notes are used to bring to life all different sorts of emotions and expressions. It is a great challenge to achieve this variety, as sometimes it is the fine difference in articulation that distinguishes these moods.

Artistic Challenges: Diagnosis and Solutions

The dream of every pianist is to find an instrument that enables a work to unfold naturally and effortlessly: one whose nature will respond directly to our particular approach towards the production of the sound, towards the sound of the composer whose music we perform and towards the ways we respond to different technical demands. This, however, does not happen often. On most occasions, pianists have to adjust to the piano in order to draw out that for which they strive. I found that the instrument used for these recording sessions did not fully respond to my intentions in this Sonata.

Some comfort was provided through a suitable amount of warmth in the sound. But the sound in the first octave,¹⁴ although rounded, sounded distant and isolated. The same applied in the second and third octaves, though the problem was somewhat less obvious. The bass register consists of a number of unrelated sounds that cascade from one to the next. Changes of tonal colour between the different octaves in the bass register are not gradual but sudden.

I believe that almost every kind of well defined sound is created at or close to the bottom of the key. The character and colour of a tone then depends on the way the contact with the key has been made. The overwhelming sensation throughout the performances on this piano was that the fingers were bounced off the keys before the tone had been finally and precisely defined. My attempts to deal with the problem on the spot were unsuccessful. On the recording, as well as from my personal judgment based on the aural feedback received during the recording session, there was a gap between the sound that was created and the sound I wanted it to be. The general character was delivered but the final, profound drop was missing.

The issues experienced during the recording session reflected a variety of problems, with the instrument itself lying frequently at the core. It was the piano that proved to be the major concern in the delivery of this work. Some of the problems resulted in inconsistencies of tonal colour, while others impacted upon articulation and the achievement of a convincing *legato*.

¹⁴ Here and elsewhere, I have referred to different registers according to *Table of Octave Designations*, <http://music.vt.edu/musicdictionary/appendix/octaveregisters/> (accessed 1 December, 2012).

Often, limitations of the piano combined with acoustical idiosyncrasies of the venue, presented another level of challenge.

Example no 1: Mozart Sonata KV 570 (i), bars 23-35

The first part of the second theme, which is settled in the first octave, projects with a hollow sound. Then, upon entering the second octave, the sound becomes more defined and compact, as was desired.

My impression was that the hammers were not exerting equal pressure on all three strings when making contact with them in this register, especially in *piano* dynamics. Not only was the sound hollow, but it was not constant either, and deviation in the sound was slightly different every time.

This theme needed the hammers to hit the strings with more focused energy. By achieving this, there was a better chance that all three strings would have equal impact upon the sound and that the hollow property would be lost. For this to occur, articulation had to be more pronounced. Once the actual piano sound was technically improved, the theme in the second

recording appeared slightly more exuberant than was the original intent, but it lay well within the stylistic boundaries.

Example no 2: Mozart Sonata KV 570 (i), bars 41-49

The first recording revealed inconsistencies in sound quality within this phrase. The sudden disjunction in tone between the C crotchets and the A minim in the lower voice made it sound as if the theme was being performed on two different instruments. To achieve the desired unity of expression, it was necessary to suppress the multiple personalities found in this particular register of the instrument.

In order to achieve this, an unusually “lazy” *legato* was used (that is a *legato* with some overlaps between the tones), providing more time to blend and disguise the different tonal characters. Since no pedal is used in this section and microphones were positioned reasonably close to the strings, there was a concern that longer overlapping of the fingers would become noticeable on the recording, yielding distasteful and stylistically inappropriate results.

The recording made during the second studio session did not reveal this to be an issue. Neither the acoustics nor the microphones recognised the lazy *legato* technique as an inadequate one. The disjunctions in sound were minimised and the *legato* that was achieved sounded rather like a cello. With fewer disturbances in the lower voice, rests in the first voice became transparent, providing a clear entry of the melody in the upper voice.

Example no 3: Mozart Sonata KV 570 (ii), bars 1-4



The opening bars of the second movement are in the same register as the second theme of the first movement. The capacity of the piano in this register did not match my vision of the required sound and my attempts to deal with this during the recording session were not rewarded. The first half of the theme sounded *Andante* rather than *Adagio*, while the second half is insecure and impatient.

As mentioned earlier, to me, the theme acts like a cradle in this movement. Its sonority stands apart from everything else that is happening around it. While trying to elicit a response from the instrument, I disturbed the pulse. Furthermore, the detached notes in the second half of the theme (bar 3) did not form a phrase but jumped out of the keyboard quite individually. Short notes need to be part of a continuous thought.

I would suggest that the continuous thoughts are what should be pursued throughout this theme. The first half of the theme should be played with a greater feeling for the key motion to secure the smooth transfer from one key to another, while in the second half, *legato* should be thought even when detached notes are played.

Another important issue arises in the third bar and it directly concerns the impact of acoustics on phrasing. Thinking of this movement orchestrally helps me to deliver the desired sonority. I imagine the first half of the theme as being played by one set of instruments, with the rest being played by another. If this were an orchestral piece, the players of the second group of instruments would be taking a breath to begin the phrase at the time the first group was drawing theirs to a close. This way, respect would be paid both to the opening of the second half and to the closing of the first half of the theme, all being done in a timely manner.

PART B. Wolfgang Amadeus Mozart: Sonata in B flat major KV 570

This approach did not succeed as intended. On the basis of the recording, the amount of time taken for a proper take over from the first part of the theme to the second was not justified. This kind of error is less likely to happen if the acoustic of the hall is responsive. Good acoustics do not leave the ear uncertain of the place the sound has reached and the position where the next one should take over.

This was a recurring problem, as the theme appeared another three times. However, every time the shortcoming became less prominent. I noticed that the acoustics were causing an unusual delay in pulse and dealt with it during the recording session.

Example no 4(a): Mozart Sonata KV 570 (iii), bars 8-22

The musical score is presented in four systems, each with a treble and bass clef staff. The first system (bars 8-11) shows a melodic line in the treble with slurs and fingerings (1, 2, 3, 4, 5) and a bass line with eighth-note patterns. The second system (bars 12-15) continues the melodic line with slurs and fingerings (1, 2, 3, 4) and a bass line with quarter notes. The third system (bars 16-19) shows a more complex melodic line with slurs and fingerings (1, 2, 3, 4) and a bass line with eighth-note patterns. The fourth system (bars 20-22) concludes the passage with a melodic line featuring a trill (tr) and a bass line with quarter notes.

The problem detected in the first recording of the third movement was that the differences between finger *staccato*, hand *staccato* and all different articulations from *portato* to *staccato*

could not be clearly distinguished. This compromised some of the shades of expression that were being sought. This can be attributed to the splashing acoustics of the hall that did not allow *staccato* notes to clear in time for the next to proceed. Attempts to hear the end of one tone before producing the next ended in a number of undesired outcomes.

The following discussion exposes this problem with two examples, both of which were resolved by use of the same strategy.

The rhythmical configuration on the first two beats in bars 9 and 11 is the same as on the first two beats of the theme (bar 1). Yet, my interpretative goal was different. In the theme, my choice was to emphasise its melodic aspect. For this to be achieved, the rests had to be mollified. In bars 9 and 11, I wished to emphasise the rhythmical configuration and for this to be accomplished, the rests needed to be audible. In the first recording, the rests in this section did not receive the interpretative meaning which I was aiming for.

Example no 4(b): Mozart Sonata KV 570 (iii), bars 59-62

The image shows a musical score for the piano part of Mozart's Sonata in B-flat major, KV 570, third movement. It covers bars 59 to 62. The score is written in two systems. The first system (bars 59-62) features a treble clef with a melodic line and a bass clef with a bass line. The second system (bars 62-65) continues the piece. The music is in 3/4 time and B-flat major. The score includes various musical notations such as notes, rests, slurs, and fingerings. The first system starts with a treble clef and a bass clef. The second system starts with a treble clef and a bass clef. The score is annotated with fingerings and articulation marks.

The interpretative aim behind the *staccato* eighth notes in bar 59 was unclear in the first recording. I wished to emphasise the aspect of intonation of the sequenced melodic movement (that is, the character of each interval within the context of the tonality) through clear and uniform articulation throughout. However, constant adjustments in articulation, which I was making throughout the performance in an attempt to meet the desired quality of a sound

within the undesirable acoustic properties of the venue, proved to be unwise and introduced a distorting influence.

The general conclusion from the first recording of the *Allegretto*, and in particular the two examples discussed above, was that the attempt to engage with the acoustics and large proportions of the hall did not result in the type of sound that was desired. There is a sense in which this is counter-intuitive as pianists routinely make fine adjustments in response to what they are hearing. My decision for the next recording session of the same piece was to try to employ the accustomed interpretation, with an attempt to resist any spontaneous adjustments provoked by the studio environment.

The follow-up session proved that this was an extremely difficult task. The second recording did, however, achieve something much closer to the interpretation that was desired. Its character was now supported by suitably varied articulation and a more effective pulse enabled detached notes to speak freely yet coherently.

Summary of Issues

From the earliest stage of investigation it was evident that my role as listener during the course of the research would be equally important to that of performer. It is only when taking on the role of the listener that we understand the processes and relations that have an impact on the way a performance is perceived and, consequently, the elements that influence the process of recording. In addition, there is a sense in which some of the issues become more obvious when experienced from the perspective of a listener.

Recording Mozart's Sonata was the first instance in which my role as listener took on critical significance in the project as a whole. What captured my attention instantly was that I could recognise the general character of the instrument. My second impression was that its tonal inconsistencies were magnified through the recorded sound. I believe that tonal inconsistencies become particularly obvious in slower or moderate tempi and in textures that do not require much if any use of pedal. The style of Mozart falls clearly within this category. When sound is unpedalled, then the resonance is smaller, which illuminates the presence of the instrument in an overall sound image. The recorded sound of an instrument appears somewhat purified from the acoustic elements that were experienced during the performance, and this magnifies any tonal inconsistencies to a level that requires the performer's attention. In addressing this issue, a performer employs only familiar performing techniques which can often easily integrate with the original interpretative concepts. Therefore, it is well worth addressing these inconsistencies.

The greatest challenges in recording Mozart were associated with *staccato* touch. I found the process of recording demanded great precision and discipline in the execution of *staccato* passages. The performer should be aware that *staccato* easily appears more aggressive in a recording, compared with a live experience of a sound. For this reason, sensibility of touch when recording probably needs to be greater than anticipated.

Sergej Prokofiev:

Romeo and Juliet, Ten Pieces for Piano Op 75

The Context

In my mind, the suite *Romeo and Juliet* portrays an inspiring variety of characters, thoughts and emotions expressed through the energy and pulse of dancing bodies. I tried to maintain that spirit throughout the set.

Folk Dance

The opening piece of the set of ten is a playful dance. It depicts circular but energetic physical movements that swing in a 6/8 time signature. *Folk Dance* involves no stops and suggests no deep thinking processes. It suggests pure pleasure in the human ability to dance.

From the interpretative point of view, the greatest challenge for the pianist is to obtain the right energy level for this dance, which occasionally becomes quite eager and hard to control. A further complicating factor is a certain technical awkwardness in the score, as the pianist can feel that this music was not originally intended for a piano. This problem is mostly experienced through awkward hand stretches throughout the piece.

Scene

Scene I hear as a piece that is laid out in platforms. Each platform (in this case a register of the keyboard) is a venue for a certain action. Actions take place simultaneously, but never interfere with one another. Each action is given its specific colour, shape and place. What connects them is the simple but strong rhythmical pulse that remains constant until the *Poco più animato* section.

Scene is almost free of pedal. Still, it must not sound dry or percussive, especially the accompanying, tenacious chords since they provide a background for other events that are in progress.

Menuet

Some editions title the third piece *Arrival of the guests*. If joined, the two titles provide the unity that explains the event as well as the pulse in which the event is unfolding.

Arrival of the guests depicts the manner in which the rich aristocrats behave, so its ceremonial and pompous character should be maintained throughout the piece. To carry through this task, the theme in the first voice is supported by the vitality of the octave movement in the bass register. Joined with its counterpart, the theme acquires enough stamina to accomplish its task.

Episodes entering in between the themes are very different in character. Beautiful and imaginative, the *dolce* and *espressivo* middle section introduces a wonderful blend of timbres. The significant element of this theme is that it is the first (out of only four) *espressivo* themes in this opus.

Juliet's Girlhood

I perceive that two different levels of maturity have merged in *Juliet's Girlhood*: Juliet-girl and Juliet-woman. Their synthesis is what creates the emotional complexity of this piece. The first is characterised by vibrant and youthful runs, while the second is captured in longer lines that require well-defined voice leading and a sense of tranquillity.

The closing section of *Juliet's Girlhood* for the first time in the suite foreshadows the tragic closure of this opus. It is just an implication, a shadow that remains over Juliet's portrait. While shifting away from the rest of the piece, it speaks through a dimmed tone of voice in the left-hand theme and a continuous vibration in the upper register.

Masquers

Masquers is not an emotionally challenging piece. However, once the technical demands are processed and muscles have accepted the task, it is a great joy to perform. The piece is free of

trouble. It is like a good joke full of wit. The naughty aspect that is suggested by the music is also to be enjoyed.

Persistent accentuation throughout the piece establishes the pulse. The dynamic range is huge and in *ff* it uses almost the full power of the instrument. In *ff* sections the sound should be powerful but still open and crisp, while accents in *piano* underline the teasing character of the softer sections.

Montagues and Capulets

Montagues and Capulets is bold in its appearance. The theme uses broad and confident steps and moves freely over the keyboard.

For *Allegro pesante*, as well as for the middle *Moderato tranquillo* section, the use of pedal is of essential importance. Pedal should be synchronised most of the time (if acoustics will allow it). In the opening this contributes to a convincing execution of *pesante, non legato*.

On the other hand, the octaves in the middle section are soft and relatively short. They complement nicely the *dolce* character of this section if the pedal is used simultaneously, copying the rhythm of the octaves.

Father Lorenzo

In *Father Lorenzo*, the lyricism has found its way to speak through subtle dissonances.

The structure of the piece is simple. The major tasks are to achieve the steadiness and comfort of the heavy steps in the opening and not to let the *Andante* overpower the *espressivo e molto legato* specifics of the middle section.

The lyricism of the middle section is established by linking the harmonic relations into a long, flowing melody, which is a challenging interpretative task considering the “walking” pulse that tends to interfere with the flow of the piece.

Mercutio

Mercutio is yet another youthful and energetic character. His stamina does not fail for the full duration of the piece.

It is a challenge to outline the difference between *giocoso* and *scherzando* in music, particularly when they appear in a single work. Some help has been provided by the composer through the extensive use of different accentuation in *giocoso* sections. If these markings are carefully distinguished, then they provide guidelines in search of the pulse to which *giocoso* should be related.

Dance of Girls with Lilies

The *Andante con eleganza* theme is almost drained of emotion. Its cool, even cold harmonies establish hypnotic sensation throughout the piece. To achieve a rhythmical pulse that does not attract attention but which sways through the harmonic landscape is quite a complex task.

Romeo and Juliet at Parting

In expressing some of the most painful human emotions, the elaborate structure of this piece captures a variety of complex sonorities, tempi and agogics. The full resonance capability of the piano is used to achieve this, both in *piano* and *forte* sections. Prokofiev has opened magnificent possibilities for the pianist to explore different qualities of sound and pedalling. Emotionally, I perceive it as the most demanding piece in the set.

Artistic Challenges: Diagnosis and Solutions

Dynamic range is one of the most important means of expression which guides the listener through the interpretation of a piece and the compositional style of a composer. It has long been a great concern of mine that the complete range of nuance and the full dynamic scope of a piece seem almost impossible to transmit into recorded sound with the same degree of precision that can be achieved in a hall during a concert performance. With composers such as Prokofiev, who call for an extremely large dynamic span, this problem becomes particularly exposed as capturing this wide range introduces significant challenges to the process of recording.

In addition to this set of issues, the following examples examine a series of challenging relationships involving the instrument, pedalling, acoustics, articulation and resonance.

Example no 5: S. Prokofiev, Ten Pieces for Piano Op 75 (“Folk Dance”), bars 1-28

Allegro giocoso

sf *sf* *sf* *sf* *mf leggiero* *pp* *p*

PART B. Sergej Prokofiev: Romeo and Juliet, Ten Pieces for Piano Op 75

Pianists master piano technique with an awareness that the mechanism of the instrument is such that there exists a difference in power between the lower and upper registers. With years of practice, this knowledge develops physical consciousness about the balancing principles between the right and left side of our body. This is necessary in achieving an advanced technique that assists in projecting the higher aims of performance. We are subject to constant balancing adjustments every time we move from one instrument to another. The level and nature of these adjustments then depend on the inbuilt characteristics of each piano and the acoustic properties of the venue.

One of the most important attributes of a piano is the compatibility of power and the consistency of character between all registers. Even if its inherent nature does not fully meet the pianist's ideal with respect to the piece that is performed, the player can make the necessary fine adjustments more easily than would be possible with an instrument that lacked these key qualities.

I was well aware of incompatible sound power between the registers of the piano used for this recording even prior to the first recording of the piece. However, during the recording of the integral version I did not want to lose the pulse support of the left hand octaves or the timbre of the bass register, so I mainly focused on reviving the sound of the melody in the upper

register. The recorded outcome from this session made me realise that the level of adjustments needed to be more radical. The leading melody in bars 12-27 in the right hand sounded isolated and to some extent it still lacked vitality, while the left hand was too prominent.

Re-adjusting the balance to favour the right hand melody seems an easy solution to an easy problem. However, re-balancing the weight this time was a more complex task. Not only did the upper register lack power but the desired colour of sound was not possible to achieve with my accustomed articulation. To produce more presence in the right hand melody, it was necessary to add more weight to the right hand as well as more vitality to the touch. Once the colour and amount of sound were satisfactory, the overall dynamic level exceeded the *pp* suggestion. Accordingly, this resulted in a slight re-drafting of dynamic relationships within the whole section, but the increased level overall made it easier for the left hand to achieve the desired softness.

In a recording session, everything happens on the spot (or with a very limited number of try-outs). One is often required to seek the same interpretative ideal but with a completely new feeling in the body and with little or no time to adjust. Knowing the piece thoroughly is essential in situations like this as it provides the capacity to change things and feel comfortable in doing so.

Example no 6: S. Prokofiev, Ten Pieces for Piano Op 75 (“Folk Dance”), bars 137-152

The image displays three systems of musical notation for the piece 'Folk Dance' by Prokofiev. Each system consists of a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. The key signature is one sharp (F#), and the time signature is 3/4. The first system, starting at bar 137, features a melody in the right hand with a forte (*f*) dynamic. The second system, starting at bar 142, shows a change in dynamics with a piano (*p*) marking and a crescendo (*cresc.*) instruction. The third system, starting at bar 148, continues the piece with various dynamic markings and articulations. The notation includes eighth and sixteenth notes, rests, and slurs, capturing the rhythmic and melodic complexity of the 'Folk Dance'.

In this section, *Folk Dance* becomes quite eager. The high energy of a dance should be maintained, while the harmonic structure needs to remain clear. In the first recording, a clash between conventional pedalling and acoustics is easily audible, especially in the accentuated *forte* melody in the middle voice in bars 137-144. A cleaner sound with less collision was needed to project the character convincingly.

When preparing for the re-recording session, I realised that my choices for finding a solution to these issues were limited. *Folk Dance* is a piece full of challenging stretches and awkward hand positions. An example can be seen in the right hand figuration in bars 139-140, 143-144 and 149-152. Due to the awkward layout (consecutive use of the thumb while the fifth finger holds the melody of the first voice), hand muscles are largely engaged in maintaining the stretch through most of the section. This reduces the mobility of the hand, and limits the choice of articulation and methods of tone production. I concluded that there was little more I could do to improve the result. From my perspective, the crucial element in improving the

artistic image of this section was an adjustment of pedalling so that a cleaner sound could be achieved. The challenging part was to determine whether the depth or the frequency of pedalling (or perhaps both) should be changed and to what degree such adjustment was necessary to achieve a satisfactory result.

In a recording context, the time for decision making is limited and factors to be considered are numerous. Particularly puzzling and time consuming can be those issues that have acoustics at their core. In situations such as this, where the solution to a problem is clear but the level of adjustment uncertain, it can be of great advantage to consider the opinion of a person who is not sharing the acoustic experience of the performing space. An experienced producer, for example, who is familiar with both the repertoire and the artistic goals of the performer, can offer valid opinions that have the potential to save both time and frustration. In this case, I made the decision myself.

During the second recording session I used much shorter pedals but still to the full depth. This ensured more clarity, yet provided enough resonance in the sound. Furthermore, I tried to apply less energy on the accentuated notes of the middle voice (bars 137-144) so as to avoid a percussive quality of sound.

Example no 7: S. Prokofiev, Ten Pieces for Piano Op 75 (“Menuet”), bars 1-12

Assai moderato

In establishing the character of *Menuet*, all voices take a significant and almost equal part. Therefore, the octave movement in the left hand should not take on the leading role. Due to the weak sound in the upper registers, this is what happened. The same problem was experienced in the opening section of *Folk Dance*, but in a different dynamic range.

To achieve the desired character, it was necessary for the right hand theme to come out of the shadow of the left hand octave movement. By reducing the amount of sound in the left hand, to match the quality and projection of the piano's upper register, the overall pompous character would have been lost. Therefore, the theme had to be performed with more weight, as if the right hand was marked *ff*, even in the opening bars.

Example no 8: S. Prokofiev, Ten Pieces for Piano Op 75 (“Juliet’s Girlhood”), bar 80

Andante dolente ♩ = 60
pp *tranquillo*
mp *dolente*

In the first recording, the *Andante dolente* achieved its *tranquillo* state to a certain extent. Some mild finger action was employed in executing the thirty-second notes in the upper voice. The recording revealed that the microphones picked up every bit of that action so that the mechanics of the piano (the hammer action in particular) became overwhelmingly present in the sound. Dynamics in the closing section were well balanced, so the main task for the second recording session was to improve the substance of the sound in the right hand pattern.

To achieve my desired effect of continuity in the upper voice, it was necessary that the thirty-second notes should be less articulated. For this to be achieved, finger action had to be minimised. By having a clear image of the desired sound and by avoiding unnecessary effort, an improved result was achieved.

Example no 9: S. Prokofiev, Ten Pieces for Piano Op 75 (“Masquers”), bar 1 and bars 12-13

Andante marziale .
p
f
ff

Masquers posed one of the biggest recording challenges because of its exceptionally wide dynamic range. Bars 1 and 12-13 form one musical example.

I recall the days before the introduction of compact discs, when I would experience frustration while listening to recordings. I invariably found it necessary to increase the volume in *piano* sections and reduce it in *forte* sections. Nowadays, I experience the opposite problem. I sit with the remote control, doing the same, but navigating the other way around. Volume in *piano* sections often has to be reduced, while *forte* needs to be increased.

It is hard to understand this problem as my experience suggests that not all the professionals involved in the technical side of the recording process share our view on the subject. However, György Sandor, a pianist, did recognise it and he wrote the following:

...the range of dynamics on recordings is extremely limited compared to that of the concert stage. Even today, when we enjoy the benefits of high-fidelity technology, pianissimos are never soft enough, and fortissimos never register fully on the microphone as they do in life. Some of the most effective and memorable effects in a concert hall are the nearly inaudible sounds and the crashing crescendos and fortissimos that the microphone can never reproduce.¹⁵

Dealing with this issue can be quite unrewarding and *Masquers* proved to be an extremely difficult case.

To understand the extent of this problem, one should listen to the amount of sound that was captured in bar 1 and then compare it with bar 13. In bar 1, not more than three notes are played simultaneously in *piano* dynamic and pedal is not used at all. In bar 13, nine notes are played simultaneously in *ff* and pedal is used on accentuated chords in the left hand. This passage spreads over the great and contra octaves that release sound more easily compared with other registers. In the first recording, I can hear the difference in texture between the two sections but in respect of the dynamic level, the difference is hardly noticeable. Furthermore,

¹⁵ Gyorgy Sandor, *On Piano Playing* (Schirmer Books, 1981), 224.

the sound in *ff* appears damped as if the left pedal was being used, compared with the direct sound achieved in the opening bars.

In the second recording, the *Andante marciale* opening was introduced in a softer and drier tone. The left pedal was added and the touch was lightened. The contrast between the opening and the *forte* chordal section in bars 12 and 13 was further enhanced by slightly reducing the dynamic level in the chordal section while increasing the impact of accents. Although this brought me closer to the desired outcome, I have not found an entirely satisfactory solution to this problem.

Example no 10: S. Prokofiev, Ten Pieces for Piano Op 75 (“Montagues and Capulets”), bars 29-36

The image displays two systems of musical notation for Example no 10, bars 29-36. The first system covers bars 29 to 32, and the second system covers bars 33 to 36. Both systems are written for piano, with a treble clef on the upper staff and a bass clef on the lower staff. The key signature is three flats (B-flat, E-flat, A-flat). The first system begins with a dynamic marking of *f* (forte) in the right hand. The second system begins with a dynamic marking of *f* in the right hand and *ff* (fortissimo) in the left hand. The notation includes various rhythmic values, accidentals, and articulation marks such as accents and slurs. The bass line in the second system features a prominent, dense chordal texture.

All of the issues relating to sound and expression merged in bars 29-36. The theme in the right hand became lost in a splash of sound from the octaves in the left hand and the actual piano sound was overpowered by background noise (pedalled sound carried by the venue's acoustics).

In attempting to obtain a carved edge in the sound, I used arm weight instead of shoulder weight. Shoulder weight creates a massive sound that resonates more and produces more overtones. Additionally, I reduced the amount of pedal, using only half its depth.

Example no 11: S. Prokofiev, Ten Pieces for Piano Op 75 (“Montagues and Capulets”),
bars 63-78

The musical score is presented in four systems, each with a piano (right) and bass (left) staff. The key signature is one sharp (F#) and the time signature is 4/4. The first system (bars 59-64) shows a melody in the right hand with dynamics *mf*, *pp*, and *pp*. The second system (bars 65-69) continues the melody with dynamics *mp*, *pp*, and *pp*. The third system (bars 70-74) features eighth-note patterns in the right hand with dynamics *pp*, *mp*, and *pp*. The fourth system (bars 75-78) is marked *Allegro pesante* and features a piano accompaniment in the right hand with a dynamic of *p*.

The middle section, *Moderato tranquillo*, in the recording appeared thick in texture and the gentle sentiment of the theme was not maintained with consistency. Mostly, this was due to an untimely use of pedal. Dampers were lifted from the strings before the root of the sound had registered clearly. This resulted in the sound being captured with too much resonance, which further resulted in pedalled *legato* so atypical of Prokofiev.

In this kind of acoustic, one should achieve a proper finger *legato* before engaging pedal.

Example no 12 (a): S. Prokofiev, Ten Pieces for Piano Op 75 (“Father Lorenzo”), bars 1-8

The image displays a musical score for the first eight bars of the piece "Father Lorenzo" by Prokofiev. The score is written for piano and consists of three systems of staves. The first system (bars 1-4) is marked "Andante espressivo" and "p tranquillo". The second system (bars 5-8) is marked "p". The third system (bars 9-12) is marked "espress. e molto legato" and "mf". The score features a complex texture with octaves in the left hand and tenuto/staccato notes in the right hand. The key signature is one flat (B-flat major or D minor) and the time signature is 4/4. The notation includes various articulations such as slurs, accents, and dynamic markings.

Together with the octaves in the left hand, the *tenuto/staccato* notes in the right hand (bars 1-8) should reflect the continuity of steady and balanced steps. As projected through the first recording, these steps do not suggest relation of an *Andante* motion through a *tenuto* concept, but rather of *Adagio* motion through a *marcato* style.

Once again, it is the way in which recording equipment picks up the mechanical aspect of the piano that affected the listeners' experience of the performance. In preparation for the second recording, I decided to use the left pedal, lighten the touch and slightly increase the pulse. This was truly beneficial.

Example no 12 (b): S. Prokofiev, Ten Pieces for Piano Op 75 (“Father Lorenzo”),
bars 9-24

The musical score is presented in five systems, each with a grand staff (treble and bass clefs). The key signature is one flat (B-flat major or D minor). The time signature is 3/4. The score includes various performance markings and dynamics:

- System 1 (bars 8-11):** Starts with *espress. e molto legato* and *mf*. The right hand has a melodic line with a slur and a fermata over the final note. The left hand has a rhythmic accompaniment. Dynamics include *p* and *mf*.
- System 2 (bars 12-15):** Features *m.d.* (mezzo-dolce) in the right hand. Dynamics include *p* and *mf*.
- System 3 (bars 16-19):** Starts with *espress.* and *mf*. Dynamics include *p* and *mf*.
- System 4 (bars 20-23):** Starts with *molto espress.* and *mf*. Dynamics include *p* and *mf*.
- System 5 (bars 24-27):** Starts with *f* (forte). Dynamics include *f*.

The score includes various musical notations such as slurs, fermatas, and dynamic markings (*p*, *mf*, *f*, *espress.*, *molto espress.*, *m.d.*).

The right hand theme in the middle section did not flow logically. This was a consequence of some bad choices made during the performance. The theme is again in the middle register, an area of the piano that was quite unresponsive towards *espressivo*. Therefore, I employed unnecessary leaning on the top voice and this resulted in a somewhat aggressive treatment of the melody.

To achieve the secluded ambience and intimacy, I played this piece during the second recording session with more subtle feelings and projected it as if to myself rather than outwards.

Example no 13: S. Prokofiev, Ten Pieces for Piano Op 75 (“Romeo and Juliet at Parting”), bars 1-7

The musical score for Example no 13, S. Prokofiev, Ten Pieces for Piano Op 75, bars 1-7, is presented in two systems. The first system shows the right-hand melody in the treble clef, marked 'Lento' and 'doleissimo' with a dynamic of [p]. The left-hand accompaniment is in the bass clef, marked 'pp legato' and 'p'. The second system continues the right-hand melody and left-hand accompaniment, with the right hand marked 'pp' and 'p'. The score is in 4/4 time and features a sequence of chords and melodic lines in the right hand, with a repetitive, soothing mode in the left hand.

In bars 1-7 the problem of resonance in an overly reverberant space was experienced again. The smudged overall atmosphere contained in the first recording is not the one I had imagined as an ideal for the opening of this piece.

I find something calming in the mood of the opening theme. To capture such a condition, the intervallic relationships of the theme in the right hand and the repetitive, soothing mode of the

chords in the left hand must remain constant. To reduce the amount of resonance provoked by the acoustics, I voiced more clearly, articulated notes of the theme to a greater extent, and delayed depression of the pedal.

Example no 14: S. Prokofiev, Ten Pieces for Piano Op 75 (“Romeo and Juliet at Parting”), bars 48-68

The image displays a musical score for Example no 14, consisting of three systems of music. Each system contains a grand staff with a treble and bass clef. The first system begins at bar 47, marked with a *rit.* (ritardando) and a *p* (piano) dynamic. The second system starts at bar 51, featuring a *ff* (fortissimo) dynamic. The third system starts at bar 55 and concludes with a *mp* (mezzo-piano) dynamic. The score includes various musical notations such as slurs, accents, and fingering numbers (1, 2, 3, 4, 5) for both hands. The key signature is one flat (B-flat major or D minor), and the time signature is 3/4.

PART B. Sergej Prokofiev: Romeo and Juliet, Ten Pieces for Piano Op 75

59

m.f.

mf

ff

63

f

66

rit.

mp

pp

When trying to push the sound beyond the natural temperament of a particular piano, a true sonority does not develop. It continues to bounce back or remains stuck rather than going forward. This issue is obvious in both live and recorded sound. This problem occurred in the *ff* accentuated melody (most obviously in bars 62 and 63). The Steinway used for this recording has some fine qualities, but power in this dynamic range is not one of them.

This is one of the problems that is impossible to overcome with real success. The best we can do is to implement an approach which works within the natural character of the instrument. As in this case, it often means that the dynamic level has to be reduced to the amount that the piano can comfortably generate. In the second recording, with reduced dynamics, the sound travels further and its melodic aspect is more obvious. Most importantly, an unpleasant sound quality is avoided.

Summary of Issues

The recordings of Prokofiev's *Romeo and Juliet* raised many problems, only some of which were able to be addressed with complete success. Issues not entirely resolved related to the authentic projection of a diverse dynamic range as well as management of thicker *fff* resonance.

My most basic understanding suggests that a recording product is a packaging system which stores a recorded outcome. As is the case with any other packaging system, it is best if it provides an optimum space for its content. During a piano performance, the sound is projected to fit the size of a performing venue which, as in the case of the space used for these performances, often has large capacity. The process of recording has the task of storing the properties of sound achieved inside this space and conveying them into the format of a recorded product, in this case an audio compact disk. In the context of my recordings, it seems that the *f* and *ff* dynamics are squashed and compacted to fit the format of the audio disk. The softer dynamics, on the other hand, appear enlarged.

Prior to the commencement of all of my recording sessions, including the ones made during this research, I have been asked by a recording engineer to play the softest section of the piece followed by the loudest, which I always did. They would politely thank me and only after that was I permitted to begin my performance. The fact that the performance is being framed before it has been delivered causes many concerns, of which the biggest appears to be compression of elements of the sound. In order to fit the format of a CD, engineering techniques, whatever positive effects they may have, nevertheless disturb the natural balance between the elements of the sound that is experienced inside the performing space.

Resonance in the *f-ff* dynamic level in the music of Prokofiev, in particular, cannot possibly benefit from being compressed. In this process, the core of the tone becomes confused with a mass of squashed overtones, while it loses clarity and strength. Exploration of these textures made me realise that the best way to improve the image of compressed resonance in *ff* is not to focus on the amount of sound but rather on its quality. Settling for a drier resonance can still create an impression of massive *ff* and will complement the format of a CD better. Even if this accepts that some of the shades of expression will be slightly modified, the performer's

ideal will still appear more genuine than if the player insists on achieving accustomed relations which, within this context, allow engineering processes to take control over the elements of the sound. The listener experiences most comfort when the sound is naturally outlined in a recording.

I also noticed in my role as listener that, in the absence of a rich resonance associated with the *fff* dynamic range, recording equipment will target elements of the percussive hammer action within the piano mechanism. With a reduced amount of resonance, which is experienced in the softer dynamic range, more space is available for other elements of the sound within the format of an audio CD. In order to be packed up tightly, delicate elements of a *piano* sound are enlarged and they appear more vivid to the listener. In this process, unwanted properties of a sound, often not audible to a listener in a live performance, become obvious. In resolving these matters we do not need to develop any new techniques but are required to apply our existing experience according to the nature of the problem.

Robert Schumann:
Symphonic Etudes Op 13

The Context

How exactly does a pianist approach a work that is characterised by the following key words: “symphonic”, “etudes”, “variations” and “piano”?

Do we perform Symphonic Etudes (in the form of Variations) on the piano? Do we perform Etudes Symphoniques (as the French language suggests) on the piano? Do we primarily have to deliver a variation form, arising from a set of etudes, performed on a piano in a symphonic style? Furthermore, what is the meaning of “Symphonic” in this context?

Piano etudes during the romantic era went through a significant conceptual transformation. By placing technical difficulties into a strong musical meaning, composers aligned the artistic value of etudes with the serious intentions displayed in other musical forms. Schumann, with his *Symphonic Etudes*, gave them even more substance: by applying variation technique to etude style, he tied twelve etudes to a theme to create a cycle.

The use of the term “Symphonic” in the title implies a wealth of orchestral texture and colour, realised, in this case, on the piano. In my view, “Symphonic” in this opus implies also the harmony of all components that have been put together to create this unusual form.

There are many complexities surrounding this cycle. In order to understand and build the structure properly one has to find the most comforting thought to begin with - something that is within an easier reach than something else. For me, this was the language of precisely defined musical and technical means that have been used to create the character of each of the etudes.

Mostly, a single set of technical demands has been placed to support the character of each individual etude. Although the texture within each etude is similar, the colour and intensity often fluctuates greatly. I found that dealing with the quality rather than the quantity of issues helped achieve integrity in each of the etudes.

Theme

The theme is deeply thoughtful, with a foundation that bears a structure of enormous strength. The prominent melodic line and the *legatissimo* marking suggest horizontal listening and strong awareness of the linear aspect of the theme. The theme is placed upon the chords and the octave movement in the bass register. They create an additional vertical dimension. The true artistic challenge of this theme is to simultaneously deliver both the horizontal element (the flow of thoughts) and the vertical dimension (the depth of thoughts and sonority).

Etude I

The exciting character of Etude I is captured within agile, strong, yet limber melodic motives, particularly in the opening and closing sections. To express these attributes, fluctuations of rhythmical configuration are best avoided and the tempo should be kept tight. The middle section is, by contrast, shaped in broad lines. It requires emotional discipline as this underlines and strengthens the aspect of modesty of melodic thought in this section.

Etude II

Complexity of expression in this etude is created by three-way motion among the three voices concerned.

Horizontal flow is conceived within the melody of the first voice. Its melodic mood changes from tender to turbulent with horizontal flow maintained throughout. The second voice, with its repetitive chords, creates an impression of circular motion within the pulse unit. The third voice delivers the Theme in a vertical progression with depth and richness of sound. There are sections where the third voice joins and strengthens the case of the first, but its individuality is prominent even on such occasions. The uninterrupted advance of each of the voices with its own identity is as vital as is the aspect of their mutual cooperation and support.

The overall atmosphere of Etude II is rather nocturnal.

Etude III

Etude III brings relief from the high demands that multileveled listening places upon the pianist in Etude II. This is very convenient for the pianist as this particular etude is already challenging enough in terms of its colouristic range and the technical agenda that lies behind the delicate right hand figuration.

The inclining and declining contours of the melody in the first voice project a “mirror image” which should remain constant and unbroken. Yet this is quite difficult to accomplish as repeated notes at the top and at the bottom of the phrase tend to form a sub phrase that breaks the image. Once this obstacle is resolved, the remaining part consists of colouring.

The Theme in the left hand is very expressive and shaped in long, well connected phrases. It sets a mood that is serious and mature but not dark or depressive.

Etude IV

Sorting out the confusion of sequenced chord units in Etude IV is much like accepting chaos as a system.

In this system, two lines make their way in a canonical motion. Each phrase starts with an impulse (*sf*) that is either on the first or the third beat. This would appear as a regular and simple order to maintain if the phrasing were shaped in 4+4+4+4 beat units (bars 1-4). In fact, the phrasing is structured in groupings of 4+6+6 beats. This means that each of the voices (in a common time rhythmic context) gets to a point where one bar has no impulse. For the second voice this occurs in bar 3, for the first voice in bar 4. Lack of impulse at these points causes a feeling of confusion and disorientation.

Still, the etude appears highly regulated. Firstly, this is due to its steady tempo that should not change for the full duration of the piece. Secondly, although the intensity of the chords changes, their determination remains constant.

Etude V

The playful mood of Etude V is set in a 12/8 time signature. To grasp the essence of its spirit truthfully, one has to carefully consider the meaning of note and rest values, their placement within the assigned time signature and pulse unit.

In this etude, there is a real danger that the performer will fall into the trap of settling the opening motive into a feeling of 3/4. The original configuration of eighth note followed by a sixteenth break and eighth note on the first beat in a 12/8 bar would sound like a dotted quarter note followed by eighth and quarter note in a 3/4 bar. Should this happen, the circular motion of a 12/8 bar becomes lost and the playful mood of this etude is not communicated.

The rhythmic structure of this etude is masterfully created to benefit its character. Once it is correctly interpreted, the music falls into place naturally and spontaneously.

Etude VI

Etude VI is characterised equally by motion and emotion. Syncopation between the hands has been used to create an element of urgency. As exciting as this syncopated rhythm is, under the given circumstances it creates a risk of collision, both physical and emotional. The circumstance is that the first voice follows the second one with only a thirty-second-note delay. At the tempo in which this etude is performed, their real time progression is almost simultaneous. Yet, individual space for each of the voices to communicate has to be created and this space should be carefully guarded.

Daring leaps, the mighty accentuation in the left hand and the equally demanding chain of chordal succession in the right hand are additional elements needing to be integrated within the structure of this etude. Once it all comes together, it should project wide horizontal movements.

Etude VII

In contrast to the motion-inspired Etude VI, this one deals with the issue of stability.

Its skipping manner of melodic motion presents a true technical challenge. The tempo is fast but not driven by speed and its entity is best achieved if provided with a combination of strength, firmness and steadiness.

Etude VIII

Etude VIII is a superb example of a musically narrated act.

Similarly to the role that diction has in a spoken language, the style of articulation in which the rhythmical and harmonic layout is interpreted is what creates the essence of the artistic power in this etude. I took the view that the relations between the rhythmical configuration and harmony are so masterfully tied that the best way to articulate its artistic value is not to interfere but to let them establish themselves. I perform this etude as if there are no bars, just three pulse units (bars 1-5, 5-9 and 10-19).

Etude IX

Etude IX is marked *Presto possibile*.

It is by no means easy for a pianist to establish how fast this really is. *Presto possibile* certainly suggests that *Presto* is pushed to its limits. Considering how fine the line is between the possible and the impossible in instances like this, the major concern is not to cross it.

One seeks to find descriptive words that promote the character of the piece without implying its tempo. The way to perform the finely beaded chains of *staccatos* that run through the piece could be described appropriately by the word 'effortless'.

Etude X

Etude X is charged with power that demonstrates authority and stamina.

Authority and stamina stand for the ability to deliver tasks with resolution and endurance. It is important to add that this is the most motorically engaged etude in the set. Both of the fundamental attributes depend on this inherent property.

Etude XI

Much like in a *fantasy*, unconstrained space is needed for Etude XI to emerge, evolve and withdraw. It is filled with uncertainty, despair and immense expressive energy, introduced through two interlaced textures.

An especially exciting dimension of this etude is that the accompanying figuration in the left hand has been given extraordinary emotional and expressive power. I would say a “symphonic” power makes its importance equal to that of the right hand theme so that a relationship of dependence, necessity and equality between the two textures is created.

The dynamic level of this etude is not easily assessable. It seems as if the left hand rumble exists in the far distance long before the actual commencement of the piece. On this level, Etude XI overlaps with the preceding one.

Etude XII

Etude XII is a Finale that with great vitality exhibits the feeling of triumph and joy.

To retain dignity of expression in such a victorious mood would normally take considerable emotional control from the pianist. In the case of this Finale, no energy is wasted in that respect. The Finale speaks through the key of D flat major. The natural colour of this tonality

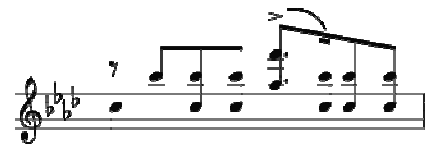
PART B. Robert Schumann: Symphonic Etudes Op 13

is already trimmed of excessive sharpness in sonority; therefore the desired colour is obtained naturally.¹⁶

The possible troublesome moment in this etude is, once again, the rhythmical layout. Punctuated rhythm (various combinations of dotted eighth and sixteenth notes such as in bars 33, 43, 72 and 77, shown below) is used to express a number of different musical attributes. By changing the attribute, the same rhythm tends to sound different. The ideal would be to achieve different attributes of expression while keeping the rhythm conscious of its real values.



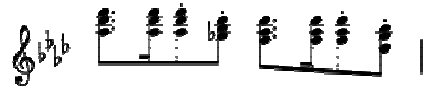
Bar 34 LH



Bar 43 RH



Bar 72 LH



Bar 78 RH

¹⁶ Rita Steblin, *A History of Key Characteristics in the Eighteenth and Early Nineteenth Centuries* (Ann Arbor: UMI Research Press 1983) 172. Rita Steblin discusses Schumann's awareness about the character of key signatures.

Artistic Challenges: Diagnosis and Solutions

At the core of the symphonic scope of this piece is the resonance of the piano sound. Many interpretative ideas draw their essence from the way in which the resonance highlights the melodic aspect. The ideal would be to capture in a recording the same variety of sound and resonance that appears in a live experience. The reality, however, is different and several examples will demonstrate the extent of this problem and the conditions that influenced them.

The examples that follow track different issues with reference to timing, phrasing, *legato*, the instrument, distance projection, acoustics, dynamics and the process of learning.

Example no 15: R.Schumann, Symphonic Etudes Op 13 (Etude I), bars 1-4

The musical score for Example no 15 consists of two systems of music. The first system covers bars 1-3, and the second system covers bars 4-6. The key signature is G major (one sharp), and the time signature is common time (C). The piece begins with a piano (*pp*) dynamic and a tempo marking of "Un poco più vivo". The first system includes a "poco a poco cresc." instruction. The notation features a complex interplay of staccato and legato passages in both hands, with various fingering and articulation markings. The second system includes a "Pedal" marking. The score is presented in a standard musical notation format with a grand staff (treble and bass clefs).

The aim in this section was to present flexibility of melodic movement through appropriate *staccato* articulation and phrasing. In the first recording, the melodic aspect was not captured very well due to excessive shortness in the *staccato* notes.

Numerous problems with *staccato* had already been experienced in the third movement of the Mozart Sonata discussed earlier. In light of similar problems in Schumann, my understanding of the issues regarding *staccato* is that:

1. A recording will capture more of what happens with a sound inside the piano than what occurs once the sound has travelled through the surrounding acoustic (assuming that at least one microphone is positioned relatively close to the piano).
2. It is extremely hard to anticipate the amount of resonance that will be captured in a recorded sound when different types of *staccato* are executed.

The performer often enters the world of the unknown when trying to anticipate how the artistic ideals will be received, conveyed and transmitted by the recording medium to the listener of a recorded product. Rules that apply in the transition of a sound by engineered mechanisms seem to be different from those that operate in the environment in which the sound is produced. This was one of those situations. My so far gained experience was suggesting that in this case, instead of using *staccato* articulation that assumes quick finger action, so making the motive appear anxious, I should just slightly detach the *staccato* notes. However, what the extent of “slightly” was, I was not sure. Judging from the second recording, in which my approach was not consistent, “slightly” is rather more than less. The motives in bars 3 and 4, where the melodic aspect is highlighted, worked particularly to my satisfaction, compared with the first two bars where the articulation still dominated the image of the sound.

Example no 16: R.Schumann, Symphonic Etudes Op 13 (Etude I), bars 10-12

The pulse within the *ritardando* section (bars 10-12) in the first recording appears too stretched. This resulted in an impression of chords being delayed in their appearance.

This kind of problem often occurs in a recording. It happens because we have a different feeling for timing during a performance, compared with the way we perceive it when listening

to a recording. As listeners to a recorded product, we do not receive full feedback from what was happening in the hall during the performance. Nor do we see the size of the venue where the piece is performed and to which the pianist is trying to project. We only hear what was captured by the recording equipment and imagine, according to the image of the sound, the size and other properties of the recording venue. Recorded sound often excludes the full range and nature of acoustic properties and the exact way in which a sound was spreading through the acoustics of the hall. This is why some decisions made during the performance appear unjustified once we hear the recorded outcome. On this occasion, this discrepancy resulted in an ineffective sense of timing in the recording.

It is advisable for a performer to be aware that intensified expressive engagement is not always captured convincingly on a recording and careful monitoring is required.¹⁷

Example no 17: R.Schumann, Symphonic Etudes Op 13 (Etude II), bar 12

During the first recording, it was noticed that the octave movement in the left hand had not reached the desired level of clarity although the pedal was changed regularly and rhythm was delivered precisely. This section was repeated and in the second delivery an attempt was made to solve the problem on the spot. The amount of pedal was reduced and sharpness of rhythmical figuration was lessened to avoid the possible sound collision during the half tone melodic movement in the octaves. The result obtained in the hall was satisfactory.

¹⁷ See Gyorgy Sandor, *On Piano Playing* (Schirmer Books, 1981), 225. Gyorgy Sandor's list of criteria for a good recording places this as the third most important priority. His advice is: "No excessive (out-of-the-ordinary) rubatos."

Despite this, the issue was still problematic in the recording, though on a smaller scale.

At this point, I realised that further adjustments of pedalling would not fundamentally resolve the issue of clarity. My further understanding of the recorded outcome was that the source of the problem was actually created by focusing on the linear progression that is suggested by the accents on the bass octave and the overall ascending progression of the melodic line. Linear thinking, in this case, included all octaves within the phrase in bar 12 being viewed as a single consecutive line. In this linear flow, the time between the octaves was arranged in a way that did not provide enough space for breathing of the rhythmical pattern within and between the sub-phrases:



Bar 12 LH

My personal cure for problems of this kind is to transform linear thinking into circular thinking (the shape of articulating movements changes accordingly). If I think that the sound of the octaves within the sub-phrase (half beat) is creating a circle, with each incoming octave taking over its position from the previous one until the last one finishes the circle, then the time between the octaves in this circular motion gains flexibility. Longer stretches become closer, and tighter rhythmic configurations become supple and easier to arrange. With improved rhythmical awareness, less pedal is needed.¹⁸

Crescendo is, in this case, created by providing a new circle for every sub phrase, with every circle being a step above the previous one. In addition, this kind of motion contributed to a shortening of the last sixteenth note of each group. This further enhanced the clarity of texture through a slightly different, yet appropriate kind of energy.

¹⁸ See Patrick Shove and Bruno Repp, "Musical motion and performance: theoretical and empirical perspectives", in John Rink (ed.), *The Practise of Performance* (Cambridge University Press, 1995) 61. The authors said the following: "Simply put, patterned articulatory movements create patterned sequences of tones. In other words, articulatory movements are sound-structuring movements." To me this seems as a definition behind the interpretative concept explained above.

Example no 18 (a): R.Schumann, Symphonic Etudes Op 13 (Etude III), bars 1-8

The image displays a musical score for the first eight bars of Etude III from Robert Schumann's Symphonic Etudes, Op. 13. The score is written for piano and is in the key of A major (two sharps) and 2/4 time. It consists of three systems of music, each with a treble and bass staff joined by a brace. The first system (bars 1-2) features a treble staff with a continuous eighth-note pattern and a bass staff with a simple accompaniment. A 'Pedal' marking is present in the bass staff. The second system (bars 3-4) includes fingering numbers (1, 2, 3, 4, 5) above the treble staff notes and continues the eighth-note pattern. The third system (bars 5-8) also includes fingering numbers and a 'diminuendo' marking in the bass staff, indicating a gradual decrease in volume. The piece concludes with a double bar line at the end of bar 8.

Example no 18 (b): R.Schumann, Symphonic Etudes Op 13 (Etude III), bars 13-20

The left hand melody is presented twice in this etude (bars 1-8 and 13-20). The only note difference between the two is a trill introduced in the repeat, on the last eighth note in bar 13. Although I was not happy with the outcome of either the first or the second appearance of the theme, and therefore decided that both had to be re-recorded, it is not hard to distinguish a more cohesive line within the left hand *legato* in the second delivery of the theme than was the case in the opening bars. The reason for this is that more power was used to produce the *mp* sound in the opening than was used later when the melody appears *pp*. With more power used to produce the sound, the hammer action becomes quicker and stronger, and the impression of a note being attacked rather than coaxed is hard to avoid. This is especially awkward in a slower tempo as the sound of the preceding note loses some of its intensity before the next is played.

Perahia's recording of the Symphonic Etudes brings to my mind the same concern.¹⁹ I can certainly not be sure what his interpretative intentions were in this etude but should it be the case that he was aiming for a coherent *legato* over the left hand melody, then it was not achieved. While it is possible that the articulation he employed was truly intentional, I cannot help but wonder if it was his original choice or a compromised one.

Longer overlapping of fingers in *legato* could be a possible solution to the problem. However, this can be implemented only in instances where finger *legato* can be followed through. In the case of this melody, the same finger is often employed in a consequent order and, occasionally, repeated notes form part of the melody, so any kind of overlapping in either case is not physically possible.

I found that using slightly more agogics in the *Vivace* movement was beneficial. By slightly accelerating the pace of the ascending part of the melody (bars 1, 3 and 5 and later in 13, 15 and 17), the notes within the phrase connected better. The value of each note was shorter, therefore the fading sound from the preceding note was lessened. Ultimately, this resulted in the hammer action being less noticeable and the *legato* being more successfully achieved.

¹⁹Murray Perahia, *Schumann*, CD (CBS Records MK 76635) 1977.

Example no 19: R.Schumann, Symphonic Etudes Op 13 (Etude V), bars 1-8

The image displays the musical score for Robert Schumann's Symphonic Etudes Op 13, Etude V, bars 1-8. The score is written for piano and bass, in F# major and 12/8 time. It is divided into four systems of two staves each. The first system (bars 1-2) is marked *p* and *Scherzando*, with an *sf Pedal* instruction below the bass staff. The second system (bars 3-4) is marked *sempre vivacissimo*. The third system (bars 5-6) is marked *p*. The fourth system (bars 7-8) is marked *pp*. The score includes various musical notations such as accents, staccato marks, and fingerings.

In the first recording, particularly in the first section (bars 1-8), *accents* appear too sharp and *staccatos* too short. The character of the opening was therefore exaggerated.

As a performer, I am very much aware of the need to aim for the right distance when projecting the sound. This helps me to achieve an adequate amount of sound (dependant on the musical meaning) that corresponds to the size of the hall where the piece is performed. I think that this is extremely important in piano performance. In instances where this has not been judged precisely, various imperfections occur, such as an overstating or understating of the musical meaning or a lack or excess of resonance. The proper judgement of aiming distance is of equal concern in every kind of a performing context.

In this case, an overstating of musical meaning can be noticed. The articulation used to achieve *scherzando* accented octaves, as perceived through the first recording, does not suggest an overall *piano* dynamic as sought in this fragment. For the purpose of recording in this venue, accents needed to be less emphasised so that they blended more with the remaining part of the motive.

The issue of the distance to which we project a sound was addressed by Pascal Rogé in an interview with Joanne Talbot in Piano Magazine:

...when you're on stage you have to project to the back of the hall without toning-down interpretations. When you play for a microphone it's different again because you can utilise a dynamic that would be no good in a hall.²⁰

The key question then becomes: What distance do we aim for when projecting sound in recorded performances?

Unfortunately, there is no universal rule that can be applied to the wide spectrum of circumstances that the process of recording involves. However, this aspect should be considered seriously for every individual recording experience, as the recorded result is significantly influenced by it. In this particular instance, aiming for the last row in the hall when executing the accented *piano* octaves was captured by the microphones as *mf*. Therefore, it was a reasonable decision to aim for a closer distance that consequently projects

²⁰ Joanne Talbot, *Interview with Pascal Rogé*, <http://www.pascalroge.com> (accessed 12 October, 2012).

the character of the motive in a softer dynamic range. With a reduced dynamic level, the excessive sharpness on the accented octaves from the first recording was also avoided.

Example no 20: R.Schumann, Symphonic Etudes Op 13 (Etude VI), bars 1-8

The musical score for Example no 20, R. Schumann's Symphonic Etudes Op 13 (Etude VI), bars 1-8, is presented in four systems. The piece is in 2/4 time, key of D major, and marked 'Agitato'. The score is for piano and includes a 'Pedal' instruction. The dynamics are marked 'sf' (sforzando). The first system begins with a double bar line and a repeat sign. The second system has a fermata over the first measure. The third system has a fermata over the first measure. The fourth system has a first ending bracket over the last two measures, with a first ending sign '1.' and a fermata over the final measure.

To achieve a successful recording of Etude VI with ease, one would need to begin with a piano that has a well defined sound at its source, which was not the case with the instrument I

used. Its splashing sound had absorbed the space needed for the syncopated rhythm to be fully established and recognised. With the syncopated rhythm insufficiently prominent, the first voice merged with the second and a pot-pourri of voices was created. Management of this problem is very challenging in such potentially thick textures and inside the large acoustic spaces used for recordings.

The means of obtaining a desired outcome in piano performance sometimes requires actions quite different from, even seemingly contrary to, the effect that is being sought.

My judgment was that the splashing sound from the piano in this texture and this dynamic range was not possible to diminish significantly. The space needed for the syncopated rhythm was to be secured by entering the chord at the last possible moment that the pulse would allow. In other words, the velocity inside the pulse unit had to be slightly reorganised. To accomplish this effect a thirty-second value break was imagined before each chord in the right hand. Although it is a very short break, it opened the necessary portion of time that assisted in achieving a better result. The two relatively close-up microphones were of additional help, as they were able to register this small but important portion of space.

Example no 21: R.Schumann, Symphonic Etudes Op 13 (Etude VIII), bars 10-15

The reason for dissatisfaction with the first recording of Etude VIII was purely the result of human error.

The best effort was made during the first recording session to perform the piece as it would be performed in a concert. However, particular discomfort during the performance of this etude was provoked by previous experiences that very slow tempi often do not sound reasonable in a recorded performance. Sometimes, continuity of energy of a sound that we feel in the hall

during the performance becomes lost; sometimes the full intensity of a tone and the length of its journey are not fully captured. Whatever the explanation, the recorded result is classified as being too slow. Reference to this problem has been made in the introduction with regard to Pogorelich's recording of the Brahms Intermezzo Op 117 no 2.

Due to so many mental doubts at the time of recording, a race with time began during the performance. In that state of mind, the consistency of rhythmical language was shaken and the ability to maintain the large pulse units uninterrupted was not realised.

After assessing the first recording, I concluded that the fear of the piece being dismantled due to its very slow tempo was not justified. The splashing sound of the piano and the reverberant space, both considered to be a set-back in so many other instances, were an advantage in this etude. They helped maintain the sound flow to the point that, in the second recording, I was able to adjust my articulation towards a drier quality of sound compared with the one achieved previously. The result of this is a sound that still resonates sufficiently, and yet, it does not contain undesired properties. With a more silent background, the narrative aspect of this etude is better accomplished.

Example no 22: R.Schumann, Symphonic Etudes Op 13 (Etude X), bars 1-8

The musical score for Example no 22, Robert Schumann's Symphonic Etudes Op 13 (Etude X), bars 1-8, is presented in four systems. The key signature is G major (one sharp) and the time signature is 2/4. The score is written for piano, with a grand staff consisting of a treble and bass clef. The first system (bars 1-2) begins with a forte (*f*) dynamic and the instruction *con energia sempre*. The right hand plays chords, while the left hand plays sixteenth-note patterns. The second system (bars 3-4) features a *sf* (sforzando) dynamic and a *non legato* instruction. A *Pedal* marking is present in the left hand. The third system (bars 5-6) includes a *cresc.* (crescendo) marking. The fourth system (bars 7-8) concludes the piece with a double bar line. The score includes various fingering numbers (1-5) and articulation marks (accents, asterisks) throughout.

The issue that came to my attention through the first recording of this etude could actually be considered as learning through a recorded sound. I noticed that my interpretation suggested a somewhat ambiguous rhythmical layout through the right hand chords. Every second sixteenth chord springs out of a break and sounds as an off beat to the chord that falls on the

beat. As a result, long lines have been cut into short, repetitive phrases that consist of weak and strong chords.

The key to resolving this issue lies in providing the chords with a pulse that will enable them to self-constitute their order and the strength of their appearance. For this to occur, the chord that is played on the last sixteenth value before the full beat must not feel time constraints. Time constraint can be initiated by literal counting of rests. Literal interpretation of rest values adds to the number of counted units, therefore consuming more time. During this time, the preceding chord is waiting in suspension. Once released, it springs out in a rather uncontrollable manner. To avoid this, an *alla breve* pulse for the right hand chord progression is advisable. Additionally, the movement in the left hand is written in a way that naturally provides sufficient rhythmic and tempo control. Having this as a support, a longer pulse unit for the right hand can be implemented.

Example no 23: R.Schumann, Symphonic Etudes Op 13 (Finale), bars 17-25

Bar 17 opens a lively and playful section. The recording revealed that the time provided for the quick repetition of the sixteenth and eighth notes within the motive in the second voice was not sufficient for the hammer to develop an adequate sound. What is captured is more of a string vibration than a defined piano sound.

PART B. Robert Schumann: Symphonic Etudes Op 13

To provide the hammer with more time to develop the sound, the space between the repeated notes must be better organised. I think that the problem occurred in the first place because the second voice motive was quite involved in communication with the first voice melody. By the time the first voice established its colour, the time for the delivery of the second voice motive was reduced, so repeated notes became squashed. Providing time for repeated notes means that they need to communicate primarily with the preceding rest. Once they emerged from a rest, there was no wasted time and the correct spacing was obtained.

Example no 24: R.Schumann, Symphonic Etudes Op 13 (Finale), bars 50-67

The musical score consists of two systems of grand staves. The first system, labeled with bar number 49, shows a treble staff with a complex melodic line featuring triplets and sixteenth notes, and a bass staff with a more rhythmic accompaniment. A dynamic marking of *sf* is placed above the treble staff. A pedaling instruction *sempre tenuto per il Ped.* is written below the bass staff. The second system, labeled with bar number 52, continues the piece with similar rhythmic complexity and dynamic markings. The score concludes with a final chord in the bass staff.

PART B. Robert Schumann: Symphonic Etudes Op 13

The image displays a musical score for Part B of Robert Schumann's Symphonic Etudes Op. 13, covering measures 55 through 64. The score is written for piano and is organized into four systems, each with a grand staff (treble and bass clefs). The key signature is three flats (B-flat major or D-flat minor), and the time signature is 3/4. The music is characterized by a strong rhythmic drive, primarily using eighth and sixteenth notes. Dynamics are marked with *f* (forte) and *sf* (sforzando), with some instances of *m.s.* (mezzo-soprano). Fingerings are indicated with numbers 1-5. A double asterisk symbol is present at the end of the fourth system.

To accomplish the acoustic scope of the “symphonic” element of the Finale, the dynamics within the piece must be tailored to fit the size of the hall as tightly as possible.

To achieve this important quality, no space in the hall should be unattended by the sound and no amount of sound should bounce back. I believe that when just the right amount of sound and resonance is projected to embrace the hall, the feeling of a “symphonic” spaciousness is communicated.

In this respect, bars 50-67 in the first recording did not satisfy completely. The parameter that establishes the outer dynamic boundary did not come through. Therefore, the aim of the sound within the chord and octave progression in the right hand (bars 52-53, 56-57, 60-61 and 64-65) as well as the sound of the corresponding melody in the left hand (bars 50-53, 54-55, 58-59 and 62-63) appear unpredictable, disorientated and lack the necessary amount of transparency in the sound.

The outer dynamic boundary is the maximum amount of sound needed to embrace the hall where the piece is performed. In this section it should be set by the octave in the third voice, that later becomes a single bass note that appears on the first beat of every second bar, starting with bar 50.

Dynamic confusion and clashing among the voices is avoided and resonance is easier to control when the limit is clearly set. In a recorded *f* and *ff* sound, especially in long and pedalled stretches such as this, planning of this sort is vital for an acceptable recorded outcome (although it is equally important in any kind of a performing context).

Summary of Issues

Through the recordings of *Symphonic Etudes* I believe that I have introduced a slightly different approach towards resolving issues. In preparation for these recordings, I realised that consideration of the technical process of recording was beginning to interfere with the concepts that I use in support of my interpretation. I began to think at a very elementary and technical level about performing approaches. Mechanical aspects of the instrument became suddenly very important: I was even acknowledging the resonance with new perception. While being well aware of the mechanical nature of the instrument itself and of the fact that many performing skills are actually the muscular ability of our body to deliver the technical demands of a piece of music, I concluded that one must not allow these aspects to rule the thinking processes. They should be acknowledged only for as long as necessary. I am explaining them here in considerable detail as they form a significant component of this research, but during a performance one should return as quickly as possible to artistic concepts that go beyond their technical aspects. Otherwise, the process of recording is like a trap for the technical side of a performer's mind. I fell into this trap several times during the course of this project and some examples in sections that follow will deal with the issue again. However, it was in the context of Schumann that I first became aware of the issue.

My recordings of Schumann, in general, enabled me to articulate many of the issues in the way in which I believe they should be pursued throughout the process of recording. This way relies on understanding relevant relations but delivers them through strong artistic concepts that facilitate their communication. Basically, this is the same approach that I assume for concert performances, but particular strategies for dealing with issue are often different. In particular, examples 17, 20 and 23 are approached through artistic concepts that provide a technical solution to the issue without overexposing the mechanical nature of the influencing factors. This I found to be essential in maintaining a good artistic spirit during a recording session.

While the previous discussion related to the performer's psychological approach, what follows deals with matters of actual performance. The first one concerns the player's expressive input while the second relates to matters of resonance.

When performing, pianists engage and rely upon a response that they receive through communication with the instrument and the acoustics of the performing space. However, pathways that sounds take during that communication are perceived differently in live and recorded experiences of a performance. In a concert setting, for example, the listener's auditory system is an immediate witness to these pathways. When listening to a recorded product, in contrast, the listener is a witness of the performance through an image of the sound that the recording equipment has captured. When it happens that the properties of sound which enable successful connection and flow inside the performing space are not fully conveyed in the recorded image, then the experience of the interpretation is compromised. This can be perceived as unconvincing or unjustified expressive engagement, as the input of a performer does not appear fully embodied in the sound. Since this often happens at times when the pulse unit is stretched, it is wise to stay as close as possible to it and avoid any exaggerated expressive gestures.

Another aspect that might require the performer's attention in preparation for recordings is the impact of resonance and acoustics, especially when rests form an important part of the musical meaning. Clearing the impact of acoustics over the rests in a recording is hardly possible in faster and thicker textures and efforts that might clear them to some extent will probably be much greater than the result that can be obtained. However, the desired pulsation can still be achieved by clear articulation and timing of the melodic elements that are framing the rests. It is worth noting that a similar problem was experienced in the third movement of Mozart's Sonata but I find that with less resonance, it is somewhat easier to manage. In the case of my performances, this perspective enabled me to project artistic meaning with much greater success.

Johann Sebastian Bach:
Prelude and Fugue in G sharp Minor BWV 887

The Context

The Prelude consists of two main melodic figures. They are both light and move with ease, while each achieves a contrasting quality of motion. The first, commencing in bar 1, is a longer melodic motive while the second one takes on a stepwise motion (bars 5-7). Often, the figuration of the second motive is introduced within the long melodic line of the first pattern (bars 11-15). In the end, the pianist is engaged in the interaction between the two motives throughout the piece, either as a way of communicating them as two melodic patterns or as a part of a single melodic line.

To emphasise its polyphonic structure, this double fugue requires an ample palette of colours within a carefully established range. Of particular concern are the long, elaborate textures that suggest the use of a *piano* dynamic range. Achieving dynamic diversity within *piano* shades which reflects the complex polyphonic language of this fugue is both challenging and thrilling.

Equally demanding is the delivery of the harmonic aspect. Particularly so is the process of voicing that is essential to creating the unambiguous melodic interplay between the chromatically conceived second theme and the countersubject of the first theme.

Artistic Challenges: Diagnosis and Solutions

When the concepts of “slow”, “*legato*” and “motion” are combined to express the flow of a piece performed on a piano, I find it to be a sign of trouble for a recorded performance. In achieving the feeling of motion within slow and *legato* textures, the pianist needs to adopt an approach which enables the listener to perceive the piano as an instrument that can sustain the flow and quality of the sound. The mechanics of the piano are such that they work contrary to the interpretative aim of the performer within this context. The only element of interpretation that actually sustains its flow is the time. As such, the time flow becomes the vital aspect for consideration when qualities of slow and *legato* motion are in question.

This section explores aspects of tempo, timing and inbuilt properties of the piano with respect to different performing concepts and ways of tone production.

*Example no 25: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue),
bars 26-27*

Piano playing often requires quick arm movements when reaching for a comfortable position in which to perform. In a slow piece, such as this Fugue, the preference of most pianists would be to adopt slow body movements that are in accordance with the slow pulse of the piece.

In baroque music, quick arm movements occur frequently due to difficult fingerings associated with the polyphonic style of composition. Inconvenience of this kind appears on the switching point from bar 26 to 27. It involves arm movement that is quicker than the pulse of the piece.

At this point, harmonic tension has its peak on the last eighth note of bar 26 before it is resolved at the beginning of bar 27. In the first recording session, the tension peak was stretched for a portion of time to enable the harmony to speak freely. At the same time, the natural space for the arm to relocate was meant to be provided. Since the arm did not shift fast enough, the time for its relocation took longer than the harmony needed to speak. The additional time used for a body movement, which can not be considered as part of the musical context, appears as a gap. To cover the gap, all that had to be done was to execute a quick arm movement that fits within the time frame that the musical context needs. The small stretching of time that appears in the second recording complements the suggested harmonic tension within this section.

This example has been considered because it demonstrates that any stretching of a musical thought in a slow tempo must be minimal so that it does not damage the sound flow.²¹ It is difficult enough to capture the continuity of a piano sound even in ideal circumstances.

*Example no 26: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue),
bars 71-76*



The concept of *legato* in slow tempi is greatly challenged through the recording medium. This poses a particularly big test in textures and styles that do not require use of the sustaining pedal.

The first, general artistic challenge for a pianist is to create the feeling of slow, *legato* motion. This kind of motion captures a spacious sense of time. During that time the sound has to

²¹ Gyorgy Sandor, *On Piano Playing* (Schirmer Books, 1981), 224. With regard to similar context, Gyorgy Sandor concluded the following: “The inability of the microphone to capture extreme dynamics makes these subtle, prolonged suspenses illogical in one’s interpretation.”

travel in order to provide the feeling of motion. *Legato* is best achieved if a feeling of continuous, smooth advance of sound is obtained. To achieve “continuous” and “smooth” *legato* in a slow tempo on a piano is extremely difficult for two major reasons.

The first is that the piano sound loses intensity from the moment it has been produced (a voice, stringed instrument or wind instrument can sustain the intensity of a sound throughout its duration). To connect the notes within the phrase means that the notes should advance as if there were no loss of intensity.

The second problem is created by the fact that the hammer must move in order to hit the string so that the sound can be produced. To successfully achieve *legato*, it is required for the hammer action to be disguised. In a way, these are battles of art against physics. It takes great mastery and creativity from the pianist to emerge the winner.

The performance of the Fugue in the first recording session was very well delivered and no issues emerged until the recording assessment was made.

The recording revealed that, although the notes within this section were connected, *legato* in its full artistic sense was not achieved. An excessive amount of impulse from the hammer was registered and this diminished the blending effect between the notes that is essential to the successful delivery of a true *legato*.

To resolve this problem, a continuous and smooth progression of the voices must be achieved. The simplest solution is to take a faster tempo. If the tempo is slightly faster, the blending of fading sounds occurs more naturally. I found myself incapable of doing this, as a faster tempo destroyed the musical sentiment that I feel to be embodied in the work. Another solution could be to use a “lazy legato” (longer overlapping of fingers). Although this would result in a more successful blending between the notes of the melody (given the slow tempo), I feared it would sound too “sticky” and the natural feel of the 6/8 movement would suffer.

The most useful approach, that grasps the pulse perceived to be correct, while also achieving the desired tonal blend, is the “in time” treatment of the pulse within the 6/8 time signature.

There are many ways of achieving precision of rhythm and pulse in piano performance. Two of them are most often used. The first one is playing “on time”, the second is playing “in time”.

The natural reaction of a body when aiming to get somewhere “on time” is to move purposefully (not necessarily fast). Then, the movements we make with our body are directed to punctually manage the time. When performing we do the same, if punctual delivery of small units of time is a vital component of the musical meaning. In such instances, the fingers (I refer to “fingers” only as the final executive element of a body that carries out the musical meaning) move in order to project a sound at specific and often frequent points in time. With every point in time that is projected punctually “on time”, the musical meaning gains the desired pulsation. When time is conceived in this manner, we are emphasising the continuity of particular points in time, not continuity in terms of long lasting connection of sounds that creates *legato*.

When moving to arrive somewhere “in time” we do not perceive the time in small units. It is something like measuring the time in very large measuring units. Inside one large measuring unit we still make many movements, but the difference is that they are moving along with time rather than managing the time itself.

To achieve more continuity of sound in this section, the fingers must move along with the time flow. By moving along with time, the finger movements gain more smoothness because they are moving constantly and at the same speed, as time does. In this kind of motion the energy is equally distributed on the full duration of a finger movement (rather than being applied swiftly). Sudden and sharp movements are unlikely to occur, therefore the possible attack on the key (that causes the sound to die as quickly as it develops) is avoided. The sound that is created lasts longer, the change between the fingers appears smoother and the blending of sounds that are at the heart of *legato* is less likely to be interrupted.

An unpleasant buzzing noise occurred in the second voice in bar 75 (the dotted half note *e*). The intention was to create a sound that can sustain for the full duration of the bar, but to refrain from making an accent. Yet, the accent appeared anyway. Once again, the conclusion is the same (although the cause and means of resolving it are different): in recording a slow,

legato piece, a pianist should make a habit of employing only strategies that can slow down the hammer motion and reduce the associated action noise. Controlled hammer motion is essential in achieving an effective *legato* during a recorded performance. It initiates sound that is purer and more focused than that produced when the hammer hits the string with greater speed.

Although the general volume of sound was not greatly reduced on the dotted E in the second recording, the quality of sound, created by the use of arm weight, resulted in an effect of leaning rather than accent. Therefore, the second voice is more eloquent in expression and more polite in appearance.

*Example no 27: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887(Fugue),
bars 84-88*

This problem is yet another that concerns the loss of sound flow. This time, the continuity of the first voice is questioned in bars 84-88. As can be seen from the example, several long notes form an integral part of the melody of the first voice. To make them sound as an integral part, they should not disappear.

In addition to the aspects previously addressed in consideration of this issue, the instrument itself in this case provided an additional setback. At the time of recording, the second octave of the new Steinway Grand had a felty and quickly fading sound. It was almost impossible to achieve a defined, flowing, transparent sound from it.

In these circumstances, any solution to this issue could be only partial. However, I shall give a detailed explanation as good intentions and a partial improvement can be perceived in the second recording, and the method itself is a very useful one.

In situations where we believe that an ideal cannot be reached, then we need to use the performing technique that best preserves and outlines the quality to which we aspire.

In this section, the sound from one note did not last long enough to connect with the following one. This could not be corrected as the tempo was slow, note values quite long and the piano lacked vitality. The sound was losing intensity rapidly and in my judgment there was no approach that could cure this problem in full. However, by capturing the residue of the fading sound and matching the subsequent one to it, a more satisfactory outcome was possible. By making the remaining sound audible, no matter how reduced it might be, the line would become more coherent and convincing.

If analysed, the sequencing of actions (according to the pattern of this example) follows this order:

1. More attention is given to the long note in the first voice when played;
2. Once it settles down, attention can be shared more equally with the remaining voices;
3. The remaining voices advance in a free but considerate manner so that the existence of the first voice is not threatened;
4. Just before they approach the point where the value of the long note expires, the remaining voices should become clearer and if any pedal has been used, it should be cleared just before the value of the long note comes to an end;
5. By a sudden clearing of the air involving all sounds that do not have a particularly constructive purpose, the sound from the long note in the first voice re-appears;
6. At this point, it is most important to hear the sound, remember it and only then proceed. By hearing the sound, a fraction of time is provided for the long note to be registered before the voice carries on.

In this way, the continuity of the melodic line can be improved.

**Example no 28: J.S.Bach , Prelude and Fugue in G sharp minor BWV 887(Fugue),
bars 97-100**

In bar 97, the fugue subject appears in the third voice in the great octave. The preference was to capture this subject with a deep colour of tone, through a well defined and compact sound. Instead, it projected unevenly with the strong presence of a string vibration. Sometimes, such vibration can dominate the sound when the player is, for some reason, overly cautious. In such a state of mind, a convincing message cannot be communicated. This can be heard in a recorded sound with more clarity than it can by those seated in the hall.

The presence of a string vibration was eliminated by the addition of more arm weight into the key. More weight was, in any case, necessary to gain the preferred depth of colour and tone. By this means, the sound gained in definition and the artistic idea was communicated with more success.

**Example no 29: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887 (Fugue),
bars 115-118**

The clarity and focus of sound required for polyphonic relations to be established was not achieved. The sound that the piano was offering in the middle registers lacked fullness and definition. The battle for the desired sound was further complicated by the fact that voices are set very close together (mostly within an octave), which means that the shallowness of sound affected all three voices.

I had no reasonable pianistic solution to this problem at the time. The solution came out of a desperate attempt to reduce the problem by making it less apparent. I decided to gradually introduce the left pedal and the result was surprisingly pleasing. The effect of doing so could easily be described as a “vacuuming effect”. Elements of sound that were not in focus in the first recording were absorbed, which resulted in a sound that was focused and stylistically more appropriate. Once this was achieved, the line of motion for each of the voices was easier to identify.

The same method was of no help in higher registers because the change from right to left pedal only emphasised the already felty sound. This was not the case in the middle of the keyboard.

*Example no 30: J.S.Bach, Prelude and Fugue in G sharp minor BWV 887 (Fugue),
bars 125-129*

This is a similar problem to the one previously discussed. It has been considered as further evidence of how the problem appears in the small and great octaves.

In the lower registers of the keyboard, undesired thickness in a sound can easily be provoked, even on pianos that are otherwise suitable for the piece. It was quite a complex issue to cure the problem (and the associated lack of transparency) in this particular register of this piano. The excess resonance was not only a result of the nature of the instrument itself, but of the shallow property of sound that it produced. The resonance of a shallow sound often creates the impression of a metallic texture, as happened in this case. This problem had to be approached from two different angles: the resonance had to be reduced as well as the metallic property of the sound.

To achieve transparency in low registers, the sound should become drier. To obtain a drier sound, the resonance produced by the string needs to be reduced. A convenient aspect of this approach is that a drier sound can be achieved in this register without jeopardizing the quality of *legato*. This is because bass strings produce sufficient resonance to help blend the notes within the *legato* melody naturally. Even if the natural resonance is reduced, it is still sufficient to meet the purpose of achieving *legato*.

Therefore, to obtain a clearer sound was not a matter of doing something, but rather of not doing, or doing as little as necessary. Demands were therefore simplified. To achieve *legato*, it was enough to think that notes should only connect without prolonged overlapping of fingers. “Connect” is a simple, undemanding word that does not provoke much in the way of muscular movement and weight to be implemented. In return, it results in a greater purity in the sound.

Once the clarity of voicing was achieved (through achieving the desired transparency), the remaining part of the problem was the shallow property of the sound. The complexion of this Fugue is expressed through a minor key with five sharps. The innate quality of such tonalities is that they have an elevated intensity of pitch. When the piano has a shallow sound, then the pitch seems even higher. This creates an effect of undesired frequencies that are sometimes not suitable for the piece.

To adjust the colour of tone, a simple solution was not found. Commonly, by gaining more depth in touch, the sound takes on a more sombre quality. In this case, because of the resonance issue previously discussed, additional weight could not be engaged. The solution was found in a re-voicing of the tonality. Instead of performing it in the key of G sharp minor, it was performed as if in the key of A flat minor. Contrary to the keys with sharps, the keys with flats show a declining tendency, creating an image of a lower frequency that has more settling effect. Re-voicing I would advise only as an “emergency” escape from very complex issues and when no other solution can be found.²²

²² The qualities of individual keys are explored in Rita Steblin, *A History of Key Characteristics in the Eighteenth and Early Nineteenth Centuries* (Ann Arbor: UMI Research Press 1983).

Summary of Issues

Recording involves a combination of engineering processes, techniques and equipment which receives, conveys and transmits the performer's artistic ideals of sound to a listener through an audio device. Therefore, during the course of research, I did not consider that the recording process itself would have a direct influence upon the performance. In a recording session, it is a silent parameter that does not influence either the performer or the sound that they produce. The main conflict in the relationship between the performer and the medium of recording is that while it does not in any way influence the live experience of the sound, it does influence the way that sound is converted into a recorded product. As a result, it becomes a parameter that sets the rules for a performer's serious consideration. These rules rely upon elements that can often be heard only in a recording but not experienced during a performance. At times, dealing with them felt as experiencing a virtual reality while performing.

The second recording session of the Bach was dedicated to very fine adjustments of which many would not be necessary for a live performance. It was mostly about improving the detail that would be picked up through repeated listening. Attempting to make these adjustments when their need is not evident in the actual performing environment does not provide much comfort for a performer. However, adjustments do need to be made and in these moments I think that a performance can benefit from the performer focusing on the quality of sound expected to be heard in the recording rather than focusing on what would complement the performing space. Associating at times with the role of a listener while performing seems quite unnatural. Indeed it is at first, but with a number of serious attempts the body will develop the awareness and sensitivity for what the mind is suggesting.²³ After all, this is only another performing concept to be mastered. I have managed to come to terms with it in recording the Bach after an upsetting first attempt in the third movement of the Mozart Sonata. Between these two recordings, I thought further about this concept and realised the importance of having a clear image of the sound that one wishes to be experienced by a listener. It sometimes requires the performer to leave the mental space of the concert hall and

²³ Irene Peery-Fox, "Mental preparation is the key to producing beautiful sounds", *Clavier Companion* 1/2 (2009), 46.

PART B. Johann Sebastian Bach: Prelude and Fugue in G sharp Minor BWV 887

enter that of the private domain of the listener. It should be noted that the need to rely on this concept arises only from time to time.

Johannes Brahms:
Drei Intermezzi Op 117

The Context

For a performer, some pieces lie within easier reach than others. My personal experience is that amongst the most difficult are pieces whose character relies on successfully establishing the relationship between pulse and velocity. By pulse I do not assume only the frequency of beats but also the nature of the movement with which they contract and expand. By velocity I consider the speed of motion between the notes inside the pulse unit. Resolving these complex issues for each of the three *Andante* movements of Op 117 is the key to an accomplished performance.

Intermezzo Op 117 No 1 in E flat major

The first Intermezzo takes on the comforting swing and soothing tune of a lullaby in the opening and closing sections. The middle part, while preserving a similar motion, introduces the lullaby through the complex emotional perspective of a mature person.

Intermezzo Op 117 No 2 in B flat minor

The second Intermezzo expresses a great variety of moods through an unstable, yet seamless harmonic language. Capturing the fluency of the constantly changing direction of thoughts is quite a challenge.

Intermezzo Op 117 in C sharp minor

The last piece maintains the darkest mood of all three Intermezzi in the set. In my experience, the most engaging aspect of this piece is achieving the perspective of purity, expressed through clarity of octaves and unison melodies throughout the piece, against the versatile harmonic choices that introduce deeply troubled emotions. As a whole, this piece provides much space for personal reflection.

Artistic Challenges: Diagnosis and Solutions

For concert performances, I prefer larger venues. However, I recognise that pieces with intimate appeal can be communicated with greater ease in a chamber like setting, as would be the case with the Intermezzi of Op 117. The following discussion reflects only upon issues that were raised with regard to the aesthetic value of these recordings and considers the impact of the factors that influence this aspect of a recorded product.

Example no 31 (a): J.Brahms, Intermezzo Op 117 no 1, bars 1-9

Andante moderato

The musical score for Brahms' Intermezzo Op. 117 No. 1, bars 1-9, is presented in three systems. The first system (bars 1-4) is marked *p dolce* and includes fingering *12 1*. The second system (bars 5-8) includes fingering *2*. The third system (bars 9-12) includes fingering *32* and a *dolce* marking. The score features a delicate melody in the right hand and a simple accompaniment in the left hand.

Example no 31 (b): J.Brahms, Intermezzo Op 117 no 2, bars 48-51

The image shows a musical score for Johannes Brahms' Intermezzo Op. 117 No. 2, specifically bars 48-51. The score is written for piano and is in G major (one sharp) and 3/4 time. It consists of two systems of music. The first system starts at bar 46 and ends at bar 48. The second system starts at bar 49 and ends at bar 51. The score includes dynamic markings 'pp' (pianissimo) and 'dolce p' (dolce piano). There are also various fingering and articulation markings throughout the piece.

When performing pieces of this nature, my ideal is to reach an interpretation that projects closeness between my feelings and those of my listeners. Recording, as a medium, appears to offer an advantage in achieving this goal compared with a concert performance, as the idea of personalising a performance during a recording session for a single person or two who will be listening is more conceivable than achieving this quality in a performance before a huge audience. As mentioned before, I did not have an audience during these recordings. However, I was performing in a hall of large proportions which I considered a disadvantage for this piece. This was because of the contradiction that exists between achieving an intimate feeling while at the same time covering a large acoustic space with sound. In the first recording of these Intermezzi from the Elder Hall I achieved phrasing that quite closely reflected my intentions. Regrettably, the sound of the instrument blended with the acoustics in such a way that the recorded outcome gave too strong an impression of the spaciousness of the hall. The reverberation dominated the overall sound impression, leaving the actual piano sound somewhat lost in the acoustic space. Recordings that reflect this image set the listener far apart from the performer. In some instances, this is the ideal for which one strives, but with these pieces I was aiming for more of a personal atmosphere.

In attempting to achieve a more “chamber like” and personalised communication through the recording, I needed to disguise the feeling of the spaciousness of the hall. In the second recording of these Intermezzi I managed to deliver a sonority in which the overall dynamic palette appears slightly more vibrant. The colour of tone appears more in focus, enriched through the acoustics rather than carried by them. Mostly, this was a result of very attentive colouring of timbres. This approach identified the sound of the instrument as the centre of an overall sound image. I believe that this image appears not only more personal and engaging for the listener, but in this case it was also able to support the finer interpretative aims. The narrative undertone of the theme in the first Intermezzo (example 31 a) is suggested more convincingly, as well as the “dropping” effect of the thirty-second notes of the right hand melody in bar 49 that I was aiming for (example 31 b).

Example no 32: J.Brahms, Intermezzo Op 117 no 3, Elder Hall and ABC integral versions

Example 32 is the recording of the integral version of Brahms’s Intermezzo Op 117 no 3. It was made at Australian Broadcasting Corporation Studio 520 as part of this research, as stated in the Introduction. Although it could not be used in the same investigative format as the rest of my examples (the recording venue was changed before the second recording session of this piece could take place), I nevertheless found it to be of valuable assistance in stimulating a richer reflection of the topic discussed in this section.

It is submitted with the particular aim of considering the impact of the recording set up on the aesthetic value of a recording.

My personal interpretative goals were much the same during this performance and the ones that were made later in the Elder Hall. Yet, the atmosphere that was captured in the ABC recording presents more authentically the ideal that I look for in a listening experience of this piece. I felt that the acoustics of the hall at the ABC permitted a reasonable amount of independence for the actual sound of the instrument. The instrument was able to generate the desired amount of presence in the softer dynamic shades (its lack of power in *forte* has been discussed in the section on Prokofiev, and can be easily detected here as well). The way in which the sound of the instrument was captured within the acoustics reflects the secluded ambiance that I anticipate when listening to this Intermezzo.

PART B. Johannes Brahms: Drei Intermezzi Op 117

In comparison, the sound of the Elder Hall instrument blended with the acoustics of the venue to a greater extent. It projected image distance rather than closeness and in that respect its aesthetic value is not comparable to the one from ABC.

Summary of Issues

To what kind of listening experience is a performer inviting a listener to a recorded product? This is one of the questions that need a performer's answer prior to commencement of a recording project.

Listening to a piece of music is on most occasions not a random choice. The listener chooses a particular piece and expects to be transferred into a frame of mind that the chosen piece of music is expected to suggest. The value of a listening experience is perceived by a listener not only through the performer's interpretation but also through an appropriate sense of the acoustic space.²⁴ This is quite important as a piece is fully communicated only when these two aspects harmoniously fit together. Although the choice of a recording venue, instrument, and positioning and setting of the recording equipment have a major impact on these values, I think that the most reflective and dominant value comes through the performer's choice of performing approaches that will characterise this relationship. While it is best if a performer's approaches are rewarded naturally by the recording set up, it is important to consider alternative approaches to the original performing concepts, should the recording set up be less than suitable for the piece that is performed.

In the case of these Intermezzi, the challenge was to eradicate the unwanted elements of the sound to create more intimate listening experience.

²⁴ See Eric Clarke, "Listening to performance", in John Rink (ed.), *Musical Performance* (Cambridge University Press, 2002) 191. Eric Clarke suggests that the space is important not as an element of structure but because it conveys the "aura" or character of the performance.

Johannes Brahms:
Klavierstücke Op 118

The Context

Brahms's set of piano pieces Op 118 is not cast as a cycle. It is a set of six individual character pieces: four Intermezzi, a Ballade and a Romance. Yet, several concepts within the set are of great influence upon the overall artistic product, with every individual piece gaining a particular dimension if the previous piece has been delivered. In relation to the importance that a key signature has for the interpretative choices of a performer, establishing the tonal relationships between the first and second Intermezzi and later between the third Intermezzo and the Romance is quite important. In both cases, the preceding piece, which starts out in a minor key, mutates at the end into a major key from which the following piece unfolds. In this way, it seems as if it is a delicate preparation for the sonority of the piece to come.

Another intriguing issue is the role of the first and the last Intermezzi in the set. Both pieces can rightly be performed individually. However, I found that one of the significant aspects of the first Intermezzo is that it appears as a prologue to the set. Being so, independent existence leaves it to some extent incomplete. The last Intermezzo shares a similar destiny although it is a piece of an imposing stature even if isolated from the set or if performed as a part of a selection from this opus. However, I feel that its core idea of closure does not only apply to the meaning of the piece itself, but to the set as a whole. In addition, if we pay attention to the order in which the key signatures progress through this opus, we see that the last Intermezzo is written in the lowest key of all, finishing the pattern of a stepwise movement downwards: A minor, A major, G minor, F minor, F major, and E flat minor.

Intermezzo Op 118 No 1

The first Intermezzo shapes a turbulent harmonic language in a long, simple and often repetitive musical line. The harmonic language is diverse but not complicated or speculative. I feel that the interpretation should suggest an aspect of the telling of a story rather than the creation of one. A possible complication is the maintenance of a degree of neutrality and objectivity in telling that story while also emphasising the harmonic diversity.

Intermezzo Op 118 No 2

The most intriguing issue concerning the second Intermezzo is that it could be a song. Its tune has all the attributes that correspond to a human voice when used as an instrument. Images of a vocal nature can often be found in piano literature, but it is seldom the case that a piano piece as a whole is suitable for performance by a voice. The first important step in achieving the right expression of this piece is to realise that it is not about imitation of a human voice through a piano sound. It is rather about awakening a piano sound through a concept of tone production that resembles that of singing. The second step is to implement this approach in all voices and registers of the keyboard. This will ensure that the Intermezzo is not treated simply as a melody with an accompaniment.

To awaken the very soul of a piano one needs to become thoroughly familiarised with the instrument. We often do not have this privilege in a concert, and recording schedule as time for bonding with an instrument is often limited.

Ballade Op 118 No 3

The Ballade is the spine of Op 118. Form and rhythm are firm, providing good support and balance to the piece itself as well as to the whole set. Of all six pieces in Op 118, I found the Ballade to be the easiest to comprehend and embrace.

The tempo is fast, but nothing should feel rushed. One could say that a feeling of comfort dominates the piece. Exceptions are just the last eight bars, but even there, comfort and, more importantly, peace can be found.

Intermezzo Op 118 No 4

The third Intermezzo is a combination of two opposite expressive ideas. The artistic challenge is to create a third one that represents their unity while preserving the integrity of both constituent elements.

The two foremost impressions that the score is implying are the calmness of the first voice and the restlessness of the second. Both voices are executed with one hand which demands a fair amount of technical alertness.

Expressive complexity also derives from the rhythmical layout. Both hands have very similar material to deliver but their phrasing starts on different beats so at all times this complex character is emerging from somewhere, resulting in an additional note of urgency to an already uneasy blend.

Romance Op 118 No 5

I would define a Romance as a manifestation of a romantic state of soul. It can be demonstrated in many different forms. This piece manifests it through the purity of harmonic relationships and the tenderness and grace of its motion. To me, the piece takes on a relaxed, pastoral character.

From the pianistic angle, the most curious aspect I find to be the transparency of the middle section. It results from a unique blend of harmonic language, articulation and breathing within the pulse.

Intermezzo Op 118 No 6

This composition is another undoubted masterpiece that reflects a draining thought process. Of all the challenges related to the artistic outcome of this Intermezzo, I found the practice method to be the biggest.

When sound is seen as a materialisation of the composer's thinking process, then the mental power of a performer needs to equal the power of thought that lay behind the creation of the piece. The trouble here is that the same amount of mental power is needed whether the piece is performed in a concert or during the practice hours. Since mental effort can result in physical exhaustion, then the pianist after a while finds itself in a mentally and physically unfit condition for a meaningful practice session, much less for the performance of the same. Therefore, the destiny of this piece is often to be practised in sections.

PART B. Johannes Brahms: Klavierstücke Op 118

In cases like this, the time spent with a piece, but away from a piano, can be of great help as it focuses the thoughts but does not engage the same kind of energy that is needed for actual performance. When the piece is practised like this (in addition to the time spent at the piano), the expressive power accumulates while being stored. Ideals of interpretation are purified, and, for an interpretative goal to be achieved, less time at the instrument is required.

Artistic Challenges: Diagnosis and Solutions

Discussion of the six piano pieces from Op 118 is like a short study of Brahms's sonority experienced through recorded sound. Examples will show how issues of resonance were considered within the complexity of Brahms's sonority and compositional style. Furthermore, the impact of the instrument upon dynamics is addressed, *legato* and phrasing as well as the influence of acoustics on weight distribution, articulation and pedalling, time flow and the process of learning.

Example no 33: J.Brahms, Intermezzo Op 118 no 1, bars 35-36



A problem faced in recording this piece was the use of the pedal. In particular, a gradual release of the pedal, such as in bar 35, proved to be extremely problematic. As this is a peculiar example, one additional excerpt from numerous takes made during the second recording session is submitted.

To achieve an acceptable result with a gradual disappearance of the pedalled sound, one must overcome two main obstacles. Firstly, the dampers must exert an equal amount of simultaneous pressure on the strings when closing down the sound. Secondly, the time provided for this action must be precisely anticipated for the needs of a particular instrument.

The complication arising from failure in either case is that during the gradual return of the dampers onto the strings, the sound loses its main characteristics, such as pitch, intensity and timbre. Harmonic relations are disturbed during this process, and we are left with a set of harsh sound remains that are clearly captured by microphones. While the first musical example captured an overall too slow clearance of pedal during the integral performance of the piece, in the second example the problem appears as a brief, but unpleasant listening

experience that in this case appears on A in the first voice, during the second beat in bar 35. In the absence of this little discrepancy, the second example would be my preferred one.

Solving artistic issues by dealing with laws of physics is not a pianist's dream. The fundamental solution to this issue would be to patiently try out the slow clearance of a pedalled sound prior to the recording session, as experience will differ from piano to piano.

In this case, the best pedalling result was achieved in the third example, by quick release of the pedal to the half position, kept there for a moment and then released even more quickly to the end. This strategy may not be applicable to all pianos.

Example no 34: J.Brahms, Intermezzo Op 118 no 2, bars 16-24

One of the most distinctive dimensions of Brahms's sonority is the capaciousness of a sound within its volume. To achieve this quality, the contours of a sound should be comfortably outlined so that the tone appears defined but not captive. During the recording of the second Intermezzo some problems were experienced in fulfilling this objective.

In bars 16-24 the desired, unrestrained quality of sound and the feeling of smooth progression of melody were not achieved. Part of the problem was certainly a slow paced pulse which provided plenty of time for the mechanics of the piano to interfere with the artistic intentions and to transmit into the recorded sound.

I find it impossible to explain objectively how we can achieve an unrestrained quality of sound when performing on an instrument that has a certain number of strings of particular length, a precisely engineered mechanism of hammer action, the most definite depth of key stroke and many other scientifically calculated proportions within its structure. However, I am convinced that many mechanical obstacles can become less apparent if an appropriate frame of mind has been set during a performance.

In instances like this, the mechanical complexity of the instrument should simply be ignored. In this example, the weight should be released on the small finger that is holding the bass voice, while the remaining component of the movement should seem as a gliding of the hand in a circular motion above the keys, as if contact with the keys is not going to be made. Contact with the keys certainly occurs but it is crucial to ignore this, focusing instead on the gliding sensation and listening to the sounds that the gliding produces. Therefore, of all elements involved in this process, only two are of constructive value to the artistic outcome: the sensation of a gliding movement from a human perspective and a sound board that projects the sound generated by the gliding movement. Involvement in other aspects of the sound production would highlight its undesired, mechanical components.

Sensitivity towards the execution of this and similar strategies needs to be exceptional for the recorded performance as the smallest discrepancy in the original idea appears as a severe deviation in a recorded product.

Example no 35: J.Brahms, Intermezzo Op 118 no 2, bars 30-34

The image shows a musical score for Johannes Brahms' Intermezzo Op. 118 No. 2, specifically bars 30-34. The score is written for piano and is in G major (one sharp) and 3/4 time. It consists of two systems of music. The first system starts at bar 27 and ends at bar 32. The second system starts at bar 33 and ends at bar 34. The score includes dynamic markings such as 'f', 'espress.', 'p dim.', 'calando', and 'dolce'. There are also fingering numbers (1-5) and articulation marks (accents) throughout the piece.

In my mind, Brahms is a sculptor among the painters because the way his sonority projects I experience as three-dimensional. This kind of sonority arises from the specific way in which the resonance of the piano is perceived in the acoustics of the hall where the piece is performed.

Three-dimensional sound is recognised primarily by its deepness. The deepness I am referring to should not be confused with that created by a “deep colour” of tone. Deepness is a term that I use in recognising the portion of a space which the sound is occupying as it pulsates. How do we come to feel the deepness in a sound and, especially, how do we create the impression of deepness within each of the voices concerned?

As mentioned before, this concerns the way in which the resonance occurs. I feel that the sonority of Brahms’s compositional style is suggested through a simultaneous appearance of different qualities of the resonance and through precise timing when change of these qualities occurs. I consider that the basic level of a resonance is established by means of tone production, the nature of the instrument, and the acoustics of the performing space. The element that enriches the basic resonance is the sustaining pedal. The amount of resonance within a phrase where the means of tone production had already been selected is controlled by the frequency of use or exchange of the pedal and the depth to which the pedal is depressed

when used. Basic resonance highlights the inner properties of each voice but also increases awareness of the vertical harmonic structure. Richer resonance blends these properties. Precision of timing between establishing the vertical harmonic relations and inner properties of voices through the basic resonance and their blending through the addition of richer resonance provides a specific sonority and sense of timing through pulsation of resonance, which I closely associate with Brahms.

In this passage, the problem, as I perceived it, was that the basic level of resonance for each voice was not established before enrichment of the resonance occurred. To accomplish this, careful voicing of timbres is essential because voices are in this case sharing the same register, and articulation is not diverse. In addition, the use of the sustaining pedal must be delayed. By providing this time delay, the listener can clearly distinguish the vertical harmonic relations and inner properties of each voice. Because the different resonant quality for each of the voices was established before blending of the resonances began, I feel that, once the richer resonance does occur, it emerges from a different location in the space where the piece is performed.

Example no 36: J.Brahms, Intermezzo Op 118 no 2, bars 49-56

The image shows a musical score for two systems of staves. The first system is labeled with a box containing the number 49 and the tempo marking 'in tempo'. It features a treble clef with a key signature of two sharps (F# and C#) and a bass clef. The music consists of eighth and sixteenth notes with various articulations and phrasing slurs. A triplet of eighth notes is marked with a '3' below it. The second system is labeled with a box containing the number 53. It continues the musical line, ending with a 'rit.' marking and a final triplet of notes (3, 2, 1, 3) marked with a '3' below it.

Sometimes, the desired property of a sound is not contained within the natural spectrum of the instrument used for performance. In this situation we have two choices. We can either work within the piano's natural ability or we can make an attempt to manipulate it.

In this section of the A major Intermezzo, the melody in the left hand sounded as an accompaniment to that in the right hand. That was not the intent. Voices should be distinguished by the quality, not necessarily by the amount of their sound. This discrepancy occurred because the natural, felty sound of the piano did not offer the translucent quality which was needed to establish the character of the right hand melody. In attempting to introduce some light into the sound, the right hand melody was performed with more curved fingers, as the tip of a finger provides clarity to the sound. While I did manage to generate more clarity in the sound of the right hand melody, the change of touch increased the dynamic level and emphasised the three-against-two cross rhythm. This resulted in the balance and communication between the voices being lost, with the melody in the right hand losing its natural and smooth motion.

My judgement was that the original concept of this section had been greatly disturbed and that I needed to decide on an approach that would be less compromising. I decided to work within the natural spectrum of the sound of the instrument. Although this reduced some of the transparency that I was aiming for, I did achieve a reasonable amount of clarity in the right hand, while gaining a smooth delivery of both the rhythmic and melodic aspects.

Example no 37 (a): J.Brahms, Intermezzo Op 118 no 2, bars 64-68

The musical score for Example no 37 (a) consists of two systems of music. The first system begins at bar 63, marked with a box containing the number 63. It starts with a 'rit.' (ritardando) marking and a dynamic of *pp* (pianissimo). The tempo is marked 'Tempo I'. The right hand features a melodic line with various ornaments and fingerings, while the left hand provides a rhythmic accompaniment. Performance instructions include 'rit.', 'espress.' (espressivo), 'cresc.' (crescendo), and 'tre corde'. The second system begins at bar 68, marked with a box containing the number 68. It continues the melodic and rhythmic development of the first system.

Examples 37a and 37b are similar to the previous one but interesting to hear in light of the previous argument. In these instances too, attempting to radically influence the nature of the instrument during the recording session did more harm than good.

At this point, during the first performance, I was doing everything in my power to open up the sound, which included quicker contact with the bottom of the key. In the live experience of the sound, this seemed effective.

In the first example, *Tempo primo* takes over from *più lento* chords. The change of tempo and pulse is, by itself, enough excitement for the right hand melody at its entering point. Making quick contact with the bottom of the key speeds up the contact of the hammer with the string and opens up the sound. The recorded outcome revealed that this caused the right hand melody to appear turbulent and commanding in a section that should initially only imply a calm and restrained manner. The more dramatic development is reserved for later.

Example no 37 (b): J. Brahms, Intermezzo Op 118 no 2, bars 93-97

The image shows a musical score for two systems of music. The first system, starting at bar 92, is marked 'legato' and features a right-hand melody with a long slur and a left-hand accompaniment of chords. The second system, starting at bar 97, is marked 'calando' and includes dynamic markings 'f', 'espress.', and 'p dim.'.

Almost the same can be heard in example 38 (b). *Legato* motion and the continuity of progression in all voices were lost in an attempt to achieve the contact with the key necessary to produce the desired colour of tone.

In a recorded performance, the only relevant receptors are the microphones. This is one of the most unsettling aspects of the recording process as we cannot always anticipate what they will register.

My choice in these examples came down to selecting the least harmful option, as my true ideal could not be achieved. Therefore, I chose the most natural approach, the one that shaped the phrase well and blended naturally the colours of the sound that the piano had to offer. I also shortened the distance to which I was performing so as to avoid any possible exaggeration.

Example no 38: J.Brahms, Ballade Op 118 no 3, bars 10-23

The musical score is presented in three systems, each with a measure number in a box at the beginning of the first staff. The first system (bars 10-14) is marked *rit. ten.* and *p*. The second system (bars 15-19) is marked *poco cresc.*. The third system (bars 20-23) is marked *cresc.* and *sf*. The score includes various musical notations such as slurs, ties, and dynamic markings.

Listening to this fragment leaves an impression of excessive use of pedal. In my opinion, this was not the case. The problem was that the interpretation was not accomplished in a way that justifies such use of the pedal.

As mentioned repeatedly in previous examples, the sound of this Steinway grand did not seem Brahms friendly for most of the Op 118 pieces. This section certainly sounds more like a battle with the instrument than like a performance on it.²⁵

Here we have three different melodic elements involved. In an ideal set of circumstances, each should be allocated its own space for communication. My problem was that, at the time, I could not distinguish the first voice by placing it in its own space (distant enough from the second voice) without seriously transgressing the desired dynamic level. Because of the ongoing battle to find an appropriate colour (one that was not “felty”) and place for the first voice, the middle voice could not find its proper orientation, which in the end confused the octave movement in the bass register as well.

My feeling prior to the second recording session was that the first voice would not be able to improve and sustain its quality if the second voice was given sufficient significance. In order to make sure that the desired overall feel of this section would be delivered, I smoothed the agogics and hid the second voice a little further. This way, the first voice gained some much needed space to express itself. Having the top two voices located and defined, the third one received clearly designated space for its own free movement. In this recording, my impression was that the sound of the piano was captured with an improved image.

²⁵ See Mohr Franz, *My Life with the Great Pianists* (Raven’s Ridge Books, Baker Books, 1998) 125. Interesting statistical information is provided by Franz Mohr, the Steinway’s former Head Concert Technician: “Many times the instruments need to be ‘broken in’, needing a bit of time before they are ready. Perhaps one among ten new instruments I work on is immediately ready for the concert stage.”

Example no 39: J.Brahms, Ballade Op 118 no 3, bars 41-56

By this stage of my research, it was sometimes difficult to relate to the concept of a concert performance while setting aside the experience and knowledge I gained in regard to the process of recording. I had experienced similar discomfort just briefly on a few occasions previously, but this time it was more prominent. I concluded that this problem resulted in the same unsettling thought every time: I was not sure to where or to whom I was directing my sound. I had the strong feeling that the projection of sound that would normally be appropriate inside the venue would not necessarily be projected with the same success through recording. And every time, as a consequence, the quality of the recorded sound became inconsistent, with a clear tendency towards exaggeration. In particular, this was the case during the first recording sessions when I was aiming to achieve integral, concert versions of each piece.

Glenn Gould said the following about his experience with recordings from concert venues:

...I was making an unnecessarily rhetorical statement about the music, simply as a consequence of having attempted to project it in very spacious acoustic environments. In a studio, where the pick-up is close to the piano, you can achieve a very similar effect

to that which the listener enjoys at home. The relationship of the piano to a microphone which is, let's say, eight feet away is very similar to the relationship between the listener at home and his speakers.²⁶

I believe that Gould was referring to “unnecessary rhetorical statement” as perceived through the recorded sound.

From the aesthetic point of view, there are many different approaches to recording. Achieving a sound with the qualities of a chamber performance is one aesthetic category. Another would be achieving recordings that aim to project the spaciousness of a concert venue. The performing ideals of each would be somewhat different. Either way, the distance to which the sound is projected remains an especially important issue.

With reference to this example, the problem was actually not so much that I did not know what my main aim was, but rather that I was inconsistent in pursuing the aim due to the knowledge that what I was aiming for would probably not have a satisfactory recorded result. Inconsistencies of this kind are audible through recordings and they may bother the listener.

In the first recording, an accent on the second beat in the first voice in bar 44 can be noticed as well as overly expressive agogics in both the first and the second voice in bars 47 and 48. This caused unevenness in the left hand movement. In general, the section sounded exceedingly energetic and excited. The original intention was to create a fluid motion.

At this time during the second recording session I had no better solution than to direct my sound to a distance closer to the microphones. In this way, I hoped, the recorded sound would assume more modesty and grace, while fluidity would be achieved through consistency of the interpretative aim. These kinds of adjustments are similar to those we apply when performing in small venues.

²⁶ Elyse Mach, Glenn Gould interview, in *Great Contemporary Pianists Speak for Themselves* (Courier Dover Publications, 1991) 89.

In the second recording, the overall flow of the middle section was captured much more successfully, the idea of *pp* is more evident and fluidity is achieved. However, I noticed that bars 46 and 47 sounded superficial which made me realise that playing Brahms “to the microphones” was not a general answer to the problem. The sonority of Brahms should not be imprisoned.

Example no 40: J.Brahms, Intermezzo Op 118 no 4, bars 16-28

The image shows a musical score for Johannes Brahms' Intermezzo Op. 118 No. 4, bars 16-28. It is written for piano in G major, 3/4 time. The score is divided into three systems of staves. The first system (bars 16-20) includes the instruction *più p e delicatissime*. The second system (bars 21-26) includes the instruction *dolce*. The third system (bars 27-28) includes the instruction *poco cresc.*. The score features intricate piano textures with various articulations and dynamics.

For a concert performance in a hall that seats 630 people, the level of delicacy was, from what I could perceive, just appropriate and well balanced within the wider context. For the recording of the same, it was not enough.

Some performing solutions that lead to a successful recorded product set the performer in an uneasy frame of mind. One of them is created when the desired outcome requires a different approach from that suggested by the acoustics of the hall. To achieve the desired delicate quality in the recorded sound, the whole section needed to be less articulated. Adjusted articulation felt essentially inappropriate for the live experience of the sound. However, the recorded result justified this effort, and the *delicatamente* effect was accomplished with more success.

Example no 41: J.Brahms, Intermezzo Op 118 no 4, bars 51-67

The image displays a musical score for Johannes Brahms's Intermezzo Op. 118 No. 4, specifically bars 51 through 67. The score is written for piano and is in G major, 3/4 time. It is divided into three systems of music. The first system (bars 51-53) features a right-hand melody with eighth-note patterns and a left-hand accompaniment of chords and eighth notes. The second system (bars 54-62) continues the melodic and accompanimental themes. The third system (bars 63-67) concludes the section with a final melodic phrase. Performance markings include 'dim.' (diminuendo) and 'pp e dolce sempre' (pianissimo and dolce sempre). Pedal markings include 'Ped.' and 'Ped. simile'.

In the first recording session, accents on the chords in the left hand in bars 52 and 54, along with all phrase beginnings in the left hand through to bar 67, lost their sense of dialogue with the right hand. Losing the repetitive sequenced pattern in this section meant that the main interpretative idea had failed.

One part of the problem was that the section is marked *pp dolce sempre*, and this created issues that I have discussed at length in other examples. Another part of the problem was that, at this stage of the session, I had lost the thrill of performing. This is a problem of a personal nature but it is one that many pianists experience in a recording environment. When it happens, the thinking process becomes too technical and theoretical for a rewarding creative process to occur. It is important to be able to recover quickly.

In general, sources of inspiration can be found in the music we perform, the instrument we play, an appreciative audience or an engaging acoustic. However, each of these elements can fail us. After a certain number of repeats during a recording session, our music might appear less inspirational or we might not experience the instrument or acoustics in the same way. An

audience in attendance is not part of a regular recording session so loneliness might also become an issue. This means that we have to develop a strategy that helps us maintain our performing energy and imagination in a way that is not dependent on the quality and type of the recording environment.

For me, this was initially a real problem, but after extensive hours spent in recording sessions, I managed to find a mental approach upon which I could rely. This approach recognises that, even when recording, we are still performing for an audience - it is only that the audience is invisible and unfamiliar to us. However fanciful, this concept can help in two ways. Firstly, it can provide comfort to a performer who considers an awareness of a human audience to be a vital component of an accomplished performance. Secondly, the aspect of a recorded performance being appreciated in the privacy of a smaller space (compared to a large recording venue) could be a tool that enables us to adjust more naturally when the problem of a recorded sound is caused by a very big or overly reverberant venue. I am referring to the set of problems created by projection of a sound across a long distance. In a recording this often results in excessive dynamics and volume, even in exaggerated expressive gestures caused by communication with a spacious recording venue, as described earlier.

In any performance format, we are aiming for the same artistic values but the means of achieving them will vary. In many instances, an imaginative psychological tool is all it takes to manage the problem, especially when it concerns performing inspiration. Therefore, it is worth having some such strategies at hand as it is highly likely that they will be needed.

Example no 42: J.Brahms, *Intermezzo Op 118 no 4*, bars 99-106

The image shows a musical score for Johannes Brahms's Intermezzo Op. 118 No. 4, specifically bars 99-106. The score is written for piano and is in G minor, 3/4 time. It consists of two systems of music. The first system (bars 99-104) is marked *più agitato* and features a driving, rhythmic pattern in both hands. The second system (bars 105-106) is marked *sf espress. legato* and shows a more melodic and expressive passage. The score includes various musical notations such as slurs, accents, and dynamic markings.

In this fragment, *più Agitato* is created within the motives that resemble canonical order, delivered with both hands. After the first listening, my impression was that this section simply ran out of control. The swing of the melodic movement within each motive seemed so strong that precision and clarity of the beat were undermined. Only in the second listening did I notice that there was nothing wrong with the beats. They have elastic precision, exactly the kind I wished for. The problem was that the use of pedal provoked too much resonance in the sound. The amount of resonance created a problem for the accented notes (that fall on every beat) in that they struggled to come through clearly.

To correct this section, the use of pedal had to be more commanding. In the second recording, the change of pedal promptly followed the accented notes and the second voice motives were made less prominent so that the accents could prevail.

Example no 43: J.Brahms, *Romance Op 118 no 5*, bars 1-9

Andante

espressivo

4

rit.

8

-p più espressivo

The opening four bars of *Romance* introduce three melodic lines of concern. The common way of delivering a melodic line is to engage with the horizontal progression of notes that form the melody. By establishing meaningful relationships between these notes, a convincing melodic line is achieved. In the case of Brahms, however, melody needs to be considered within the context of the harmony and underlying sonority. The notes of the melody can then be connected through their relationship with the vertical harmonic structure upon which they are laid.

In the first recording, this concept of vertical and harmonic integration was not obvious enough. Instead, melodies took on a linear expression that introduced too much fluctuation both in regard to pulse and dynamics. They did not fit well within the framework of the harmony and sonority.

To achieve higher awareness of the vertical and harmonic structure in the recorded sound, I needed to free my mind from an overly cautious approach during the first recording session. For this to be achieved, it was necessary to trust the instrument. I decided to use the left pedal that had not been used in the first recording for fear of making the sound more muffled than it already was.

The left pedal wiped off the sharpness from the melodies and helped produce a sound that shaped the resonance more neatly in the rest of the voices. The different resonance introduced more transparency in the blending process throughout the vertical layout, while at the same time preserving the integrity of the horizontal projection of sound.

Example no 44: J.Brahms, Romance Op 118 no 5, bars 17-19



The tempo of this section is exactly the same in the first and the second recordings. Yet, in the first recording it sounds slower. The sound captured in the first recording reveals insufficient resonance between the notes to provide the necessary continuity of sound. This resulted in a certain emptiness that gave an impression of unintended delays.

I became aware of this issue only upon hearing the recording. The cause of my dissatisfaction with this fragment is similar to the one discussed in example 37 but the form of the appearance is different.

Practising and performing is all about making the sounds we hear in our head audible to others. The colour of tone I was hearing in my mind for this section was exciting and rare. Therefore, I made it an objective above all others, forgetting that fine details are justified only if they bond naturally with other aspects of interpretation and if the circumstances permit successful delivery.

In this instance, I do not think that the problem was provoked by the recording environment. I believe that the pulse I was seeking for this section could not accommodate the time that I needed to produce the desired combination of colour and texture in the sound. This mismatch between the rhythmical and sounding properties of the tone appeared as a delay. Time delays in a recorded sound are, in my opinion, always audible and never justified.

In general, this is another example that confirms how important it is to control the resonance of the piano. During the second recording session I made this aspect a priority and adjusted my touch so as to obtain a more fluid resonance. Although at the time I believed that I was closer to my objective in the first performance, I can now say that the outcome from the second session was superior.

Example no 45: J.Brahms, Intermezzo Op 118 no 6, bars 13-16

The problem contained in this fragment is a combination of several issues experienced elsewhere.

During the warm up time, I noticed that my accustomed pedalling was not compatible with the acoustics of the hall. The way I was hearing it suggested that the pedalling I was using carried through an excessive amount of sound from the triplet motive in the bass register. This disturbed the nature of the main melody in double notes. I decided to change pedal more

frequently and make the double-note melody more prominent so as to avoid the confusion of sound.

The recording revealed that the timing was shattered and that the pedal changes divided one idea into two. It created two melodic lines (double notes and the triplet motive) where I was aiming for one. In this fragment I hear only one melody, which is carried by the double-note movement. In my conception of this passage, the triplet motive in the bass register is a mist through which the melody appears.

Interpretation is a result of an extensive creative process. Before sharing it in a performance, we ensure that all pianistic means of interpretation are selected carefully to lead towards a faithful delivery of our thoughts and feelings. I find that an imperfect performing set up should not initiate rushed decisions that might influence the core idea of a piece or its segment. No matter how well considered such changes may seem at the moment, I feel that it is better to engage the accustomed interpretation and only upon listening to the recorded sound decide if something should be changed.

After the assessment of the first recording, I decided to continue with my accustomed pedalling, but to use only three quarters of the normal pedal depth, while fully honouring the remaining aspects of interpretation. In this recording I also managed to achieve a very effective slow clearance of the pedal (on the first beat of bar 13). This had also been an issue in the first Intermezzo.

Summary of Issues

During this project, I performed on three different instruments. Evaluation of recorded outcomes made me conclude over and over again that the general character of an instrument will be captured and recognised in a recorded sound. I found the attempts to influence its nature, should this be considered a cause of dissatisfaction, not to be truly rewarding. It seems wise to make friends with an instrument prior to recording, even if it is not perfectly suited to the piece. Treating its general character with respect for what it is will bring a better result than any attempt to change it (not provoking its undesired elements seems also a good strategy as well as disguising tonal inconsistencies, as discussed elsewhere). However, getting to know the character of an instrument as closely as is needed for a successful recorded outcome requires longer rehearsal sessions.

As a concert performer I am not very much in favour of prolonged rehearsals on the instrument that will be used for a performance. This is mostly because my perception of an instrument during the concert performance tends to be much different from that gained during rehearsal time. On many occasions I found that my opinion about the nature of an instrument, acquired during rehearsals, was more confusing than helpful within a concert frame of mind. Additionally, there are times when a lesser degree of familiarity with an instrument stimulates a higher level of engagement at the moment of performance.²⁷ For a concert performance, alertness of this kind can be very important as live performance can be unpredictable and we need to cope with arising issues as they appear during the single chance we have to deliver a piece.

In a recording session, quick responsiveness is not essential as most of the factors that influence the perception of a sound are the same during the rehearsal and performance time. Due to lack of audience in a recording session, neither the performer's frame of mind nor the acoustic properties of a venue change (I am not considering fine acoustic changes influenced

²⁷ See Robert Philip, *Performing Music in the Age of Recording* (Yale University Press, 2004) 22. Fritz Kreisler said "I never practise before concert. The reason is that practise benumbs the brain, renders the imagination less acute, and deadens the sense of alertness that every artist must possess...The extra alertness required to master any uncertainties that may exist enables me to play even better."

by weather conditions, such as the level of humidity inside the venue). Therefore, the relationship developed with it in rehearsals is valid throughout the recording session and the time spent bonding with the instrument and the acoustics becomes extremely useful. In addition, many methods of tone production need great sensitivity during a recording, and developing a proper feeling for the sensitivity of key motion of particular instrument takes time. Furthermore, the pedalling action is also best if well investigated prior to commencement of a recording.

In regard to the pedalling techniques, my recordings highlighted a number of issues. The sustaining pedal mostly creates problems when slow clearance is required. Discrepancies that occur are obvious to the listener in both the live and recorded sound. However, I would suggest that the listener of a recorded outcome is more aware of and less tolerant towards undesired elements which use of the sustaining pedal can produce. The left pedal can also be problematic and should be tried out in advance. Unfortunately, the sound achieved with use of the left pedal does not appear the same in a recording. It is best if tried out in different dynamic levels and registers through a “test” recording, instead of relying on any impression gained from listening to the live sound.

Test recordings reveal how well the instrument and the acoustic properties work together and how effectively they are reflected through the format of an audio CD. This is critical in determining the distance to which the sound is projected. It is by far preferable if the recording set up enables the performer to fully communicate with both the capacity of the sound of an instrument and the size of the performing space. Should this not be possible, it would be of great advantage for a performer to understand what adjustments are necessary, and to adopt the performing approach prior to recording.

Before closing this discussion, it is worth noting an exciting realisation that came to me as a result of this research.

During this project I managed to develop an insight towards an important aspect of recording: the relationship with an audience that can be experienced during a recording session. If carefully thought through, the aspect of communication with a listener of a recorded product (as an audience) can be truly exciting and in many ways rewarding for a performer. I would

venture to suggest that expectations of a listener of a recorded performance are quite different from those of a concert patron. Should the expectations of the listener of a recorded performance be the same as those of a concert audience, then the live presence of an audience in a recording session should be greatly missed. But they are not. When listeners wish to experience the kind of excitement that a live performance can provide, then they go to a concert, listen to live broadcasts or purchase a recording of a live concert event. A listener of a recorded performance does not anticipate the kind of excitement that arises from the often spontaneous creativity (and, on some occasions, the experimental interpretative approaches) which adds to the specific excitement and exclusivity of a live performance.²⁸ I trust that a recorded performance should be a matured and well settled interpretation of a piece. As such, it can benefit greatly by being communicated to a silent and distant listener. This concept is very different from the one we commonly engage with in a concert setting but, nevertheless, it can be equally exciting.

²⁸ See Irving Louis Horowitz, "Mass, Class and Audience: Beyond the Glenn Gould Problem", *Modern Age* 51/1 (2009) 6.

Conclusions

My realisation prior to embarking upon this research was that the knowledge derived from performing in a concert setting cannot necessarily be applied unchanged to successfully serve the purpose of recording. The most curious issues for me were those regarding the authenticity of interpretative ideas when projected through the medium of recording. What I felt I needed to learn was how to manage the recording process so that its final outcome might reflect more closely the ideals which I was achieving with considerable success in live performance.

This project was very much centred upon my own personal artistic aims and philosophies. It was intended to target artistic solutions that might have practical value for a pianist engaged in the process of recording.

The main investigative tool was performance. Investigation was pursued through studying, rehearsing and recording six items of repertoire, then evaluating the recorded outcomes in each case. Each of the six works was subject to the same investigative pattern which included: preparation (as would normally occur for a concert performance), recording, evaluation of the recorded outcome, further preparation based upon feedback received and re-recording of that piece. Issues and findings were then documented.

As previously noted, my main concern before engaging with this research was how to achieve an authentic translation of interpretative ideals into recorded sound. I was always assuming that managing this process from a pianist's perspective begins and ends with the performance in a recording session. During this project I developed an insight into the full scope of the recording process and understood that managing a recorded performance neither begins nor ends with the recording session. The end point of the performance is when it actually reaches the listener. That is to say, a recorded performance is not shared with listeners inside the performing venue but is delivered to them by the medium of recording into a space of their choice. During transition and packaging of a live sound into the format of an audio recording, the relationships between some elements of the sound change. The newly established relationships often do not reflect authentically the performer's intentions. For this reason, recognising the nature of the factors that govern this transition of the sound is actually the starting point in management of a performance during a recording session. These factors do not influence the performer or the live experience of a sound directly but they set certain

rules, limitations and expectations. The performer needs to be aware of these as authentic transition of artistic ideals through recorded sound will be conditioned by them.

It is this translation of live sound into recorded sound, together with the presence or absence of an audience, which at times makes it necessary for the performer to utilise different strategies in the studio compared to those adopted in the concert hall. Assuming that the performer is already well accustomed to the concept and strategies of concert performance, the remaining elements for investigation are those introduced by recording. This research has recognised that in order to identify rules that apply within this format, it is necessary to engage in a purposefully structured and analytical process that examines specific elements relevant for a performer, all of which can be perceived through the role of a listener.

There are various levels of listening engagement. For the purpose of becoming fully familiarised with images of a recorded sound, the performer needs to be seriously engaged in the listening process. This will help develop a deeper and more personal understanding of the characteristics and varieties of the recorded sound, and increase awareness of how to react to those performing elements during a recording session. Furthermore, and with reference to the perspective of a distant listener constituting an audience for a recording artist, a genuine association with the listening role makes the performer accustomed to and comfortable with this perspective, creating a psychological advantage during a recording session when absence of an audience can sometimes have a negative impact. Awareness of the recording outcomes as experienced by a listener will further sharpen the performer's perception with regard to optimal levels of expressive engagement, different aesthetic values of a recorded product, and ways in which they are perceived when experienced through the format of a CD or similar audio medium.

In general, connecting with the environment of a listener and understanding images of recorded sound through a listener's perspective enables a performer to relate to essential aspects of recording which are beyond reach during a performance. Developing a strong sense for their values prior to commencing the process of recording will enable the performer to achieve the right frame of mind for performance during a recording session and to approach the challenges of the recording process with more awareness and competence.

Further preparations for the recording continue inside the recording venue, by becoming acquainted with the instrument and the acoustics of the space. Rehearsal time is important. In my view, the longer it is, the more beneficial it could be. Considering that recording equipment is extremely capable of conveying undesired elements of sound (in particular, the percussive hammer action of a piano's mechanism becomes easily perceived), a performer's ability to fully control the key motion of the instrument used for recording will avoid many disappointments. In addition, sufficient rehearsal time is needed to explore the pedal action, to bond with the nature and capacity of the sound and, most importantly, to develop an awareness of how these characteristics relate to the acoustics of the venue. I find essential a certain number of test recordings as they can reveal how well the instrument and the acoustic properties work together and how effectively they are reflected through the format of an audio recording. Although I did not have any test recordings prior to any recording session during this project, I consider that the recordings of the integral version of each of the pieces did in a way serve a similar purpose. If considered from this angle, the project established the value of test recordings through all primary findings which were based upon evidence that was captured in the first recording of each piece. Relevant evidence that arose as a result of their evaluation has been discussed throughout the exegesis with reference to particular pieces and compositional styles.

Through evaluating the recordings, I came across a number of issues which I consider highly relevant for this topic. However, the research has pointed out that there is one element that more than all others influences and determines the quality of transmission of one's interpretative ideals, and that is the element of resonance. Issues of resonance, as perceived through the acoustics of the recording venues, have been discussed with regard to every piece that was performed. Whatever the musical context may have been, the nature of the instrument, the acoustic properties of the recording venue, or the settings of the recording equipment, adjustments in the amount or type of resonance seemed to be crucial in achieving better recorded results in a great number of examples. Therefore, I found the identification and subsequent handling of those elements that affect resonant properties with regard to a particular musical context to be of primary concern. Sometimes, adjustments in this respect might not be needed at all. However, the only way to establish if they are needed or not is to listen to a test recording. My recordings revealed that attempts to achieve richer resonance affected the delivery of *staccato*, the sense of timing through rests, and pedalling throughout the repertoire. With reference to particular compositional styles, the greatest challenge was in

resolving resonance issues in thicker *f* and *ff* textures in Prokofiev, outlining of the symphonic scope and phrasing in Schumann and the sonority of vertical textures in Brahms through all dynamic levels.

Less resonant sound (as experienced through the acoustics of the particular recording venues) seems to be unproblematic for conveying into the format of an audio recording. However, once the resonant properties of a sound are reduced, the undesired inbuilt properties of an instrument are often revealed. This has resulted in the perception of inconsistencies in tonal colour between different registers of the instrument and jeopardised the continuity of sound in softer, slower passages. These issues arose mostly in baroque and classical styles of Bach and Mozart. There are also particular issues with reproduction of the softer side of the dynamic spectrum, especially when the dynamic range is extreme as in the case of Prokofiev. In these instances, the less resonant quality of a sound in *piano* level sounds louder than intended. The full scope of this issue has been discussed in the Summary of Issues that concludes the section devoted to Prokofiev.

The set of conclusions regarding resonance may need to be applied differently, according to each particular recording context. However, it is my overwhelming impression, based both on the evidence of the recorded outcomes and on the personal experience of the sound during the performance, that an authentic transmission of one's interpretative ideals will greatly depend on establishing properties of resonance that can effectively reflect the interpretative ideals through the format of an audio recording.

One aspect of the research was an exploration and comparative analysis of how the performing elements were addressed in both the first and second performance of each piece. In reflecting upon such elements, which include aspects of dynamics, phrasing, pedalling, timing, tempo, articulation, voicing and agogics, the convenient and simple fact emerged that performance for recording purposes requires only techniques that pianists commonly employ in other performing environments. When examined from this perspective, recording is not a field of the unknown. Rather, it is familiar, in the sense that recorded performance calls only upon techniques that a pianist is already skilled to engage in immediately, without prior recording experience. This is comforting knowledge that can provide some confidence for a performer. However, it is well worth noting once again that the technical nature of the recording process can easily trap a performer's mind into a technical frame. While

acknowledging the existence of some technical aspects in a recording session, the performer's constant engagement with higher artistic concepts and active decision making with regard to performing elements as defined above will maintain an alert creative sense through the challenging format of a recorded performance.

This research has further identified and explored a range of "breathing" factors that impacted upon the recorded sound. Examination of these issues emphasised that the properties of the instrument and of the acoustic space used for performance, the impact of an audience and the nature of the repertoire are all factors that are commonly considered in any performance context. In my experience, the most distinct difference between a concert and a recorded performance is associated with one's perception of these factors. There may be circumstances in which a performer's intentions are precisely reflected in a recorded product. Where that does not occur, adoption of the strategies and mental approaches that have been suggested throughout this research might be of help. These include consideration of the audience, the distance to which the sound is projected, the level of responsiveness towards the acoustic properties of the instrument and venue, and the mental approaches that can reinforce awareness about the values of the recorded sound. As documented throughout the exegesis, the understanding of these factors will have an impact on the player's approach towards many different elements of performance and may provide a clue for addressing problems when they do arise.

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