Introduction

This DMus submission, entitled *Translating Twenty-First-Century Orchestral Scores for the Piano: Transcription, Reduction and Performability,* sets out to explore the field of practical piano reductions of contemporary orchestral scores, with piano concertos at the centre of attention. The research is focussed around two case studies, and this part of the submission consists of complete reductions of the orchestral parts of works for piano and orchestra by the living British composers Mark-Anthony Turnage and James Dillon. Both reductions have been created by the researcher; and are intended to be viable for use in professional situations; both have received the full endorsement of their respective composers.

Because there so far exist very few published piano reductions of twenty-first-century orchestral scores, what professional piano accompaniment practice there is in this field tends to rely on score-reading techniques to produce an adequate representation of acoustic impressions of the orchestral material, whose soundscape often includes elements that transcend traditional pitch-based sound production. As a result, solutions are highly subjective, typically made spontaneously, and as often as not, ultimately fail to provide adequate support for the soloist in either rehearsal or performance.

My research over the past six years has been an iterative process, consistently based on my own practice as a professional collaborative pianist, coupled with deeper analysis of the original orchestral materials than is normally possible in the little time available in the professional working environment. A further aim has been to come as close as possible to producing publishable – and therefore reproducible – piano reductions of the orchestral parts for the two works investigated in the case studies. This process has included consulting both composers in semi-structured interviews which, alongside the reductions, form the primary outputs generated by this research.

The genesis of my interest in piano reductions of orchestral works is rooted in my experience as a professional performer, often confronted with the challenge of representing complex scores in piano transcription.[1] As a professional pianist, I have always been fascinated by the

[1] I studied piano up to the Artist Diploma level at the Estonian Academy of Music and Theatre in Tallinn and the Royal College of Music in London. My subsidiary studies include composition and conducting, and in 2013 I became a Mills Williams Junior Fellow at the RCM. One of my Junior Fellowship projects was called *Symphonic Piano*, a scheme of regular faculty classes designed to create an environment where pianists and conductors could collaborate freely to explore the nineteenth-century symphonic repertoire in piano reductions, develop sight-reading skills, gain ensemble-playing experience and examining the role of the conductor in music

potential of piano reductions of orchestral works to push the boundaries of the instrument itself, both in terms of technical features and artistic imagination. A substantial part of my performance practice involves playing the piano reductions of orchestral parts in works written for a solo instrument, a voice or a choir. Among the multitude of keyboard, string and wind concertos from the late eighteenth-century onwards, there are examples of innovative and pianistically idiomatic piano reductions available, made by either the composer or by professional arrangers. The level of innovation in transcription techniques increases greatly from the early twentieth century, probably matching the ways in which composers extended the sonic potential of the nineteenth-century orchestra. The richness and density of orchestral texture in the Concerto No. 1 for violin and orchestra (1916) by Karol Szymanowski (1882–1937) for example, are represented through an extraordinarily virtuoso use of the piano in a reduction of the work produced by the pianist and composer Jerzy Lefeld (1898–1980). However, Witold Lutosławski (1913–1994), Lefeld's student and one of Poland's foremost composers after the second world war, wrote his only piano concerto in 1987 for Krystian Zimerman, and the two-piano version of the work (by an unidentified arranger) published by Chester Music in 1991, features a reduction of the orchestral part that is not only difficult to execute but also misrepresents some of the crucial elements of the composer's style, such as his trademark overlapping legatos in the lower strings (I will return to this example in the course of the literature review, below). For the annual 2017 Concerto Competition at the Royal College of Music I was asked, at short notice, to accompany a candidate in their performance of the Unsuk Chin's Violin Concerto (2001), the full score of which is published by Boosey & Hawkes. The piece does not come with a piano reduction of the orchestral part, and therefore even in the performance I had to play from the full score.

The experience of score-reading a twenty-first-century orchestral work, more or less at sight, highlighted for me some of the challenges that arise from kinds of stylistic changes that took place in much Western art music of the late twentieth century. When music is governed by the principles of functional harmony, deciding which pitch classes to play at any particular moment is often helped by the pianist's intuitive knowledge of diatonic and chromatic triads, seventh chords and their inversions, and so on. Successfully capturing the bass part complemented by select harmony notes will normally result in a comprehensive

performance. Currently I have an international career as a soloist and collaborative pianist with a specialty in accompaniment and a strong interest in twentieth and twenty-first-century music. For more information on my performing career, please visit www.foylestsuraduo.com/maksimstsura.

representation of orchestral texture, timbral considerations aside. Interestingly, this core principle of score reading is rooted in the similar approach used by organists in the early days of the continuo system developed in the latter part of the sixteenth century. Referring to the practice of score reduction employed by organists before the first figured basses were published, *New Grove* notes: 'the basso continuo took the form of an 'abbreviated full score': the organist played the lowest-sounding note at any given point, together with its harmony.'[2] However, during the first half of the twentieth century, most academically trained Western art music composers moved away from functional harmony, either in the direction of modality (Béla Bartók), free atonality and dodecaphony (Arnold Schoenberg), serialism (Pierre Boulez), indeterminacy (John Cage) or *musique concrète* (Edgard Varèse), to name just some of the most prominent traits.[3] These compositional approaches have a direct impact on the extent to which their orchestral materials can be represented on the piano, an instrument that is based on the system devised for representing tonal music.[4] For instance, due to the mechanical limitations of its temperament, the conventional piano is incompatible with the microtonal compositional model.[5] As it happens, in case of Unsuk Chin's Violin Concerto, I found that, despite its colourful orchestration, the underlying system of pitch-class organisation of the work was fairly modal and the composer favoured slow harmonic shifts, which enabled the texture to be captured fairly successfully by a score-reading pianist. I will keep returning to the category of modality in the course of this commentary.

The process of piano reduction can be characterised at its most basic as a type of translation from one medium to another. Frank Corliss discussed this analogy in his 2017 article 'Lost in Translation: Playing Orchestral Reductions.'[6] His unique performer's perspective on playing orchestral reductions was informed by the exhaustive sixteen year-long experience of working as a staff pianist for Boston Symphony Orchestra, frequently collaborating with

[2] Peter Williams and David Ledbetter. 'Continuo.' *Grove Music Online.* 2001; Accessed 6 Sep. 2019.
[3] To avoid confusion, when using the term 'tonality' in my discussion, I follow Stefan Kostka's strategy to apply the term to 'the system of functional harmonic tonality employed in Western art music from around 1600 to around 1900.' Kostka also clarifies that he does not imply all other music is atonal.
Stefan Kostka, *Materials and Techniques of Twentieth-Century Music,* Second edition (Upper Saddle River, New Jersey: Prentice Hall, 1999), p 91.
[4] I have borrowed the term 'compositional states' from David Metzer's book *Musical Modernism at the Turn of the Twenty-First Century* (Cambridge: Cambridge University Press, 2009).
[5] Of course, digital keyboards such as Roli Seaboard (www.roli.com) are designed to overcome the boundaries of 12-tone equal temperament. However, ascertaining whether their potential widespread application is possible within the context of orchestral reduction is beyond the scope of this research.
[6] Frank Corliss, 'Lost in Translation: Playing Orchestral Reductions,' *Journal of Singing* 74, no. 2 (November/December 2017): 226–229.

artists such as the conductor Seiji Osawa and cellist Yo-Yo Ma. Many of the practical concepts Corliss introduces as his 'guidelines for translation' are relevant to my research, for example re-voicing chords, avoiding displays of pianist virtuosity in double thirds or octaves, converting percussion parts and adjusting orchestral dynamics, to name but a few.[7] Corliss acknowledges the imperfections and inaccuracies encountered in orchestral reductions and encourages collaborative pianists to prepare their own version, 'informed by deep understanding of the core musical expression of the work and of the characteristics of the orchestral sound.'[8] I will now delve further into the parallel between reduction and translation.

According to Jeremy Munday in *Introducing Translation Studies,* the term 'translation' was 'first attested in around 1340, [and] derives either from Old French *translation* or more directly from the Latin *translatio* ('transport'), itself coming from the participle of the verb *transferre* ('to carry over')'.[9] Munday then proceeds to explain the meaning of 'translation' in the field of languages, distinguishing between translation as a product, a process, and a field of study or research, and pointing to a basic common principle of 'changing the words from source text/language to target text/language.' He also quotes the Russo-American linguist Roman Jakobson (1896–1982), who formulated the following categories of literary translation in his 1959 paper 'On Linguistic Aspects of Translation': 'intralingual' (within the same language), 'interlingual' (between different languages) and 'intersemiotic' (between different mediums).[10] When applied to music, the first category could be equated with a simplified piano arrangement (target text or medium) of a more complex piano work (source medium) made, perhaps, within an educational context. The second category would constitute 'reproducing' musical material such as pitch-classes, dynamics and rhythms (for example, from a string quartet as source medium to the piano as target medium). Finally, 'intersemiotic' translation opens up the fascinating possibility of an equivalence to 'representing' the acoustic *effects* of the source medium for which a literal correlation cannot be found in the target medium (for example, emulating non-pitched percussion sounds on the piano). This intersemiotic process is predicated on the assumption that there are, in words or music, intrinsic meanings that are independent of their precise 'media'.

[7] Ibid, p 228.
[8] Corliss, 'Lost in Translation […],' p 226.
[9] Jeremy Munday, *Introducing Translation Studies* (Third Edition, London: Routledge, 2012), p 8.
[10] Roman Jakobson, 'On Linguistic Aspects of Translation' in Brower, Reuben Arthur, ed., *On Translation* (Cambridge (MA): Harvard University Press, 2013), p 233.

If orchestral material being transcribed for the piano does not allow for such obvious standard processes as for instance, reduction of harmonic layers (often manifested in eliminating the octave doublings in triadic chords), then the arranger is faced with the persistent challenge of having to determine which elements of the musical fabric are fundamental and which are emergent properties of a musical whole. This raises a deeper ontological question of whether a simple hierarchy of elements within a musical texture can be established at all. I shall return to this question at a later stage. Assuming, however, that this hierarchy can be ascertained, then the most important layers of texture can be prioritised and those of fundamental importance will thus find their way into the reduction. In essence however, piano reduction is an act of choice and compromise. For example, as I have said, the simple fact that the piano is normally an equal-tempered instrument necessarily prevents it from adequately representing some acoustic and stylistic categories of modern music, such as microtonality. Such challenges explain why so many editions of works in the concerto repertoire, the Unsuk Chin Violin Concerto among them, simply do not offer piano reductions to complement their published full scores. On the other hand, very often the ones that do offer published piano reductions, such as Lutosławski's piano concerto mentioned above, are created using methods that do not take into account the wide range of acoustic possibilities that the piano as an instrument does actually possess.

Having observed at first hand how great the practical demand for comprehensive piano reductions of contemporary music is, I have been surprised to discover that generic questions about the process of reduction itself have not been the topic of discussion even among practitioners, let alone a subject of scholarly research. Marc-André Roberge noted in 1993 that 'despite their very large number and their usefulness, piano reductions and transcriptions have rarely been the subject of any systematic inquiry.'[11] Those studies which have been made have tended to focus on nineteenth- and early twentieth-century repertoire (for example Hopkins 1969; Fugo, 1973 and Zhu, 2006). However, late twentieth- and twenty-first-century compositions have not, by and large, been considered. In deciding to begin to make good this lacuna, I realised that my professional experience could allow me to approach the topic of piano transcription from a specifically practical perspective and also to place any significant findings into a broader musicological context.

[11] Marc-André Roberge, 'From Orchestra to Piano: Major Composers as Authors of Piano Reductions of Other Composers' Works' in *Notes* 49 (1993), p 925.

In the first chapter of my thesis I examine the historical tradition of piano reductions of orchestral scores. This includes both general principles and specific examples of reductions made in different periods. The second chapter focuses on my research questions and the methodology I have used to explore them and explains how and why I have chosen my case studies. This discussion is then followed by the two detailed analytical commentaries which accompany my own complete reductions of the piano concertos by Mark-Anthony Turnage and James Dillon. Finally, I reflect on the process of my research and its significant findings, and suggest possible directions for further scholarly inquiry.

Review of Literature and Historical Context

Early on in my research, it became apparent that there is considerable variation in which certain key words are utilised by performers, scholars and publishers, and it was crucial to establish a standard working terminology. There are three terms which are frequently applied to the subject of my research: arrangement, transcription and reduction. In the *New Grove*, 'Arrangement' is defined as 'the reworking of a musical composition, usually for a different medium from that of the original.'[12] The author of the article, Malcolm Boyd, describes the process of arrangement as one of elaboration or simplification of a piece, adding that in some cases some degree of re-composition is involved.[13] However, he also admits that the distinction between an arrangement and a transcription is not universally accepted. 'Transcription' is defined in *New Grove* as a subcategory of notation, involving the copying of a musical work, and sometimes also editing it. In its second meaning, 'transcription' is synonymous with 'arrangement'.[14] Interestingly, the *New Grove* does not have an article on 'reduction' at all. Nevertheless, the term is normally understood as referring to a piano arrangement (for rehearsal purposes) of the orchestral accompaniment to a work written for one or more soloists, or chorus, with orchestra or other instrumental ensemble.[15] In 1969 Hans Keller wrote an article in *The Musical Times* entitled 'Arrangement: For or Against?' His review of a European Broadcasting Union concert at the Queen Elizabeth Hall in London featuring Anton Webern's arrangement of Arnold Schoenberg's *Kammersinfonie* turned into a general discussion of the nature of arrangement. Keller captures well the attitudes of his time: the musical public of the 1960s placed the notion of 'authenticity' – 'faithfulness to the composer's intention' – on a high artistic pedestal. For Keller, the musical work's greatness can only be measured through its abstract communicative powers. He builds an argument around the notions of 'communication,' which he attaches to the intrinsic musical material of the piece (fundamental properties), and 'stimulation,' which encapsulates sound effects achieved through orchestration (emergent properties). Regardless of such a questionable value judgment, other issues raised in his article (such as the reliance of terminology on the parallels between music and language, and the often elusive relationship between the

[12] Malcolm Boyd, 'Arrangement', *Grove Music Online, Oxford Music Online*, Oxford University Press, accessed 1 December, 2015.
[13] Boyd, 'Arrangement', *Grove Music Online.*
[14] Ter Ellingson, 'Transcription', *Grove Music Online, Oxford Music Online*, Oxford University Press, http://www.oxfordmusiconline.com/subscriber/article/grove/music/28268, accessed 1 December, 2015
[15] 'Reduction', *The Oxford Companion to Music*. *Oxford Music Online*. Oxford University Press, accessed 16 February, 2016.

composer's and the arranger's artistic identities and their impact on the final product) are all pertinent to my research.[16]

The history of the keyboard reduction of orchestral or vocal scores goes back at least to the sixteenth century. In her article 'Full and Short Scores in The Accompaniment of Italian Church Music in the Early Baroque', Imogene Horsley writes that before the tradition of figured basso continuo became the widely accepted default for the indication of harmonies and simple voice-leading above a single bass line at the start of the seventeenth century, printed organ accompaniments featuring full and short scores were far more numerous than those containing only a single bass line or *basso seguente.* Horsley notes that 'these *partiture* represented the taste of those who felt that the proper accompaniment of vocal polyphony was the exact doubling of all the parts.'[17]

The seventeenth century saw the development of a large variety of localised approaches to improvised continuo practice across Europe in both sacred and secular music. Realising figured bass became an indispensable skill for composers who often directed performances of both their vocal and instrumental works from the keyboard. As the harmony became more elaborate, the need for a systematic overview became pertinent. Jean-Philippe Rameau (1683–1764) was the first theorist who, inspired and influenced by the scientific advances of the Age of Enlightenment, attempted to classify existing musical practices and supply them with a rigorous theoretical backbone. His string of treatises beginning with *Traité de l'harmonie* (1722) formulated the idea of a 'fundamental bass' which provided the bedrock of music theory education across Europe by the end of the eighteenth century.[18] The practical implication of the theoretical ideas formulated by Rameau and also others including Johann Matheson (1681–1764) somewhat ironically, perhaps, paralleled the gradual disappearance of continuo practice from instrumental music. However, when Mozart wrote 'col basso' markings in his keyboard concertos, it was to encourage the soloist to play the continuo part throughout the tuttis; but the reason for that had more to do with the necessity for the pianist to direct the ensemble rather than to provide acoustic or timbral reinforcement. In the world of vocal music such as oratorio and opera, the tradition of directing ensembles from the

[16] Hans Keller, 'Arrangement: For or Against?' *The Musical Times* 110, no. 1511 (January 1969): p 23.
[17] Horsley, Imogene, 'Full and Short Scores in The Accompaniment of Italian Church Music in the Early Baroque,' in *Journal of the American Musicological Society* 30/3 (Fall 1977): p 466.
[18] Graham Sadler and Thomas Christensen, 'Rameau, Jean-Philippe,' *Grove Music Online,* 2001; Accessed 30 May, 2020.

keyboard remained prevalent well into the nineteenth century, with contemporary accounts showing this practice was still being employed by Rossini and his contemporaries.[19]

By the nineteenth century, the fortepiano had become a ubiquitous household instrument among the middle-classes of Europe. The piano reduction of orchestral scores established itself as an important medium for disseminating symphonic works to wider audiences than those able to hear them in their orchestral form, and this included a high percentage of amateur pianists. In his article on four-hand transcriptions published in the nineteenth century, Thomas Christensen demonstrates that the accessibility and relative simplicity of four-hand transcription for piano served the purpose of popularising orchestral music by Beethoven, Berlioz, Wagner and Brahms, as well as helping to establish the Western art music canon for the growing 'general' bourgeois public.[20] George Bozarth compares the role of four-hand transcriptions of orchestral repertoire in the nineteenth century to that of engraved and photographic reproductions of original paintings:

> In the nineteenth century, keyboard arrangements of orchestral works and piano arrangements of chamber music played a role much like engravings and photographic reproductions of paintings: while rendering the works less colourful, both transfers of medium facilitated wide dissemination to an art-loving public when access to the originals was limited.[21]

This comparison echoes the one articulated by Franz Liszt, who described the piano reduction as bearing the same relationship to 'an orchestral work that an engraving bears to a painting: it multiplies the original and makes it available to everyone, and even if it does not reproduce the colours, it at least reproduces the light and shadow.'[22]

Piano arrangements intended for realisation at home, mostly by amateur pianists, offered the possibility of deeper knowledge and thus greater appreciation of the symphonic works of major nineteenth-century composers by music-lovers unable to hear full orchestral performances in the pre-recording age. Meanwhile, piano arrangement could also enhance the artistic experience of those who had already heard works in their original orchestral versions. Robert Keller, the editor overseeing Brahms's publications for Nicholas Simrock in Berlin from the early 1870s until his death in 1891, wrote to Brahms on 23 January 1886, asking

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[19] Williams and Ledbetter, 'Continuo,' *Grove Music Online*, 2001.
[20] Thomas Christensen, 'Four-hand Piano Transcription and Geographies of Nineteenth-century Musical Reception,' *Journal of the American Musicological Society* 52 (1999): 255–298.
[21] George Bozarth and Wiltrud Martin, ed., *The Brahms-Keller Correspondence* (Lincoln and London: University of Nebraska Press, 1996), xxx–xxxi.
[22] Franz Liszt, *An Artist's Journey: Lettres d'un bachelier es musique, 1835–1841*, trans. Charles Suttoni (Chicago: University of Chicago Press, 1989), pp 40–51.

him to supply the four-hand arrangement for his Fourth Symphony at least after its premiere, that: 'your admiring friends should […] be allowed […] to investigate the fine lines of the drawing while the magnificent colour of the whole is still fresh in their minds and to delight in the abundance of attractive and ingenious details that are simply impossible to grasp in their entirety during the first exciting hearing of the original.'[23] Piano arrangement was also an ideal means for critical study of musical works in the abstract. Thus, four-hand piano transcriptions provided the first experience of the great nineteenth-century symphonic repertoire music for such important critics as Theodor Adorno (1903–1969) and even Roland Barthes (1915–1980), both of whom presumably had access to acoustic recordings of the originals, should they have wished.[24] Yet, regardless of their ubiquitous nature and various practical applications, the issue of piano reductions of orchestral works has not been widely explored in musicological discourse.

It is self-evident that the piano, as an instrument played by one individual, cannot provide a complete or absolutely satisfying reproduction of orchestral sonority, due to the technical limitations of the instrument itself and the physical restraints of the two hands and ten fingers of one performer. This is aptly summed up by Eric Taylor in his manual on score reading: 'the fact has to be admitted at once that a pianist cannot do justice to a work which was conceived for the orchestra. He cannot reproduce the timbres of the different instruments. He cannot sustain notes as wind and string players can, let alone shape them with a crescendo. Much of the time he cannot even play all the notes, which no doubt is one of the reasons why composers seem to prefer to arrange their works, if at all, for two players.'[25] Brahms also understood the limitations of arranging the symphonic score for two hands and recognised the virtuosic demands it puts on a pianist, if a truthful representation of orchestral sonority is to be attempted: 'I would consider a two-hand arrangement interesting only if an extraordinary virtuoso did it. Somewhat like how Liszt did in the Beethoven symphonies.'[26]

As recently as 1914, the leading British composer, conductor and teacher, Charles Villiers Stanford, presented an interesting angle on assessing the relevance of piano transcriptions of

[23] 'so sollte es Irhen bewundernden Freunden doch vergönnt sein, nach der Aufführung in frischer Erinnerung an die Farbenpracht des Ganzen den feinen Linien der Zeichnung nachspüren und sich der reizenden u. geistvollen Details erfreuen zu können, welche in ihrem Reichtum vollständig zu erfassen bei dem erstmaligen aufregenden Anhören des Originals dich night möglich ist.' Bozarth and Martin, *The Brahms-Keller Correspondence,* p 90.
[24] Christensen, 'Four-hand piano transcription […],' pp 262–3.
[25] Eric Taylor, *Playing from an Orchestral Score* (Oxford: Oxford University Press, 1967), p 3.
[26] Bozarth and Martin, ed., *The Brahms-Keller Correspondence*, p xxxi.

orchestral scores to appreciation of the iconic nineteenth-century symphonic works. In his book, *Pages from an Unwritten Diary*, he writes — referring to the music of Berlioz or Wagner — that 'the worship of colour for its own sake is the rock upon which modern superficial taste is in danger of splitting'. His recipe for testing the truly timeless quality of the work in question is a fascinating one: to play the work on the piano. According to him, if the works 'give real pleasure to listen to as music under these black and white conditions they will have proved their inherent value'.[27] Stanford's aesthetic judgments are echoed in those of Hans Keller a generation later, but the question raised by him is undoubtedly a wider-reaching one: is the fundamental property of an orchestral work, which heavily relies on specific tone colours of individual instruments and their countless combinations to project its musical expression, more likely to perish when transcribed to another medium? To what extent can the 'black-and-white conditions of the piano' do justice to the rich palette of shades and timbral variety of a large symphony orchestra? These are questions equally relevant to music of the nineteenth, twentieth and twenty-first centuries, and I will return to them in the course of what follows.

It is crucial to distinguish between the purposes of four-handed and two-piano transcriptions on one side, which had the potential to extend the possibilities of capturing orchestral sonorities, and the two-hand arrangements, which favoured a more practical approach. Published four-hand transcriptions of nineteenth-century symphonic repertoire were most often made by lesser-known composer-performers such as Robert Keller and Otto Singer, whereas reductions of orchestral parts for two-piano versions of instrumental concertos were often supplied by the composers themselves, who in many cases were prominent pianists in their own right.[28] However, even Brahms made a clear distinction between the four-handed arrangements of his orchestral scores, primarily intended for wider dissemination of these works to the wider public, and the reduction of the orchestral part in an instrumental concerto, where its purpose was simply the facilitation of the rehearsal process:

> The chief aim of a pianoforte arrangement of orchestral accompaniments must always be to be easily playable. Whether the different parts move correctly, i.e., in strict accordance with the rules of counterpoint, does not matter in the least. [29]

[27] Charles Villiers Stanford, *Pages from an Unwritten Diary* (London: Edward Arnold, 1914), pp 302–3.
[28] Christensen, 'Four-hand piano transcription […],' pp 262–3.
[29] Brahms's remark to Georg Henschel (Henschel, *Personal Recollections*, 34), as quoted in Bozarth and Martin, ed., p 292.

Schoenberg took a more nuanced view and expressed criticism of those arrangers who did not avail themselves of the various idiomatic aspects of pianistic technique. He argued that 'most authors of modern piano reductions limit their achievement to transposing each of the voices in the score for piano, placing them one on top of the other. These arrangers are like the cook who, instead of a meal, has the ingredients served that are to go into it.'[30]

In order to begin to establish a consensus about what in the late nineteenth century might be considered the essence of a good piano arrangement, it is appropriate to quote Brahms again, who thought it should be 'light, brisk, leaving out all that is possible… just so it sounds really well for four hands and is playable.'[31] Although Brahms is referring to four-hand arrangement, the same criteria can justifiably be extrapolated to any piano reduction. The examples of piano transcriptions of symphonic repertoire made by famous nineteenth-century pianists such as Liszt, Tausig and Busoni might serve as illustrative models, but should probably not be used as templates, as they are in essence designed as virtuoso solo pieces in their own right, requiring highly developed technique and hours of practice, whereas a practicable piano reduction should be sufficiently utilitarian to serve its purpose without drawing overt attention to its own virtuosity. One curious example of a transcription not made by the composer, is *Nights in the Gardens of Spain* by Manuel de Falla, in an arrangement by Gustave Samazeuilh, where the orchestral part is intended to be performed as a piano duet, despite the relative lightness of the orchestration.[32]

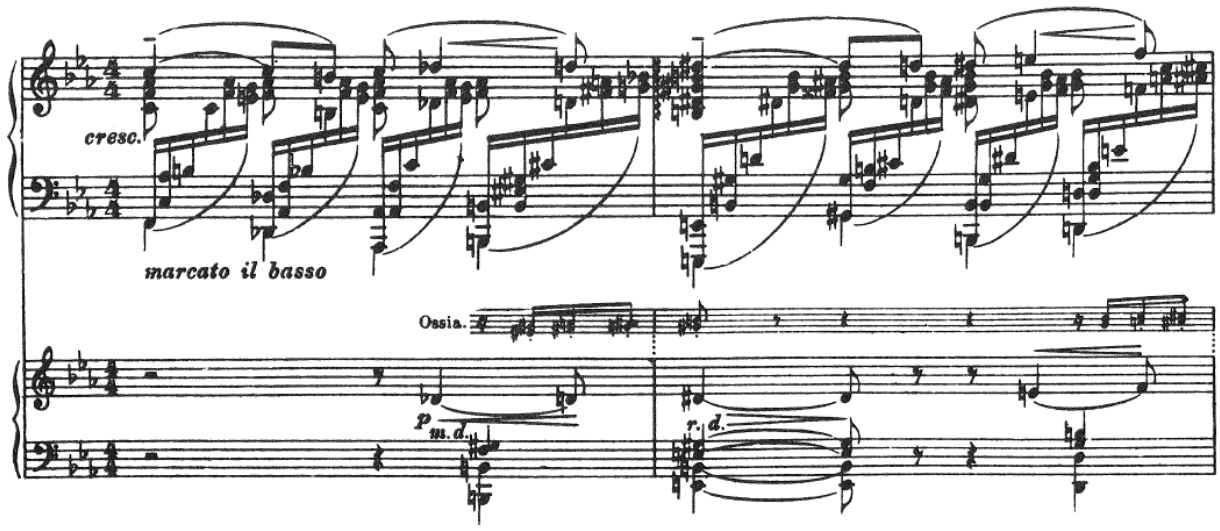
Here it might be appropriate to identify a little more precisely who the performers of various types of arrangements were intended to be and in what circumstances they might be performed. The four-handed arrangements of symphonic repertoire made in the nineteenth century were primarily designed for amateur pianists, helping to enhance their knowledge and understanding of the orchestral repertoire in the pre-gramophone age and this is reflected in the commercial strategies of publishers. They were intended to be performed either privately or at informal social gatherings. Christensen notes the extraordinary popularity of these four-hand arrangements and points to the fact that, in order to cater for such public interest, the major publishers had to employ in-house arrangers: Theodor Kirchner and Hugo

[30] Bozarth and Martin, ed., *The Brahms-Keller Correspondence*, p xxxii.
[31] Letter from Brahms to Keller of 21 December 1876, quoted in Bozarth and Martin, ed., *The Brahms-Keller Correspondence*, p xxxii.
[32] Manuel de Falla, *Nuits dans les Jardins d'Espagne – Impressions symphoniques pour piano et orchestra* (Nights in the Gardens of Spain – Symphonic Impressions for Piano and Orchestra), with transcription of orchestral part for one piano four hands by Gustave Samazeuilh (Paris: Editions Max Eschig, 1922).

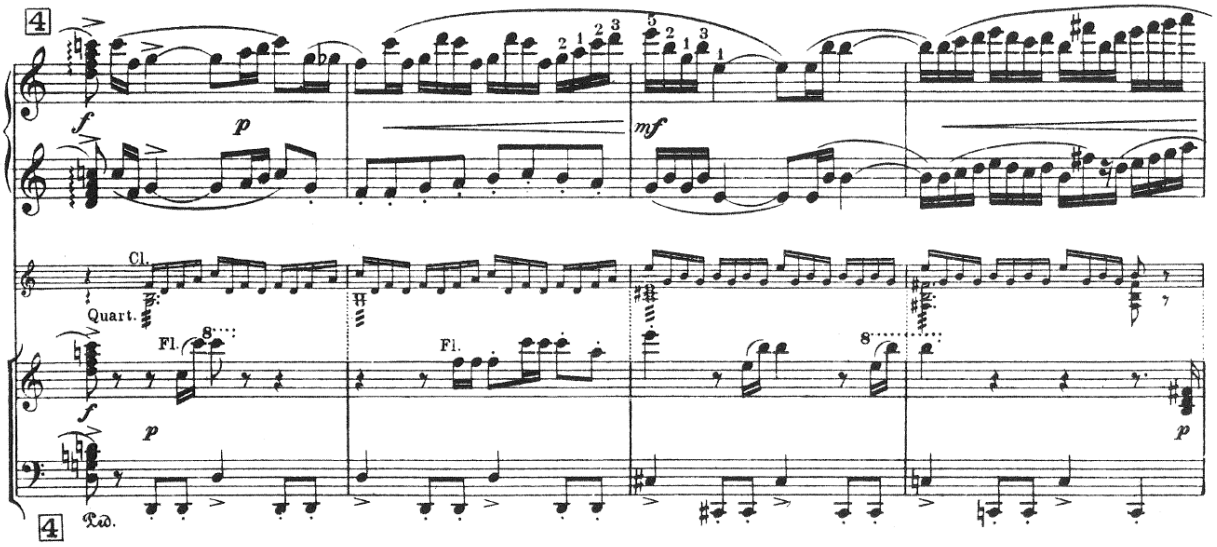
Ulrich worked for Edition Peters, August Horn for André, Robert Keller for Simrock, and Otto Singer for Universal Edition.[33] The virtuosic transcriptions by Liszt or Busoni were concert pieces, published as performed by the authors themselves or by their colleagues, who could equal them in proficiency and skills. The single-player reductions of the orchestral parts of instrumental concertos were primarily intended for professional pianists to use when accompanying soloists in rehearsals or preparatory performances before the orchestra was present. It should be noted, however, that these professional pianists often did not have much time to study the reduction, and thus the orchestral part needed to be more or less readable at first sight.

In the early twentieth century, arrangements tended to include as much of the original raw notational material as possible in the reduction, leaving to the performer's discretion how exactly to represent the texture and the choice of which layers to perform and which to leave out. They often include *ossia* staves that allow the inclusion of a variety of alternative solutions to particular passages. Examples of this strategy can be found in the piano reductions of Bartók's First Piano Concerto,[34] Rachmaninov's Third Piano Concerto[35] and Prokofiev's Piano Concertos Nos. 2, 3 and 5.[36] All these reductions were made by the composers themselves, and are therefore of particular interest in enabling us to trace how they preferred to see their works adapted to the medium of the piano. Examples 1a and 1b below show the use of *ossia* staves in piano concertos by Rachmaninov and Prokofiev. I took the deliberate decision not to use the ossia staves in my own reductions because I wanted the final product to be a definitive version of the musical text, encapsulating the result of painstaking deliberations and carefully weighed decisions, the examples of which will be considered in the analytical commentaries on my case studies.

[33] Christensen, 'Four-hand piano transcription […],' p 267.
[34] Béla Bartók, *Concerto No. 1* for piano and orchestra, arrangement for 2 pianos 4 hands by the composer (Vienna: Universal Edition, 1992).
[35] Sergey Rachmaninoff, *Piano Concerto No. 3* Op. 30 in D minor (1909), reduction for 2 pianos (London: Boosey & Hawkes, 1910).
[36] Sergey Prokofiev, *Piano Works* in five volumes, volume five: *Concertos for Piano and Orchestra Nos. 3, 4, 5*, arranged for two pianos by the composer (Moscow: Muzyka, 1986).



Example 1a. Serge Rachmaninoff. *Piano Concerto* No. 3 Op. 30. Reduction for two pianos. London: Boosey & Hawkes, 1910. Third movement, figure 52, bars 6–7.

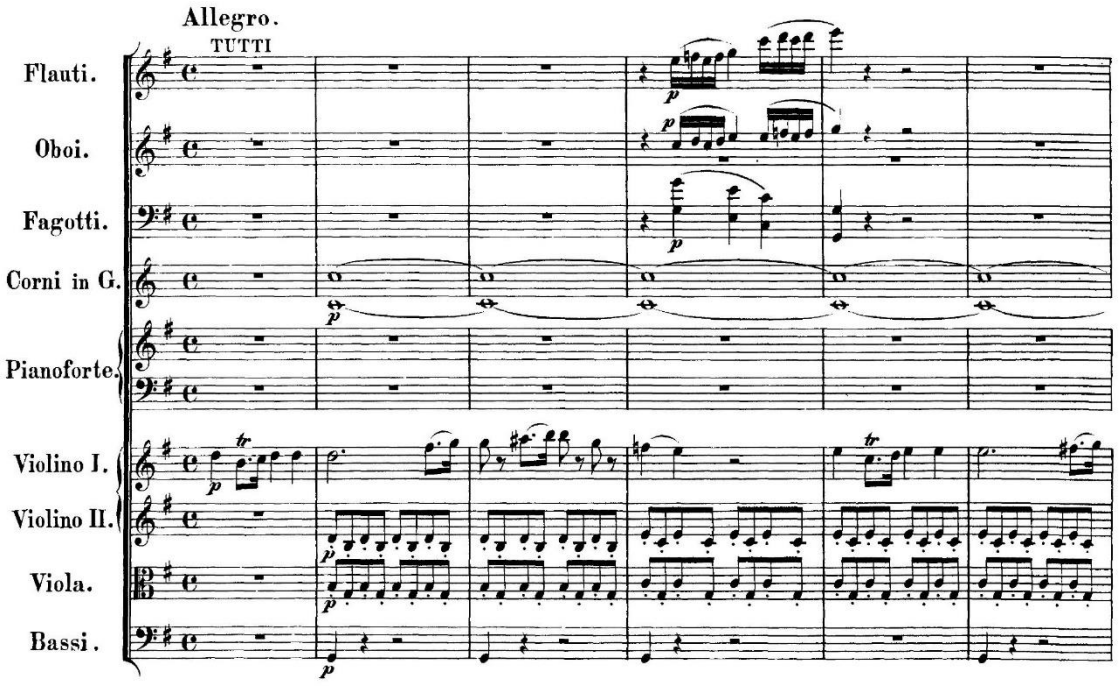


Example 1b. Serge Prokofieff. *Piano Concerto* No. 3 Op. 26. Reduction for two pianos by the composer. London: Boosey & Hawkes, 1923. First movement, figure 4, bars 1–4.

However, in the later twentieth century, publishing houses began producing new editions of well-known works from the main-stream traditional repertoire, which contain more practical reductions. This recent trend has tended to adopt the principle of leaving out as much as possible of the orchestral texture, in order to create an easily playable score. This current has been a particular feature of editions produced by G. Henle Verlag, who have published both 'comprehensive' (critical) and 'practical' (performing) editions (such as the Mozart concerto series with reductions by András Schiff) and also other 'hybrid' versions, where compromise

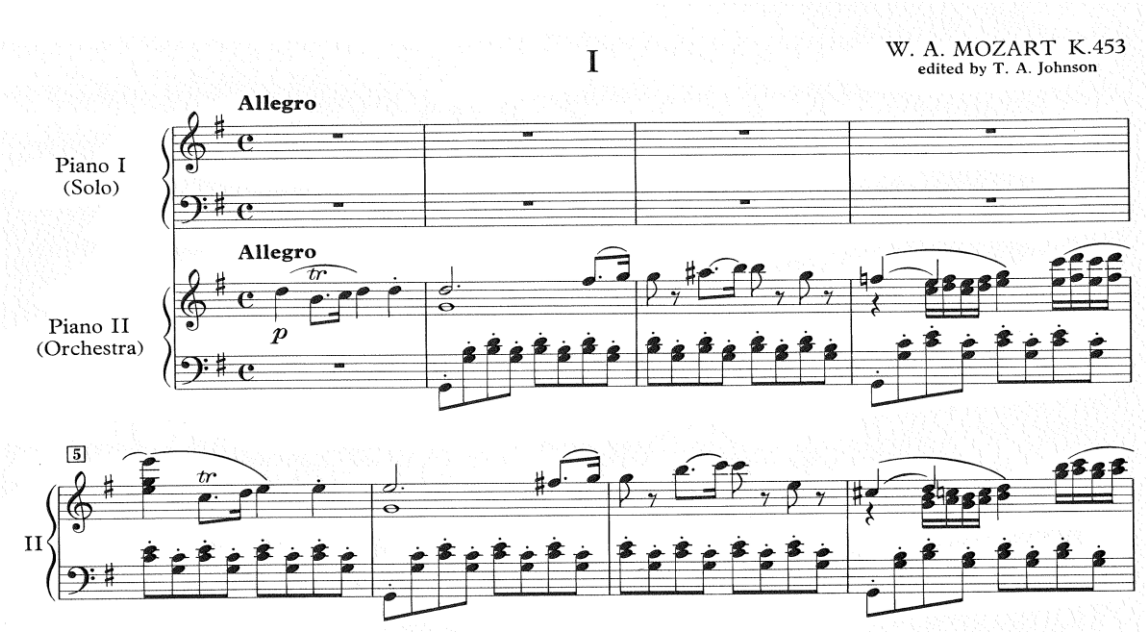
might have been achieved at the expense of truly orchestral sonority (for example, Grieg's Piano Concerto).[37]

As an illustration of both these tendencies, it is intriguing to compare two different reductions of Mozart's *Piano Concerto in G major* (K453) published in the last 50 years. Example 2a shows the original full score of the opening six bars of the piece. Example 2b is the piano reduction by Thomas Johnson published by Peters in 1972. Example 2c shows the piano reduction by András Schiff, published by G. Henle Verlag in 2005.

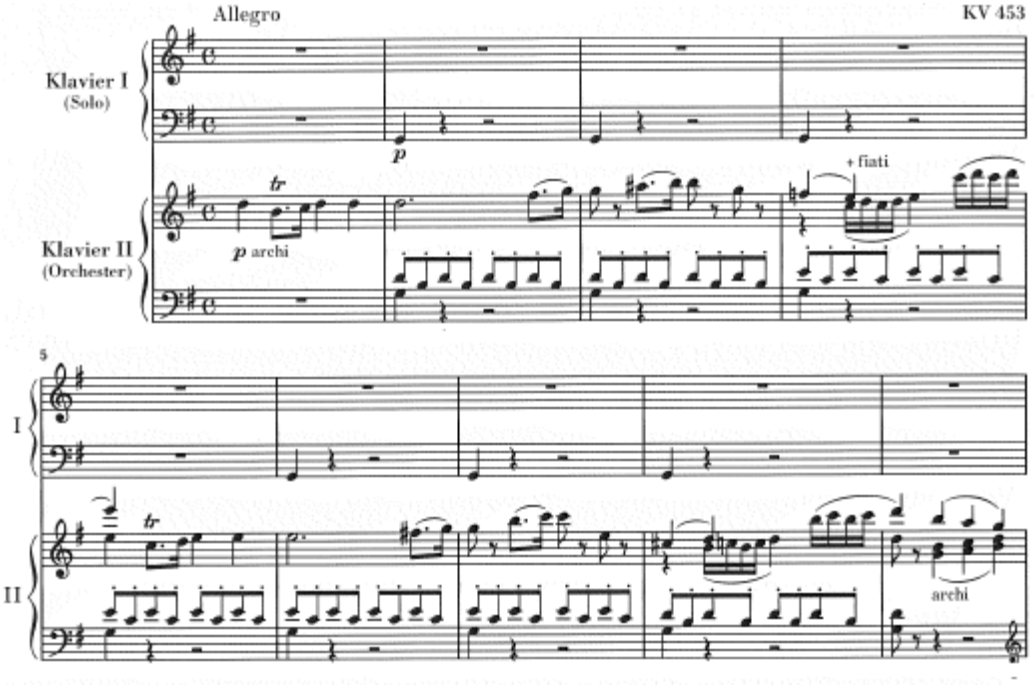


Example 2a. Wolfgang Amadeus Mozart: *Keyboard Concerto* in G major K 453. Full score. Leipzig: Breitkopf & Härtel, 1878, reprinted 1978. First movement, bars 1–6.

[37] Edvard Grieg, *Piano Concerto in A minor*, two-piano score by E. Steen-Nöklenberg (Munich: G. Henle Verlag, 2003).



Example 2b. Wolfgang Amadeus Mozart: *Keyboard Concerto* in G major K. 453. Reduction by Thomas A. Johnson. London: Edition Peters, 1972. First movement, bars 1–8.



Example 2c. Wolfgang Amadeus Mozart: *Keyboard Concerto* in G major K. 453. Piano reduction of the orchestral part by Sir András Schiff. Munich: G. Henle Verlag, 2006. First movement, bars 1–9.

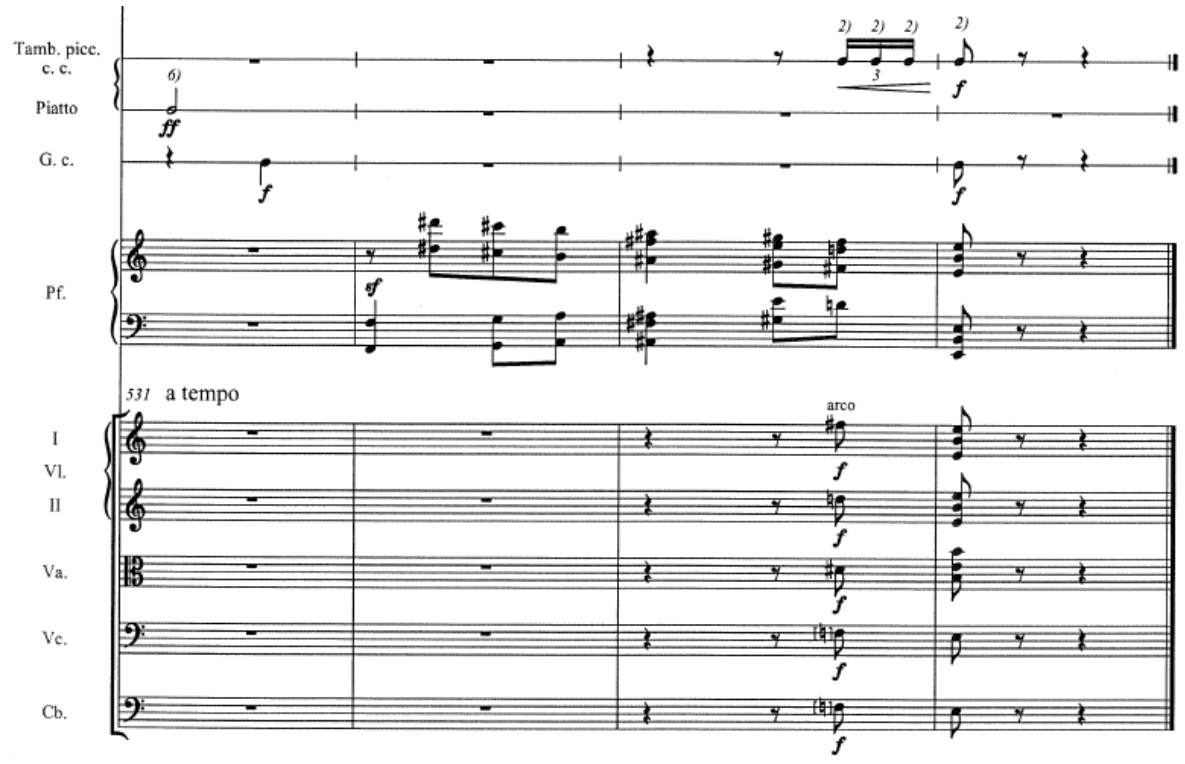
One can immediately see how the Schiff reduction is much lighter in its texture than Johnson's. For example, the rhythmic figurations of the quavers in the left hand are concisely expressed in a single part, supported by the basses. The same figuration in the Johnson reduction has the additional harmony tones from the viola part. The resulting piano texture is

only a little bit more difficult to perform yet gives a much more coherent representation of the orchestral sound. The unreasonably difficult section of Johnson's reduction comes in bar 4 with its parallel sixths in semiquavers, which are almost impossible to execute at the required speed and add a layer of unnecessary virtuosity to this 'practical' edition. On one hand, one might argue that the lightness, practicality and sight-readability of the Schiff example have been achieved at the cost of sacrificing important acoustic features of the original orchestral sound. On the other hand, we must take into account the size of the orchestra of the Viennese Classical era which was much smaller than is normally encountered in present day performances by modern symphony orchestras. Schiff has evidently tried to reflect the acoustic image of a smaller eighteenth-century ensemble in his reduction.

An important aspect of an effective piano reduction would seem, then, to be finding a balance between keeping it sufficiently simple so that the pianist can learn it in a short time, and the risk of sacrificing either the essential musical properties of the score (pitch classes, rhythm, dynamic), or the acoustic impression of its performance. Employing an elegant metaphor, Corliss calls this dilemma the 'Goldilocks rule' and elaborates that 'you need to play at the level of complexity and detail that is 'just right'.'[38] As I have expounded above, his guidelines are addressed to the performers, but can nevertheless be extrapolated and applied to writing of the piano reduction. Much can be learned from compositions that exist in both original piano and orchestral versions made by their respective composers, for instance Stravinsky's *Petrushka* and *Rite of Spring,* Bartók,'s *Concerto for Orchestra* or Lutosławski's *Partita*, as well as Ravel's orchestral pieces (which were in most cases were, in fact, originally conceived as piano works). These works reveal particular techniques of reducing the orchestral material without losing important timbral and acoustical content, and they have been essential references for my own research.

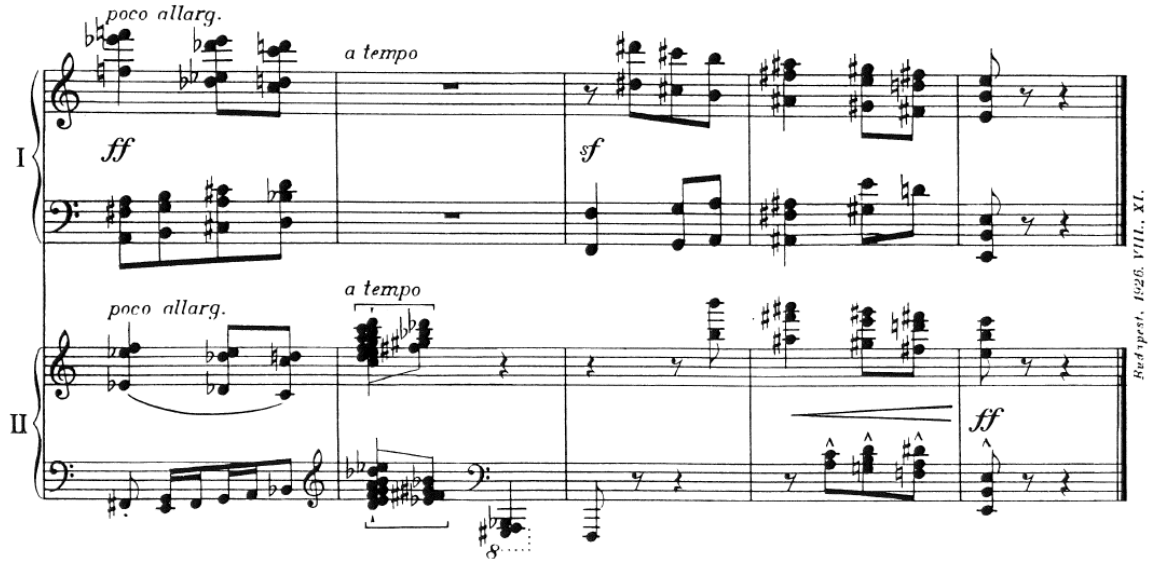
There are telling examples of Bartók's approach to translating orchestral texture to the piano in his own piano reduction of the orchestral part of his *Piano Concerto* No. 1. At the end of the Finale, in the third bar of figure 53 the orchestral part features a sequence of crucial gestures. Firstly, there is a *ff* suspended cymbal stroke on the first beat of the bar. Secondly, the bass drum responds with a *f* crotchet on the second beat. Finally, there is a timpani quaver (F2) at the start of the following bar. These gestures are demonstrated in the Example 3a below.

[38] Corliss, 'Lost in Translation […],' p 227.



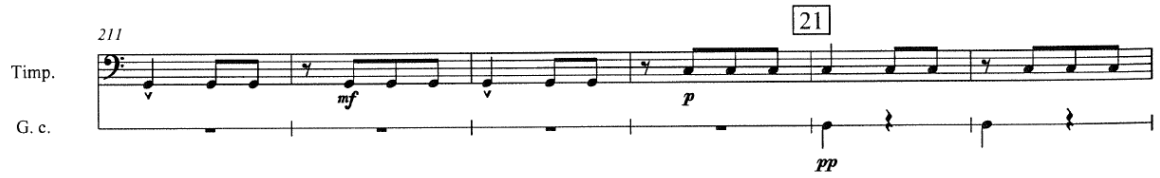
Example 3a. Béla Bartók: *Concerto No. 1* for piano and orchestra (1926). Full score. Vienna: Universal Edition, 1927. Copyright renewed 1954 by Boosey & Hawkes. Third movement, bars 531–4.

In his piano reduction Bartók represents the cymbal stroke with a cluster spread over two octaves. The bass drum crotchet is notated as a three-note chromatic cluster and the timpani f is notated one octave below the original pitch, taking into the account the additional overtones of a timpani sonority: see Example 3b below.

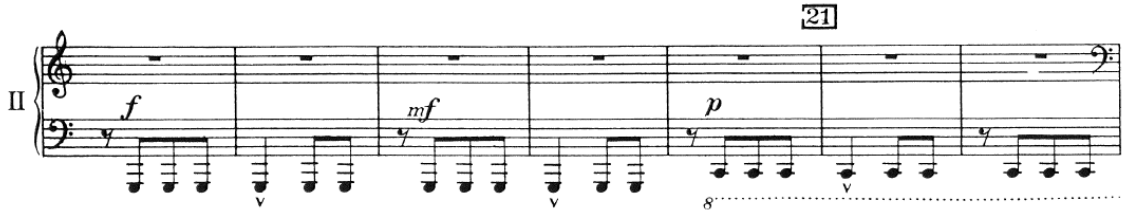


Example 3b. Béla Bartók: *Concerto No. 1* for piano and orchestra. Arrangement for 2 pianos 4 hands by the composer. Vienna: Universal Edition, 1992 (UE 8779). Third movement, bars 530–4.

The representation of the bass drum stroke sonority as a low chromatic cluster reveals Bartók's knowledge of the acoustic possibilities of the piano, on which he attained unrivalled proficiency as a performer. However, despite the insights displayed in the reduction of the final bars of the *First Piano Concerto,* there are passages earlier on in the piece where he does not use the same principles. Example 4a shows the moment in the third movement where the timpani line is supported (from figure 21 onwards) by the gentle strokes of the bass drum. Example 4b illustrates Bartók's consistent treatment of the timpani part: it is notated in piano reduction one octave lower than the original sonority to represent the richness of overtones. It is also surprising to see that Bartók chose to leave out the *pp* bass drum crotchets, although they could have easily been included at this point.



Example 4a. Béla Bartók: *Concerto No. 1* for piano and orchestra (1926). Full Score. Third movement, bars 211–6.

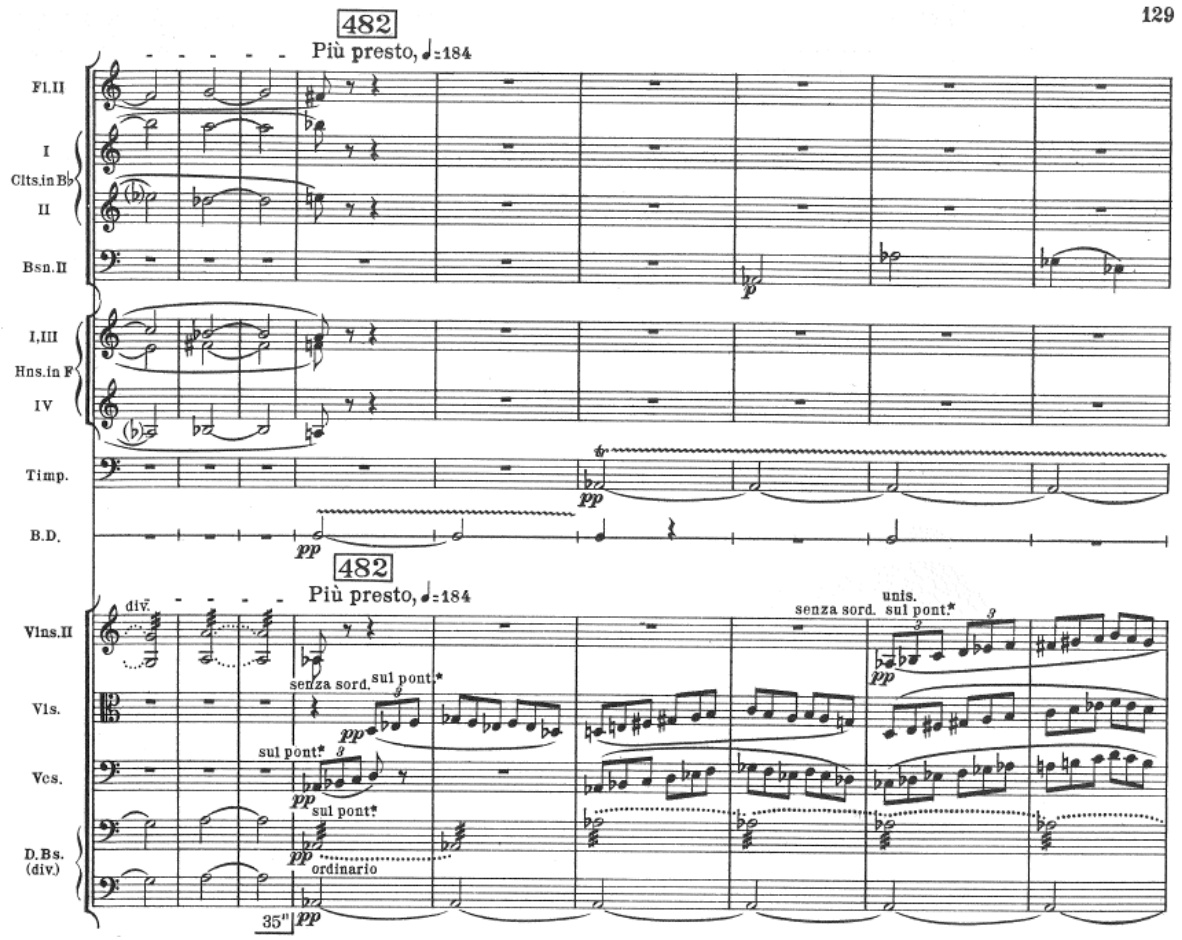


Example 4b. Béla Bartók: *Concerto No. 1* for piano and orchestra. Arrangement for 2 pianos 4 hands by the composer. Vienna: Universal Edition, 1992 (UE 8779). Third movement, bars 210–14.

It is also revealing to compare Bartók's own arrangement of his *Concerto for Orchestra,* which he prepared in 1943 in order to facilitate rehearsal for the ballet performance of the piece, with the revised version by György Sándor. The latter was published in 2001 by Boosey & Hawkes, accompanied by the original manuscript of Bartók's own reduction. Bartók admits that 'it is impossible to transcribe adequately for one piano' the section between figures 482 and 555 of the Finale.[39] The importance of the rising and falling gestures

[39] Peter Bartók, preface to *Concerto for Orchestra*, piano score by the composer, edited by György Sándor (London: Boosey & Hawkes, 2001), p iv.

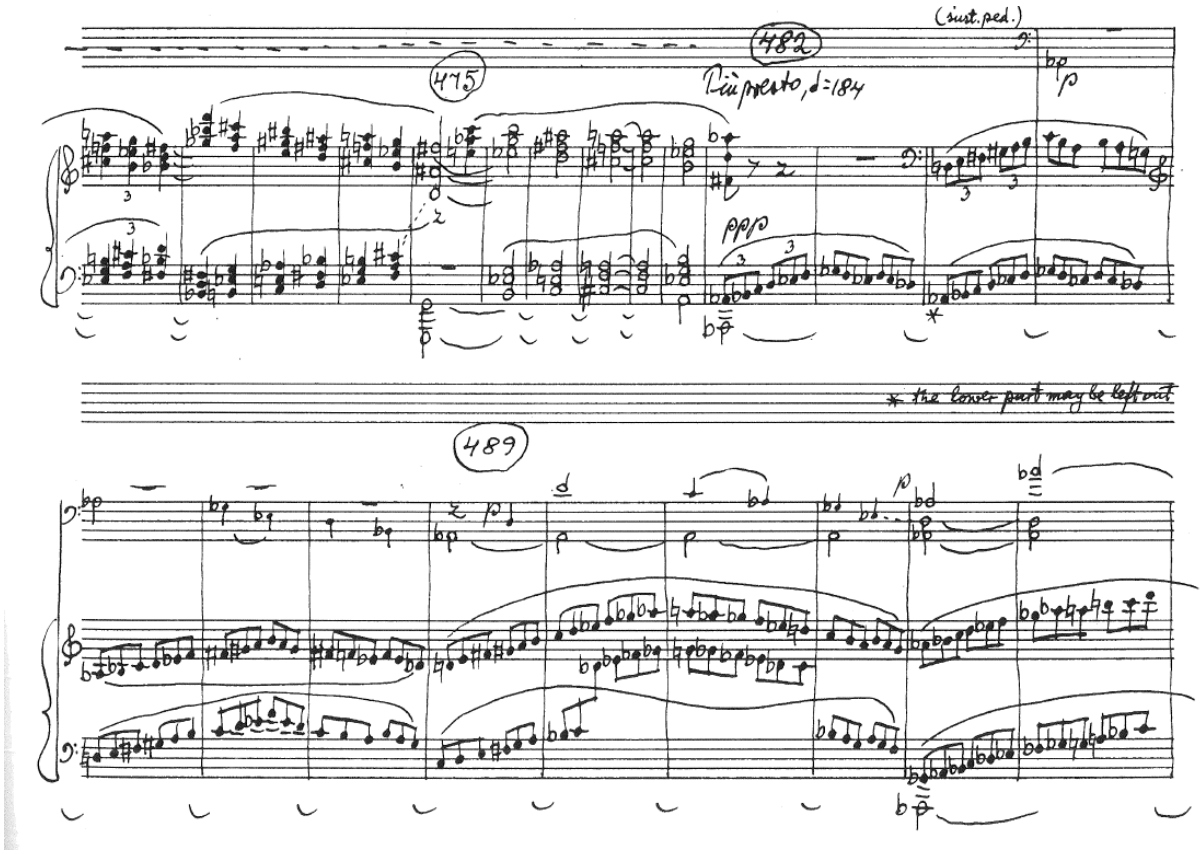
in the string triplets, which communicates growing tension preparing the climax of the movement, was apparent to Bartók. He also wanted to include as many of the shorter phrases in woodwinds and brass as possible. This explains why he suggested performing this section with two pianists.[40] Example 5a below shows the beginning of the section in full score.



Example 5a. Béla Bartók. *Concerto for Orchestra.* Full score. London: Boosey & Hawkes, 1946, rev. ed. 1993. Fifth movement, bars 479–87.

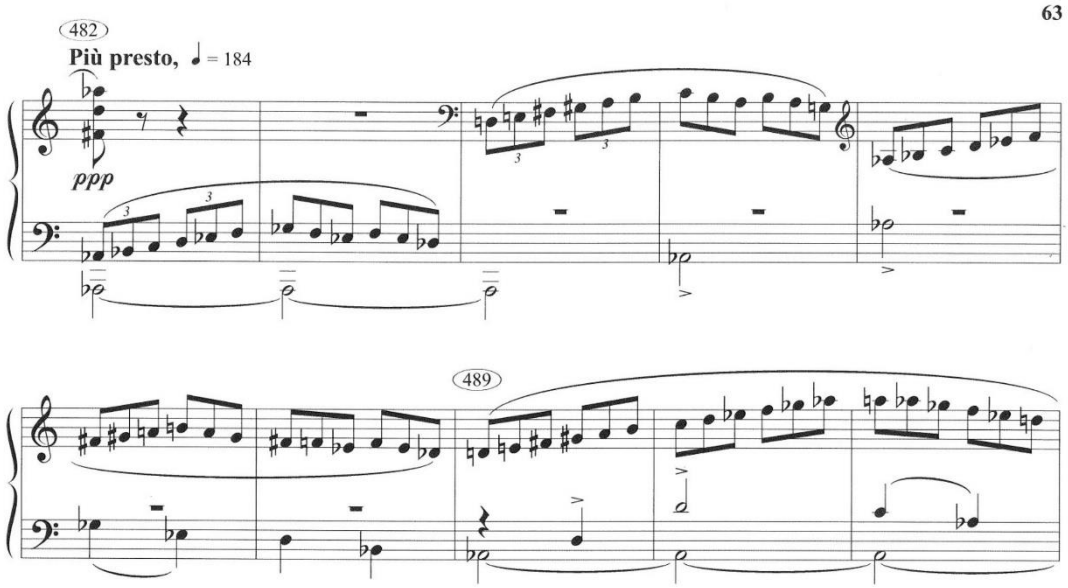
Example 5b below demonstrates how Bartók starts the section in figure 482 by literally reproducing all the passages in the strings and uses an extra stave to accommodate the woodwind counterpoint.

[40] Ibid.



Example 5b. Béla Bartók. *Concerto for Orchestra*. London: Boosey & Hawkes, 2001. Facsimile of the composer's manuscript. Fifth movement, bars 471–94.

Sándor found an elegant solution to this dilemma. Initially he includes the strings' gesture almost in full, adding to these waves the crucial entries in the woodwinds, as seen in Example 5c below.



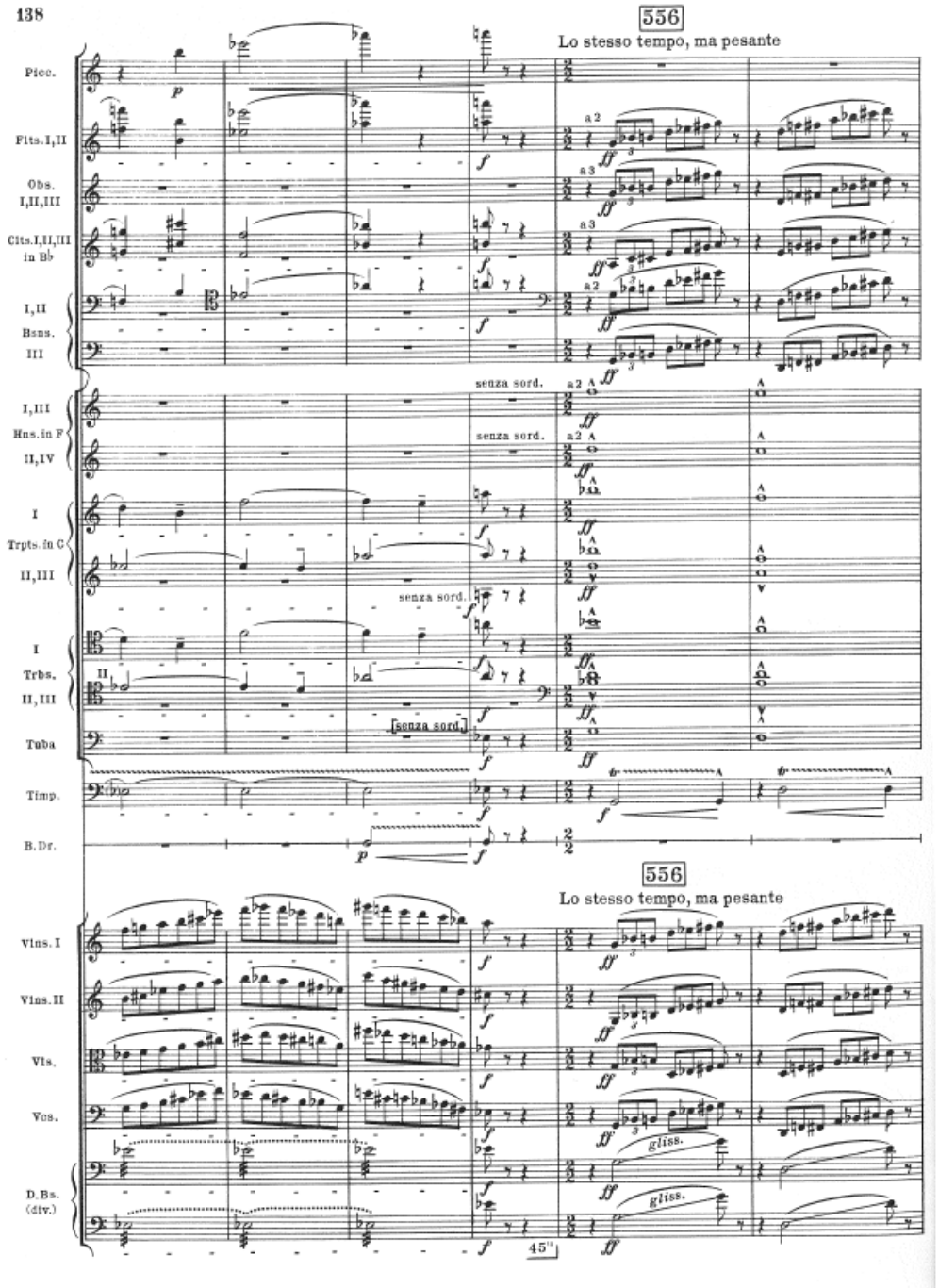
Example 5c. Béla Bartók. *Concerto for Orchestra*. London: Boosey & Hawkes, 2001. Piano score edited by György Sándor. Fifth movement, bars 482–91.

As the dynamic and the density of orchestral fabric build up, Sándor begins to replace the literal reproduction of the triplets with idiomatic pianistic gestures and tremolos, for instance between the figures 515 and 533. When approaching the climax in the section between bars 533 and 549 he creates the feeling of multi-layered orchestral crescendo by combining the following elements:

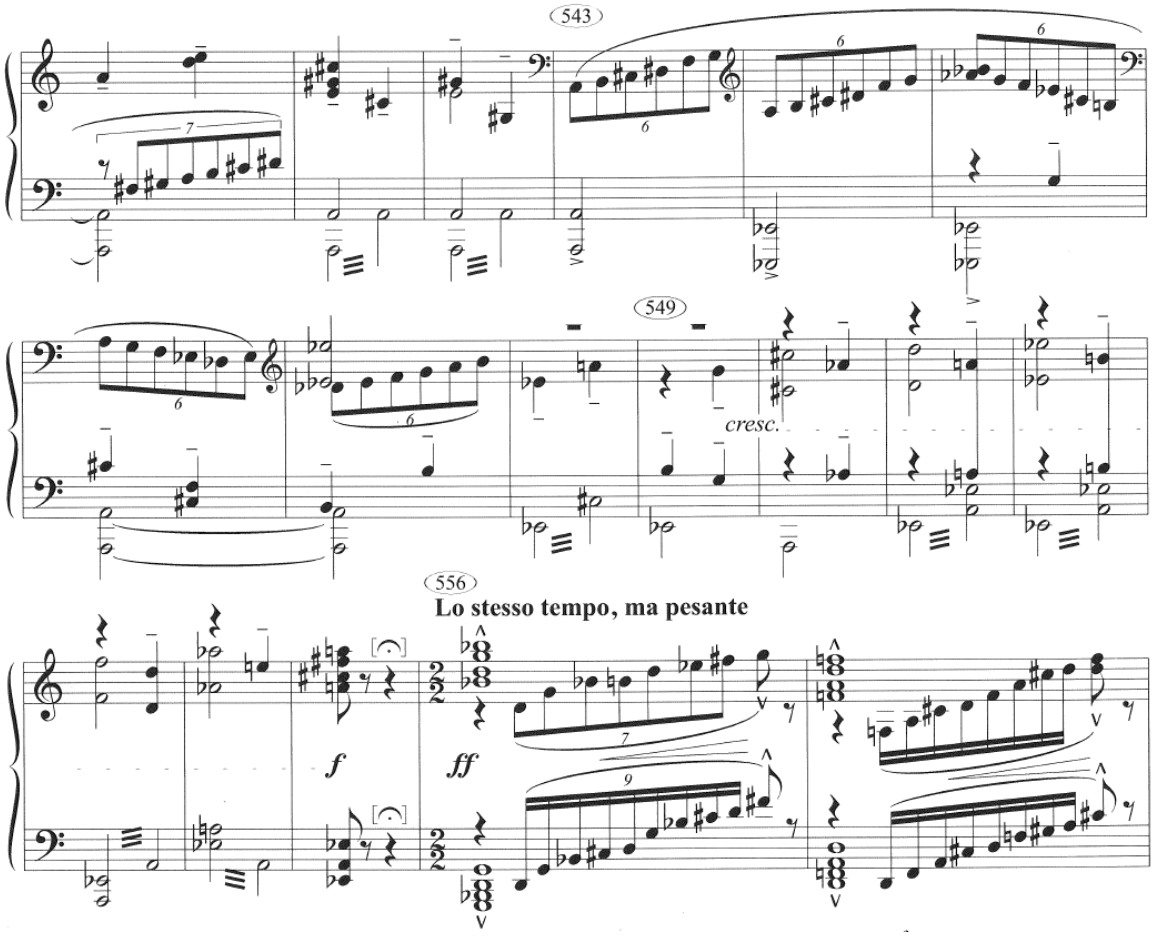
- String triplets in the left hand. These are occasionally shifted metrically from a sextuplet to a septuplet to allow for the bass notes to be sounded, as in bars 533, 535, 537 and 540.
- The bass notes are to be held using the sustaining pedal.
- Crucial melodic material in woodwinds and brass. The superimposing of the E flat octave in flutes and clarinets on top of the line is especially noteworthy.
- The tremolo features prominently in bars 551–4 to represent the timpani entry.

This section demonstrates the tools that should form the basis of an arranger's toolkit. However, I have not been able to determine the rationale behind shifting the left-hand tremolo to a lower octave in bar 553. While it certainly contributes to the acoustic impression of growing sonority, it creates an unnecessary emphasis on the pitch class of A natural as opposed to E flat, which conflicts with Bartók's thematic development. In bars 556–7 it is

truly admirable how Sándor alters the rhythmic outline of the ascending gestures in woodwinds and strings. The irregularity of the right-hand septuplet and left-hand nonuplet is instrumental in representing both the double bass glissandos and the timpani tremolos. Example 6a below shows the fragment in the full score; this is followed by the Example 6b illustrating Sándor's insightful approach to the reduction.



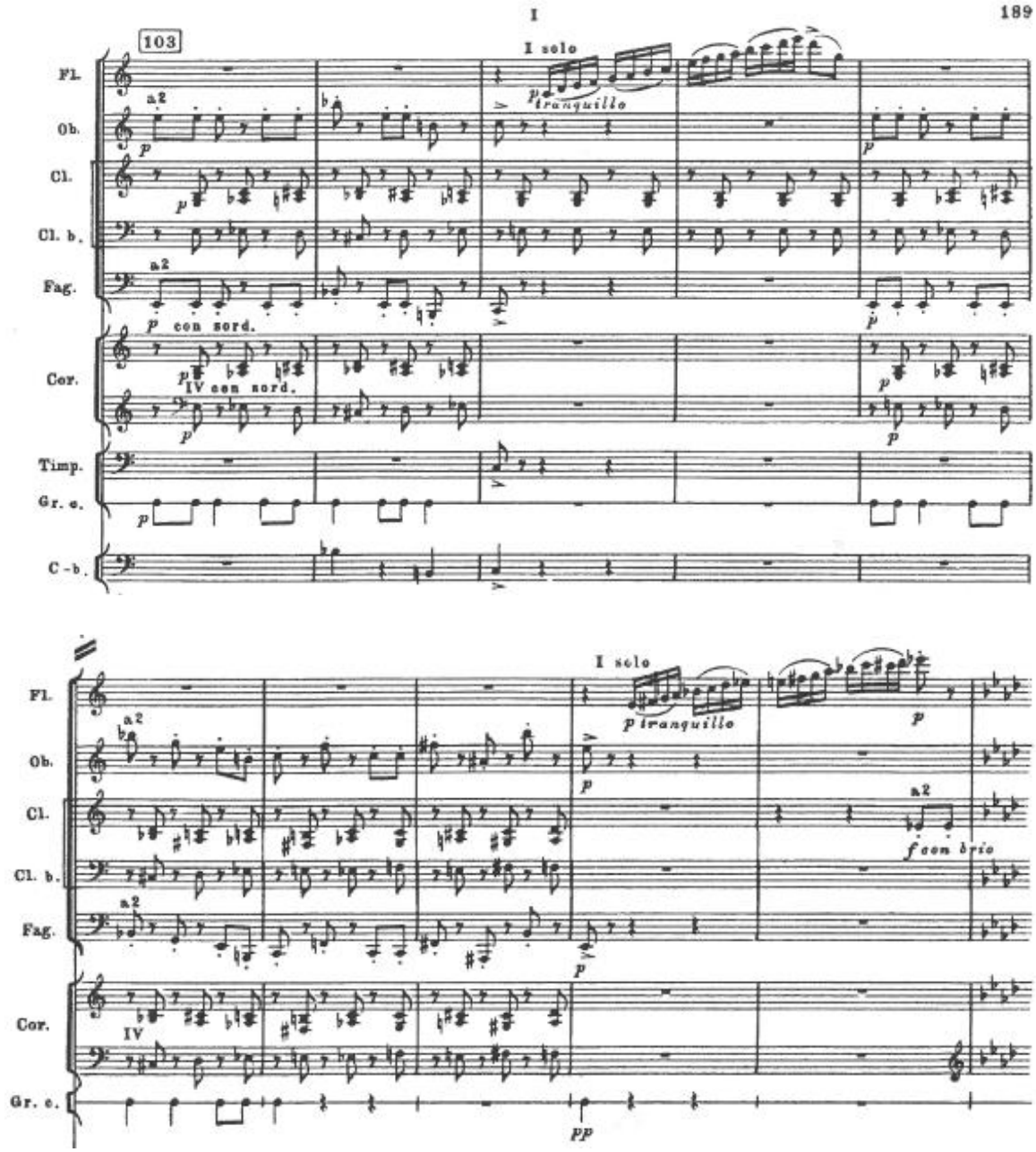
Example 6a. Béla Bartók. *Concerto for Orchestra.* Full score. London: Boosey & Hawkes, 1946, rev. ed. 1993. Fifth movement, bars 551–7.



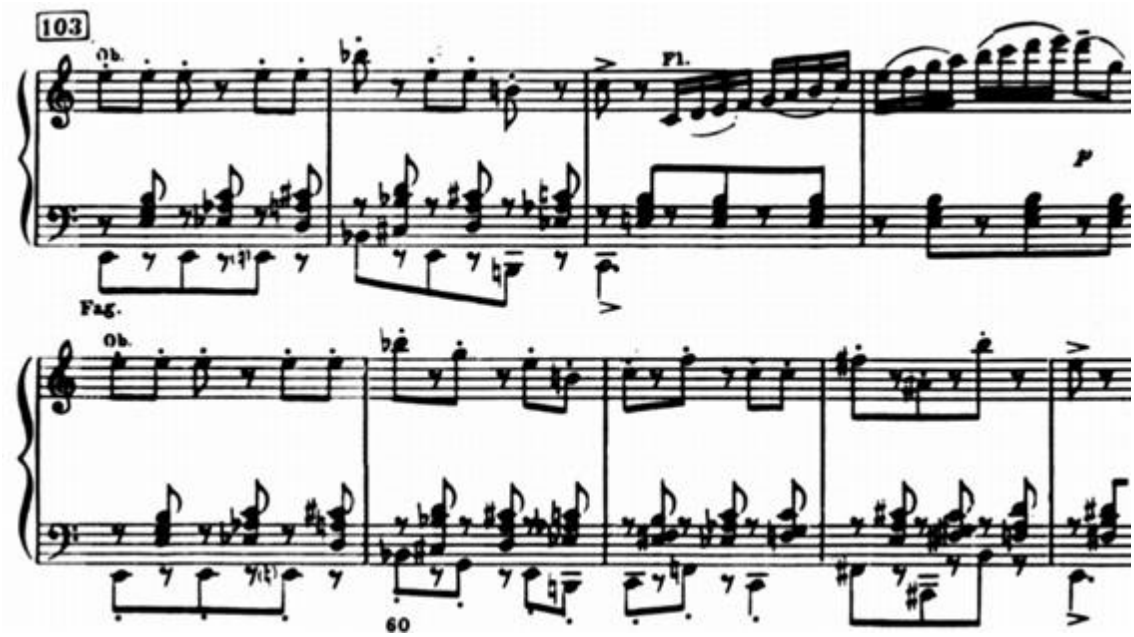
Example 6b. Béla Bartók. *Concerto for Orchestra*. London: Boosey & Hawkes, 2001. Piano score edited by György Sándor. Fifth movement, bars 540–56.

In her dissertation, 'Prokofiev's Piano Transcriptions: A Comparative Study of His Transcribing Techniques,' Di Zhu provides insights into the way Prokofiev transcribed his own orchestral works, drawing examples from works such as the ballets *Romeo and Juliet*, known as *Ten Pieces from Romeo and Juliet* op. 75, and *Cinderella* (*Three Pieces from Cinderella* op. 95).[41]According to Zhu, Prokofiev employed a variety of transcription techniques including what she labels 'decoration, refinement, simplification and rearranging the musical material.' [42] Zhu refers to an interesting example of decoration in the 'Mercutio' section in *Romeo and Juliet,* for which two versions exist, the reduction by Levon Atovmyan (from the complete ballet score) and the transcription by Prokofiev himself (from the *Ten Pieces* op. 75). Example 7a shows a relevant section from the full score of the ballet. Example 7b shows figure 103 as arranged by Atovmyan and 7c is Prokofiev's own version.

[41] Di Zhu, 'Prokofiev's piano transcriptions: A comparative study of his transcribing techniques' (DMA dissertation, University of Cincinnati, 2006).
[42] Ibid., p 18.

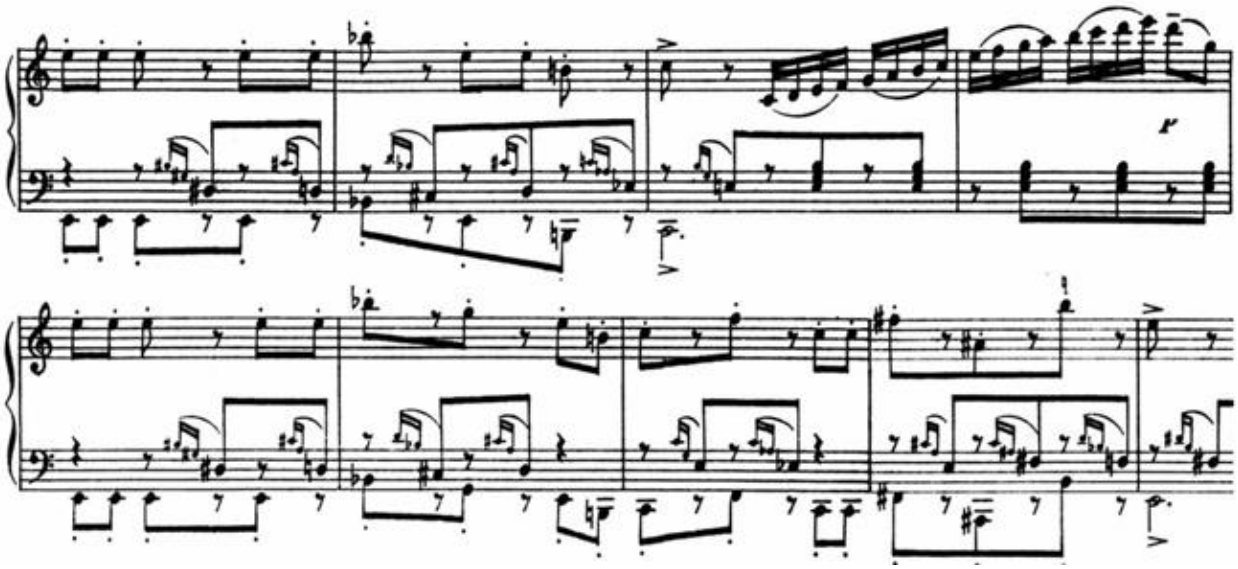


Example 7a. Sergey Prokofiev: 'Mercutio' from the ballet *Romeo and Juliet* Op. 64. Full score. Moscow: Muzgiz, 1961. Bars 55–64.



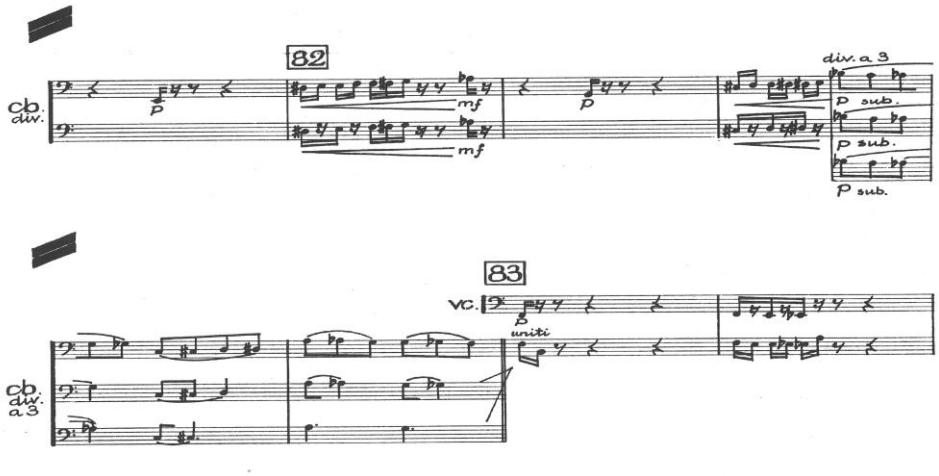
Example 7b. Sergey Prokofiev: 'Mercutio' from the ballet *Romeo and Juliet* Op. 64). Piano reduction by Levon Atovmyan. Hamburg: Musikverlag Hans Sikorski, 1960, p 48, bars 55–63.

Apart from being impractical on account of its literal reproducing of the orchestral texture, Atoymyan's version notably has an impossible chord in the left-hand part in the second bar of the lower system, final quaver. In the arrangement made by Prokofiev (Example 7c) it is evident that the author has doubled the motif of three repeated 'E' quavers each time it starts the phrase, and also replaced the chords with more elegant and humorous grace notes, which depict the character in a much more appropriate way on the piano. In addition to character and colour, the grace notes also reflect the sound of the original muted horn section, which then stops at the start of the scale passage in bar 57.



Example 7c. Sergey Prokofiev: 'Mercutio' from *Ten Pieces from Romeo and Juliet* for piano op. 75, no. 8, published by Musikverlag Hans Sikorski (Hamburg, 1958), bars 55–63.

Often the challenges that the arranger faces cannot be overcome just by simplifying the texture, but require the creative application of specifically pianistic gestures. A telling example is Witold Lutosławski's Piano Concerto, written in 1987 for Krystian Zimerman. At the beginning of the fourth movement, the lower strings, cellos and double basses play a chain of close-knit chromatic phrases with very dense legato effect, achieved by the *divisi* double basses overlapping the notes of the subsequent descending scale, as demonstrated in Example 8a (third bar of figure 82 until figure 83, fourth bar of figure 84 until figure 85, later at figure 90).[43]

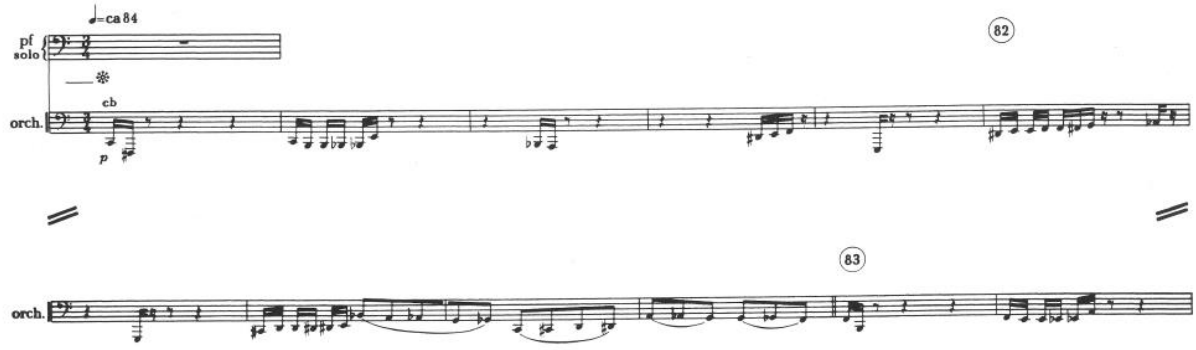


Example 8a. Witold Lutosławski: *Concerto for Piano and Orchestra* (1987). Full score. London: Chester Music, 1991. Beginning of the fourth movement, p 79.

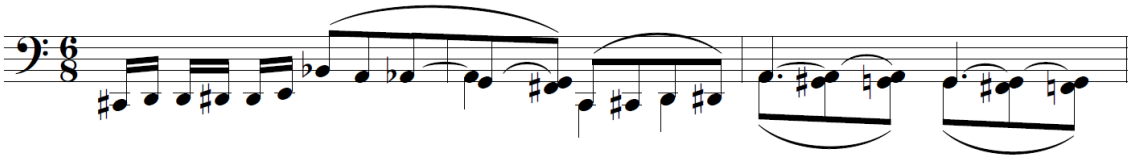
This acoustic effect of overlapping legato is highly characteristic for Lutoslawski's writing: other examples of it may be found in pieces such as the *Novelette* (string parts in the First movement, *Announcement*, figures 1–3, 15; Third movement, *Second Event*, figures 21–22;

[43] Witold Lutosławski, *Concerto for Piano and Orchestra* (1987), full score (London, Chester Music, 1991), pp 79–80, 87–88.

Fifth movement, *Conclusion*, figures 36–40, 52–53);[44] *Symphony No. 3* (woodwind parts between figures 1 and 2; string parts between figures 19 and 24, 93 and 97);[45] as well as *Chain 3* (string parts in figure 4–6, 46).[46] The re-creation of this effect can be achieved quite easily on the piano by applying overlapping finger legato technique in which the fingers hold the preceding notes of the descending or ascending scale for longer in order to allow them to sound together with the subsequent notes. The attack of the subsequent notes will therefore be softened and blurred, which emulates the required effect. However, in the two-piano version of this work, the composer did not use this technique, and simply notated the texture in a single line of descending or ascending quavers, as illustrated in Example 8b.[47] A better alternative version is proposed as Example 8c. Careful assessment of the desired acoustic impression can easily save the transcriber from such oversights.[48]



Example 8b. Witold Lutosławski: *Concerto for Piano and Orchestra* (1987). Two-piano version. London: Chester Music, 1991. Beginning of the fourth movement, p 46.



Example 8c. Witold Lutosławski: *Concerto for Piano and Orchestra* (1987). Proposed alternative version of the reduction of the orchestral part (bars 3–6 of figure 82).

[44] Lutosławski, *Novelette* for orchestra (1979), full score (London, Chester Music, 1981), pp 1–2, 13, 18–19, 29–31, 42–43.
[45] Lutosławski, *Third Symphony* (1983), full score (London, Chester Music, 1984), pp 2–3, 22–26, 93–97.
[46] Lutosławski, *Chain 3* for orchestra (1985), full score (London, Chester Music, 1988), pp 5–6, 40.
[47] Lutosławski, *Concerto for Piano and Orchestra* (1987), two-piano version (London, Chester Music, 1991), pp 46–47, 49–50. See footnote 43 for licensing information.
[48] According to Nicholas Hare, former Editor at Chester Music Limited, Novello & Company Limited, now Wise Music Group, the composer himself prepared the piano reduction of the orchestral part which was then hand-copied by his wife Danuta. It is important to stress, however, that the two-piano version in question was only intended for rehearsal purposes. I am grateful to Mr Hare for kindly allowing this information to be shared within the context of this research.

The previous examples demonstrate that above all, the creative use of musical notation is critical to communicating the desired acoustic impression to the pianist performing the reduction. Cornelius Cardew offers illuminating commentary on this in his 1961 article 'Notation: Interpretation, etc.'; he writes: 'the notation of music is a creative (or synthetic) activity, not to be confused with logical notation.'[49] It is, of course, important to remember that Cardew was writing this in the period when various new modes of notation were being employed by composers such as John Cage (1912–1992) and Earle Brown (1926–2002), in the words of Richard Taruskin, to 'enlist the performers' imaginations (or their prejudices)'.[50] Such instances of experimental notation are not applicable to the piano reductions considered in this research project since the use of unconventional symbols could well limit accessibility to the works transcribed. However, some of Cardew's recommendations, such as 'every sign should be active',[51] and 'a notation should be directed to a large extent towards the people who read it, rather than towards the sounds they will make', have direct impact on my research.[52]

Research Questions

There are several reasons why creating two-piano versions of twenty-first-century piano concertos is both worthwhile and necessary. The elaboration and analysis of these reasons has led me to formulate the following research questions:

1. What are the benefits of having a two-piano version of a contemporary piano concerto?

Much contemporary music poses considerable difficulties to performers due to its use of extended playing techniques, complexity of structure and novelty of musical language. During the process of learning the solo part of a contemporary piano concerto, a pianist faces not only the technical and musical challenges of their own part, but the need successfully to position it within the orchestral texture, which is frequently dense. In works such as James Dillon's *Andromeda*, where rhythmic patterns often do not follow traditional, acoustically perceivable momentum, orientation and interaction of the soloist with the orchestra becomes

[49] Cornelius Cardew, 'Notation: Interpretation, etc,' in *Tempo*, New Series, No. 58, Summer, 1961 (Cambridge: Cambridge University Press, 1961), p 21.
[50] Richard Taruskin, 'Chapter 2. Indeterminacy' in *Music in the Late Twentieth Century*, Oxford University Press (New York, USA, n.d.), accessed 24 May 2019.
[51] Cardew, 'Notation: Interpretation, etc,' p 23.
[52] Cardew, 'Notation: Interpretation, etc,' p 26.

exceedingly difficult.[53] Can having a piano reduction of the orchestral part that can be played by another pianist, or by the soloist themself during the learning process, facilitate study of the piece and reduce the number of rehearsals needed?

2. How does the specific compositional state or style of a work affect the process of transcription?

In case of a work such as Helmut Lachenmann's *Ausklang,* where the compositional idiom focuses on the phenomena of sound production rather than pitch-class based thematic material, reducing the texture produced by the orchestral instruments will inevitably lead to significant changes in the acoustically perceived narrative.[54] The work of the transcriber will thus involve changing the ontological identity of the original piece and inventing with, rather than reproducing precisely, the original musical material. This suggests a further broader question:

3. What are the ethics of the arranger in relation to the 'ownership' (or originality) of the work?

As I was working on my case studies, it transpired that the arranger often has to make what amount to editorial decisions, or, indeed, interventions in relation to the original musical text. There must always be a strong rationale behind altering a composer's notation and that rationale has to be explicitly acknowledged and stated. I have encountered multiple situations where modifying rhythms and pitches helped make the reduction clearer and easier to read. Examples include streamlining the notation of accidentals, approximating complex rhythmic counterpoint and adjusting dynamics. What are the ethical considerations that such interventions raise?

4. How might two-piano versions aid the dissemination and wider recognition of twenty-first-century piano concerto repertoire?

It remains the case that works commissioned from prominent composers by organisations such as the BBC Proms usually receive successful and prominent premieres, but typically fail to stay in the repertoire. This is primarily due to their complexity and the requirements of instrumentations and rehearsal time needed for performance. If it is not feasible to rely on the

[53] James Dillon, *Piano Concerto – Andromeda* (2005), full score (London: Edition Peters, 2006).
[54] Helmut Lachenmann, *Ausklang – Music for Piano with Orchestra* (1984–5), full score (Wiesbaden: Breitkopf & Härtel, 1985).

programming policies of major orchestras and festivals for repeat performances (with notable exceptions, such as the Huddersfield Contemporary Music Festival in the UK and equivalent specialist festivals in other parts of the world), then knowledge and appreciation of worthwhile works can easily atrophy. One significant group of musicians who could both benefit from, and perhaps lead the exploration and dissemination of the repertoire, is advanced students at music conservatoires. Many such institutions have programmes that focus specifically on contemporary repertoire and allow students to research and perform or record music by a particular contemporary composer.[55] By entering such programmes, students may gain a reasonably comprehensive knowledge of a composer's output for the solo instrument but may well miss out on learning important contemporary instrumental concertos due to the inaccessibility of performance opportunities requiring full orchestra. How can two-piano versions make contemporary concertos more accessible and therefore available for study and performance, for example within the context of advanced training (such as for concerto competitions and conservatoire concerts)?

The transcriptions that make up the case studies in this project have been developed strictly from a performer's point of view and my research focusses on pre-existing works written for solo piano and orchestra in the twenty-first century by composers still living. The research raises, however, a range of wider-reaching questions about aesthetics and the ontology of 'works' that are posed by the very process of arrangement that need to be addressed. Some of the pieces in a similar performance medium written in the last few decades of the twentieth century, but which nevertheless share the innovativeness and stylistic ambition of today's music, have been used to enhance the frame of reference for the main research area, providing a comparative perspective. The sources consulted during my research include both primary and secondary documentary materials, a full list of which can be found in the Select Bibliography.

Research Methodology

In order to explore some of the issues outlined above, I decided to undertake the writing of piano reductions of the complete orchestral scores of two twenty-first-century piano concertos by living composers. Initially, I wanted to restrict the illustrative material to selected sections from multiple works. Completing a full reduction of a work between 20 and 30 minutes in length takes up to a year, which is followed by an extensive editing process.

[55] For instance, the Royal College of Music has a 'Contemporary Piano' option on its Master of Performance Course: https://www.rcm.ac.uk/keyboard/#d.en.25444.

However, I decided that producing the two-piano reduction of a complete concerto at the end of the research project would not only aid the future dissemination and appreciation of the original work, but also enable analytical and stylistic studies of it. The following two works have been chosen as case studies:

1. Mark-Anthony Turnage, *Piano Concerto* (2013).[56]

Mark-Anthony Turnage's *Piano Concerto* was written in 2013 and first performed on 10 October 2013 by Marc-André Hamelin and the Rotterdam Philharmonic Orchestra under Yannick Nézet-Séguin in De Doelen, Rotterdam.[57] The writing of the orchestral part of the work is relatively 'transparent' and therefore allows for a piano reduction which in many ways follows in the tradition of early twentieth-century works, such as the piano concertos by Schoenberg, Bartók and Prokofiev.

2. James Dillon, *Andromeda* (2005).[58]

A work which stands out in terms of its complexity and the use of extended playing techniques is *Andromeda* by James Dillon. Written in the course of 2005 and dedicated to Helmut Lachenmann, it reflects stylistic features of the so-called 'new complexity' such as extreme density of texture, exploration of timbral phenomena of sound and its mixtures, and of spatial qualities such as 'movement in waves between proximity and distance.'

There are numerous passages in the orchestral writing of this work which are particularly difficult to transcribe for the piano. For example:

- Dense polyphony in the strings in bars 104–169
- Unsynchronised dynamic waves between string, woodwind and brass section in bars 215–230 and 308–318
- Multi-layered waves in pitch and dynamic in bars 475–493
- Timbral effects in bars 576–593, especially in the percussion

[56] Mark-Anthony Turnage, *Piano Concerto* (2013), full score, London: Boosey & Hawkes, 2013. A copy of the full score is attached as an illustrative material at the end of this DMus portfolio and is not part of the submission. I am grateful to James Eggleston, the Head of Publishing at Boosey & Hawkes for kindly granting me the permission to use the as yet unrevised score of the Concerto (which is only available on loan) in my research.
[57] Turnage, *Piano Concerto*, full score (London: Boosey & Hawkes, 2013).
[58] James Dillon, *Piano Concerto – Andromeda* (2005), full score (London: Edition Peters, 2006). A copy of the full score is attached as an illustrative material at the end of this DMus portfolio with kind permission from Katie Tearle, the Director of New Music at Edition Peters.

- Effect of the sonic flux against strong rhythmic ostinato of quaver pulse in bars 710–770

Unlike Turnage, Dillon does not compose at the piano, but rather conveys his unique and complex sound world directly into the full score.[59] The two chosen case studies present not only very different sound worlds but also compositional approaches to both orchestral and piano writing. The process of exploring ways of transcribing the Dillon score has necessitated considerably expanding the range of acoustic effects in the accompanying piano part, compared to the much less 'interventionist' procedures required for a work such as Turnage's.

My choice of restricting the case studies to living British composers is explained by the fact that I wished to be able to interact and collaborate with the composers while creating two-piano versions of their concertos, and that this should be integral to my research. Being able to meet the composers, interview them at length and draw on the knowledge and advice obtained from these interviews in my practical and theoretical work has proved both essential to clarifying many questions arising from the reductions, and also highly informative of the research process itself. The edited transcripts of the interviews are referred to within the analytical commentary to each reduction and are also included in full as Appendices I and II.

The second decision, to limit my research to the genre of the piano concerto, is justified first by the fact that the reduction of such works enables me to reveal the similarities and disparities between the particular composers' writing for piano solo and the 'reduced' orchestral fabric. It also provides a platform on which other enquiries of a comparable kind could be made, using illustrative material from concertos written for other instruments, opera and ballet scores, and other relevant works; including examples from each of those genres would go beyond the scope of the current research. A final consideration is the particular utility of providing piano reductions that can support both the preparation of the two concertos for eventual performance with orchestra, or alternatively, for two-piano performance. It is important to keep in mind the distinctiveness of challenges of balancing the texture produced by two pianos playing at the same moment, as opposed to another instrument or voice/s with a piano. The naturally occurring timbral segregation which occurs when, for instance, a violin concerto is performed with a piano accompaniment, aids the perception of an authentic acoustic impression. The sonic homogeneity of an acoustic stream

[59] See the transcript of my interview with James Dillon, p 95, JD 10.

produced by the two pianos makes the arranger's work more delicate and therefore more revealing, especially when non-pitched sonorities are concerned. For example, the sound of a bell can be successfully translated into the piano reduction, but the presence of the solo part will diminish the acoustic impression of the effect.

I do not wish to claim that I have found solutions for all the kinds of problem outlined so far, all of which have been found in the course of this research project. A certain degree of compromise will always be involved in translating content from one medium to another. The overwhelming density of certain passages in the twentieth- and twenty first-century scores can challenge even the most experienced of arrangers. This creates further parallels with obstacles encountered in literary translations. Silvia Kadiu writes in *Reflexive Translation Studies: Translation as Critical Reflection,* referring to Jaques Derrida's (1930–2004) concept of 'untranslatability':

> If students interpret Derrida's concept of untranslatability as a deliberate gesture of resistance to translation, for example, they may be inclined subsequently, as literary translators, to retain 'untranslatable' words in the original language, words that have no established equivalent in the target language. If, on the other hand, they apprehend untranslatability as an inevitable dimension of the process of translating itself, they may be less likely to highlight the 'untranslatability' of these words and hence decide to translate them in a more creative or experimental way.[60]

During the process of my research I have often realised that simply acknowledging the impossibility of reproducing certain orchestral passages on the piano can lead to the liberation of one's creative energies and may result in 'creative or experimental' and, ultimately, more idiomatic solutions. It is also important to stress that I do not claim that piano reductions are 'equal' to their orchestral originals. However, the practical benefits of a piano reduction, to which I will return in later, greatly outweigh its relative limitations, and it is because of these benefits that I believe this research to be valuable and applicable in the wider context of music performance and education.

The high quality of works I chose for the research is of paramount importance: firstly, in order to be able to investigate a wide range of technical challenges and their possible solutions; secondly, in order to create for general study purposes usable two-piano versions of works that expand knowledge of what might already be considered contemporary canonical

[60] Silvia Kadiu, 'Introduction: Genesis of a Reflexive Method in Translation,' in *Reflexive Translation Studies: Translation as Critical Reflection* (London: UCL Press, 2019), p 16.

repertoire; and thirdly, to increase the awareness of pianists in particular of the newest developments in contemporary music.

The following additional questions have arisen as I worked on the case studies:

1. While aiming for the most economical use of piano texture throughout the reduction, how far is it possible nevertheless to imitate the actual sound picture and dynamic range created by the symphony orchestra?
2. What elements of orchestral fabric can or may be left out in a piano reduction produced first and foremost to be playable and to facilitate the learning process, without losing the fundamental properties or content of the score?
3. Which sound effects that the piano is capable of producing best correspond with the most commonly used idiomatic effects of the various orchestral woodwind, brass, percussion and string instruments, playing both singly and in ensembles?

The key parameters of the orchestral original that I aim to respect in the reduction can be broken down into the following categories:

- Pitch-classes

The pitch classes organised both vertically and horizontally can be reproduced in the reduction using techniques identified by Zhu as ‘simplification’ and ‘refinement’ (see above). In tonal textures, which constitute most musical narrative (for example, in Prokofiev’s ballets), cancellation of octave doubling and substituting larger intervals for smaller ones results in a playable texture which is nevertheless perceived by the audience as the same chord as the original. The challenge of atonal texture is to establish the hierarchy of pitch classes within a multi-part sonority. During the process of my research I discovered that at the core of both Turnage’s and Dillon’s most complex textures often lies the modal skeleton of pitch-classes, which can then be treated similarly to their tonal counterparts.[61] These core modal textures take priority over more ambient sounds that add ‘distortion’ to the modality, and which, in turn, can be represented through careful use of the sustain pedal.

[61] The modality of their music has been acknowledged by both Dillon and Turnage in the interviews. Please see the Dillon interview transcript, p 103 JD 46 and the Turnage interview transcript, pp 87–8 MAT 10, 11.

- Acoustic impression

Needless to say, in order to analyse and integrate the category of the actual acoustic impression of an orchestral work properly, a transcriber ideally needs to have access to recordings of performances of the original piece. Inevitably, the visual characteristics of the score do not always constitute an accurate reflection of the aurally perceived sonority. Fortunately for me, I was able to use the commercial recording of the Turnage's *Piano Concerto* and the archive recording of the premiere performance of Dillon's *Andromeda* as points of reference.[62] I have always aimed to prioritise representing the acoustic impression over simply reproducing the musical content. This sometimes entails rearranging and adding musical material in the reduction. For example, idiomatic gestures are created, using existing pitch-classes from other parts in the score, to capture effects such as flutter tongueing by wind instruments.

- Approximate or non-pitched sounds, particularly percussion

A consistent approach has been devised and then applied to percussion instruments that have approximate pitch or are non-pitched (bongos, tenor drum, tubular bells, cowbell). For the latter type, diatonic or chromatic clusters are used in different registers depending on the perceived sonority of each instrument. Corliss aptly summarises the principles:

> […] choose a low cluster of notes on the piano and that can become your bass drum. A triangle can be a cluster played high up on the piano and a snare drum could be a cluster played in the middle of the piano. Everything should be played of course with sharp attach and precise rhythm.[63]

In order to integrate the percussion clusters into the overall fabric of the piece, these are composed of pitch-classes sounding at the same moment in time in different parts of the orchestra, especially if those parts are not already represented in the reduction. This practice ensures the modal homogeneity which, as I will elucidate later, is fundamental to both concertos used in my case studies. Online resources such as *Vienna Symphonic Library* offer a comprehensive collection of audio examples of various playing techniques used by the individual instruments of the orchestra.[64] These libraries are helpful in isolating percussion sounds and establishing the matching clusters on the piano.

[62] The Dillon recording was kindly provided to use in this research by the BBC Scottish Symphony Orchestra.
[63] Corliss, 'Lost in Translation […],' p 226.
[64] *Vienna Symphony Library: Academy*. Accessed 2 June 2020. https://www.vsl.co.at/en/Academy

- Relative dynamics

The dynamic markings in the full score take into account the acoustic capabilities of each instrument or section and are aimed at creating a desired dynamic balance within the orchestral sonority at each particular moment of a 'live' performance. The original markings have to be adjusted when transferring the overall acoustic impression to the piano to maintain the hierarchy of dynamic levels within the texture as opposed to matching the actual power of the orchestral sound. The scaling down of dynamic markings has been a pertinent topic of discussion during the interviews with the composers and numerous changes were made at the editing stage.

- 'Spatial orchestration'

James Dillon pointed out in my interview with him that aside from creating new sonorities by mixing orchestral timbres, he is also fascinated by the idea of the musical material moving in physical space from one instrument or section to another.[65] An acoustic piano naturally has the limitation of being a single sound source in a fixed location, which prevents this compositional device from being effectively transcribed. It is however possible to recreate the dynamic dimension of this effect (dynamic swells) to a certain extent by using tremolos, and this strategy has been employed throughout the reductions.

- Elements of notation and their role in reduction

Articulation marks such as slurs, accents, daggers, tenuto and staccato not only inform the performer of the way specific notes should be played, but also ensure timbral variety is adequately represented. Slurs do not only communicate legato performance to instrumental players but also help differentiate the texture beyond simple polyphonic layers. It is important to note the different acoustic effect when slurs are applied to different instruments. For instance, legato playing on the harp is very different from legato on the oboe.

Creating a piano reduction of any orchestral score involves several stages of familiarisation and the following is the process which I established for each section of the score:

1. Listening to the original orchestral version with and without the score.
2. Undertaking a series of standard score-reading exercises, attempting to capture the essence of the acoustic impression.

[65] Dillon interview transcript, pp 107–8 JD 60, 61.

3. Creating a draft piano score with as many of the original orchestral parts included as possible.
4. Creating a template score using notation software with a braced piano system to produce a 'skeleton' arrangement, with additional staves to accommodate the voices which it is not immediately possible to fit into the main system.
5. Prioritising the material according to the following factors:
    - How relevant is a particular pitch or gesture to the overall texture?
    - Is the pitch or gesture in question doubled by other instruments or not?
    - What are the dynamic markings relevant to this pitch or gesture?
    - What are the timbral permutations of the pitch or gesture and do they allow for its clear projection within the overall hierarchy?
    - Do its integral emotional and structural properties suggest it can be classified as a fundamental or an emergent element of the musical fabric?
6. Playing the draft score on the piano and adjusting the layout of texture according to the principles of practicality and playability.
7. Determining whether pedaling is crucial for translating the acoustic impression and indicating it whenever necessary.

Below is a list of frequently used abbreviations:

- PR: piano reduction
- FS: full score
- SP: solo piano part
- RH: right hand part
- LH: left hand part

To avoid confusion, 'soloist' is always the performer executing the SP, while 'pianist' refers to the performer of the PR. The dynamics that apply to the RH only are written above the top stave and the ones that apply to the LH only are written underneath the bottom stave. Dynamics applicable to both hands are written between the staves in the PR. This principle does not apply to the SP where the original layout of the dynamic markings was preserved.[66] For example, at bars 231–40, the LH crescendos are positioned above the LH stave, but

[66] For example, in Case Study II: James Dillon's *Andromeda,* in bb 231–240, both the crescendos applicable to the LH and the single dynamic markings applicable to the RH are positioned in between the two staves of the SP (pp 24–25 in Case Study II).

below the single dynamic markings that apply to the RH. All trills should be performed as semitone trills, unless otherwise specified. Names of instruments or combinations thereof have been indicated throughout the PR to further inform the pianist of the original orchestral timbre.

Case Study I: Mark-Anthony Turnage, *Piano Concerto* (2013)

The *Piano Concerto* has three contrasting movements: 'Rondo Variations', 'Last Lullaby for Hans – in memoriam Hans Werner Henze' and 'A Grotesque Burlesque'. In his note on the Boosey and Hawkes website, the composer himself admits that 'though I was never a top-level pianist, it is the instrument I played most and probably have always felt closest to. I knew I wouldn't write a grand concerto like Beethoven's Emperor or Brahms's second concerto but, writing for a brilliant pianist like Marc-André Hamelin, I've tried to provide enough challenging things, even within a fairly compact 20-minute piece.'[67]

An important influence which Turnage acknowledges in his programme note is that of jazz. For example, the third movement of the Concerto features textures clearly resembling stride piano technique, which was developed in the 1920s and 1930s by American jazz and ragtime pianists.

Unlike Dillon, who composes straight into the full scores, Turnage uses short score of four to six staves. The composer studied piano at the Royal College of Music Junior Department in the 1960s and this familiarity with the instrument is evident throughout the score of the Piano Concerto.

Performances of the *Piano Concerto* to date:

Date	Venue	Performers
10 October 2013 (premiere)	De Doelen, Rotterdam, The Netherlands	Marc-André Hamelin (piano), the Rotterdam Philharmonic Orchestra, Yannick Nézet-Séguin (conductor)
22 January 2015	Verizon Hall, Philadelphia, Pennsylvania, US	Marc-André Hamelin (piano), the Philhadelphia Orchestra, Yannick Nézet-Séguin (conductor)
22 October 2015 (UK premiere)	Bridgewater Hall, Manchester, UK	Marc-André Hamelin (piano), the Hallé Orchestra, Ryan Wigglesworth (conductor)
23 October 2015	Sheffield City Hall, Manchester, UK	Marc-André Hamelin (piano), the Hallé Orchestra, Ryan Wigglesworth (conductor)

[67] http://www.boosey.com/cr/news/Turnage-Piano-Concerto-premiere-in-Rotterdam/100279, accessed on 30 November 2015.

Recording:
Turnage, Mark-Anthony. *Piano Concerto* (2013). Marc-André Hamelin, Rotterdam Philharmonic Orchestra, Yannick Nézet-Séguin. Deutsche Grammophon 0289 483 5552 5, 2018.

Turnage is known for often drawing inspiration from extra-musical sources. For example, one of his earlier compositional successes, *Three Screaming Popes* (1985) for large orchestra was inspired by the paintings with the same title by Francis Bacon. The large-scale four-movement *Remembering* (2014–15), written in memory of a family friend and a son of the jazz guitarist John Scofield, is a symphony in everything but name. The composer said that he did not feel comfortable with the baggage that the genre of 'symphony' carries within itself.[68] Out of the nearly twenty works written for various solo instruments with orchestra, only the Cello Concerto of 2010 and the Piano Concerto of 2013 do not have narrative or 'vivid' titles.[69] Turnage himself explained that as he progressed through his compositional career, his confidence in handling purely musical structure grew and 'the pieces [became] more abstract and they also [became] more about the notes.'[70]

The composer notes his fascination with various techniques that find their application in the Piano Concerto, to variable degrees: variation, rotation, transposition, inversion and distortion. He says that he learned the rotation technique from his mentor Oliver Knussen and traces it ultimately to Igor Stravinsky's approach to writing block chords. The chords and their inversions rotate around a central pitch which is often manifested through a pedal point. Therefore, positions and inversions of each chord carry structural significance for the musical narrative and need to be preserved in the PR whenever possible.

[68] Turnage interview transcript, p 84 MAT 06.
[69] Official biography of Turnage on the Boosey and Hawkes website.
[70] Turnage interview transcript, p 84 MAT 06.

Analytical commentary

First movement: Rondo – Variations				
Section figure	Bars (subsections)	Tempo markings	Description	Recording timings (start time for each section: minutes′ seconds″)
A	1–33	♩ = 144	SP introduces the jaunty, sharply articulated motif built around the chromatic intervals of fourths and sevenths. Two single bar phrases in 2/4 time signature are followed by one two-bar phrase in 5/8 and 2/4. This four-bar antecedent then proceeds into a consequent where the original piano motifs are interspersed with humorous interjections from the strings and woodwinds. The roles are reversed when the 8-bar theme is repeated. In bars 17–23 the composer seemingly starts the first variation by chromatically distorting the theme. However, in bars 23–7 a new rhythmic configuration is introduced. It feels new due to the shifted metric emphases, however it bears strong motivic resemblance to the first theme. It is repeated and fragmented.	00′01″
	34–58		Further variation with longer semiquaver runs is introduced in bar 34, driven by SP. The orchestra starts by supporting them with a sustained lower C, however this is quickly replaced by a pizzicato string and woodwind interplay in bar 38.	00′32″

In the unrevised score the SP chord in bar 34 is notated with a spread, in the later version it is written out and divided between the hands which makes for easier execution. This is an example of a suggestion from Marc-André Hamelin that was incorporated into the final version and an indication of Turnage's desire to collaborate with his performers and 'make it

right for them.'[71] My two-piano version features Hamelin's suggested alteration as approved by the composer. Grace notes are used to represent the string pizzicatos until bar 34. However, in 44–58 the pizzicato resonance is represented by short rhythmic pedals on each quaver, reflecting the sharp articulation of the orchestral texture.

59–76		The First theme returns, this time supported by sustained woodwind chords adding dynamic energy to it.	00′56″

Both the horizontal and vertical pitch classes of the 'A' section are a good example of what Turnage describes as a 'chromatic, but definitely not atonal' musical language.[72] The relative transparency of the orchestration made reducing this section a relatively straightforward process. Simply reproducing the pitch classes from the FS in the PR already gives an adequate representation of the orchestral sonority. In 59–61 RH tremolos represent the crescendos in sustained woodwind chords.

B	77–105	♩. = 144	The time signature changes to 6/8 and this is emphasised by the snap pizzicatos of cellos and double basses emphasising the downbeats with percussion and brass highlighting the syncopated upbeats. Despite the phrase being metrically extended, the contour of the first theme is still recognisable. After three phrases of seemingly accompanying texture, the first theme is superimposed on it in an *arco* string unison.	01′13″

The bass drum has been notated in the PR with a chromatic cluster (as in Bartók's *First Piano Concerto* discussed on p 15 of this thesis), complemented by grace notes to represent snap pizzicatos. The direction of the grace notes changes according to which octaves constitute the parallel lines in cellos and double basses. The brass chords in 77–80, 84–6 and 89–92 are doubled in both marimba and vibraphone. This frequently occurs in the orchestration (also with harp and/or celeste) and makes reducing the score much easier for the arranger. However, if the vibraphone/marimba chords are laid out in PR precisely as they appear in FS, they can only be played by a pianist with large hands. On the other hand, when SP plays the similar chords in 97–105, they are laid out in the same way as those in the

[71] Turnage interview transcript, pp 91–2 MAT 21.
[72] Turnage interview transcript, p 87 MAT 10.

marimba/vibraphone parts. After a consultation with the composer, the decision was taken to adjust some of the chords so that the large stretches are not required for performing the PR.

This section demonstrates a notable example of differences that may occur between the image presented by the FS and its acoustic realisation on a recording. When the theme in 93–105 is supported by the marimba and vibraphone, percussion tremolos of the latter two appear on each dotted minim. They seem prominent visually, but in the acoustic realisation are barely heard behind the sustained strings unison. Initially the tremolos were included in the PR; however, after listening to the recording and discussing the issue with Turnage, it was decided to leave them better to represent the actual acoustic impression.

C	106–132	♩. = 120	SP initiates the slower lyrical passage, maintaining the syncopations but over longer phrases of three or four bars. Both the chromatic seventh chords and misplaced accents are a reference to Turnage's trademark jazz influence.	01′42″
	133–53		The phrases are augmented and become dynamically more expansive, reaching focal points in bars 139 and 144. A SP postlude follows in bars 146–53.	02′13″

Most commonly the string pizzicato is represented in piano reductions by using grace notes. However, due to the lyrical nature of this section, the decision was taken to use sustained long notes instead for the whole duration of the bass line.

D	154–192	♩. = 144	In a conventional first movement, composed using the principle of the sonata form, at this point in the structure the listener would expect a development. Turnage seemingly conforms with this expectation and changes the texture to more frequently accented lines. Misplaced accents, syncopations and changing time signatures further contribute to the effect of increasing tension. Despite the appearances, the motifs continue inverting and chromatically distorting the theme for yet another round of variations.	02′37″

The sequences of off the beat fifths in the cello part occurring in bars 166–7, 180–1, 184–5, 188–9, which are doubled in SP, present a dilemma for an arranger. If they are included in PR

alongside the two-note motifs, the resulting texture becomes much more difficult to execute due to the necessity of large leaps. The rationale behind including the cello fifths would be to inform the soloist of the fact his LH part is being doubled by the orchestra. After some deliberation and discussion with the composer, it was decided to exclude the fifths, therefore making the PR easier to play. The texture would still sound complete in a two-piano performance. The same principle was applied to the flute and double bass parts in 168–75, which were both left out of the PR. This instance highlights the importance of the arranger's awareness of the orchestra's acoustic impression.

A1	193–227	♩. = ♩=144	Similar to the 'D' section, 'A1' fulfils the role of a recapitulation, with the motivically unchanged first theme restated at stronger dynamic levels, this time driven by the orchestra.	03′19″
B1	228–255		Both the syncopated 6/8 ostinatos of the original 'B' section and the SP semiquaver runs first heard in bars 38–45 are juxtaposed in rapid succession. This leads up to a climax of the 243–55 passage, which structurally is a restatement of what we heard in 93–105 yet reinforced dynamically by the full forces of the tutti orchestra.	03′51″
C1	256–67		The intensity and dynamic levels remain as does the rhythmic drive, but the motivic lines are clearly derived from the lyrical 'C' section.	04′17″
D1	268–282		The piano gestures come from the last subsection of 'A'. The repeated two-note motifs in the orchestra relate to the ones heard in 166–7, 180–1, 184–5, 188 and are ultimately a rhythmic augmentation of the initial humorous string and woodwind interjections in 'A'.	04′28″
Coda	283–290		A brief piano-driven crescendo passage, which brings the movement to a sudden close. The orchestra supports SP with off the beat snap pizzicatos, brass and woodwind chords.	04′43″

Despite the relative transparency of its orchestration, the First movement of the Concerto provides valuable musical material that illustrates common problems that face the arranger and exemplifies possible solutions to them.

The second movement, 'Last Lullaby for Hans – in memoriam Hans Werner Henze,' was composed in memory of Turnage's mentor Henze who sadly passed away in 2012. Ever since

the two composers first worked together in Tanglewood, where Turnage was studying on a scholarship in 1983, they remained close friends. The movement is gentle and lyrical in nature, it is written using a clear ternary form and features a substantial piano cadenza in the middle.

The instrumentation of the movement is relatively sparse and does not raise too many questions concerning the representation of the orchestral acoustic image on the piano. However, it provides a telling example on how similar playing techniques need to be treated differently when placed in contrasting musical contexts. I have used grace notes consistently for representing string pizzicatos in my reductions. However, in bars 1–3 and also 16–17 of this movement the grace notes would inflict a certain disturbance on the lyrical flow of the musical fabric. Therefore, the decision was taken to notate the pizzicato double bass line, running an octave below the arco cello crotchets, as quavers with a dual tenuto/staccato articulation.

Third movement: 'A Grotesque Burlesque'				
Section figure	Bars (sub sections)	Tempo markings	Description	Recording timings (start time: minutes′ seconds″)
A	1–29	♩ = 92	SP opens the antecedent of Third movement, as it did in the First, with two bars of highly syncopated chordal texture in 4/4 reminiscent of the 'stride piano' technique employed by the ragtime pianists of the 1920s. The contrasting legato phrase in bars 3–4 follows the similar melodic contour as the corresponding bars 3–4 of the First movement. The orchestra responds with a consequent and the material is then developed through fragmentation technique in constant dialogue between the soloist and the orchestra until bar 27.	00′00″

The *fp* effect of the bassoons, first two horns and the viola taking place in bars 9–10 (the D4 pitch class) is traditionally challenging to represent on the piano. However, with the location of the effect being so close to the start of the movement, it enables an elegant solution in the PR. Since the orchestral tutti in bars 5–8 can and should be performed with no sustaining pedal, prior to the start of it the pianist performing the PR can silently depress the keys of G1

and D3 and hold them throughout the tutti with a sostenuto pedal. These keys provide the fundamental and the fifth for the D4 in bars 9–10. Once the 9th bar is reached, the pianist plays the D4 as a tenuto crotchet released in strict time and then the acoustic reverberation of the piano will create an illusion of the dynamic drop. If the piano does not have a sostenuto pedal, holding on to the G2 and C2 after the cello and double bass lines end can help create a similar effect. The latter option is notated in the PR.

B	30–68	Same	Slightly more lyrical material is introduced in dialogue by the strings and woodwinds in ¾. It features 2-bar long descending phrases in FS accompanied by the short, articulated chords of the SP. After a brief interjection of a contrasting passage in 40–45, the SP plays the expanded version of the 'B' theme that builds up to an orchestral climax in bars 54–63.	01′11″

The orchestral tutti in bars 54–63 is a telling example of the need to treat the reduction process in a creative way. My initial drafts of this passage were a literal reproduction of the pitch classes from the FS. However, after a few stages of elaboration the new version was reached where tied grace notes are used in LH to represent not the pizzicato strings but the crescendos in the bass drum that prominently feature in the lower register. Although the sustaining pedal is not notated here, the tied notes in the bass line communicate to the pianist what type of acoustic impression is needed. The clear trumpet line is given to the thumb of the pianist's RH.

The combination of muted horn, harp harmonic, sustained viola note and the cello pizzicato results in a colourful F4 pitch class starting in bar 68. The representation of this is achieved by similar means to bars 9–10 of the Third movement. A silent chord is depressed by the LH and the note itself is rearticulated by the RH when necessary. This approach is consistently applied within the subsequent section.

C	69–99	Changing	In a formal gesture similar to the one used in the First movement, Turnage plays with the listener's expectations and writes the section of contrasting textural and temporal juxtapositions, sequential motivic development and increasing tension. This suggests the	02′36″

			illusion of a development section and leads the movement into a virtuosic cadenza of the SP.	
D	100–121	♩ = 120	Aside from a brief softer passage in 104–7, this is music of high energy with almost violent accented syncopations throughout. Greatest precision and agility is required from the soloist, which reflects Turnage's wish to convey an appropriately challenging texture for a pianist of Hamelin's calibre.	03′46″
E	122–135	♩ = 92	Once the orchestra joins the SP, a truly grotesque and angular fragment follows, building up towards the return of the material from the movement's opening.	04′32″
A1	136–153	♩ = 92	In this recapitulation the orchestra plays most of the thematic material while the SP provides the martellato interjections and accompaniment.	04′57″
A2	153–176	♩ = 92	This piano-driven section features a long bass drum tremolo and builds up towards the focal point of the whole movement, another virtuosic cadenza of the SP marked *fff* by the composer, with 'hammered' chords.	05′31″
F	177–199	♩ = 92	CODA: sustained *fp* chords of the orchestra and the contrasting martellato interruptions of the SP bring the work to a dramatic close.	06′35″

The section in bars 177–199 presents a fascinating challenge to an arranger. The orchestral fabric contains multiple sequences of accentuated minor thirds entries in ascending and descending motion. Each of these thirds is sustained for a different duration, creating a series of superimposed layers which are impossible to reproduce literally. However, the use of sustain pedal is instrumental in representing the acoustic impression and it is imperative that the marked pedaling in this section is followed verbatim.

Case Study II: James Dillon, *Andromeda* (2005)

The Scottish composer James Dillon (born 29 October 1950) is frequently associated with the 'School of New Complexity,' alongside his contemporaries Brian Ferneyhough (b. 1943), Michael Finnissy (b. 1946), Chris Dench (b. 1953) and Richard Barrett (b. 1959). The British musicologist Richard Toop was one of the first to place the term 'New Complexity' firmly in the discourse back in 1988,[73] acknowledging in 1993 that it may be perceived at first as a mere 'journalistic convenience.'[74] However, he goes on to argue successfully that the use of this and other similar terms is justified when they are viewed 'not as an aesthetic enclave, but simply as a frame of reference which allows for any number of diverse and even partly contradictory phenomena.'[75] Arnold Whittall provides an in-depth exploration of the history behind the term, examines the aesthetic categories fundamental to its representatives and gives his detailed analyses of the sixth string quartets by Ferneyhough and Dillon in his article 'Theory, History, Analysis: Exploring Contemporary Complexity' (2012).[76]

Alastair Williams similarly refers to the style of Dillon as 'new complexity' in *The Cambridge History of Twentieth-Century Music* and writes that he and other composers associated with the movement share certain concerns between them, 'particularly with regard to their ways of working through the tensions between tradition and restructuring that are the hallmarks of modernity.'[77] According to Igor Tonoyi-Lalic, they 'had come to the fore in the 1980s and 1990s' and their music 'was amongst the most texturally dense, sonically extreme and structurally complicated of any works in Western musical history.'[78] Writing in *The Guardian,* Tom Service described Dillon's music in a similar way, writing of his five-part piano cycle *The Book of Elements* (composed between 1996–2003) and *Nine Rivers,* comprising nine large-scale works for various instrumentations:

[73] Richard Toop, 'Four Facets of The New Complexity,' in *Contact: A Journal for Contemporary Music*, 32 (1988): pp 4–50.
[74] Richard Toop, 'On Complexity,' in *Perspectives of New Music* 31, no. 1 (1993): p 53.
[75] Ibid, p 53.
[76] Arnold Whittall, 'Theory, History, Analysis: Exploring Contemporary Complexity,' in *Theory and Practice* 37/38 (2012): 241–61.
[77] Alastair Williams, 'Ageing of the New: the Museum of Musical Modernism,' in *The Cambridge History of Twentieth-Century Music*, edited by Nicholas Cook and Anthony Pople (Cambridge: Cambridge University Press, 2004), 526–7.
[78] Igor Toronyi-Lalic, 'James Dillon: I am looking for an endless intensity,' *The Times,* 13 November 2009, accessed 1 December 2018, https://www.thetimes.co.uk/article/james-dillon-i-am-looking-for-an-endless-intensity-rg3ljmdbzkt

> '…Dillon's combination of sonic immediacy and multi-layered complexity creates some of the richest experiences you can have in new music. This is music that seems to animate a mythic power that is both primeval and preternaturally sophisticated.'[79]

The density of orchestration, 'sonic extremes' and an intricately sophisticated relationship between the soloist and the orchestra were the main reasons behind my choice of Dillon's *Andromeda* as a largest case study for this research project. Commissioned by the BBC Proms and written in 2005, Dillon's *Andromeda* is dedicated to Helmut Lachenmann on the occasion of his 70th birthday.

Performances of the *Piano Concerto – Andromeda* to date:

Date	Venue	Performers
10 August 2006 (premiere)	Royal Albert Hall, London 36th Promenade Concert of the 2006 season	Noriko Kawai (piano), the BBC Scottish Symphony Orchestra, Ilan Volkov (conductor).
23 September 2006	City Hall, Glasgow	Noriko Kawai (piano), the BBC Scottish Symphony Orchestra, Ilan Volkov (conductor).
28 September 2007	Palais de la musique et des congrès – salle Erasme (Salle Érasme), *Musica Strasbourg* Festival	Noriko Kawai (piano), l'Orchestre Philharmonique Royal de Liège, Pascal Rophé (conductor).
29 November 2014	Town Hall, Huddersfield, Huddersfield Contemporary Music Festival	Noriko Kawai (piano), the BBC Scottish Symphony Orchestra, Steven Schick (conductor).

The review of the Huddersfield performance by Simon Cummings describes the 'textures that make up a lot of *Andromeda*'s material' as being 'often rooted in/constructed from small units, which are worked up into a turmoil of metrical regularity.'[80] This is an important observation as the 'small units' are a key to the translation of the orchestral score into a different medium (the piano) and I will return to this feature shortly.

Composers are often reluctant to talk about or comment on their work. For instance, Paul Griffiths famously compares interviewing (Sir) Harrison Birtwistle to mating pandas,

[79] Tom Service, 'A Guide to James Dillon's Music,' *The Guardian*, 4 February 2013, accessed 20 January 2019, https://www.theguardian.com/music/tomserviceblog/2013/feb/04/contemporary-music-guide-james-dillon.
[80] Simon Cummings, 'HCMF 2014: BBC Scottish Symphony Orchestra, Arditti Quartet,' *5:4*, 1 December 2014, accessed 5 January 2019, http://5against4.com/2014/12/01/hcmf-2014-bbc-scottish-symphony-orchestra-arditti-quartet/.

explaining that 'the creature is friendly but on the surface ponderous, though capable of sudden grace, exactness and surprise.'[81] When composers do provide textual commentary, it is often confusing rather than clarifying, and sometimes meant to be so. James Dillon wrote a one-page note explaining the concept of *Andromeda.* This note is published in the full score.

First Dillon refers to the two main sources of the work's programmatic narrative:

1. *Andromeda:* the offspring of Celeus and Cassiopeia (night and darkness) is a personification of the dawn. To atone for the vanity of her mother, Cassiopeia, who claimed she was fairer than any of the sea nymphs. She was chained fast to an overhanging rock where the foaming billows that their spray continually dashed over her fair limbs. Eventually she is rescued by the Perseus' irresistible sword – the piercing rays of the sun.[82]
2. *Andromeda:* V-shaped constellation in the northern hemisphere said in ancient times to represent the outstretched arms of Andromeda, 'the chained woman'.
   The Andromeda galaxy, a spiral galaxy like our own Milky Way, is the most distant object to be seen by the visible eye.[83]

This is followed by two paragraphs introducing the musical aspects of the work. In the first paragraph he talks about the nature of the instrumental concerto, the development of the genre from Beethoven onwards, the increasing virtuosic demands on the performer and his ideas about the original meaning of virtuosity.

According to the composer's description featured in the second paragraph, *Andromeda* is written 'in one continuous movement of around 35 minutes in duration'.[84] The recurring musical elements referred to in the Preface include:

- Dynamic and spatial 'imaginary' waves, often reaching different stages of intensity simultaneously in different sections of the orchestra or the solo piano part, the composer also refers to the dynamic changes as 'the perpetual growth and decay'.[85]
- The V-shaped constellation, also depicting the outstretched arms of Andromeda, is musically reflected not only in the dynamic hairpins, growing and fading, but also in

[81] Paul Griffiths, *New Sounds, New Personalities: British Composers of the 1980s in Conversation with Paul Griffiths* (London: Faber Music Ltd, 1985), p 186.
[82] Dillon quotes the definition of a mythical nature of Andromeda from *Myths of Greece and Rome* by Hélène Adeline Guerber. Two editions of this book have been consulted for this research: the 1893 New York edition by the American Book Company and the 1907 London edition by George G. Harrap & Co. The 1893 edition narrates the story of Perseus and Andromeda as part of the 'Classical Myths' chapter (pp 246–9) and talks about the significance of the story in 'Analysis of Myths' on pp 190–1. The 1907 edition tells an expanded version of the Perseus and Andromeda myth on pp 214–7 and comments on their significance on pp 354–5.
[83] Dillon claims he has taken this quote from the *Times Atlas to the Universe*, although it was impossible to determine the exact edition of the *Atlas.*
[84] Dillon, preface to *Piano Concerto – Andromeda* (2005), full score (London: Edition Peters, 2006).
[85] Dillon, preface to *Andromeda.*

the visual image of the score, which is full of V-shaped gestures. These gestures appear vertically (e.g. bars 215–19 woodwind parts, 218–29 harp part, 240–297 strings, 365–403 strings) horizontally, (319–326, 96–501 most notably) also as inverted V symbols.

- Regular ostinato rhythms which are interspersed with destabilizing inner rhythmic pattern–the composer describes this tool in the preface as 'the large rhythm of the sections contains a more spontaneous activity'.[86]

Dillon himself refers to the work as being divided into 15 sections, including a coda. Having established where each section begins and ends, I compiled a chart of these sections (see the Analytic Commentary below). The chart numbers these sections, gives the length of each one in both bars and timings, based on the BBC archive recording of the first performance.[87] All timings are therefore from one performance only, rather than prescribed by the composer, and should not be considered prescriptive for future performance. Further information includes the metronome markings of each subsection, and short descriptions of the musical material. Each section of the chart is accompanied by a commentary on the challenges posed and solutions found in the process of making the piano reduction. As part of this research, I conducted a semi-structured interview with the composer on 7 December 2018 at the Royal College of Music. The conversation with Dillon has provided me with a great deal of further insight into his compositional process and the background of the work. An edited transcript of the interview is provided in full in Appendix II and relevant passages are quoted in the body of this critical commentary.

Dillon's compositional style

In his *Arts Desk* interview with Igor Tonoyi-Lalic in 2010, the composer himself commented on the notion of complexity in relation to his music, saying that 'there's going to be a certain noise in any kind of complex system.'[88] That Dillon's musical fabric is perceived by both performers and listeners as a complex system is evident. The composer's highlighting of 'noise' as a crucial category in his sonic style helps in identifying some basic elements of that style. Firstly, there are the 'small motivic units' mentioned by Simon Cummings in his

[86] Dillon, preface to *Andromeda.*
[87] The recording has been kindly shared with me to use for this research by Graeme Taylor, the Programme Manager of the BBC Scottish Symphony Orchestra.
[88] Igor Tonoyi-Lalic, 'theartsdesk Q&A: Composer James Dillon,' *The Arts Desk*, 31 October 2010, accessed 19 May 2020, https://theartsdesk.com/classical-music/theartsdesk-qa-composer-james-dillon.

review (see above), which are superimposed onto a vertical polyphony and stretched into horizontal linearity driven by ostinato rhythms. These motivic units are modal in their nature, although according to Dillon himself, 'one of the characteristics of a mode is it's not always clear what is the fundamental.'[89] Secondly, there is an element of 'ambient noise' which supports, distorts or conflicts with the modal motivic units. Then there is the exploration of timbre and space which often involves 'creating instruments that don't exist.'[90] Referring to the first bar of section C (bar 319), where viola and oboe start the sequence of ascending quintuplets, Dillon says that he is 'playing with the idea of an instrument that you can call a 'violoboe.'[91] The 'spatial' aspect of *Andromeda* manifests itself in both the visual symbolism of the score (V-shaped waves) and the literal exploration of the physical space on stage between different instruments of the orchestra. Dillon explains the mechanism of the latter:

> […] Sometimes I take the contrabasses, let's say, extreme right as I'm looking front on to the orchestra, extreme left if you're playing in the orchestra and I say, 'where are the horns?' and the horns may be North-West, as opposed to South-West and OK, how much space is there between them? And often when I'm thinking about orchestration I'm thinking about this space between the instruments. Do I fill it? Do I keep it as a gap, like an interval space? *I'm often making these trajectories across the space* (my emphasis).[92]

Finally, there is a fusion of all these elements into a type of the 'protean theatre' narrative model which Dillon refers to in his Preface.[93]

Relevance of stylistic elements to the process of piano reduction

In my interview with him, Dillon identified the notion of modality as a defining feature of his compositional language saying that *Andromeda* 'essentially, is modal' adding that that his 'verticalisation of multi-modes' used in orchestral polyphony presents a considerable challenge for a piano reduction.[94] However, modality also provides a key to translating this apparently overwhelming polyphony into a texture which can be performed by a pianist's ten fingers. The approach is similar to that used in tonal music and is detailed below:

- recurring pitch classes that constitute the mode or scale are established and noted

[89] Dillon interview transcript, p 104 JD 52.
[90] Dillon interview transcript, pp 107–8 JD 60.
[91] Ibid.
[92] Dillon interview transcript, p 108 JD 61.
[93] Dillon, preface to *Andromeda.*
[94] Dillon interview transcript, p 103 JD 46.

- doubling of these pitch classes is excluded, unless there are grounds for believing the unisonal effect is a fundamental property (careful examination of the orchestration and dynamic can provide clues)
- registral priority is given to the high and low extremes of the texture at any time
- phrases integral to the acoustic impression are translated using appropriate idiomatic gestures on the piano
- pedaling, articulation and performance directions are used to encourage the pianist to convey the timbral variety and scope of a full symphony orchestra

It is important to stress that the pianist performing the PR should always assume full orchestral sonority unless instrument indications suggest otherwise. Therefore, consistent pedaling, at the pianist's discretion, should be employed throughout the work, even in sections where pedaling is not indicated in the PR: only pedaling crucial to sustaining certain pitch classes or their combinations is specifically marked.[95] The second fundamental role of pedaling is to provide a constant cloud of ambient sonority that envelops, supports, and sometimes distorts the thematic skeleton made of the relatively short melodic and harmonic cells that forms the second element of Dillon's musical language. This timbral exploration is one of the areas of piano reduction where the limitations of the instrument prevent the process from being literally represented in the PR.

Coming back to the 'violoboe' example in bar 319, both the uniqueness of the tone colour and the inverted V-shaped trajectory in the physical space occupied by orchestral musicians on stage are naturally beyond the possibilities of one piano. However, what is possible is to include in the PR as many of the modal pitch classes as possible, clearly following the ascending trajectory of the material and emphasising the contrast between the plain staccato line of strings and woodwinds in bars 319–23, and the ensuing flutter-tongue response of woodwinds and brass in bars 324–6. The 'saturation' of the pitch field and the 'deliberate ambiguity of tonality' described by the composer are then alluded to through pedalling and idiomatic gestures even if they cannot be fully fleshed out in the PR.

The recurring topics of conversation with both Dillon and my supervisors about the transcription process included the necessity of employing relative dynamics. It is often the

[95] It must be added here, that pedaling in performance of all piano music needs to be frequently adapted to acoustic features of the piano and the venue, therefore indications in the scores do not always need to be followed literally.

case that certain sections or single voices in the orchestra are marked with stronger dynamics in the score than other instruments, with a view to achieve textural balance in a live performance setting. These dynamic markings have to be adjusted when the parts are translated into the piano reduction.[96]

Another important aspect of a reduction is the broader question of its role and purpose, which has already been alluded to in the Research Questions and Methodology chapter. The fundamental aim of any PR is to maintain the often-fragile balance between the density of the orchestral texture on one hand (which leads to decreased playability) and the striving to represent the original orchestral sonority as well as possible. It is the position of this research project that the resulting PR does not need to be sight-readable, but after a reasonable amount of practice time provide a satisfying pianistic experience to whoever is performing it and an adequate acoustic impression to the soloist and the prospective audience. Communicating the aforementioned acoustic impression to the soloist should be prioritised as they need to know how the orchestral part supplements or complements the SP.

Research Question 3 opened the discussion regarding the ethical and legal position of an arranger creating a PR. In the current case-study the arguments for applying editorial decisions to passages with inconsistent or confusing notation became pertinent. Often different spelling of accidentals used in various parts of the FS has needed to be enharmonically adjusted to make the PR more streamlined (for example strings and woodwinds in section C of *Andromeda*). Another idiosyncratic feature of Dillon's notation is that he applies each accidental only to the note immediately following it. This has been consistently changed to the conventional system where one accidental applies for the whole bar unless amended or cancelled. Meanwhile, Dillon's rhythmic notation involving groupings of notes within the beats, irregular time signatures and polyrhythmic groups has been maintained wherever possible. Occasional spelling errors have been corrected. The transposition of certain parts occurs when it is justified either by timbral fidelity or technical limitations of the piano or the player. Stefan Kostka's justified claim that 'voice-leading conventions are not a central issue in much of the music of the twentieth century' applies to twenty-first-century music just as well.[97]

[96] For example, following Dillon's suggestion, woodwind dynamic in bars 17–30 had to be brought down from *f* to *mp*.
[97] Stefan Kostka, *Materials and Techniques of Twentieth-Century Music*, Second edition (Upper Saddle River, New Jersey: Prentice Hall, 1999), p 74.

Analytical commentary

Section figure	Bars (subsections)	Tempo markings	Description	Recording timings (start time for each section: minutes′ seconds″)
Section 1 103 bars, 2′56 minutes in length	1–22	♪=108	Introduction, where syncopated chords in strings and brass set against growing and fading atmosphere of strings, woodwinds and percussion – first appearance of 'imaginary waves.' SP provides a regular rhythmic ostinato of quaver chords.	00′32″
	23–76	♪=120 (tempo changing later within the interlude)	Demonstratively virtuosic interlude of the SP, which would conventionally be referred to as a cadenza.	01′10″
	77–103	♪=96	The SP is joined by percussion and later brass and strings (quick glissando gestures), later Viola provides semiquaver ostinato.	02′47″

The challenges of the opening passage include the idiomatic treatment of a timpani part. Due to the depth of this instrument's sonority, the representation in the PR works best when the line is either transposed one octave lower or doubled in octaves. However, consistent octave doubling in complex rhythmic figures may result in unnecessary difficulty, therefore my solution is to use a combination of octaves and single notes, reducing the doubling in softer dynamics (bars 2, 6, 10, 15). The timpani tremolos include Gs in addition to the E flats (bars 3, 4, 7, 9, 13, 15), contributing to the harmonic coherence of the opening and adding an 'overtone' effect characteristic of the timpani sonority.[98]

Section 2, letter A: 111 bars,	104–169	♪=156	First three bars produce the effect of an avalanche, which is then followed by the rhythmically regular section dominated by canonic imitations in strings. The dynamic constantly grows in bars 106–154, then fades	03′28″

[98] Similar principles were used by Bartók in his reduction of his *First Piano Concerto* and in Sándor's version of Bartók's *Concerto for Orchestra.* Please see my discussion of both examples on pp 17–24 of this disseration.

02′19 minutes in length			in bars 162–167. This dynamic tool, because of its scope, is psychological rather than perceptive.	
	170–214	♪=108	Sudden tempo change, heralded by the *subito ff* entrance of SP and percussion. In the next section the syncopated chords of wind instruments punctuate the polyphony of the strings, towards the end of the section SP becomes more prominent and unleashes its energy in a virtuosic outburst, in the last 7 bars of the section the chordal texture of the opening is revisited (see SP) • In this section the texture juxtaposes the harmonic stasis and rhythmic movement, meaning the material is harmonically immobile but is always in flux. • Certain pitches are supported (or distorted) by 'orbital' sounds, therefore adding dissonance to otherwise fairly diatonic harmonies of melodic F minor.	04′48″

One of the challenges in Section 2 (bars 104–169) is the multitude of polyphonic layers in the strings' imitations. Despite the constantly changing time signatures, the semiquaver texture persists throughout different voices. It is impossible to include all of these layers in the PR. However, what one sees in the FS and what is perceived acoustically are often not the same. In the case of this passage, the listener is likely to perceive the texture as a 'static' acoustic mass of diatonic clusters with tangible F minor references. Fluctuating time signatures present another challenge. The answer to this is to include in the reduction technically convenient figurations mainly reproducing the semiquaver texture, occasionally amplifying it with longer 'orbital' sounds. The role of the pedal is paramount; however, indicating precise pedaling might be impractical as the necessity for it will vary according to the acoustical features of each particular piano and room. A recommended pedaling is included in the PR.

The dramatic entry of the SP in bar 170 is emphasised by the overall change of orchestral texture. The orchestration is denser, with more sections of the orchestra involved. However, the actual musical material can be relatively easily filtered using the conventional reduction technique of combining the parts that double one another into close position chords and marking the heavier points with accents and tied notes. In bars such as 183–196, tied notes are used in the LH to indicate to the pianist the crucial bass line of the contrabassoon and the double bass. It is essential that this line is brought out with either sostenuto or sustain pedal.

Apart from carrying in itself important harmonic material, the line is also instrumental in helping the soloist navigate their way through these pages.

Bars 203–214 are a good example of the spatial dynamic polyphony of Dillon's writing. The range of the sequence of the longer growing and fading chords of the woodwinds and shorter single chords of the brass is wide. This sequence is set against the prominent three-octave melody of the strings. The syncopated sequence of the cowbell strokes also clearly comes through in the orchestral version. Understanding the inner hierarchy of the orchestral texture is the key to choosing which elements to include in the reduction at any one time. However, as pointed out by Rodney Lister in his review of the first performance of the *Andromeda*, Dillon occasionally uses 'intentionally ambiguous hierarchical relationships.'[99] While keeping the strings' line in the LH and using the pedal to sustain it, the RH doubles the line in bars 203–5, 209 and 211–12 to reflect registral range. Tremolo is used in the RH in 205–7 to increase the dynamic of the woodwind harmony and notes from existing harmonies are used with *sfz* signs to mark the cowbell strokes. Using pitch-classes borrowed from other instruments ensures modal consistency throughout this section.

Section 3, letter B: 104 bars, 03′50 minutes in length	215–230	♪=84	The dynamic is predominantly soft, with strings and harp contributing most of the atmospheric sonorities. SP the lower register, its chords are supported by repeated martellato semiquavers. Syncopated chords of the brass signify harmonic shifts, although prolonged bass A notes keep the material in relative stasis.	05′47″

This passage presents an interesting challenge to the transcriber as the sonic effects are more than ever reliant on the sustaining instruments of the orchestra. Despite the visual intensity of the regular harp quintuplets, its part is not as prominent as the brass. Priority is given to the piccolo minims as l.v., and the prolonged chords in horns and trombones. The shifting atmospheric harmonies and dynamic waves are represented through tremolos and, once again, the use of sustain pedal is precisely indicated (see the PR and FS, bars 215–228).

[99] Rodney Lister, 'Dillon, Stucky, Lindberg, Gruber et al', *Tempo* 61 (2007): 53–70.

231–253	♪=66	Prominent ostinato E in the SP is emphasised by repeated notes in harp, trombone and tuba. In bar 240 the strings enter with brief syncopated motifs, diatonic in nature. The SP is in conflict with this background due to polyrhythmic gestures.	06′28″

This is a relatively straightforward section as the orchestration is sparse, however it highlights the principle I referred to when commenting on the existing piano reduction of Lutosławski's Piano Concerto.[100] The overlapping notes in the trombone, tuba and harp are quite easily reflected by a similarly overlapping finger legato in the PR: half pedal is also recommended. In bar 243, a low five-note cluster is used to reflect the single stroke of the tam-tam. The piccolo is given priority in bars 244–5, as it comes through the strongest from the woodwind texture. In bars 246–8, tremolos are used to represent the simultaneously growing and fading tied notes and trills in the strings. The 'Bartók' snap pizzicato of the cellos in bar 248 becomes a grace note marked *sfz*.

254–307	♪=76	Rhythmically regular ascending sequence emerges in the strings in bar 265, in 272 the syncopated ostinato on the lower E note is introduced by the viola section, timpani and xylorimba. The motif of inverted 'V' comprising of C5 – B5 – F5 notes is repeated in the violins. The visual presence of V's is evident in the score as more desks gradually join the first violins with this motif. At the same time, the number of desks performing the counterpoint in the second violins is decreasing, thereby creating a fascinating spatial effect.

I have found that the best way to communicate the glissandos entering in bar 256 is by filling in the gap between the G and the E in the RH with a triplet of chromatic notes, one of them being a semitone clash. This clash can be comfortably played by the thumb, with the other surrounding fingering as 5–3–1–3–2 (notes under a slur). The following section tries to incorporate as many layers as possible within the reasonable technical limits of a pianist. In earlier versions of the reduction, bars 269–73 saw the piccolo line being brought down an octave to merge it with the remaining woodwinds. However, following experimentation, the decision was taken to keep the piccolo line at its actual pitch as it has a defining role within

[100] Witold Lutosławski, *Concerto for Piano and Orchestra* (1987), two-piano version (London: Chester Music, 1991), p 46.

the texture, and the soloist would have to know that the line is there. The syncopated E ostinato starting in bar 272 is transposed an octave lower from the actual pitch because of the overtone richness of the timpani. The illusion of spatial waves in the live orchestral performance does not translate effectively in the PR. Although the technical limitations of the instrument need to be accepted within the paradigm of a reduction, the subtle changes of texture are used to shift the colour ever so slightly so that it complements the corresponding dynamic variations. Bar 294 sees the double bass tremolo being transformed into a pianistically idiomatic figuration of the LH. The same principle is applied to a brass phrase in bar 299, and the woodwind 'swirl' in bar 300.

308–318	♪=84	SP returns to the chords in the lower register, supported by repeated martellato semiquavers while the rest of the orchestra descends spacious cluster-harmonies, leading into the following section.	09′09″ *Sempre accellerando*

This brief ten-bar long passage is an elegant reference to an orchestral texture first used in the trend-setting *Atmospheres* by Ligeti. [101] The orchestra uses the variety of its possible timbre and sheer number of musicians to present a sequence of superimposed clusters and chromatic chords. For example, piccolo, flutes and oboes play a cluster of the first five degrees of an E major scale with a flattened fifth. The cor anglais, bass clarinet and bassoon play a G major triad in second inversion. The horns and trumpets have a Lydian F major cluster one octave lower, complemented by a sharp third degree. Trombones and tuba introduce a diminished triad in C. The clarinets join the first violins in a G whole-tone cluster two octaves up from the middle C, while the last two desks join forces with the second violins for an F minor melodic cluster one octave down. The chords of the cellos only slightly overlap with the lower brass and the rest of the orchestra adds more semitone clashes. All this texture keeps sequentially shifting down by a semitone each bar, although the double bass lands and stays on the lower D from bar 311 onwards. The nature of the acoustic effect produced by the orchestra leaves the transcriber frustrated by the technical limitations of the piano here. The priority must be consideration of practicality and compromises made accordingly. In the PR I try to capture the range of the original orchestral texture, including the pulsating triplets of the contra-bassoon in bars 308–10, harp tremolo in bars 310–18, and the *bisbigliando*

[101] György Ligeti, *Atmosphères* for large orchestra (1961), full score (Vienna: Universal Edition, 1963).

bassoon phrase in 312–4.[102] The clusters are collapsed in the RH, whereas the chords in the LH complement those with pitch classes from low woodwind and brass chords. The pitch classes of the harp tremolo are used as a vehicle for dynamic waves. Sadly, the shifting colour of interchanging *sul tasto* and *sul ponticello* in the strings has to be left out, as there seems to be no appropriate way to reflect it on the piano.

<u>Section 4,</u> letter C: 43 bars, 01′17 minutes in length	319–323	♪=144	Horizontal 'V's shape the rapid textural and dynamic expansion of woodwinds and strings, lasting just five bars and culminating with a timpani outburst.	09′37″

Here the priority is given to the energetic *staccato* semiquaver quintuplets of the strings and woodwinds. After the initial ascent, when the top notes are reached, some of them are included in the texture wherever this technically idiomatic option is available. The timpani outburst in bar 323 is included in full, preceded by a short tremolo.

324–6	♪=120	These three bars, despite replicating the visual concept of a 'V', represent a dynamic meltdown, quickly descending into PP, until a powerful chord arrives on the last beat of bar 326, marking the beginning of the next subsection.

Despite the fact that the semiquaver quintuplet figures remain in the texture, the flutter tongue effect negates the precision of the attack and the sonic ambiguity of the ensuing descent is therefore represented by a sequence of idiomatic tremolo gestures in bars 324–5.

327–361	♪=132	This subsection is characterised by a rhythmically regular ostinato in strings and woodwinds. Strong quaver pulse carries the dramatic narrative, while the harmony is rich in diatonic clashes, sequences of diminished and augmented triads. The sense of F minor emerges, referring back to section 2, despite the contrasting texture; later on, the tonal centre shifts to D minor. Against the backdrop of regularly moving chords in strings and woodwinds, the solo piano 'weaves its figural spells around', occasionally interrupting the quaver pulse with polyrhythmic outbursts.

[102] Here: a single-note tremolo.

The pulsating and mostly ascending quavers had to be compressed into four-part chords spanning no more than a ninth in range. Although in some cases it would have been possible to stretch the chords to tenths, therefore staying truthful to the original layout, the decision was taken to favour a consistent approach to hand stretch throughout this subsection. The bowed percussion gestures have been excluded as they appear secondary to the timbre of the strings and woodwinds. In bar 356 the first violins' glissando is dynamically clearer than the lower gesture of the second flute, so this is favoured.

Section 5, letter D: 58 bars, 02′55 minutes in length	362–403	♪=72	*Con arrogante umorismo* is the marking Dillon uses to describe the character of this subsection. V-shaped ostinato is in the strings, with rising and falling waves in both pitch and dynamic. The second textural layer is represented by sharp repeated five-note motifs where piccolo, xylorimba, harp and glockenspiel clash chromatically. The third layer is the energetic ascending motifs in woodwinds. Halfway through this passage in bar 380 woodwinds briefly join the V-shaped figuration of the strings, while the repeated five-note motif is taken over by trombones. In bar 394 the piccolo returns with piercing F sharps while the heavier harmonies of the lower brass lead the increasing tension into a climax of the next subsection. Throughout this passage SP amplifies the energetic ascending motifs of the woodwinds and later brass and underlines the pulse with heavy clusters.	10′54″

The double bass *crescendo* in bar 364 is represented by a tremolo. After the initial sixths in bar 365, the strings' texture is amalgamated into idiomatic diatonic clusters (major and minor seconds) until bar 379. Five-note motifs are retained wherever possible, with chromatic clashes outlined above. Slurs are used throughout the section to aid visual separation of the woodwind and horn phrases, despite the fact that the FS does not have them. This is to aid the pianist performing the PR to differentiate those gestures more clearly from the rest of the texture. Trills are added in bars 369 and 379 to include the glissando of the first trombone.

404–412	♪=96	The first six bars resemble an earthquake. Heavy percussion presence is dominated by the bongos and tenor drum rolls. The bass drum and harp tremolos, glissandos in lower strings and brass contribute to the overall sense of shaking ground. SP starts the section with the extreme dynamic of *fffff*.	13′00″

		In the latter three bars the climax is subsiding and the texture is moving upwards.	

To communicate the timbral difference between the bongos and the tenor drum, chromatic clashes are used for the former and diatonic ones in slightly lower register for the latter. This is in line with the overall priority to retain the acoustic impression of the original orchestral sonority while maintaining the practicability of the reduction, as is explained in the 'Research Methodology' chapter on pp 31–9. To comprehensively achieve the 'earthquake' sonorities of the lower strings, brass and harps, the combination of idiomatic gestures, tremolos and accented notes is used. The pianist is encouraged to use the sustaining pedal throughout and change in the RH rests or whenever the acoustic of the venue demands it.

413–419	♪=72	The ethereal chords of harp and woodwinds accompany gentle solos of the first desks of first and second violins.	13′22″

The clarity and expressivity of the first desk violin parts necessitated the *espressivo* marking in the PR. While it is challenging for the pianist to accomplish the piercing yet warm tone of a single violin, the directional quality of the top line is encouraged by slurs. The *tenuto* marks accompany the chordal texture and the muted trumpets entering in bar 418 are clearly indicated by means of both articulation (*tenuto* and *staccato* together) and notation (quavers with rests instead of crotchets).

<u>Section 6</u>, letter E: 61 bars, 01′26 minutes in length	420–24 425–61	♪=72 ♪=108	The main elements of this section are the formidable and rhythmically regular bass line, unifying timbres of double basses, cellos, bassoons and contrabassoons. Violas provide almost inaudible yet rhythmically complex counterpoint throughout while the v-shaped dynamics of string trills punctuate the narrative. The interplay between the short phrases of SP and orchestral woodwinds/percussion eventually leads to a tremolo climax in bars 452–8.	13′49″

This was one of the most challenging sections to reduce and went through multiple versions and transformations before reaching its final form. Attaining the balance between the primary (bass line, melodic phrases in woodwinds/percussion) and secondary (string trills, viola

counterpoint) material was one of the objectives; the other was to not lose the lightness in the higher register which is immediately evident in orchestral sound, despite the contrapuntal density of the FS.

Section 7, Letter F: 40 bars, 01′36 minutes in length	462–74	♪=144	SP follows the preceding climax with an interlude which, in turn, leads into bars 470-3, dominated by tubular bells and suspended hand bell followed by a general pause.	15′15″

The complex sonority of the tubular and hand bells is rich in overtones and therefore especially difficult to represent adequately on the piano. My solution was to imitate the overtones by adding extra notes to the main pitch, situated a major ninth and a minor eleventh above it. The main pitch should then be given a gentle tremolo by the pianist. With pedal providing additional ambience, I argue that the resulting soundscape closely resembles the original orchestral one.

475–93	♪=120	Despite the seemingly obsessive nature of the quaver pulse in the first violins, which is later intensified by subdivision, the accompanying syncopations of the second violins and lower strings contribute to the overall perception of this passage as a continuous flow. The key of harmonic G minor is apparent yet constant harmonic distortions destabilise the tonality without ever actually leaving it. The brass chords take centre stage, supported by celeste and tubular bells.

The G minor allusions in bars 475–93 constitute the largest part of the PR's pitch classes. The 'obsessive' rhythmic nature of the violins is clearly supported by the slurs over the diatonic clusters in RH. Tremolos are used for the 'destabilising' interjections of the brass.

494–501	♪=96	The depths of the lower register are explored by the ostinato figures in tuba and trombone while the first desk of cellos narrates in an improvisatory manner reminiscent of jazz yet taken completely out of context. A five-bar crescendo of string tremolos concludes the section.

The ‘jazzy’ cello pizzicato solo starting in bar 494 is given priority until bar 498, where double bass glissandos take over, followed in the next bar by the tremolos in higher strings. Dillon was critical of the resulting density of the PR in bars 499–501 when he saw the first version, and so the dynamic has been scaled down to pianissimo and a ‘leggiero’ performance direction has been added.

Section 8, Letter G: 52 bars, 01′53 minutes in length	502–504 505 506 507–539 540–553	♪=54 ♪=96 ♪=84 ♪=144 ♪=120	Lyrical SP interlude. ‘Obsessive’ quaver pulse returns for a rhythmically tight interplay between SP, strings and woodwinds. Dynamic and spatial waves of the orchestra envelop the dramatic descending passages of the SP.	16′51″ 18′17″

Much of the melodic material from all sections of the orchestra in bars 507–539 is doubled in the SP. This poses a question to the arranger about whether to include that material, communicating the nature of the dialogue to the soloist or to focus on the parts which are missing from the SP (oboe, bassoon, harp, celeste, xylorimba, violas). The recording highlights how the trumpet clearly comes to the fore due to the natural brilliance of its timbre. Therefore, my rationale here has been to focus on the trumpets and the bassoons and to include as many of the harp, celeste and xylorimba interjections as possible. Despite the seeming density of bars 540–553, the texture can be relatively easily boiled down to a few instrumental pitch classes. The pedal is essential for sustaining the correct harmonies and should be followed here precisely. The tremolos communicate the ‘dynamic waves’ of the original.

Section 9, Letter H: 42 bars, 01′20 minutes in length	554–7	♪=96	A moment of respite from the drama built on the woodwinds’ juxtaposition of short melodic cells: ascending sixths, sevenths and descending fifths. Violins and cellos provide ambience.	18′44″
	558–65	♪=144	Short motifs become more and more insistent, descending perfect and augmented fourths are added. SP responds with dramatic descending staccato gestures.	

	566–75	♪=112	The narrative shifts towards calmer sonorities, yet after four bars restless trills in the strings heighten the tension again.	
	576–88	♪=144	Various percussion supports forceful chordal entries from bar 582 onwards.	
	589–95	♪=96	Drama gives way to suspense in a rustling combination of toneless string tremolos complemented by percussion.	

Due to a sparse texture, reducing Section 'H' has been a comparatively straightforward task, and most of the pitch class material could be included in the PR. The vibraphone chords in bars 582–8 have been transposed to a lower octave, therefore fulfilling the dual function of representing the pitch classes from the existing parts and the acoustic image of bass drum and tam-tam. The sustaining pedal plays a crucial role in bars 590–93: after the D4 of the second violins is sustained into bar 591, the D1 of the tuba needs to be re-sounded pianissimo and, following that, the D4 of the second violins comes back. However, it is not possible to sustain the D4, therefore it is also included in the RH while the LH plays the 'almost toneless' string chords. Gentle arpeggiation of those chords references the percussion parts.

Section 10, Letter I: 81 bars, 03′43 minutes in length	596–600	♪=60	This whole section continues exploring the calmer sonorities introduced in the previous passage. Strings present distant sustained chords with gentle syncopation.	20′04″
	601–7	♪=96	Ascending semiquaver gesture in the woodwinds momentarily reminds us of the drama.	20′27″
	608–23	♪=72	Ethereal chords in the strings return with glimpses of diatonic tonality.	
	624–36	♪=96	New development begins with a layer of syncopated brass utterances, followed by patterns of repeated notes in woodwinds.	21′47″
	637–46	♪=120	A dialogue between lower and higher strings emphasised by rhythmic phasing, contrasted against sextuplets of the SP.	22′12″
	647–76	♪=108	A longer passage with descending staccato gestures of the woodwinds, sustained chords in the strings and prominent horn calls.	

Section ‘I’ is another example where conventional reduction technique works, as most pitch class combinations can be easily condensed. The dynamic markings in the FS help establish which of the lines are of primary and which of secondary importance.

Section 11, Letter J: 33 bars, 00′57 minutes in length	677–81	♪=120	SP’s arpeggios in both parallel and contrary motions are set against lighter orchestral textures with a powerful entry of steel drums, triangle, tubular bells and vibraphone in bar 683.	23′47″
	682–87	♪=96		
	688–701	♪=120		
	702–709	♪=80	Dense chordal gestures in SP are reinforced by the trills and glissandos in strings, using the same pitch classes as SP.	24′29″

To represent the sound of a snare drum, a combination of diatonic clusters is used that is consistent with the tenor drum transcription in bars 404–08, as the two instruments are similar in sonority. The trombone and snare drum parts are merged together to facilitate execution on the piano. Idiomatic arpeggios are used to reflect the trills and glissandos in strings in bars 702–09.

Section 12, Letter K: 62 bars, 01′57 minutes in length	710–771	♪=132	After a brief introduction with strong E flat major references, the section reprises the passage in letter ‘C’. Strings and woodwinds establish a regular quaver pulse in their chordal progressions, with interjections of repeated note triplets. SP supports the regularity with groups of articulated demisemiquavers.	24′44″

As this section reprises the material introduced in ‘C’, the reduction technique of condensing chords and maintaining direction while sacrificing voice leading in individual parts is employed again.

Section 13, Letter L 36 bars,	772–807	♪=132	Mostly low dynamic governs this section, with discernible 5/8 rhythmic ostinato. The repeated cell is two bars long and is recognisable each time it reappears, despite the subtle changes in orchestral colour.	26′41″

01′14 minutes in length	795–807	♪=120	The ostinato reaches a climax and begins to crumble like an avalanche towards the roaring depths of lower brass in bars 801–04.	

The two-bar cells repeated to create an ostinato pattern can be broken down in the following way:

1. A combination of cello glissandos, descending two-chord sequence in the trombones and percussion rhythms.
2. Descending two-chords sequence played by the double basses and bassoons with tuba reinforcing the lower chord.

Listening to the recording, it becomes apparent that in the full orchestral performance it is actually the trumpets, percussion and trombones that come through most clearly, and therefore those instruments are given priority in the PR. The snare drum sonority in the PR in this section has been modified from the previously used diatonic clusters in order to include pitch classes from the rest of the orchestral texture that would otherwise have to be left out: D4, E♭4, F♯4, A3, A♯3 (enharmonic B♭3) and G3 of the second violins; B4 and C4 of the first violins. In the LH part of the PR relative dynamic has been applied to the bassoon and double bass combination: they have been reduced to single forte to reflect timbral difference with the trombones and cellos combination.

Section 14, Letter M: 69 bars, 01′44 minutes in length	808–14	♪=96	SP dominates the texture in this section, although woodwinds and brass briefly take over in bars 848–51. The monumental chordal edifices of percussion-led orchestra in bars 866–76 resemble the rocks to which the mythical character of Andromeda is chained. To continue this analogy, SP's arpeggiated responses perhaps depict the sea waves crushing at the rocks.	27′55″
	815–26	♪=120		
	827–9	♪=96		
	830–33	♪=120		
	834–40	♪=96		
	841–43	♪=120		
	844–47	♪=96		
	848–876	♪=120		

The black and white key glissando has been chosen as the most appropriate representation of the vibraphone glissando in bar 815. A mordent-like gesture in the LH of the PR corresponds to the low cello tremolo. The D2 pitch class is not in the FS, but it adds the effect of the smudginess produced by the low-register tremolo.

Section 15, Letter N: 'CODA' 31 bars, 01′51 minutes in length	877–907	♪=72	The sparse orchestration ensures the *Delicatissimo* quality throughout this final section, permeated by the gentle repeated sequences of B flats and F sharps of the glockenspiel. Celeste is prominent at the start of the passage and G minor arpeggios of the strings take over from bar 891.	30′39″

Relative dynamics have been applied throughout this final section following Dillon's suggestions.

Conclusion

Having spent almost six years closely engaging with the orchestral scores of two of the foremost twenty first-century composers, I have been fortunate to gain glimpses into their creative practices. Using the process of transcription as an analytical tool, it was possible to reveal the fundamental properties of musical fabric that permeate the music of both case studies. Coming back to my Research Question 2 outlined on p 30 of this dissertation, I can now say with certainty that the most important example of these properties that defines the compositional state of both Turnage and Dillon is modality. Both composers mention modal logic as a guiding principle in their pitch-class organisation and it is this modality that allows for the process of intersemiotic translation to be reduced to an interlingual one, thus perpetuating the intrinsic qualities of musical language. In a similar way to modality, the distortion of sonorities emerged as a predominant category in my conversations with the composers. Achieved in the orchestra by vertically superimposing multiple layers of timbral masses, it most adequately translates onto the piano through the strategic use of sustain pedal. As I specify on pp 38 and 54 of this commentary, the pedaling crucial to either sustaining important pitch-classes or creating the authentic, in this case distorted, acoustic impression, is precisely marked in the PR. However, I must reiterate that in practice, pedaling depends on a variety of factors, such as the peculiarities of the particular piano or the acoustic properties of the venue, so a certain degree of flexibility is always implied.

The density of textures manifests itself both visually and aurally and can become either an obstacle or a liberating factor. This refers back to my discussion of ‘untranslatability’ on p 34. By prioritising the acoustic image of the music, the arranger establishes the pianistic gesture as the most effective instrument in their toolkit. They are then free to represent the original sonority without the constraints of having to reproduce the exact pitch-classes or rhythms. This heuristic strategy can be applied to non-pitched percussion and extended techniques on string, wind and brass instruments. See, for example, representation of the flutter tongue effect discussed on p 61, employing chromatic and diatonic clusters for various non-pitched percussion instruments on pp 63–4, or amalgamating pitch-classes from other parts to collate into the cowbell strokes on p 58. Denoting orchestral instruments in the PR further informs the pianist of the original timbre. Corliss’ process of translation involves the pianist studying the score and the recording of the work (if it is available) prior to the performance. It is my belief that PRs created in this research contain exhaustive information

all fundamental aspects of the music and therefore the study of the score is of course welcome but is not a prerequisite for a satisfying performance experience.[103]

I have decided not to use the wealth of possibilities offered by the use of extended techniques or a prepared piano. The reasons for this are twofold. Firstly, preparing the piano is a lengthy and often cumbersome process which often becomes an act of performance in itself. It requires a completely different set of skills from a performer and can sometimes be detrimental to the proper functioning of an instrument. As a result of the latter, many venues do not allow using prepared pianos or extended techniques on their instruments or have specially designated pianos for that purpose. Asking the pianist performing my PRs to undertake this process would go against the utilitarian approach taken within the framework of this research project. However, I do accept that many of the orchestral sonorities encountered in my case studies would have been more truthfully translated to the piano using extended techniques or a prepared instrument. Secondly, works such as Dillon's *Andromeda* display within their large-scale yet single-movement formal span how the acoustic impression of the orchestra constantly undergoes timbral metamorphosis from section to section. Pursuing the most faithful representation would then require stopping in the middle of the piece and preparing the piano in a different way ahead of each new passage.

It is pertinent to acknowledge that the resulting PR, especially in Case Study II, is not by any definition an easy piano piece to execute. Maintaining the compromise between preserving the authentic acoustic image and simplifying the end result enough to be performable can be aptly likened to walking a tightrope. It is a given that a work as complex as Dillon's *Andromeda* will retain its complexity regardless of the medium in which it is captured. This complexity is ontological, it lies at the very foundation of the concerto and it will be communicated, whether someone interacts with its manifestation as a full score, live performance, recording or a piano reduction. What I tried to achieve in my reduction is not relinquishing the complexity, but scaling the magnificent 'protean theatre' that engages a hundred musicians and thousands of listeners in the Royal Albert Hall down to two very capable pianists and perhaps a few dozens of witnesses.[104] Using 'creative notation' logically, to paraphrase Cardew's point, is crucial to facilitating the execution of the PR and ensuring that its performance becomes, after a reasonable amount of practising, a satisfying pianistic

[103] Corliss, 'Lost in Translation […],' p 227.
[104] Dillon, preface to *Andromeda.*

experience.[105] The carefully considered streamlining in the spelling of accidentals and wide range of articulation marks contribute to aiding the achievement of that outcome.

It is true that there are examples of notation software, such as Finale or Sibelius, that can produce piano reductions of orchestral scores with enviable speed. Nevertheless, it seems that at the current stage in their development, the result they come up with is the collated version of notational data. The algorithms neither discriminate between the musical material of primary and secondary importance, nor adequately address the concerns of performability, nor take into account the acoustic impression. Whether these problems can be overcome in the future by developing algorithms further or applying the principles of machine learning, remains to be seen. There have been promising developments in this field, such as the presentation in 2009 of the *Automatic System for the Arrangement of Piano Reductions* by the Taiwanese researchers Chiu et al.[106] Their system goes through ta five-step process: track segmentation, arrangement element determination, phrase identification and utility assignment, playability verification, and finally phrase selection.[107] In the end it is able to produce a playable piano reduction according to the settings imposed on the algorithm. Despite the remarkable findings demonstrated in these studies, the musical examples chosen are all from tonal repertoire of limited complexity. It would certainly be fascinating to see whether algorithms can evolve in the future to the stage of being able to reduce, with satisfactory results, the dense and sophisticated orchestral scores of the twentieth and twenty-first centuries.

My hope is that the amount of effort and perseverance required to create successful reductions of non-tonal scores will not stop other arrangers from launching into the fascinating projects of transcriptions. Perhaps the twenty-first century will see the revival of the nineteenth-century traditions of piano transcriptions and bring the variety and richness of its modernist repertoire to everyone willing to be fascinated and mesmerised by its narratives.

[105] Cardew, 'Notation: Interpretation, etc,' p 21.
[106] Shih Chuan Chiu, Man Kwan Shan and Jiun-Long Huang, *Automatic system for the arrangement of piano reductions* (ISM 2009: 11th IEEE International Symposium on Multimedia, 2009), pp 459–464.
[107] Ibid.

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Appendix I.

Monday, 3 June 2019, 12.00–14.00. Interview with Dr Mark-Anthony Turnage conducted at his house in London.

Interview Transcript

MS: Maksim Stsura, the researcher.
MAT: Mark-Anthony Turnage, the composer.

This transcript has been edited by the researcher with the permission of the interviewee with the purpose of leaving out non-substantive interjections. The continuous line numbers have been added to facilitate referencing passages from the interview throughout the main text of the dissertation. Each question and answer have also been numbered consecutively to ease the perception of the conversation. The text highlighted in bold is of special significance to this Research Project.

MS 01	Just for the record, this is the interview with Dr Mark-Anthony Turnage and the research project is 'Piano Transcription of a Twenty-First-century Orchestral Score: Freedoms and Limitations'[108] conducted by Maksim Stsura, the DMus researcher at the Royal College of Music. Firstly, may I just say thank you very much for giving your time to this and, of course, thank you for letting me use your work, the Piano Concerto, as a subject of my research.
MAT 01	Thanks for choosing it.
MS 02	I'll give you the copy [of the reduction], as it stands right now. Obviously, there are still a couple of layout and, possibly, articulation issues which I will have to go through in even greater detail.
MAT 02	Well, my score as well, to some extent. […] It is hard, sometimes, knowing how to split the hands.
MS 03	Cross – staves?

[108] This was the working title of the research project at the time of the interview. Since then, the title has been changed to the one given at the start of this Transcript and elsewhere in the Critical Commentary.

MAT 03	Yes, cross - staves. You know this, right, Marc-André [Hamelin], actually, at the end of the first movement, rewrote [the section]. Yes, you got that.
MS 04	In fact, we talked about this in our previous meeting and you did mention about your collaboration with Marc-André [Hamelin] and one of your colleagues at Boosey [Boosey and Hawkes, the publisher of the Concerto] sent me a pdf [file] of the new piano part and I have included his [Hamelin's] version in the [two-piano score].
MAT 04	It [Piano Concerto] also came out on the disk for Deutsche Grammophon last summer.[109]
MS 05	Yes, I have been listening to it, a brilliant and beautiful recording with the Rotterdam Philharmonic who also played for the premiere.[110]
MAT 05	[In the following section of the interview MAT confirmed that the four performances of the concerto are indeed the only occasions so far on which the work was played. MAT and MS then proceeded to discuss the possibility of the publication of the two-piano score with Boosey and Hawkes. MAT said that he fully supports the idea. MS then advised MAT that the two-piano score will be also made freely available in the RCM repository of Doctoral research projects after the completion of MS' DMus degree.]
MS 06	I would like to discuss a couple of points before we get into the specifics of the score. Looking at the many orchestral […] and concerto works that you have written over the years, I noticed that in many cases you use what is described as 'vivid' titles.[111] Obviously, one of your first major orchestral works was *Three Screaming Popes* [written in 1985] after Francis Bacon, quite recently you had a work called *Remembering*, dedicated to the son of your good friend John Scofield, or, for example, your concerto for viola and orchestra (which I went to listen to at the Royal Albert Hall and enjoyed very much), *On Opened Ground,* also has a title.[112] In fact, when I looked through all the pieces you have written for solo instruments and orchestra, it

[109] The recording referred to: Marc-André Hamelin, Rotterdam Philharmonic Orchestra, Yannick Nézet-Séguin, 2018, Deutsche Grammophon 0289 483 5552 5.
[110] Marc-André Hamelin and the Rotterdam Philharmonic Orchestra under Yannick Nézet-Séguin on 10 October 2013 in De Doelen, Rotterdam.
[111] A description from Turnage's official biography on Boosey and Hawkes website, accessed 2 August 2019. Mark Simpson describes them as 'evocative' in the BBC Composer's Profile.
[112] Other examples include *Hammered Out, Scorched* (for jazz trio and orchestra), *Kai* (for cello and orchestra), *Blood on the Floor* and many others.

	is only this Piano Concert and the Cello Concerto (2010) that do not have a title. Did it ever 'want' to have a title?
MAT 06	Not really, no. I think I deliberately, lately, have gone to less [programmatic music]. Not that these earlier pieces are particularly programmatic, but they quite often had something behind them. For instance, […] with *Three Screaming Popes* there is the Bacon.[113] In the case of quite a lot of my work, there is extra-musical stimulus, either a poem, a painting or something else even. I have always cared about the pitches, which is a particular thing of mine. As I got older, the pieces have become more abstract, more about the technical things I am trying to solve. Perhaps what is happening is, and it is a very dangerous thing to say, I am becoming more confident and don't need those extra-musical things to hang the piece on. The pieces become more abstract and they also become more about the notes. Over the last four to six years, I have become quite obsessed with Beethoven and Bach. I have gone back to the things I grew up with. I see Bach as being very pure, and the pictures being very pure, and, of course, the composer's selection of pitches is very personal. I quite often hear the composers say that they are not very good with pitches, well, that's a matter of opinion, but I really take care over the way the pitches are used or constructed, the nuances of that are quite important to me. Cello Concerto is not as successful, Piano Concerto, I think, is a better piece. In some ways it's becoming purely musical. In case of Beethoven, there is quite a lot of extra-musical [influence], there's quite a lot of Shakespeare. It's interesting that he kept that very quiet, he never talked about it. [Hans Werner] Henze [1926–2012] had this as well. I was quite shocked when I had these discussions with Henze, who was my mentor at Tanglewood but outside of that as well. I had a lesson with him in Tanglewood and he talked a lot about extra-musical influences and I found that strange cause he never talked about it publicly. Often the composers do not own up to it. In my case, I did own up to it but as I got older and as I got more confident in writing (I still find it difficult and I think all composers

[113] The work was inspired by the Francis Bacon's series of paintings of the screaming popes for which Diego Velázquez's *Portrait of Pope Innocent X* from 1650 forms the basis.

	should find it difficult) I still have more faith in manipulating just the notes, the structures and the pitches.
MS 07	Absolutely, thank you. It's interesting what you said about Beethoven and Shakespeare. I recently was teaching a class at the Royal College of Music [L5 History: Classical Pianist] and I was looking at Beethoven's piano sonatas including the so-called *Tempest,* which is one of the many cases where Beethoven didn't give it a title but it is known that he had Shakespeare's *The Tempest* in translation in his library.
MAT 07	We will never quite know, but it is fascinating. When you talk to people, especially non musicians, they [often] say that when they hear music they have these visual or even [verbal associations]. I never do that, except when I take the whole poem and use that as a basis for a piece, but that's a different case, usually it's just to get me off the ground. With the Piano Concerto and other pieces that have very normal, plain titles, **it was nothing but the form**. In this case, the first movement is obviously Rondo-Variations.[114]
MS 08	Just following on from what you have been saying about your music, there are two things. When you talked to the BBC about *Remembering,* you were asked … in its structure, [it] resembles a symphony and back then you said that it doesn't just resemble a symphony (aside from the fact that it doesn't have a large-scale and triumphant finale), but it is a multi-movement symphonic work. You said that you had such respect for the genre [of symphony], you decided, and I am quoting you very freely, that you chose to give it a title rather than calling it a symphony. Is it different with a concerto, does a concerto not have quite as much baggage as a symphony?
MAT 08	Possibly. I grew up with piano concertos and symphonies more than any other form. A string quartet is the same thing. All the string quartets I have written (I have completed four and am writing my fifth now) are not called 'string quartets.' The reason I haven't written a symphony, although I am writing symphonic works, is that I am intimidated by the idea of writing my

[114] Of course, the second movement of the Piano Concerto, an incredibly lyrical and moving elegy for MAT's mentor Hans Werner Henze, does have a name: 'Last Lullaby for Hans.'

	first or second or third symphony. Also, it's slightly pretentious and very nineteenth century. I don't feel the same with piano concertos. There are some great piano concertos, but it's still, to some extent, a limited repertoire. Unlike symphonies and string quartets which has a much vaster [repertoire]. There are some great piano concertos by Beethoven, but also Schumann, Bartók in the twentieth century. If you are a pianist, you have quite the repertoire, unlike the cellists or even the violinists. I didn't find the title 'piano concerto' so intimidating.
MS 09	Thank you, that's wonderful. Continuing from this. You mentioned something that I found quite interesting, as I was looking into your work. You mentioned how important pitch is to you as a category when you're writing music. There is a wonderful book by Andrew Clements, published in 2000 where you talk about your career up to that date. [In that book] you talk about the various influences behind your compositions: there are studies with Oliver Knussen [MAT studied with Knussen at the Junior Department of the Royal College of Music], then with Gunther Schuller at Tanglewood and of course Henze. Then you mentioned that you took something from Stravinsky which you describe as this technique of rotating chord and collections of pitch classes. Do you still use that [technique]?
MAT 09	Sometimes. I am always manipulating pitches, transposing, inverting, doing all the obvious stuff. I use a lot more counterpoint these days. I studied counterpoint when I was at the Royal College with John Lambert and it's come into play more recently, more in the last five or six years. With the rotation [technique], I quite often now use it when I am a bit stuck: it helps me generate [musical material]. It's interesting with Stravinsky, because I learned the rotation from Olly Knussen, who sadly died last year [Oliver Knussen passed away on 9 July 2018]. I spoke to him [Knussen] towards the end of his life [about rotation] and he said 'Oh, did I teach you that? Well, I don't do that anymore.' I often mention this to my students as it is a really great way of integrating pitches. Obviously, it is about intervals and it is about the transposition of intervals**. It does tend to unify the pitches**. I can't remember if I used this technique in the Piano Concerto. The variation technique is something I use all the time. Making two bars into four,

	expanding, I am always dealing with that. 'Improvising' is a dangerous thing to say as it [sounds] rather loose, most composers don't admit to that really, but you do that a lot. Beethoven improvised a lot, sadly we don't have any of his improvisations. Some of his piano sonatas started off as improvisations. I have always improvised, I play the organ very badly at church, but I have the ability to [improvise], which is [common among] organists. These days I am not a good enough pianist, the idea of a composer — performer sadly [did not apply] in my case. I am [always] aware of the piano and I was reasonable enough to get round it. I could not play this concerto because it is actually very hard, but that is another story. I use rotation occasionally. […] What worries me is that in case of many of my earlier pieces, I can always tell the ones that use rotation. You often have the [sustained] pedal note and all the rotations around it. A lot of my pieces [therefore] have a central pitch and all this florid stuff. I can see that the Piano Concerto does not have that. It was more [involving] the variation technique.
MS 10	Is it fair to say that your harmonic language, as far as anyone can generalise here, still embraces tonality, even if it is not conventional tonality?
MAT 10	I have to say, [my harmonic language] has got more tonal as I have got older. People tend to become more conservative. You can tell certain things from certain instruments. You can tell from the harp parts that it has got more tonal, because there are fewer pedal changes. It is modal, which probably comes from jazz, Miles [Davis] of a certain period. There are times when it's saturated harmonically and you could not say it is tonal at all. I have just written an orchestral piece for next year and it is very tonal and it is hard to make it fresh. Benjamin Britten managed to be tonal and fresh, and I think it is a real challenge. I would say [my harmonic language] is **chromatic but it's definitely not atonal**.
MS 11	That was definitely my impression as well. What is very interesting is this: as I was interviewing James Dillon about his concerto, and his music uses a lot of sound effects, and one would almost think that it would be more similar to things like Helmut Lachenmann or *musique concréte,* which rather than focusing on [manipulating pitches], focuses on sound production. However, if you strip away that layer of sound effects, you actually come

	down to small melodic cells which are very modal. **Modality still seems to be at the core of a lot of the composers' thinking.**
MAT 11	So, decoration? Actually, I would say that it is also the case of Lachenmann, weirdly. He talks about this privately. The colour is added but [once you take that away, what remains is a modal texture]. I cannot do that, my music is much more straightforward and more traditional. I am working with line […] and I find I have to work much harder on line than I do on harmony. I have always loved moving chords, I love chorales. I think I have also been influenced by Louis Andriessen [who in turn was influenced by] Stravinsky through the idea of the **emotional pull of harmony**. That is what is very interesting for me about other composers. Some people are naturally good at moving harmony, other people are not and have to work very hard at that. The last movement of *Remembering* uses this idea [of the **emotional pull of harmony],** and many people have reacted [emotionally] to it and that is very modal. But also the second movement of this [the Piano Concerto – MAT is referring to the 'Last Lullaby for Hans.']
MS 12	So, would it be fair to say that in your modality you still have the goal-orientated way of placing chords and it has an effect on the emotional narrative?
MAT 12	Yes, and I think that is because I grew up with Beethoven and the [goal-orientated structures] are from a German tradition, and of course people will rebel against that, especially in minimal music […]. I was conflicted when I discovered Stravinsky because he doesn't do the chords in the goal-orientated way, it is blocks, which I am also quite fascinated by, so I have got a bit of that in me as well, but the thing is, and it is coming from a variation technique: I find it very hard to repeat the whole sections without changing them, and it's the same with Stravinsky – he has to tinker with it. I get bored of the repetitive music, because for me it has to be goal-orientated. Quite often, when [I compose], rather than going back to the original pitches, I will transpose. When I find the material quite bland, I will shift sections or move into another area. A lot of composers do that too, even if it is literally transposing. [If you look at the left and right] of the piano [the lower and higher registers respectively], I would often have the bass of the

	left hand transposed in a different way, so you have a slightly skewed perspective. I do that a lot.
MS 13	This brings me to another category which I found very interesting as I was looking into the various interviews with you. You often mention that all the way back to the beginning you were fascinated with the idea of distortion. You talk about this in the book by Andrew Clements, but also in the interview with Katy Hamilton for the Incorporated Society of Musicians just a few years ago: as a child you used to distort the pieces from the syllabus, so that your parents would be thinking you were practising those but actually you were adding some things. Would it be fair to say that you still use that **technique of distorting the material**?
MAT 13	Yes, I think so. In a way, distortion for me is similar to variation. And the idea of a wrong note? I found it very exciting when I read, a long time ago, **the interviews with Francis Bacon by David Silvester**. **He [Bacon] talks about a mistake becoming the piece, or the next idea**. Sometimes I get it wrong or I transpose it and I think to myself: I would prefer this in a different context, so I distort the pitches. It is just a different perspective. Quite often I will reverse an idea, which is not unusual. It is not always an inversion: sometimes it just does not work upside down. That is what I am doing all the time: distorting or putting a different perspective on the [musical material]. It is a repetition in a way, but I change it all the time.
MS 14	Wonderful. That actually creates an interesting parallel to what I was talking about with James Dillon. Although, […] in the interview, [he] confessed to embracing modality in his music, [I] think he [rejects the idea of a goal-orientated narrative]. He thinks about his [acoustic] effects as being static, but [constantly] in flux. I find it fascinating that your styles, despite being rooted in modality, display [such different principles].
MAT 14	Yes, of course. It is just a personal thing. I wished I could do that in a way. His [Dillon's music] is textural more than mine is, I don't use effects and it has been [this way] all along from my earlier works. For me it was about something emotional, but not only. I find it interesting that **I have always been emotionally affected by mainly tonal music**. Then again, I really like

	Morton Feldman, and that's not tonal. But we have gone off the topic, what were we talking about?
MS 15	We were talking about the idea of emotionality and tonality and progress versus stasis.
MAT 15	Yes, that is the thing. It is to do with boredom, I have to move things on and it is a personality thing.
MS 16	For you the emotion needs to be changing?
MAT 16	Yes. It's just the music I am most excited about. Even in case of Stravinsky it is often a [music of progress]. *The Rake's Progress* is goal-orientated, that's for sure. Or *Orpheus.* You can say that *The Symphony of Wind Instruments* is not goal-orientated, it is just blocks. Also with me, I [tend to] plan pieces quite strictly but sometimes I don't want to. […] I have a real problem with music that is […] structured in such a way that does not allow for you to cut it. When you are not prepared to do that, it can be a particular disaster for the theatre music, because you really have to be a different sort of animal for that. If you are thinking about purely musical processes, they do not always work on stage. For me static is not interesting. I don't mind listening to the music that does that, but I cannot do that myself.
MS 17	This next question is slightly off the point, but I would be really interested in hearing your opinion on this. Do you think the almost dogmatic restrictions of the serial music were the reason why the composers moved away from it after 1960s?
MAT 17	I think so. It is quite interesting. There are not so many interesting pieces from that period. For example, with [Pierre] Boulez, I prefer his later compositions, *The Ritual, Notations,* for example.
MS 18	Do you think it was a necessary step for [twentieth-century music]?
MAT 18	You had to do it, but afterwards almost everyone [of the composers] moved away from it. I think it can be quite comforting for composers to have everything completely ordered, but at the same time it does not allow for spontaneity. […] In my opinion, if you write for an orchestra, you have to use octave [doubling]. If you just have a single line of a certain instrument, it is not going to come out, it is just an acoustic thing.

MS 19	I know you do this with your stage works, but I am interested whether [this also applies] to the so-called absolute music, to use the nineteenth-century term. Do you think about how your music is perceived by the different types of the audience?
MAT 19	No, absolutely not. I think it is a very dangerous path to go down. As soon as you start doing that, you compromise. It has to only be about what you are interested in or what fascinates you and then you hope that it coincides with somebody else. And sometimes it does! I am interested, once [the work] is done, to see what pieces affect people more than others. And I know that from the pieces of mine, they get done. For instance, I have this song cycle, *Twice Through the Heart,* which is being performed again quite soon and it is done a lot, along with *Greek* and *Blood on the Floor,* which is one of my most performed pieces. With all three of these pieces, I did not think they would make the impression they did. You can't trust composers to judge their own [music]. When you are [composing], you purely thinking about the technique, about the piece working for you. That's all you have to think about. If you worry about the audience, then you're stuffed.
MS 20	However, and this is another one of those things you have mentioned a lot publicly, what matters to you a lot is your interaction with a particular performer.
MAT 20	Yes, that is different. Once the score goes to the performer, you want their input. In some cases, certainly more than others. Jazz is a real collaboration because it has to change quite a lot in case of jazz players. I quite recently did a piece for a bassoon and a string quartet in America. I ended up cutting 30 bars in the first movement and I added 30 bars in the last movement. […] That was partly through hearing the performer. I really care about the performer and I want it to be right for them. Not that I am going to make it easy for them, but that means a lot to me. […]
MS 21	And the other thing which I learned is that sometimes you appreciate when you can have a dry run of a piece with the performer and then make some changes to it?
MAT 21	That happens less and less these days because of the financial problems. I had it with the LSO with both *Speranza* and *Remembering.* That was partly

	because Simon Rattle was very generous in that way. Quite often I change things after the first performance. I mostly change dynamics these days. I wrote a quartet recently (*Winter's Edge*) where I literally didn't change any structure, didn't add any bars, didn't take any bars away. Apart from a few double stops taking out, there were quite a lot of dynamics. What happens with a run-through is you get a more polished final version.
MS 22	Have you ever used any experimental notation?
MAT 22	I have used multiphonics early on in a piece called *On All Fours.* It opens with quite a few clarinet multiphonics. And that was probably about it. I may have used key clicks at some point, I have used percussion, but that is different. I have not used box notation. I can't do extended techniques. If I started putting those in, people would not laugh, but they also would not take [the piece] very seriously. I think it is a path you go down and you have to do it in the end, but I have never done it and I cannot see myself doing it. You never know, I might start writing all these spectral pieces, but it is not very likely. I have nothing against it and I like some of those pieces, but I could not do it myself. […]
The following section of the interview was dedicated to the discussion about Turnage's experience with piano reductions of orchestral works. He said he did a piano reduction of an opera by Gary Carpenter called *The Snow Queen,* and also of *The Snowman* by Howard Blake. The compositional process was also discussed and Turnage said he uses short score of four to six staves when writing orchestral music which is then orchestrated into a full score.	

Appendix II.

Friday, 7 December 2018, 13.00–15.00. Interview with James Dillon at the Royal College of Music in London.

Interview Transcript

JD: James Dillon, the composer.
MS: Maksim Stsura, the researcher.

This transcript has been edited by the researcher with the permission of the interviewee with the purpose of eliminating non-substantive interjections. Further corrections and clarifications have been suggested by the interviewee and have been incorporated into the text. The alterations or omissions of the verbal content are indicated using square brackets. The clarifications of issues added by the researcher are indicated using round brackets. The questions and answers have been numbered consecutively to facilitate referencing passages from the interview throughout the main text of the dissertation. The text highlighted in bold is of special significance to this Research Project.

MS 01	[…] This is the interview with Professor James Dillon at the Royal College of Music for the 'Piano Transcription of a Contemporary Orchestral Score: Freedoms and Limitations'[115] project, conducted by the researcher Maksim Stsura. Thank you very much indeed for taking part in this project and thank you for coming in today, that's greatly appreciated.
JD 01	No problem.
MS 02	Now, I'd like to first ask you […] *Andromeda* Piano Concerto was written by you in 2005 for the 2006 BBC Prom commission and it was premiered on 10 August right here at the Royal Albert Hall, just across the road from here, by Noriko Kawai and the BBC Scottish Symphony Orchestra conducted by Ilan Volkov and the concerto is dedicated to Helmut Lachenmann on the occasion of his birthday. Is there any particular significance in the dedication?

[115] This was the working title of the research project at the time of the interview. Since then, the title has been changed to the one give at the start of this Transcript.

JD 02	No, he's just an old friend. […] Obviously, our languages are quite far apart so it's probably … to the innocent observer it looks surprising, perhaps, but we can speak to each other.
MS 02	That's very good to hear. And indeed, one of the pieces I was looking at within the framework of my research was [Helmut] Lachenmann's *Ausklang,* which is another great…
JD 02	Which Noriko Kawai also played at the College.
MS 03	I did see actually that she was here when they did the concert dedicated to Lachenmann. So, now, I know that the concerto, *Andromeda,* was also performed […] in Glasgow, is that correct?
JD 03	Yes.
MS 04	I have kind of found some traces of that performance on the internet. Glasgow City Hall, was that [with] the same [performers]?
JD 04	Same soloist, same conductor. […] But it was the BBC Scottish [Symphony Orchestra].
MS 05	Which was also [the orchestra that did the premiere]. And they were also very kind because […] they would share the recording of the premiere with me and I was referring to that [recording] in my research, because at the time I was starting this [project] I haven't [been able] to obtain any other recordings. As far as I know, there are no official recordings?[116]
JD 05	I don't know, I'm not sure if Noriko Kawai got a recording from Strasbourg, for example […] I've never asked her […] I'm probably […] [the] world's worst archivist. […] When you said 2005, if you said to me 'when did I write it', I have no idea.
MS 06	It does say at the end of the score that you finished it in December 2005.
JD 06	[Yes], you're right. […] I literally got this score this morning before [our meeting] and actually and the reason I grabbed it is I was hoping […] it is a working copy that I used […] I was hoping that perhaps there is going to be some corrections.
MS 07	I do have [some of the] places that I noticed [and was hoping to discuss with you].

[116] Since the time of this interview, I have been able to find a recording of the *Andromeda* from the 2014 Huddersfield Contemporary Music Festival performance, which was for a time publicly available on the BBC Radio 3 website.

JD 07	Possibly, […] something that […] definitely going to emerge in our discussion about what you've done, **is just the complexity**. […] I mean, for example, if one looks at the period of […] piano transcriptions, which is, basically […] a nineteenth-century phenomena.
MS 08	That was a way of disseminating orchestral music.
JD 08	And an awful lot of the composers, of course, composed at the keyboard. […] There are exceptions to this, of course, […] Berlioz is obviously an exception, […], he didn't write [a] piano concerto. I don't think he wrote for the piano, in fact.
MS 09	No, he was one of the probably two major nineteenth-century composers who didn't actually play the piano, also Wagner…
JD 09	He was a guitarist [117]… although Wagner did write a sonata and a *concertante* piece I [can't] remember the name of…
MS 10	I have actually looked at his (Wagner's) sonata, it's a fascinating work. **Do you use the piano when you compose?**
JD 10	**No, not at all**.
MS 11	Do you use any kind of a short score?
JD 11	No […] basically, I break things down into kind of textural ideas that I'm working on and, maybe, I sketch them out. Sometimes, I don't bother even sketching them out. There's a big change in my work from the early 90s when I began to use these notational packages. I use Sibelius. […] It's a different working method for me. Previously, […] my sketches were kind of […] semi-full scores. **I [have] never made reductions of any kind at all**. But, if, for example, if you were to look at an earlier orchestral work of mine and […] it looks roughly like this in the finished article, you might get empty pages and then you might get filled in pages. […] I was pretty clear either about the destination or I was working out a process, a particular musical process, which could have been teleological, it could have been goal-orientated or it could be simply a stand-alone texture. […] I was working like that when I was working with pen and ink. Pencil. But the working method changed a lot for me.
MS 12	Because of the computer interface?

[117] Dillon is referring to Hector Berlioz (1803–1869) here.

JD 12	Well, there's that. […] First of all, […] you can only see so much on the screen.
MS 13	That's very true.
JD 13	Unless you've got an incredible eyesight…
MS 14	Or a huge screen!
JD 14	You know, I'm looking at that on the screen (*points at a section in the* Andromeda *score*) and if I'm lucky, […]
MS 15	I know this so well, […] I have a small laptop which I use.
JD 15	[…] It has pluses and minuses. It just forces you to think about a layout in a different way, forces you to think about texture in a different way, densities, for example. But often I am just putting stuff straight in, from very 'skeleton' material straight into computer. […] Often, I'm working in layers. So, for example, clearly, here, this is the same layer. But there are other places where it actually bifurcates into multiple layers. You, know, what's a good example, something like this (points at a section in the score, bars 494–501)
MS 16	I remember this bit, almost like a slightly jazzy solo from the pizzicato cello and then you have these […]
JD 16	[…] Some layers have longer processes, they cross other layers, other layers happen that are shorter… […] **I suppose what I'm always looking for is the feeling that something is pushing forward, but you don't really know exactly where**.
MS 17	I read a few interviews about you.
JD 17	Yes, you read, […] what was this…
MS 18	There is one for the Arts Desk with Igor Toronyi-[Lalic]…
JD 18	This [interview] is […] very superficial. I mean, this happened on a train, standing up, coming from the south of Holland to hook up with the Eurostar in Amsterdam. […] Sorry, in Brussels. […] I didn't see it till it went out. […] Some of the questions he asked me, and some of the answers he put in, were not exactly the same question and the same answer. […] Some of it doesn't make sense to me, anyway. Actually I was a little bit surprised that you would even want to use it.

MS 19	I was just actually looking for, because you did mention the Musica […] I think it was the 2008 Strasbourg Festival, I was trying to find information about that. I think It was the *Musica Viva* Festival.
JD 19	No, no, *Musica Viva* is in Munich. It's just called *Musica Strasbourg.* […] Boulez started the festival I think in 1980.
MS 20	[…] Am I right in assuming that *Andromeda* was also performed there? [at *Musica Strasbourg* in 2008].
JD 20	Yes. And the orchestra was either the Liége Philharmonic, which is a Belgian orchestra, or […] possibly a German, a North German… NDR (Nord-Deutsche Rundfunk)… I could look this up. I should have looked this up. […] The conductor was French, and, again, I can't remember his name. Somewhere I probably have a record of this.[118]
MS 21	[…] It's not of critical importance, I was just curious to possibly include records of the performances of this piece, which I wasn't earlier aware of. It's just […] I realised there were more performances than I realised.
JD 21	I think there's been five in total, as far as I can remember. Glasgow, London, Huddersfield, Strasbourg and one I'm forgetting. It might just be four, I might be wrong. […]
MS 22	Anyway, please don't feel obliged to remember this, it's […] probably, like you say, quite a superficial information. From a statistical point of view it would be interesting to know. But it really doesn't make a huge difference to the content.
JD 22	Certainly she (Noriko Kawai) has been the only soloist.
MS 23	[…] When you collaborated with her [on *Andromeda*], she also collaborated with you on your other [large-scale piano work].
JD 23	*The Book of Elements.*
MS 24	Yes, exactly, that large-scale project, […] compared to the Ligeti studies, I do find it absolutely fascinating.[119] When she (Kawai) was learning the piano part

[118] Dillon has since the time of the interview kindly confirmed that the orchestra for the performance discussed here was indeed l'Orchestre Philharmonique Royal de Liège, conducted by Pascal Rophé. The examination of the archive programme booklets on the festival website (https://festivalmusica.fr/) revealed that the performance actually took place in 2007.

[119] Writing for *The Guardian* in 2013, Tom Service called *The Book of Elements* 'the most significant contribution to the pianist's repertoire since György Ligeti's Etudes.' https://www.theguardian.com/music/tomserviceblog/2013/feb/04/contemporary-music-guide-james-dillon

	of the *Andromeda*, do you know how she […] went about that process? Obviously, this is quite a complex role of the pianist within the overall texture, but you didn't have a reduction.
JD 24	We didn't speak very much or even see each other very much until she was ready, felt confident [with the part]. She is not a typical contemporary music pianist. In fact, most of her repertoire is *repertoire*. […] Apart from the music of Gerald Barry, which I think was the only thing she played in terms of contemporary music at that point, she was known more as a 'Skryabin [pianist].' In fact she was at the College here as a student and I think then she was a 'Rachmaninov pianist.' […] She is a slow learner in that sense. She is not like a lot of contemporary specialist who just process notes. […] She probably had a good six months with […] the part.
MS 25	It is a very challenging part […] and it's a very substantial piece.
JD 25	I respect that, the way she works. […] I knew it was my responsibility that she didn't get the material two months before or two weeks before, as some composers would do. I didn't really collaborate with her. One of the Books [*The Books of Elements*] was written for her, the five *Books* were written for five different pianists, commissioned by five pianists. And you know, her playing, obviously she recorded the *Book of Elements* and I'm sure my knowledge of her playing somehow infected the way that I was thinking about the piano part, the solo part for this work [*Andromeda*]. But not overly, […] I can't work if I get too obsessed about the particularities of a different performer […]
MS 26	Playing style?
JD 26	Playing style… I'm trying to do something larger than that. […] One of the obvious things about the work, I think it's obvious, there's a kind of dialectic between this idea of the heroic concerto…
MS 27	You do mention that in your Preface, going all the way back to Beethoven…
JD 27	That struggle, you know, that notion of the struggle… But it's also, you know, at times much closer to something like *Harold in Italy* by Berlioz, which of course, Paganini was extremely disappointed about, [because] it wasn't showing him off all the time. [There are] quite a few passages where the

	pianist, although she is always very busy, or generally very busy, gets absorbed into a larger [texture], it becomes more *concertante* than concerto.
MS 28	What I found very interesting, is the way you talk in that interview (Arts Desk with Igor Toronyi-Lalic), and I'm sorry to keep referring to that, [about] how important ornamentation is for you. And, obviously, there's quite a few composers, even Beethoven, whom you do mention in your preface, he was known for taking some of the elements of [the] musical fabric, which can be described as an ornamentation, and then treating them as a thematic material. Do you think this has similar type of importance for you, when you write?
JD 28	I think there is a clear kind of Baroque element to the work as well. […] **A lot of material is actually a written out ornamentation**. […] Passages like this, for example, here, are kind of […] extended mordents or something. There is an element of that. Ornamentation is not something for me like a prosthetic that is placed on the material, **ornamentation for me is integral to the very notion of action itself**. […] Ornamentation can have different functions. […] One of the functions can be this notion that you put material which would be played, can be played in a way that has a clarity about it, has economy about it. If one was to extrapolate from that material something that was put into… vibrato […]. How can we talk about the vibrato in relation to the piano? It has to be iterative, you have to do something.
MS 29	Absolutely, you have to make a tremolo, or a trill.
JD 29	Of course, […] if you are playing a particular chord, you can imagine vibrato…
MS 30	There is a different type of articulation…
JD 30	Or voicing… […] But, how can I put it, it's an imaginative act that probably affects touch.
MS 31	And […] definitely affects perception, visual perception as well as the acoustic perception by the audience.
JD 31	I totally agree.
MS 32	The other thing I was gonna ask you is, and, obviously, we don't like labels, but your music has been described as belonging to the […] trend which is called the New Complexity.
JD 32	I hate it… (*laughing*)

MS 33	I'm sorry!
JD 33	It's okay…
MS 34	But the notion of complexity itself means quite a lot to you, because you do mention that you are interested in the theory of chaos…
JD 34	Yeah… I mean, […] again, that came up in this interview and there is a lot left out of that interview why it came up.
MS 35	There was a reference to Peter Maxwell-Davies using these squares to generate twelve-tone rows…
JD 35	I think one can hear difference. I actually find in a lot of his use of… and I'm not that familiar with it because […] I have mostly been completely disinterested in other British music, […] particular of that generation. For me there's a difference and it has something to do with how organic[ally] one uses pitch. And I find something a little bit too square often in this [generated twelve-tone music] and, of course, if you forgive the pun, (laughing)… in the kind of uses of […] chord structures, harmonic lines and things, I find, they become very highly predictable in that kind of working with pitch. I don't work with pitch quite like that, I work with pitch in a much richer way […], superimposing pitch lattices on top of each other, so actually there is an interplay between that arrangement of pitches and it may well be in some kind of matrix, and then, superimposing another matrix on top and looking at […] the overlay between the two. […] One of the things that we struggle from, […] since the exhaustion of tonality in the late nineteenth century, is, we struggle for […] is it possible, and […] I mentioned earlier […] I am always looking for this notion of something that seems to be moving forward all the time, has a kind of organic quality about it. […] One of the great strengths of functional tonality is modulation, harmonic modulation, and we don't have that!
MS 36	Is it something that Dahlhaus calls goal-oriented structures?
JD 36	Yeah, of course. Well, I don't know about Dahlhaus' thing, but […] it's one of the most obvious aspects of functional tonality as it enables a listener to follow a movement […]
MS 37	Progression…

JD 37	Yeah, exactly. […] **The tension that's involved in those things, where actually one can move through key systems in a disrupted sense or in a more flowing sense.** One of the things that interests me, and this is where I'm going back to your question about complexity: is it possible, for example, to think about a modulation that has something to do with timbre, as opposed to it necessarily [being] just pitch-orientated? You know the words you have a central pitch idea that somehow everything modulates to and from it.
MS 38	Would that be similar to the way we have a *Klangfarbenmelodie,* and here we would have *Klangfarben*-modulation?
JD 38	It's kind of related. […] One gets it in that famous third movement from the Five pieces by Schoenberg. […] That particular piece still feels static to me, but you do get a feeling of light and shade. […] Actually, he's modulating a single twelve-tone chord in that particular movement.
MS 39	Through colours of different timbres?
JD 39	Slow-shifting orchestration. The clue is in there. But the clue is elsewhere as well. One of the things that really influenced me a lot is non-Western music, and they don't use functional tonality often, if you look at the Eastern court music, or if you look at the raag system or even folk music [who clearly don't use functional tonality, for example Korean or Japanese court music].
MS 40	You studied Indian talas in your youth…
JD 40	My early twenties, yes, it was something that fascinated me. […] I found a sitar teacher, who […] herself was a student of Ravi Shankar, her name was Punita Gupta. I went to ask her initially […] to explain to me the tala system, how it works. I had a very basic idea of it. […] When I first came to London, I went to an awful lot of recitals of […] some of the great Indian musicians like Ustad Vilayat Khan, Ali Akbar Khan, Ravi Shankar.[120] I was really fascinated by this cyclical idea of organising rhythm. So I went to ask her really about [that] and she insisted that I had to play.
MS 41	Is that the practical way of learning [the music theory]?
JD 41	'We don't have theory in this, we have theory but it's in action.' She went out and she bought me these tablas, well, I bought the tablas, but she chose them

[120] (Ustad) Vilayat Khan (1924–2004), a sitār play and composer; Ali Akhbar Khan (1922–2009) a sarod player; Ravi Shankar (1920–2012), a sitār player and a composer. All three were prominent musicians, touring internationally, disseminating and popularising Indian classical music worldwide.

	for me because they were serious instruments. I spent a year studying with her. And it was really fascinating, not just learning about the relationship between the body and the rhythms themselves, you know, when you actually have these [inaudible] (vocalises) ding-ding etc…, they have these ways of vocalising the rhythms. And she actually explained to me, she started [learning the sitar] when she was eight years old, she wasn't allowed to touch an instrument till she was fourteen!
MS 42	Oh, wow!
JD 42	For six years, she had to learn to sing it!
MS 43	Vocalisation…
JD 43	[…] And that fascinated me. I never lost that sense that somehow, regardless of how abstract this kind of way of working is, in the end it becomes very corporeal, very somatic.
MS 44	Do you think that Western notation struggles with expressing the same level of rhythmic complexity? Because, in some of these sections of *Andromeda,* and I find them fascinating, but also quite tricky to rationalise some of these rhythms. For example, there is one in […] the viola line (from bar 425 onwards) goes into divisions of tens and eights, […], is it possible that you were trying to replicate the same level of rhythmic complexity in a polyphonic kind of way?
JD 44	Again, irrational rhythms have different functions, how I'm using them, where I'm using them: unisonal or […] polyphonic, or whatever. Often, what I'm looking for, is a kind of […] **internal rubato** within larger sound. […] [I'm] trying to dissolve any feeling of mechanics. […] A larger texture can have a much more complex inner structure to it. One of the ways of doing that is creating **internal tensions**. When violas go off on these almost soloistic passages, they are really just pulling against everything. It's not […] aggressively pushed, it's something that's just underneath.
MS 45	Subtle…
JD 45	You know, […] I always return to something very basic as a composer, which is actually the nature of sound itself. It's absolutely crucial to me. One never loses that sense, regardless of how sophisticated [the texture] becomes, and it

	becomes way, way too sophisticated sometimes, but you don't lose that sense of the **erotics of sound**.
MS 46	That's a wonderful way of putting that. […] Following on from that, since the nature of sound is so important for you, kind of fundamental to your approach to composition, do you think that in that way… and because, what I argue in my research is that there are certain pieces […] in twentieth and twenty-first century (and one of the examples is actually Lachenmann's *Ausklang*) that are so focused on the nature of sound production, that if one attempts a piano reduction of those orchestral parts, than it actually changes the identity of the piece so much that it becomes a different piece. In my opinion, then the reduction becomes if not redundant, then at least, quite useless really. […] It would be a re-imagining of the piece. I have found, despite all the complexity in *Andromeda,* I have found at its core some of the things that actually are possible to reproduce at the piano, some of the modes and some of the feeling of non-functional, but still tonality.
JD 46	Well, of course, […] the **piece, essentially, is modal**. Where the complexity of trying to make a piano transcription of the orchestral score is something to do with how there can be this **verticalization of multi-modes**. What is the function of that? The function of that [depends] on the general flow of what's happening at that particular moment in the work. Sometimes it's through saturation, **saturation in a sense of pitch-field, where you are creating a very deliberate ambiguity** of tonality. […] I differentiate between the idea of tonality and functional tonality, first of all. I tend often to think of pitch more like I think of frequency, rather than 'that's a digital, discreet pitch.' […] I often find that, for example, pianists are often paralysed in their way of thinking about pitch. Because they [press this key – they have C sharp, press again – they have the same C sharp, and of course invariably tuned by others].
MS 47	Those are the limitations [of the piano as an instrument].
JD 47	[…] There is thinking behind forcing undergrad[uate students] who come as pianists in the conservatories to learn a second instrument. I don't know if this is the thinking behind it, or if it's something much more mundane. I think it (learning a second instrument for a pianist) is very good for the ear. To

	remember, that sometimes, [in order] to stay in tune, one has to use their own ear in real time.
MS 48	Yes, not just to trust the key to do the work.
JD 48	If you think of the experience of a string player, as opposed to a keyboard player, their relationship with the music is so radically different.
MS 49	It is, absolutely.
JD 49	You know, what they mean by C sharp and what you mean by C sharp [is different]. And, of course, you are relying on someone who has regulated the piano, tuned it…
MS 50	And may not have done a very good job!
JD 50	Exactly!
MS 51	And then you go to Europe and there's different tuning system altogether.
JD 51	[…] And, you know, do you have perfect pitch? You know, this thing called perfect pitch, […] relative pitch? […] I used to go out with a violinist who, actually, it was painful – she had perfect pitch, it was painful for her, anything that [would] challenge that…
MS 52	They can't do their historically informed performance then…
JD 52	Exactly. […] And we know it's a kind of indoctrination. But, when I think about pitch, […] **I have always been, and I say this very glibly, very promiscuous with pitch**. […] **I'm not a serial composer, I'm not an atonal composer, I'm definitely not a functional tonal composer**. […] **One of the reasons I'm interested in certain modalities is the openness of them**. […] You can create very rich ambiguities. Where is the centre? One of the characteristics of a mode is it's not always clear what is the fundamental. […] This is what fascinates me about working with pitch modes.
MS 53	Even when they used the church modes for the Gregorian chant, there used to be the one tone and then the other tone a fourth or a fifth above and they were both of equal importance.
JD 53	Exactly.
MS 54	One you recite on and one you come back to.
JD 54	So that (modality) is what I find interests me on a number of levels. One is ambiguity, one is to do with… there's an echo of ancient music in there, that interests me. […] I like, culturally, those echoes of something that is not,

	necessarily, just tied to the present, the historical present. I am […] fascinated by […] what Curt Sachs would call the origins of musical phenomena, [today a little dated perhaps but I don't care about that].[121] And of course, you did ask about the idea of the score itself. […] You know, I started out as a child playing folk music, Scottish folk music. It was a struggle for me to shift into the written tradition, but, of course, […] the fundamental characteristic of the Western Classical tradition is the score.
MS 55	The score, and [the] polyphonic […] nature [of the compositions].
JD 55	That's a secondary aspect of a score, I think, of the written tradition itself.
MS 56	The verticality of it?
JD 56	Well, also, visually you can see lines, that you would never imagine if you would just [inaudible, possibly rely on] your ears. There is always a visual aspect to the score, and it's the one thing that separates the Western Classical tradition from all other Classical traditions: the Hindustani tradition, or the Japanese Gagaku tradition, or […] the Korean Confucian tradition. These are all Classical systems, they all use tablature, but […] this measured notation that we use in the West, coming out of chants and the monasteries is very unique and, of course, what it produces is […] this extraordinary set of riches that come from six hundred years of exploration of the relationship between the eye and the ear.
MS 57	And how they connect in performance and perception?
JD 57	Exactly. I mean, of course, this is music that could never be spontaneous. Where the spontaneity comes is something to do with the technical imagination of working this way. And this is a technical imagination.

[121] Dillon is referring to the work of an American musicologist of German descent, Curt Sachs (1881–1959). *Grove Music Online* describes him as 'one of the founders of comparative musicology, a forerunner of ethnomusicology, and of modern organology.' In the first chapter, 'The Origins of Music,' of his book *The Rise of Music in the Ancient World, East and West,* Sachs lists the three main theories prevalent at his time that explain the purpose of music making in the most primitive societies: imitation of the animals, alluring the opposite sex and, finally, intensified speech. He then proceeds to argue convincingly that such a complex phenomenon as music could not have arisen from a single source. Sachs notes that while components of human civilisation such as language or technology evolve and transform, music is keenly preserved by many societies often in its most rudimentary form. He claims that the earliest observable musical activities constitute singing, which he understands as 'an expression of man's soul and motor impulse, [it] has little to do with the mutable surface of life, and nothing with struggle for existence.' (Sachs, *The Rise of Music* […] (1943) p 21).

MS 58	And would you say, and, because, the other thing that I found in some of the conversations with you is that sometimes you write something to intentionally put the performers out of their comfort zone, does that tie in with the idea of spontaneity in the act of performance, sort of, to create the spontaneity by writing something that is almost impossible to realise?
JD 58	I don't know where you read that, cause I actually don't like the idea at all of putting someone out of their […] comfort zone. Certainly, I know, that **occasionally I'm moving into spaces that are extreme and it's questionable whether they are actually realisable**. Or rather, let's put it this way: within the present economic system, (laughs), how many rehearsals one would get? If I was always working with Celibidache,[122] where he would say 'we need twenty seven rehearsals and the soloist needs three years with the work,' then, perhaps, we would get close to something that is even richer, than [what] we have at the moment. **The notion of accuracy, of course, is a fallacy**. **It's based on the misplaced notion of fidelity to the score**. You know, one of the interesting things for me, and I'm acutely aware of this, is **what spaces am I actually giving the performers**, what space is left for them. And this is one of the things that, […] perhaps, you learn as part of your craft anyway […] just how far you can […] And it's a very instinctive thing for me now – it's so easy to move into a space where you actually freeze a performer. There are certain performers now, of a generation that didn't exist back then when I first started getting performed in the late 1970s, that are very natural. The more difficult, the more fun they have. But they are not often the most interesting musicians. The most interesting musicians for me are the ones that actually find the small spaces where they can breathe, where they can express themselves. And it's true that I have always been interested in this notion of virtuosity, all of my works are what would be considered as virtuosic. But I tend to think of virtuosity not in that nineteenth-century Lisztian sense of the word, **I tend to think of virtuosity as something to do with the subject**. Originally, if one goes back to the etymology of the word 'virtuosity,' it had more to do with the subject than it had to do with the

[122] Sergiu Celibidache (1912–1996), Romanian conductor known for his meticulous and rigorous rehearsal process.

	action. So I'm much more interested in the [virtuoso] subjects, if you like, whereas, in this case where you have this […] soloist placed alongside this large acoustic space called the orchestra it's… […] The interesting things for me is all the things I don't write. All the things that the performer discovers in her own, or his own, discoveries in working with them. The last thing I'm going to do is sit down with a performer and say 'wait a minute, that wasn't a quintuplet.' I mean, I'm not interested in that […]. The bottom line is, I expect the performer to come to grips with the text. That takes time and different performers need more time that other performers and I totally respect that. What interests me is actually the way they themselves break through this membrane of just getting it into their muscles and the body and they do that and […] then there's the next stage. But this isn't different from playing Mozart, it's just more of it. It's the same process for me and […] that fascinates me and it's the act of reading, [the hermeneutics, it's finding the 'other' text, one that I might not be aware of…].
MS 59	I'd like to mention a little bit the symbolism that I have found in the score. You talk about different notions of what *Andromeda* is and there are all these mythological origins and also the astrophysical origins if you like. I found, personally, that the notion of the V-shaped constellation is reflected […] all the way through.
JD 59	That's purely coincidence. Well, sort of, but, you know, that's much more to do with… You know, let's say…
MS 60	[Something similar to] Xenakis … did you do that on purpose?[123]
JD 60	Well, sometimes yes but **it's not really to do with symbolism, it's much more to do with the movement of sound in space for me**. […] Let's just take this page here. We start with the oboe and it starts with the violas. What is the relationship between the two? There's a very strong overlap in terms of register between the two instruments. […] They're playing in unison these quintuplets and **I'm playing with the idea of an instrument that you can call a 'violoboe.'** […] Orchestration for me is fascinating. Actually, what I'm doing is not saying 'OK, I'm giving this material to that instrument, and this

[123] French composer of Greek descent, Iannis Xenakis (1922–2001), consistently applied concepts such as physical space, time, geometrical and mathematical symbolism to his works.

	material… **What I'm often doing is I'm creating new instruments that don't exist**. If I start something where the viola and the oboe are in unison and they instigate a particular motif, for me it's not the viola and the oboe, it's a new instrument, it's somehow a hybrid instrument between the two. Then you have to think about 'OK, now, the oboes are here (shows a position of the oboe section in space) and, depending on the arrangement, the violas are might be there or they might be here or they might be directly in front of the oboe (shows three possible locations for violas), but, actually, how many meters away.'
MS 61	They would have to play together.
JD 61	I'm often thinking of the orchestra as a sound space, sound scape. […] Sometimes I take the contrabasses, let's say, extreme right as I'm looking front on to the orchestra, extreme left if you're playing in the orchestra and I say, 'where are the horns?' and the horns may be North-West, as opposed to South-West and OK, how much space is there between them? And often when I'm thinking about orchestration I'm thinking about this space between the instruments. Do I fill it? Do I keep it as a gap, like an interval space? **I'm often making these trajectories across the space**. And it's not so much that I'm thinking about the symbolism of the 'V', it just so happens that… the oboes and the violas are here (shows a position) and I'm heading towards something like the trumpets which would be here (shows a different position) and I'm drawing a line like that (shows a contour). […] I'm moving the sound like that, but I'm keeping the sound there. […]
MS 62	This is fascinating! And as I was listening to the premiere recording, it actually does come across. […] And this is one thing you can't do with the piano, because the sound would still come out of the same black box.
JD 62	Exactly, the same sound source.
The following section of the interview was dedicated to the discussion about the specific issues that emerged from the process of creating the PR in *Andromeda.* Relative dynamics were a recurring topic, multiple adjustments were suggested by JD and subsequently implemented by MS.	