'Narrowing the gap' - notational prescription and extended techniques in selected classical saxophone repertoire.

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Abstract

The use of notational prescription and extended techniques are effective in 'narrowing the gap' between composer and performer insofar as they instruct actions that can be used to allude to the 'imaginings' of the composer. This alluding to intent is more successful if there is an agreed symbolic language and resultant performative action. The performer can then build their version of the composer's 'imaginings', and contribute to the conversation using the same language.

This research is an exploration of the shared 'imaginings' between composer and performer through a series of experimental case studies. In particular, how the use of extended techniques and notational prescription support the sharing of 'imaginings' enabling a more accurate realisation of a score.

The dialogue focuses on classical saxophone performance in the French tradition, encompassing discussions relating to instrumental treatises and the influence of equipment choice.

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Audio examples, compositions and performances

Audio examples in text are given in this format: (*Description* - AF: XX.m4a).
AF = audio file name on USB stick.
Audio examples can also be downloaded from:
https://www.dropbox.com/s/l7do0ka706exjey/AudioExamples.zip?dl=0

Name	Description	Audio file	Duration
Egyptian Wish	Saxophone Trio	01.m4a	7' 48"
20 Grandes Études			
Study no.1	Neck Screw excerpt 1	02.m4a	11' 44"
Maï	Neck Screw excerpt 2	03.m4a	8' 00"
Pitched slap-tongue	Finding the sound	04.m4a	1' 14"
Secco slap-tongue	Finding the sound	05.m4a	1' 40"
Tongue-clicks	Finding the sound	06.m4a	1' 42"
Clockwork	Composer performance	07.m4a	0' 51"
Clockwork	Performer sample 1	08.m4a	0' 58"
Clockwork	Performer sample 2	09.m4a	2' 01"
Clockwork	Performer sample 3	10.m4a	1' 31"
Clockwork	Performer sample 4	11.m4a	2' 34"
Clockwork	Performer sample 5	12.m4a	1' 48"
Clockwork	Performer sample 6	13.m4a	1' 41"
Key-clicks	Scintilla	14.mp3	0' 20"
Key-pops	Scintilla	15.mp3	0' 06"
Scintilla	Example texture	16.mp3	1' 21"
Scintilla	Quirk rehearsal 1	17.mp3	0' 38"
Scintilla	Quirk rehearsal 2	18.mp3	0' 29"
Study	Composer performance	19.m4a	1' 32"
Study	Participant 1	20.m4a	1' 28"
Study	Participant 2	21.m4a	2' 26"
Study	Participant 3	22.mp3	2' 01"
Study	Participant 4	23.m4a	1' 34"
Study	Participant 5	24.m4a	1' 55"
Study	Participant 6	25.mp3	2' 31"
Study	Participant 7	26.m4a	1' 32"

Study	Participant 8	27.mp3	2' 25"
Study	Participant 9	28.m4a	1' 49"
Study	Participant 10	29.m4a	1' 36"
Limbo	Too Many Zooz	30.mp3	3' 12"
Smudge	Quirk saxophone quartet	31.m4a	5' 57"
Maï	First recording	32.m4a	7' 38"
Maï	Second recording	33.m4a	7' 00"
Ensemble	Saxophone ensemble	34.m4a	7' 00"

Compositions

Egyptian Wish (2010)	soprano saxophone trio	Katy Abbott
Clockwork (2018)	solo or group of saxophones	Kenneth Wilkinson
Scintilla (2016)	saxophone quartet	Kenneth Wilkinson
Study (2018)	solo saxophone	Kenneth Wilkinson
Smudge (2018)	saxophone quartet	Chris Jolly
Maï (1978)	solo alto saxophone	Ryo Noda
Ensemble (2017)	saxophone ensemble	Kenneth Wilkinson

Performances

Egyptian Wish (2010) by Katy Abbott	Quirk saxophone trio
Smudge (2018) by Chris Jolly	Quirk saxophone quartet
Maï (1978) by Ryo Noda	Kenneth Wilkinson

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I would not have been able to complete this work without the help of so many supportive people. First of all, I would like to thank the University of Huddersfield, which enabled me to pursue this degree through the Vice-Chancellor's Scholarship programme.
Thank you Richard Glover and Bryn Harrison for taking the time and being an inspiration, and thank you Philip Thomas for helping me to think differently. Thank you to my supervisor John Bryan, for your enthusiasm, ideas, and endless patience. Thank you James Fox for your support and trying to keep me in a straight line. Thank you to the composers and performers that took the time to participate in this research. Thank you to Sarah Hind and Chris Jolly, members of the Quirk saxophone quartet.

Thank you Sarah Markham, my muse, my teacher, my partner,
for your endless love and support.

Chapter 1: Introduction

In 2010 a collaboration between Marcus Weiss (saxophonist) and Giorgio Netti (composer) resulted in the publication of *The Techniques of Saxophone Playing*; a treatise describing extended techniques that quickly became a standard reference for saxophonists (Weiss & Netti, 2010). Weiss and Netti make the following observation in their introduction:

> What ultimately emerged in the collaboration between an interpreter and composer on a "treatise" such as this was the possibility of intersecting different, even apparently opposing spheres of experience. The experience of one who performs music and one who writes music are, however, in the truest sense, polarities of the same musical experience. Following this line of reasoning, what seems especially important to us is that the performer acquires a deeper understanding of the circumstances and context of his actions and that the composer experiences a more direct contact with the materials with which he is working (Weiss & Netti, 2010, pp. 11-12).

Their observation embodies the main thrust of this investigation: the 'intersection' between composer and performer, the point at which responsibility is relinquished by the creator and differing experiences overlap. More specifically this research investigates the process of transference; the exploration of the potential 'gap' between composer and performer and how notational prescription, and the use of extended techniques, help to narrow that divide.

Over the last six years the saxophone repertoire I have performed has gradually shifted from 'standard' classical French works towards compositions employing more notational prescription and extended techniques: from Gotkovsky's *Incandescence* (Gotkovsky, 2014) to Ryo Noda, Christian Lauba and beyond. This re-focusing was driven by a fascination with the range of sound 'colours' emerging from my saxophone. The gamut of timbres increased with every advanced technique; an addictive experimentation with variations of techniques, listening to the slightest sonic change. My thoughts turned to the compositional process that led to the choice of those sounds, and whether the sounds I produced were the sounds that were intended: what was the composer 'imagining' and how did my 'inner hearing' differ in response to the score?

The focus of this research is classical saxophone performance in the French tradition. It is a practice-based exploration of the 'imaginings' of two parties: the composer and the performer. This research illustrates how 'imaginings' cross a divide, with a focus on notational prescription and extended techniques. It is a discussion of the composer and

performer as separate entities. A composer-performer scenario as exhibited by the saxophonists Vincent David or Philippe Geiss is an alternative dynamic, leading to a different conversation beyond the main scope of this research.

This thesis has two parts:
The first is an initial discussion which introduces the journey from idea to notation, leading to a review of literature that might support an agreement of musical 'colours' between composer and performer. This is followed by examples of how equipment choice might affect performance.

The second part involves a series of case studies framed from the points of view of the composer and the performer. These studies explore 'imaginings': how notational prescription and extended techniques might intimate aspects of timbre, and whether they might support a narrative. There is also a discussion with performers giving their thoughts relating to musical narrative.

Chapter 2: Shared imaginings

There is a precursive stage before notation whereby an abstract idea emerges, and determinations are made to place this idea into a musical framework. These decisions involve genre, instrumentation, form and structure, best placed to communicate the initial premise (Cox, 2013, p. 17). Krenek calls this space between idea, decision and notation 'musical thought', and it is these musical thoughts that fill a *Gestalt*: 'The musical *Gestalt* is the way the thought manifests itself in musical material' (Krenek, 1966, p. 140). A sequence of events informed by the *Gestalt* results in the definition and character of the composition, with notation embodying the musical thought. Krenek's model ties in with the established tradition of Western music: that of the *Gestalt* being communicated via notation, and an implication that it is the responsibility of the performer to be true to that instruction. This concept of *Werktreue,* which moves interpretation away from a performer's subjective influences towards a set of mandates that ensure a 'valid' performance, reinforces the belief in a composition having an autonomous identity. The performer is encouraged to work with the information set before them (Cox, 2013, p. 12). It could be argued that the score is the final element in a sequence of events beginning with the *Gestalt*; that it needs to contain all the information the performer requires to convey the musical thoughts. Care must be taken to limit the distortion of the initial musical thoughts and related *Gestalt* at every stage of the sequence leading to the final notation (Cox, 2013, p. 18), as the score is the medium by which the musical thoughts, or 'imaginings', of the composer are transferred (or implied) to the performer. The composer's 'inner hearing' is intimated with the expectation that a performer might realise at least a fragment of intention. Greene uses concentric circles to describe the path from conception to performance (fig. 1), with each circle representing a subset of the previous step (Greene, 1974, p. 507).

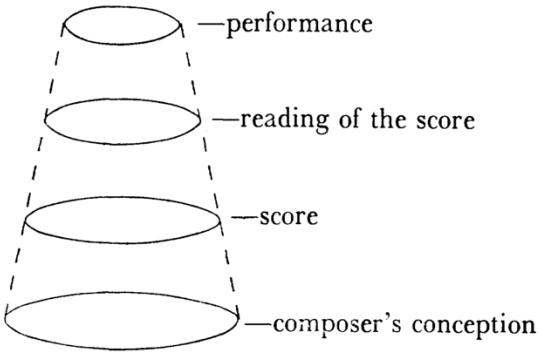


Figure 1: Greene's path from conception to performance - *For Whom and Why Does the Composer Prepare a Score* (Greene, 1974, p. 507).

Greene comments that this descriptive model assumes that the realisation of a composition would not fundamentally differ from the creator's original premise, and ignores creative contributions by the performer. Even so, Greene's illustration of the composer to performer process is useful to explain my particular interest.

In my roles as a composer and a performer I find it helpful to visualise the reduction in clarity of the original conception (Greene, 1974) as a 'gap' between the creator and the interpreter. The 'gap' might be wider or narrower depending on several criteria, such as notational information, informed musical culture and the performer's experience. I think of the areas either side of the 'gap' as 'imaginings'. The composer has an initial premise, not necessarily musical in nature, that leads to an internal concept of sound. From the 'inner hearing' a physical form is created from which the performer then creates their own 'imagining'. It is worth noting that there is an 'intuitive' and 'reflective' thinking process that refine the initial 'imaginings' during the creation of the score (Pohjannoro, 2014, p. 182). The process of 'shared imaginings' invites questions such as: 'How is the initial idea and associated sonic 'imagining' on one side of the interpretational 'gap' best conveyed to the performer using Western notation?', 'What methods might allow these disparate imaginings to be as closely matched as possible?'.

My interest is focused on the use of extended techniques and notational prescription to widen the musical 'colour palette' available on the saxophone: the instrument-specific 'inner essence' that 'one could not imagine any other instrument playing the same material in the same way' (Ferneyhough, 1995, p. 375). In effect, with regard to extended techniques and associated prescription, how closely can the 'imaginings' of the composer and performer be matched, and how similar in size might Greene's circles be?

In order to explore how notational prescription and extended techniques might help reduce the degradation of signal from the viewpoint of composer and performer I have divided the use of prescription and extended techniques into three categories (although musical material does overlap between the categories). This allows a focus on the particular aspects of each usage.

Category 1: An imitation of sounds: An imitation of 'prescribed sounds', depicting extra-musical material such as real-world sounds, or other musical instruments. An example of material in this category is the performance by the ensemble Quatuor Morphing of the *String Quartet in F major* by Maurice Ravel (Morphing, 2017). The saxophonists use various

extended techniques to emulate string instruments, such as slap-tongue to imitate string pizzicato.

Category 2: Development of musical material: Prescription and extended techniques used mainly in the development of musical material, such as employing specific musical 'colours' or timbres, or compositions without strong or dramatic narrative. *Revolution* (Mellits, 2012) a composition for saxophone quartet that makes use of long contrasted sections of extended techniques would fit into this category.

Category 3: Describing a narrative: Used to describe a narrative which might encapsulate storytelling, emotion, or real-world events. *Fragmented Spirit* (Garrop, 2008) is a strong example of a work in this category. It embodies a dramatic premise, at one point using extended techniques and notational prescription to portray a human scream.

These three categories will be explored using six case studies. My compositions *Clockwork* and *Scintilla* (category 1), *Study* (category 2), and *Ensemble* (category 3) will enable examination mainly from a composer's point of view. *Smudge* (Jolly, 2018a) (category 2) will give a composer and performer's perspective, and *Maï* (Noda, 1978) (category 3) will give a performer's perspective. Case studies in category 1 and category 3 explore aspects relating to 'shared imaginings': the transference of an imagined sound between composer and performer. The case studies in category 2 explore the role of prescription and extended techniques in works without strong narrative.

The three categories of usage are in order (in my view) of complexity: category 1: sounds; category 2: more complex timbres and textures (with no narrative), and category 3: strong narrative and complex sounds.

The next chapter reviews publications that are available to support a more accurate sharing of musical 'colours'; a 'common ground' in order to help narrow the gap between creator and interpreter.

Chapter 3: A shared meeting place

It could be argued that the composer-performer dynamic offers the most direct route of communication. In this scenario the full intent of the musical *Gestalt* is available to the performer, allowing the possibilities of response and development of the original premise during actual performance. These explorations would not be based upon the musical culture, assumptions and intuitions of a third party performer, but be intrinsically linked to the thought process of the composer; a variation of 'comprovisation'. Integrating composition and performance so they are no longer separate creative processes results in the listener hearing truly authentic ideas, assuming the composer's virtuosity is sufficient (Yip, 2015). This is more evident in solo works, where the lack of layers of interpretation from other (third party) performers preclude possible dilution of intent. It is in this situation that we might see notation as a form of 'shorthand' for the performer, a limited reminder of a complex and nuanced intended realisation. Outside of the realm of the composer-performer scenario, notation becomes less 'shorthand' and more a crucial language of instruction. Davis describes this language of instruction in terms of 'thickness': the more information imparted to the performer the 'thicker' the work, with 'thin' works employing less prescription. His definition of a 'thick' work includes the caveat: 'a great many of the properties heard in a performance are crucial to its identity and must be reproduced in a fully faithful rendition of the work' (Davies, 2007, p. 20). Davis's assertion implies that the use of notational detail puts a responsibility on the shoulders of the performer.

The score seen as an embodiment of a work to be rendered by a performer is only valid for a certain period of time, when composer intention and performance practice are synchronous within the tradition. Viewing the score as 'a medium of (graphic) communication between composer and performer' (Barrett, 2014, p. 61) allows the use of notation to instruct a sound-world, in a similar way to the use of text to write prose, embracing the inherent socioculture that it involves. A sound-world intimated by the use of notational prescription combined with an advanced knowledge of the intended performance instrument, its idiosyncrasies, and extended musical palette through advanced techniques, enables the composer to detail as finely as practicable their intentions; attempting to secure more accurate and consistent realisations.

Yet the security of intention in granularity has a limited lifespan at the mercy of the influences of current tradition and thinking within the community, which may include different practices with regard to the work. Within a fairly short number of years,

performances can range from romantic or lyrical, to technical dry perfection, depending upon the prevailing mood of the time. The notating of more complex elements such as extended techniques involves sometimes complex processes of writing or interpretation, and until assimilated fully by the tradition these will seem alien and difficult. This complexity results in a bias towards the greater use of the more easily understood elements: the 'perspective' of a notation (Gottschewski, 2005, p. 253). This 'perspective' encourages composers to avoid the exact notation of difficult elements, leaving the finer parameters of execution to the performer based upon 'an implied ideology of its own process of creation' (Ferneyhough, 1995, p. 4).

Notational symbols (with the intrinsic sound expectation) become stable as they are assimilated into the musical culture and tradition. Without a fixed symbol and related expectation of performance, re-definition within the tradition over a period of time would prevent stable repeatable results (Bhagwati, 2013). That being the case, it could be argued that the more notational information received by the performer the better the basis to build the interpretation. Yet there is a balance to be achieved between efficient and accessible communication, and labyrinthine language that can become an obstacle. Within this equilibrium, how much space is there for the performer to contribute to the conversation? Greene (1974) suggests that the score is not an art object, but an unfinished project, which invites the performer to comment and reveal unexpected musical facets. O'Grady (1980) casts doubt on whether this is fully the case, pointing out the endless sketches and reworkings of scores, as a composer strives for clarity of idea and notation. I would suggest there is room for both or a combination of positions: in the case study *Smudge* (Jolly, 2018a) the composer welcomes contributions and deviations from his score (chapter 6), whereas I prefer a nuanced response from performers. Ferneyhough argues that all realisations of a score are valid, although he qualifies that statement identifying 'aesthetically adequate performances' dependent upon 'the extent to which the performer is technically and spiritually able to recognize and embody the demands of fidelity' (Ferneyhough, 1995, p. 71).

The more exact the definition, the less the performers of the future have to decode intentions, although 'historically informed performance' is always at the mercy of the notational syntax of the time. Conversely, if the notational system chosen becomes too complex, too 'visionary', then there is a danger of the loss of functionality (Black, 1983). There needs to be a balance of complexity that is refined enough to convey the 'inner hearing' of the composer, but not so extreme (or bespoke) as to be an obstacle to the assimilation within the tradition. With regard to extended techniques, the signifier and the

signified concept needs to be clear to all parties: 'A symbol remains useful if the perceiver's response is less than, but not different in content from that of the one who uses it.' (Greene, 1974, p. 507).

The accuracy of a composer's 'outer and inner' hearing, the imaginary performance and the music delivered to the audience, is crucial to precise communication. If there is disparity then it might be the case that the music, although prescribed in detailed notation, is not what the audience hears, or might not be achievable by the performer (Sessions, 1951). If the composer cannot 'hear' a particular multiphonic, for example, in the same way as tonal material might be heard, then the composer (or performer) cannot be assured of the resultant sound.

Instrumental treatises have long been a shared meeting place to assist the aforementioned future-proofing of composer intention and to support 'inner hearing'. They are a fixed point of reference for composer and performer: a repository of symbols and resultant sounds to be consulted, if only for a sonic starting point.

Saxophone treatises

The development of the saxophone treatise from 'a book of fingerings' to a useful meeting point between composer and performer has taken around forty years. A historical review of treatises focusing on the saxophone show the publications becoming more sophisticated in terms of accuracy and information, introducing discussion of sounds and techniques facilitating a sharing of 'imaginings' between composer and performer. Publications such as *Saxophone High Tones* (Rousseau, 2004) and *Top-tones for the Saxophone - Four-Octave Range* (Raschèr, 1983) are excluded from this review as their main focus is on facilitating a greater saxophone pitch range. The multiphonic extended technique is used as a basis to compare the historical development of publications in the following examples.

Ken Dorn

Multiphonics - Saxophone Technique

Ken Dorn's treatise *Multiphonics - Saxophone Technique* (Dorn, 1975) focuses solely on multiphonics. The foreword frames the publication more as a 'joint venture' between the saxophonist and the treatise:

> This book is intended to serve as a catalyst for its' (sic) user to discover and develope (sic) his/her own collection of multiphonics. [...] The only prediction which can be made for each user, is that most of the fingerings will produce some kind of multiphonic [...] Play each of the fingerings listed in this book, and check off those fingerings that produce multiphonics. (Dorn, 1975, foreword).

This approach to the dissemination of information encourages experimentation and discovery on behalf of the instrumentalist, but limits the usefulness of the publication to a composer. It lacks the 'dictionary' element whereby a composer or a performer can quickly find a solution. The examples contained in the book are in the format of a base multiphonic shown as notation, underneath which is a numeric list of possible fingerings, with some lists containing well over one hundred combinations (fig. 2). The numerals denote which fingers and keys to depress or release. As the tablature is proprietary, (it is not based on the more usual saxophone keywork designations such as the systems developed by Jean-Marie Londeix or Eugene Rousseau (see appendix 1)) it adds a barrier to the accessibility of the information. Only the base multiphonic is given and microtone accidentals are not used in this publication, nor are the given fingerings instrument specific. The suggested alternative fingerings will change the nature of the resultant multiphonic in terms of tuning and timbre,

as will the use of a different member of the saxophone family, resulting in a certain amount of guesswork from users of the book.

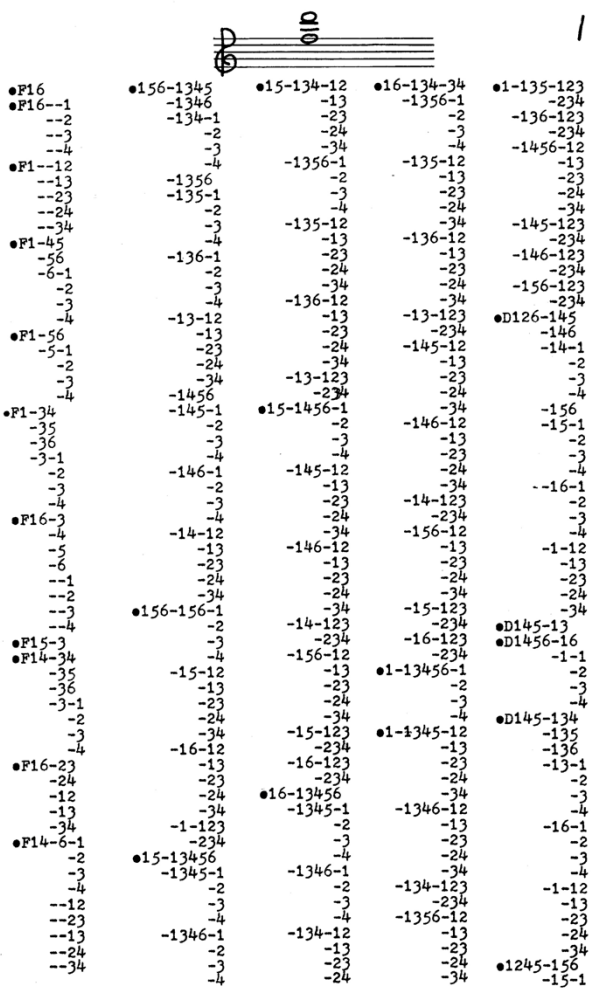


Figure 2: *Multiphonics - Saxophone Technique* - example format of multiphonic information (Dorn, 1975, p. 1).

Relying on experimentation by the saxophonist, *Multiphonics - Saxophone Technique* does not easily aid the 'hearing' of multiphonics due to the lack of detailed musical notation or audio examples. It has a non-specific instrument focus (the given fingerings are for the whole saxophone family). This publication is perhaps more of an encouragement for instrumentalists to explore multiphonics rather than provide a platform for a composer and performer to agree sounds or symbols.

Ronald L. Caravan

Preliminary Exercises & Etudes in Contemporary Techniques for Saxophone

Caravan's (1980) treatise offers a wide scope of extended techniques. These include changes of timbre, various articulations, percussive key effects and multiphonics. It also encompasses techniques used regularly in contemporary music, such as air sounds, vocal sounds, 'lip buzz' and the use of the mouthpiece alone. Again, this is not a 'dictionary' format, more a discussion with exercises to help the saxophonist understand and facilitate extended techniques. It is pedagogical in nature, gradually guiding the saxophonist through different aspects of a technique using short exercises. There is a limitation expressed at the beginning of the book:

> All of the fingerings contained in this volume for timbre variation, quarter tones, and multiphonics have been derived and thoroughly tested utilizing the E-flat alto saxophone. This does not preclude the possibility of using other sizes of saxophones, such as soprano or tenor [...] but in many cases fingering adjustments may be necessary [...] some of the multiphonic fingerings may not respond well at all on saxophones other than the alto (Caravan, 1980, p. 1).

Although this treatise deals thoroughly with a wide range of extended techniques, in reality the information is predicated on the alto saxophone. In contrast to the Dorn publication there are more examples of music notation given, which consist of exercises to facilitate execution, and fingerings for techniques such as multiphonics (fig. 3).

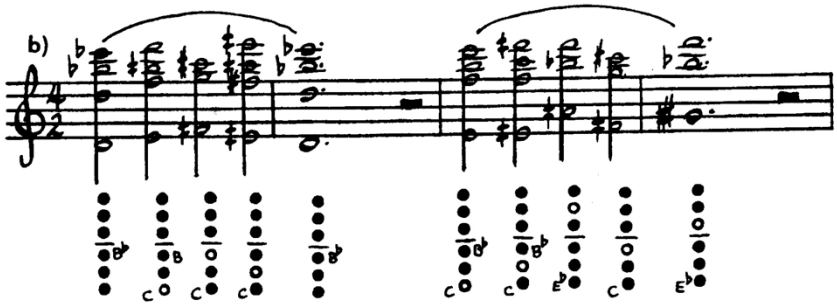


Figure 3: *Preliminary Exercises & Etudes in Contemporary Techniques for Saxophone* - example of fingerings given for multiphonics (Caravan, 1980, p. 25).

Microtonal accidentals are used in examples, and the given fingerings use a simple system that is more easily understood. This treatise takes care to explain fully the process to be followed to facilitate techniques, and provides more precision with regard to resultant sounds than the earlier Dorn publication. It is a publication mainly for saxophonists rather than composers, and it could be argued, only aimed at alto saxophonists. There is little basis to facilitate a 'sharing' of sounds between composer and performer.

Daniel Kientzy

Les sons multiples aux saxophones

Kientzy's (1982) treatise focuses solely on the production of multiphonics. Unlike previous treatises, this publication follows a 'dictionary' format, allowing composers and saxophonists to easily find required multiphonics and fingerings. The work covers multiphonics for soprano, alto, tenor and baritone saxophones, and is unusual in also including the sopranino saxophone. The information offered is precise and detailed. Not only are microtonal accidentals used, but also information on parameters such as volume of breath, amount of reed taken into mouth, and fine graduations of musical dynamic level relating to tone production, for example between *piano* and *mezzo piano* (fig. 4).

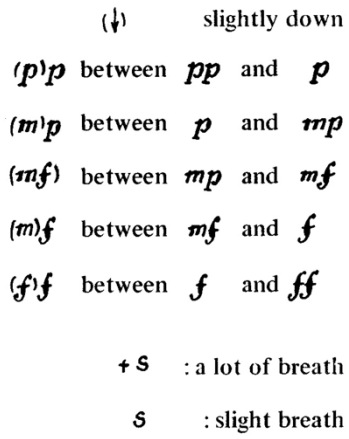


Figure 4: *Les sons multiples aux saxophones* - fine graduations of dynamic level (Kientzy, 1982, p. 3).

The format of the multiphonic examples are clear and easy to follow, with each example allocated a number (fig. 5). The fingering scheme used is the Londeix system of finger and key designations (see appendix 1).

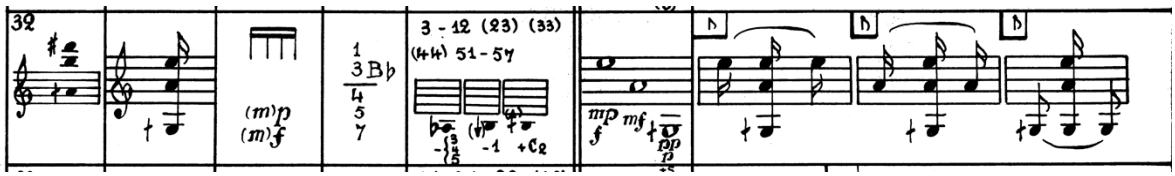


Figure 5: *Les sons multiples aux saxophones* - example multiphonic number 32 (Kientzy, 1982, p. 52).

Each multiphonic diagram is split into seven areas of information:

1) The treatise catalogue number of the multiphonic and the transposed pitches for saxophonists (this area is also used to give warnings of particularly unstable or difficult multiphonics).
2) The pitches (in concert pitch) comprising the multiphonic.
3) The quickest rhythm that can be used when repeating the multiphonic and possible dynamic levels.
4) The saxophone fingering.
5) Information relating to the duration of 'shakes', dependant on alteration of fingering.
6) Component notes that can be produced separately.
7) Options for component notes that can precede or follow the multiphonic.

The approach the Kientzy treatise takes is a marked improvement over previous publications. The work is a useful reference point for composers and performers, giving nuanced information that allows subtle compositional and performance choices. Such is the success of this treatise that influential composers of saxophone repertoire, including Christian Lauba, adopted the Kientzy system of numbering in their scores. For example in *Hard* (Lauba, 2013), a composition for tenor saxophone, the abbreviation 'K' (Kientzy) and the numeral representing the multiphonic in Kientzy's treatise is used throughout (fig. 6).

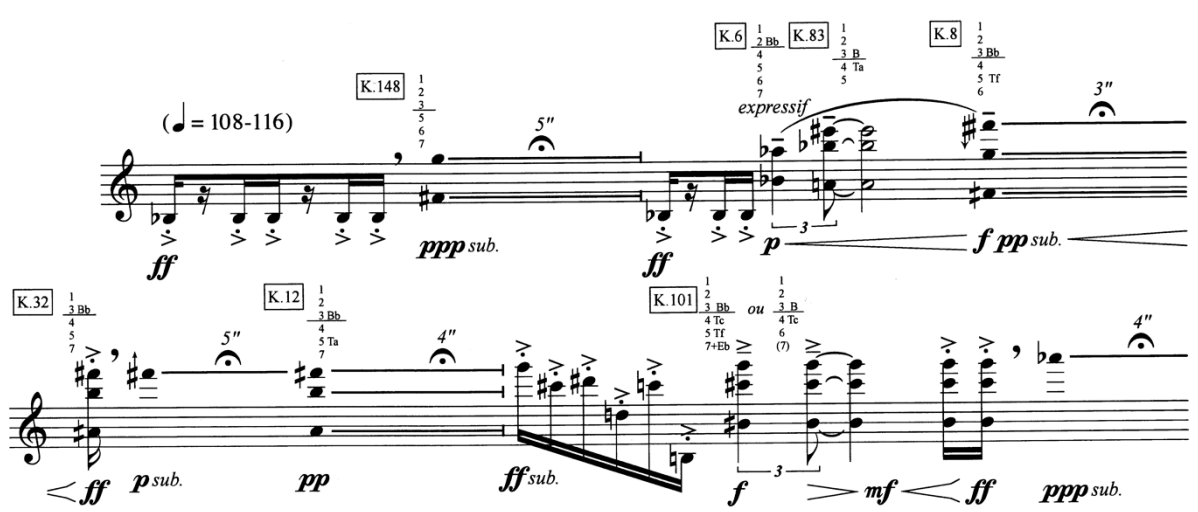


Figure 6: Christian Lauba *Hard* - showing the use of numeral designations from Kientzy's treatise (Lauba, 2013, opening section).

Note the 'K.32' multiphonic specified on the second line is the multiphonic described in figure 5. Although *Les sons multiples aux saxophones* focuses solely on multiphonics it became a standard reference for composers and performers.

Jean-Marie Londeix

Hello! Mr. Sax or Parameters of the Saxophone

Londeix's (1989) treatise encompasses most aspects of saxophone instrumental practice. Not only is there advice on extended techniques but also more traditional requirements, such as playing at a low dynamic range, timbre, and 'standard' articulations such as staccato. The publication is less 'dictionary', more 'encyclopaedia', with short articles supported by examples and exercises. In comparison to the Kientzy treatise, the multiphonic examples (fig. 7) are not as detailed, but do use microtone accidentals and give advice on the range of dynamic levels.

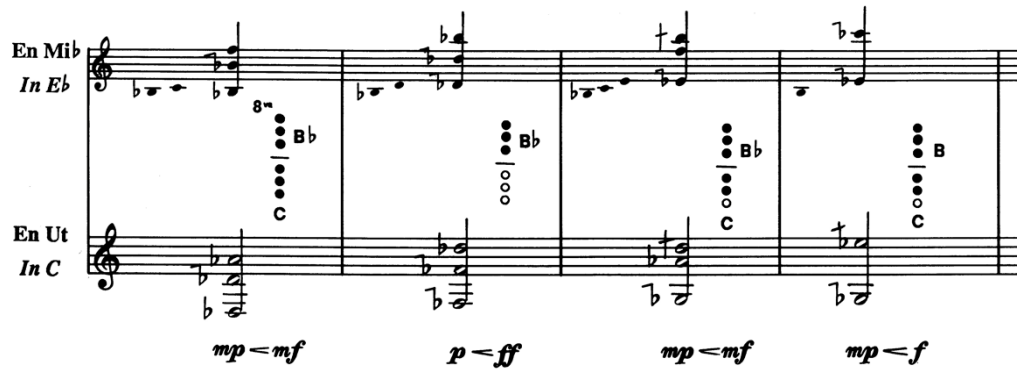


Figure 7: *Hello! Mr. Sax or Parameters of the Saxophone* - example multiphonic information (Londeix, 1989, p. 34).

Parameters of the Saxophone supports the 'inner hearings', or 'imaginings' of composer and performer in a different way to previous treatises. Londeix discusses aspects of saxophone performance in great depth, producing an invaluable resource for performer and composer. For example in his discussion of 'attacks' he begins by explaining the three components of a musical tone: attack, duration, and ending (Londeix, 1989, p. 86). There follows a discussion detailing how 'attack' is used with the four parameters of sound (pitch, timbre, intensity, and duration). Londeix develops the subject: 'the attack, an important element of expression' (Londeix, 1989, p. 87) discussing ways of beginning a sound and the cultural awareness of the performer. He advises on composition and the historical background to different 'attacks', with examples of usage by major composers. Included in the various discussions within the publication is a series of diagrams to help visualise the complex ideas Londeix is putting forward. These diagrams demonstrate techniques such as articulation (fig. 8), decay, types of sound, and extended techniques. There is detailed advice on the notation of techniques and where in the saxophone pitch range the techniques might be used most successfully.

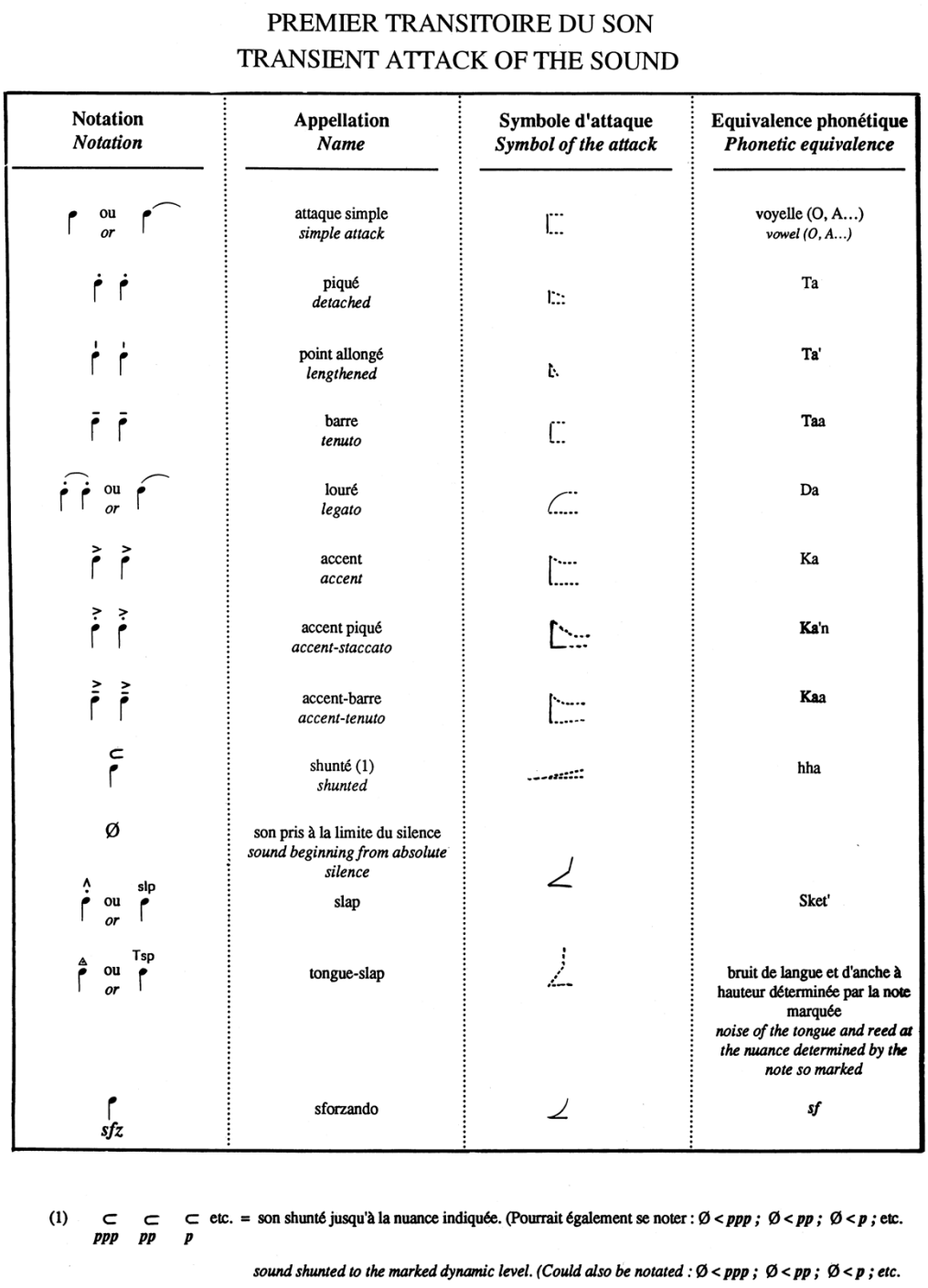


Figure 8: *Hello! Mr. Sax or Parameters of the Saxophone* - diagram to support discussion (Londeix, 1989, p. 92).

Throughout Londeix's treatise care is taken not only to describe a 'sound' and how to achieve that sound, but also to advise which notational symbol should be used to instruct the performer. By using a more graphical approach to describe sound, and detailed explanation, *Parameters of the Saxophone* moves closer to the ideal of a repository that is of equal use to composer and performer.

Marcus Weiss and Giorgio Netti

The Techniques of Saxophone Playing

Twenty-one years after Londeix's publication, Marcus Weiss and Giorgio Netti published *The Techniques of Saxophone Playing* (Weiss & Netti, 2010). It might be expected that a collaboration between a composer of contemporary music (Netti) and a virtuoso saxophonist (Weiss) would result in an invaluable resource. The work is in the style of Londeix's *Parameters of the Saxophone*, including extensive advice relating to the facilitation of extended techniques, notational examples, and detailed description of topics such as timbre. The material is combined with a 'dictionary' element on a par with Kientzy's *Les sons multiples aux saxophones*. For example, the multiphonic examples are allocated a number which could be referenced in a score, and detailed information is shown relating to dynamic range, and sounding tones (fig. 9). Weiss and Netti explore multiphonics in depth, with a focus on the sound produced:

> We have decided not to proceed from a spectral analysis, because the "sense" of the sound should, of course, always derive from musical listening. Our own hearing has been cultivated over years of instrumental and compositional practice within a particular sound world and what we have heard, revised repeatedly, is what we trust [...] The preciseness of intonation in music is always a question of context and reception; thus, suggesting a less chordal experience of these sounds comes much closer to the actual perception of these sound phenomenon as a kind of timbral-harmonic event (Weiss & Netti, 2010, pp. 58-60).

Each multiphonic example in the treatise includes:
1) Number and name (next to the number). For example in multiphonic '61' (fig. 9), the name 'A/F#+Bb-1' means: alto saxophone/finger F#, close low Bb key, open key 1.
2) Notated partial tones with indication of their vibrating quality. Rather than encourage thinking of multiphonics as 'chords', Weiss and Netti see them as a combination of tones of different timbres and variations of volumes that combine to give a particular overall sound.
3) Qualities of vibrating behaviour. For example, in multiphonic '61' (fig. 9) the designation 'C' below the first multiphonic means: 'between a minor ninth and an eleventh (octave + fourth), stable; *pp-mp*' (Weiss & Netti, 2010, p. 61).
4) Dynamic range suitable for the multiphonic to respond.

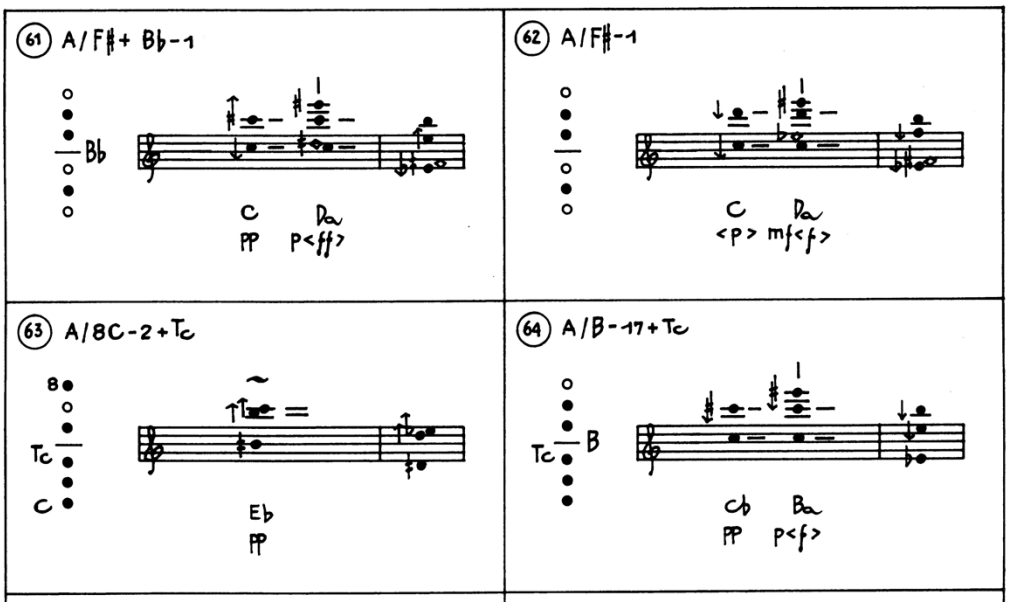


Figure 9: *The Techniques of Saxophone Playing* - showing multiphonic examples (Weiss & Netti, 2010, p. 84).

Elements of the multiphonic descriptions in the Kientzy treatise are further developed in *The Techniques of Saxophone Playing*: as well as designations for component notes that can precede or follow the multiphonic (indicated by a horizontal line '-'), there are new symbols: a vertical line above the multiphonic indicates all tones can be played simultaneously with a full sound; a diamond shape indicates a shadow sound that cannot be isolated; a wavy line indicates an unstable sound with difficult response. Weiss and Netti are concerned not only with technical aspects, but also with the sound the listener perceives. To that end they have produced audio examples that are available online to support the discussions in their treatise (Weiss & Netti, 2018). *The Techniques of Saxophone Playing* is a culmination of the previous treatises, combining detailed sonic information as given in the Kientzy publication with wider discussions relating to interpretation, reflecting the Caravan and Londeix treatises. With its detailed focus on the sounds produced, notation of those sounds, and audio examples, it is equally useful to composer and performer.

A different approach

The previous collection of treatises all instruct methods of sound production and include discussions of usage to varying degrees. One gives audio examples as a 'target sound'. By necessity there is an assumption that saxophonists will execute the instructions in a similar manner leading to an 'average' resultant sound. Yet as most instrumentalists will attest, giving identical instructions to different saxophonists does not produce identical results. What one performer 'feels' internally is different to another, resulting in a variance of execution. The results might range from the creation of a slightly different timbre to a

complete failure to produce a sound. This trial and error method, whereby the saxophonist follows instruction and attempts to emulate a sound (perhaps given by a teacher or found on YouTube for example), undermines the consistency needed to ensure a 'standard' realisation of a symbol into a sound. This somewhat haphazard approach is due to circumstances: saxophonists are unable to see the internal workings needed to execute a saxophone technique, relying on verbal or text instructions alongside an example sound. A recent treatise by Dr. Mark Watkins addresses this complication.

Dr. Mark Watkins

From the Inside Out

Described as 'An In-Depth Resource for the Development of Saxophone Sound', *From the Inside Out* by Dr. Mark Watkins (2018a) is the next step in the development of saxophone treatises. Watkins examines the 'imagining of physiological process' by the performer and what they 'think' they are doing. His starting point is that the laws of physics do not alter according to whim or personal preference, and that all humans operate in the same manner. This gives a stable basis to accurately measure the processes linked to saxophone techniques and sound production (Watkins & Smith, 2018). Watkins approaches his research from two angles: a scientific point of view, supported by endoscope videos and MRI scans, and also his experience as an accomplished saxophonist. This enables complex scientific data and theories to be delivered through the 'lens' of a performer, resulting in an accessible publication for both composers and performers. Saxophonists no longer have to describe physiological inner workings based on what they perceive is happening, they now have definitive descriptions of what is actually happening.

From the Inside Out mirrors earlier publications in that it gives fingerings, notation examples and exercises related to saxophone techniques. Where it differs is that it includes internal pictures of the correct method of execution. For example if we continue with our multiphonic example, Watkins uses images to describe the production of separate component pitches, and also all pitches in combination to produce the multiphonic (fig 10). Similarly to the use of online audio examples by Weiss and Netti's *The Techniques of Saxophone Playing*, Watkins takes this method of delivery a step further by including videos (Watkins, 2018b). The online materials consist of internal videos taken whilst the performer executes traditional and extended playing techniques. The position of the mouthpiece, tongue and vocal tract is highlighted using a superimposed white line. The videos also include audio performances of the techniques being performed.

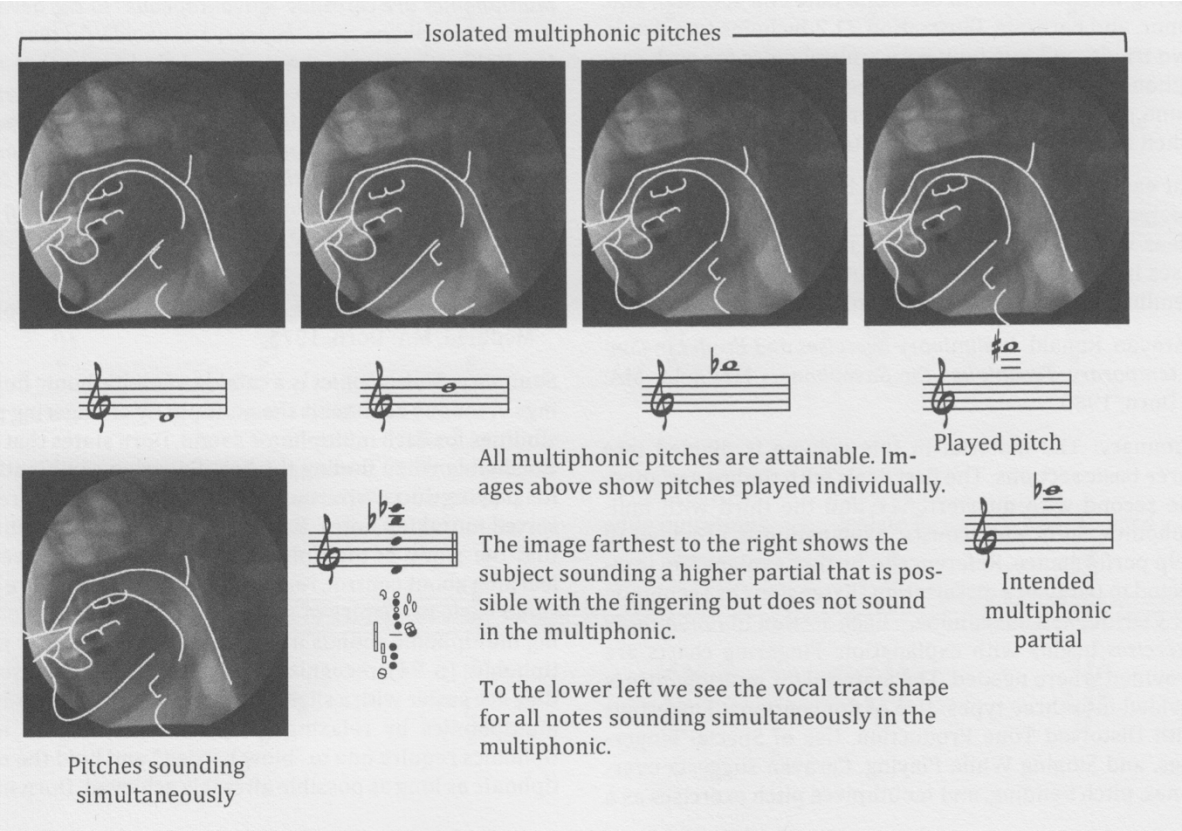


Figure 10: *From the Inside Out* - showing the vocal tract during a multiphonic (Watkins, 2018, p. 287).

From the Inside Out addresses the need to understand the correct internal process to achieve a desired result. Adoption of a standardised method of sound production across the saxophone tradition would help to stabilise the 'sound palette' of the saxophone, enabling composers and performers to be more certain of their 'colour' choices. Yet there is still the matter of how the performer might know they are executing the physical processes correctly, as they have no internal view. Various procedures developed by Watkins as an educator are brought into play to overcome this potential obstacle. For example, he explains a method whereby a thin plastic rod can be placed into the mouth through the side of the embouchure. Letting the plastic rod rest on the tongue gives an indication of the position of the tongue: if the visible end of the rod is high, the tongue is low; if the rod is low, the tongue is high (Watkins, 2018a, p. 88). The scope of information covered by the Watkins treatise is greater than the previous example publications, and goes some way to giving a definitive resource of techniques and associated sounds for both composer and performer.

In summary

It can be seen from the review of publications that there is a progression from a somewhat vague gathering of useful information towards a precise nuanced approach. The Dorn publication takes a more executive approach; the remaining treatises using a conceptual system (Cazden, 1961). Earlier treatises offer a 'joint venture' experimentational approach, with some information limited to either a sole member of the saxophone family or a 'generic' instrument. As the publications evolved over time a more authoritative voice emerged giving definite information. Alongside the development of the treatises as a resource to be consulted came a standardisation of the keywork naming system. The Dorn and Caravan treatises use a bespoke method of naming fingers and keys; publications from the Kientzy work onwards all adhere to the French (Londeix) system of nomenclature (see appendix 1). Only the Londeix and Weiss & Netti publications give extensive musical notation examples of the usage of extended techniques and notational prescription. The Watkins treatise deals with a combination of technical and audio elements rather than a main focus on symbols or notation. For a comprehensive reference source a performer or composer would need to consult a range of publications.

This chapter revealed sources related to executive aspects of saxophone performance. The next chapter provides insight into an equally important consideration: how the choice of equipment influences interpretation.

Chapter 4: Equipment

Although the main focuses of interpretation include notation, playing technique, context and cultural background, there is another piece to the jigsaw. The performer-instrument relationship is perhaps equally as important, as the 'imagined' sound has to be realised through the instrumental 'tool'. The saxophone is designed and engineered with two main objectives: to produce a sound, and to make it as easy as possible for the performer to create and manipulate that sound. To that end there are acoustic and ergonomic demands (Craenen, 2014). The more 'comfortable' the instrument feels, the greater the affinity with the performer, allowing the saxophone to become an extension of the performing body. This chapter explores real-world issues relating to performance. A composition for saxophone trio is used as an example to open the discussion, leading to an investigation of how different equipment might influence performance.

Egyptian Wish

Composer - Katy Abbott

Egyptian Wish (Abbott, 2010) is a composition written for three soprano saxophones (see appendix 5: scores). Although there are no programme notes, the score (and the title) imply an oriental perspective. This implication is alluded to by the scalic material in the score and the use of the glissando extended technique. Throughout the score Abbott uses different line lengths and finishing positions to indicate the parameters of the glissando. Other instruction is given in text, for instance, '*slow gliss*' and '*bend*' (fig. 11).

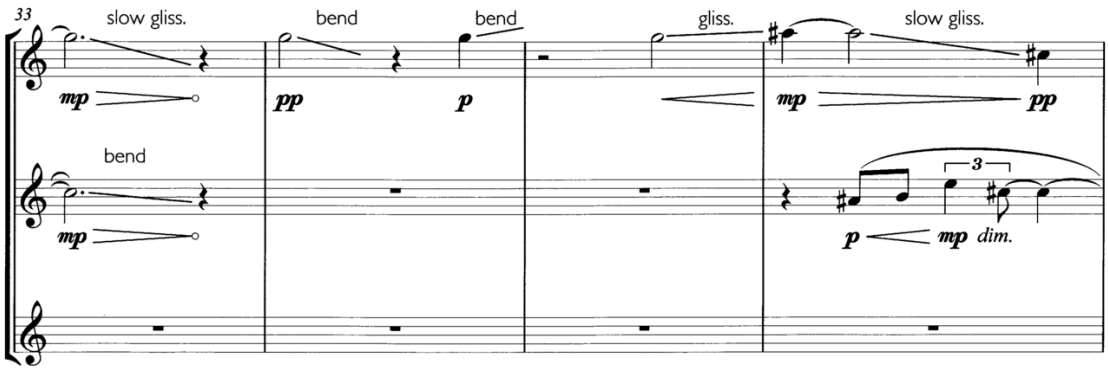


Figure 11: *Egyptian Wish* - showing glissando and text instruction (Abbott, 2010, bars 33-36).

In 2018 I performed *Egyptian Wish* with two members of the Quirk saxophone quartet. The rehearsals and performance highlighted issues relating to the execution of the glissando extended technique, resulting in our realisation deviating from the instructions in the score (*Egyptian Wish* - St. Paul's Hall, University of Huddersfield, March 2018 - AF: 01.m4a). During rehearsals we found that each member of the trio had a different limit related to the length of glissandi. Two members felt comfortable moving a pitch by an octave or more, while a third player found movement of an interval of a third (from more stable pitches) challenging. After consideration we agreed this limitation was mainly the result of equipment choice: some saxophone mouthpieces allowing more flexibility than others. In order to synchronise pitch movement when glissandi occurred together, members of the trio marked their respective parts with 'glissando limits' matching the smallest achievable pitch movement (fig. 12).

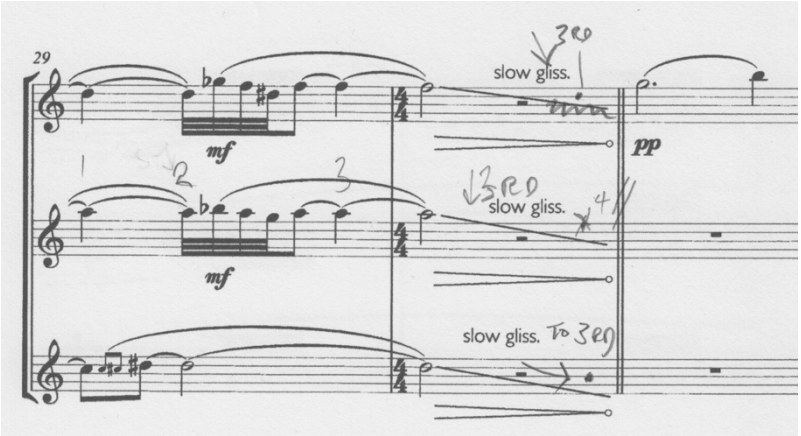


Figure 12: *Egyptian Wish* - showing glissando limit markings (Abbott, 2010, bars 29-31).

The interpretational choices the trio made were born of necessity but in contrast to the intentions of the composer. The careful and deliberate journey from composer to performer somewhat unravelled by the contingencies of performance.

After reflecting on the experience of performing *Egyptian Wish* I sought the advice of Jonas Lange, the Specialist for Woodwind Development & Research at the Yamaha Atelier in Hamburg. I asked his views on the impact a choice of equipment might have on interpretation. As a performer takes time to adapt to change, and there can be disruption to the physiological aspects of sound production, I wanted to ascertain if the process was mostly positive or negative.

Lange gave his views on experimentation and change in regard to saxophone equipment: 'Change isn't good or bad, it's just different'. He went on to explain that making small

changes to an instrument is a catalyst, that instability can enhance some aspects, stability might improve others. 'If you like the feel and the sound produced, then you can work with that' (Lange, 2017). He revealed a set of eight neck screws he had designed, made from materials of different densities, and described how they affected the response of the instrument. He suggested I experiment with the different neck screws.

Neck screws

The saxophone neck screw is tightened after inserting the saxophone crook into the top of the body of the saxophone, creating an airtight seal (fig. 13). According to Lange the screw is positioned at the node of a sound wave, with the result that his neck screw designs (fig. 14) have a major effect on timbre and response.

Figure 13: Default factory neck screw.

Figure 14: Lange designed neck screw.

Lange provided eight neck screws (fig. 15): four in a smaller size (13mm diameter) made from bronze, brass, nickel silver and stainless steel and four in a larger size (15mm diameter) made from identical materials.

Figure 15: Eight saxophone neck screws.

Performance testing the neck screws

When formulating this test I took account of the adaptability of the performer. I had to avoid giving time for the saxophonist to compensate for any differences to their usual equipment, for example 'tweaking' embouchure, air usage, or oral cavity in order to achieve their usual 'imagined' sound. Rather than using a long section of musical material that might give the performer time to adapt, I prepared two shorter examples of notation:

Excerpt 1) The first eight bars of a study from *20 Grandes Études* by Ferdinand Capelle (Capelle, 1943, p. 3) written in the French classical style of the time (fig. 16). The recorded excerpt is preceded by a sustained note (concert A).

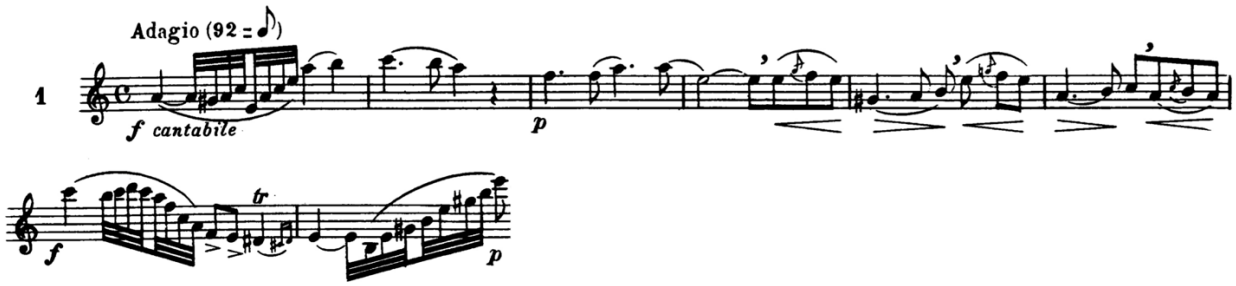


Figure 16: *20 Grandes Études* - Study number 1 bars 1-8 (Capelle, 1943, p. 3).

Excerpt 2) A series of three short phrases from Ryo Noda's *Maï* (Noda, 1978) (fig. 17).

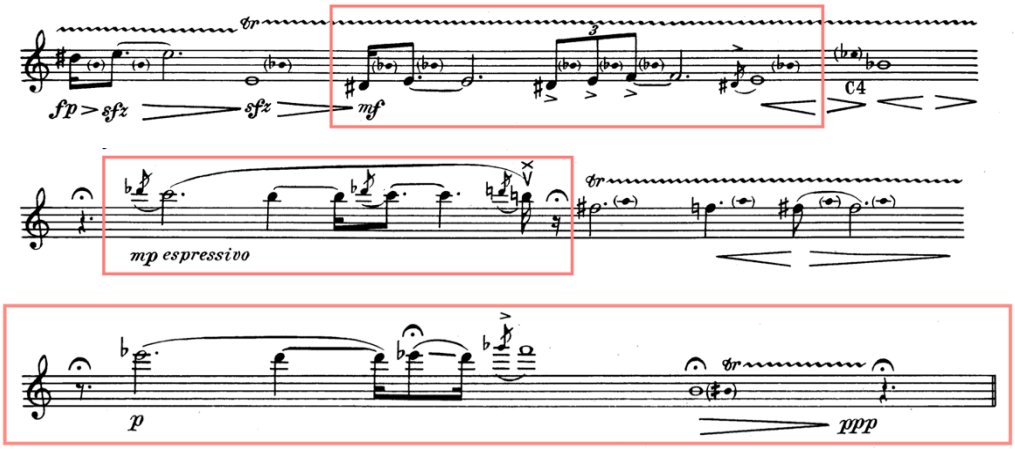


Figure 17: *Maï* - recorded excerpts marked in red (Noda, 1978).

The Capelle study is lyrical in nature, giving the opportunity to hear fluidity and movement around the instrument registers. The Noda excerpts encourage a different timbre to the Capelle. Both performers (myself and renowned classical saxophonist Sarah Markham) used Yamaha Custom 875EX alto saxophones and both instruments had metal left-hand thumb

rests and right-hand thumb hooks (unusual on that instrument model). Vandoren AL5 mouthpieces were used with Vandoren V12 reeds at a strength of 2.5. Physiology and their individual playing methods were the only differences between the two performers. The excerpts were recorded in St. Paul's concert hall at the University of Huddersfield. The microphone was placed at a position equivalent to where a member of the audience might be seated, in the middle/front of the seating area.

The testing process

Aims:

1) To hear how a change in equipment influenced timbre and sound production.
2) To note any response by the performer to the equipment change.

The nine neck screws were tested in the following order:
Yamaha neck screw (the default screw included with every instrument)
Bronze (small)
Brass (small)
Nickel Silver (small)
Stainless Steel (small)
Bronze (large)
Brass (large)
Nickel Silver (large)
Stainless Steel (large)

Recordings were made of the performances (see appendix 2 for the results of the testing): Sarah Markham performed the Capelle study (*20 Grandes Études, Study no.1* - St. Paul's Hall, University of Huddersfield - AF: 02.m4a), I performed the segments from Noda (*Maï* - St. Paul's Hall, University of Huddersfield - AF: 03.m4a). The various neck screws were changed as quickly as possible between playing each excerpt. During the changeover the performer gave thoughts about the neck screw just tested (noted by the listener), giving an immediate impression of the effect of the neck screw. The listener recorded their comments during the performance of each excerpt. The performers were aiming to be consistent in playing method throughout the testing. For example, using a similar air flow, embouchure and use of relevant dynamic levels throughout: the focus being on timbre and instrument response rather than accuracy of interpretation.

Conclusions

Each screw had an unexpectedly marked effect on the response and 'feel' of the saxophone. This was surprising, as the volume of metal added to the instrument by the neck screw is dwarfed by the overall weight and size of the body of the saxophone. The neck screws made from brass and bronze materials had the most positive feedback from both performer and listener. The performer's preferred neck screws reflect the repertoire they most enjoy playing: Markham 'enjoyed' the flamboyance and responsiveness of the screw made in bronze, which aligns with her focus on French classical repertoire. Whereas I preferred the brass neck screw, sacrificing some warmth of timbre for a sound with more energy and focus: at the moment my performance repertoire focuses on contemporary and cross genre works.

Note that the performer's preferred neck screws were chosen mostly on the grounds of how the screws made them 'feel' as a performer rather than the sound produced. The neck screw changed the responsive nature of the instrument, which in turn altered the way in which the player responded to the instrument: a psychological change resulting in a sonic change.

The effect of instrumental equipment on the thoughts and responses of a performer is reflected in the philosophy of Arno Bornkamp, a highly regarded saxophonist and educator. Bornkamp advises that saxophonists: 'sacrifice yourself to the material, give more responsibility to the material'. He talks of how he achieved his imagined 'personalised' sound not through the usual journey of a performer searching for their 'perfect' sound, but by what he described as his 'process'. His process was to eliminate negative elements of his performance practice. Rather than focusing on a desired timbre as a main goal, his aim was to be as 'comfortable' as possible with his equipment. He describes thinking: 'how many things I have to do to make this work [..] I want positive (colours), I don't want to correct the bad ones'. Bornkamp searched for materials that helped him avoid 'emotional instability' during performance, that his 'comfort' as a performer freed his thoughts to be able to 'touch' the audience (Bornkamp, 2018). Not only does the choice of equipment affect timbre, it also changes the response of the instrument. It is the immediacy and flexibility of response of the saxophone that helps facilitate realisation of extended techniques. Bornkamp avoids having to 'correct' his instrument at the same time as trying to 'create'.

Previous chapters have explored the 'shared imaginings' of composer and performer through publications that support that 'sharing' and a discussion of how equipment choice affects the response of the instrument and the sound produced. In the following chapters

we move on to a series of case studies designed to explore to what extent notational prescription and extended techniques help and facilitate the process of 'sharing'.

Chapter 5: An imitation of sounds (category 1)

The musical material used in this chapter is based around 'simple' extra-musical sounds. Extended techniques and prescription is employed to enable the saxophonists to mimic those sounds. In *Clockwork* the performer(s) are informed of the nature of the extra-musical sound, in *Scintilla* no information regarding the narrative is given.

Clockwork

Composer - Kenneth Wilkinson

Clockwork tests the transference of a relatively simple idea, and how notation and prescription might carry that idea. The study explores the communication between composer and performer by limiting variables and focusing on a simple yet almost universally known sound event.

Aims:
1) To test how effectively notation can convey a 'simple' everyday sound.
2) To explore the difference between my 'imagining' and performance, and other saxophonists' realisations.

Clockwork is a development of a saxophone study from my earlier composition *Four Mechanisms.* This earlier collection of works is based on Jean-Marie Londeix's *Exercices Mecaniques* (Londeix, 1961), but with a focus on extended techniques. *Four Mechanisms* was based on the inner workings of old clocks, and the use of repetition, to cement instrumental technique. The simplicity of this premise makes *Clockwork* an ideal case study to explore the shared 'imaginings' of the composer and performer, and to test whether narrowly focused instruction brings proximate imaginings. As Stephen Nachmanovitch remarks: 'if you have all the colours available, you are sometimes almost too free' (Nachmanovitch, 1990, p. 85).

An imagining

Clockwork is a composition for solo saxophone or group of saxophones, based on the sound of the ticking of a clock mechanism. Bearing in mind that my focus was in part on the possibility of 'shared imaginings' between composer and performer, I used a sound that is easily imagined and as universally known as possible. Most people can imagine a ticking clock of some description, if only (in this iDevice age) from the influence of film and

television. Even with a relatively simple premise the variables are many and complex, so a text description is used to narrow down the 'imagining': *Somewhere, distant, the ancient mechanism of an old clock can only just be heard*.

The prose was intended to help 'position' the sound as distant and delicate. It frames some of the timbral choices available to the performer. The position of the 'ticking' is hard to place and can 'only just be heard'. Not only does this suggest a low dynamic level, but the 'ancient mechanism' proposes mechanical rather than electronic inner workings. My expectations were of a dry, mechanical, delicate sound, rather than a more 'musical' sound.

Finding the sound

From the viewpoint of the composer I had my inner 'imagining'. I could 'hear' the old clock, and had a sense of its tone colour: a mechanical sound, more a 'release of tension' than an instrumental articulation. The sound needed to be produced at a very low dynamic level, with well-defined starting and ending points, without sounding aggressive. I 'heard' a softer, distant 'ticking', that exhibited subtle changes in timbre alluding to a 'tick-tock'.

The percussive nature of the concept determined the family of extended techniques; the use of some form of articulation. The more usual forms to produce short events, staccato or staccatissimo, might not be well defined at a very low dynamic level. They need a certain amount of air pressure for successful production, and that might result in more tonal sound than is desirable for a mechanical event. They would be too 'musical'. The use of slap-tongue technique would be more appropriate.

Slap tongue is defined in *The Techniques of Saxophone Playing* as:

> an especially sharp tonguing of a percussive character. The slap is a strong marcato and can be performed as a short staccato (compared to the "Bartók pizzicato" of the strings) but can also be the attack of a longer tone. During the short moment of the attack, the tongue is pressed against the reed and almost immediately "spit away" from the vacuum created. In one concentrated charge, the pent-up air is released into the instrument. Linguistically, the slap corresponds to the explosive consonant sound "t" (Weiss & Netti, 2010, p. 142).

Weiss and Netti's description is clear, and there are numerous other descriptions and instructions available (such as on YouTube (Mechmet, 2011)), but it is not a technique all saxophonists find easy. This might be because any instructions followed, or relayed by tuition, are describing procedures within the oral cavity of another person. This is an

obstacle often encountered when discussing subjects such as the position of the tongue, embouchure, size of oral cavity or throat position. One person is describing the 'feel' of a mechanical process to another, without the ability for either party to properly see the process (as discussed in chapter three). This convoluted method leads to a kind of 'sub-imagining', as the performer cannot rely on a tried and tested method developed over time: 'if you press that finger down and blow, this will happen'. Using their sense of the desired effect, the saxophonist has to produce the target sound using their personal technique, derived from a description rather than a 'showing'. This mirrors the 'play-evaluate-refine' process of instrumental practice: the execution of the extended technique is refined by the performer to fit their circumstances in the search for the desired sound.

There are variations of the slap-tongue articulation: the default slap-tongue technique contains a pitch element, obtained by using a mix of air and the slap-tongue articulation. Secco slap-tongue dispenses with the air flow, only using the articulation technique. Slap-tongue can be produced with the mouth closed, or the mouth open to amplify the created sound.

I determined the required saxophone fingering: I was not in pursuit of a particular pitch, as different instruments in the saxophone family would produce different concert pitches using the same fingering. Also, the use of the slap-tongue technique affects the pitch usually associated with the particular fingering (Weiss & Netti, 2010, p. 144). The clock 'ticking' was a dry mechanical sound, with no ongoing 'ring' to each occurrence. As the body of the saxophone helps to create resonance, I notated a fingering which uses less of the instrument tube: middle C#. This also had the benefit of imparting less resistance to the player than other fingerings might, as the note is very 'free-blowing', giving an advantage when playing at a very low dynamic level.

I refined the usual slap-tongue techniques, at first experimenting with pitched slap-tongue, working towards a shorter event but lacking the impression of a mechanical device (*Pitched slap-tongue* - AF: 04.m4a). Unsatisfied with the tonal element and the soft initial attack of the events, I moved closer to my imagined sound using secco slap-tongue (*Secco slap-tongue* - AF: 05.m4a). I could achieve a very low dynamic (as heard towards the end of the audio example) but the attack of the sound events was still ill-defined, I wanted something more 'metallic'. Using more of the front area of the tongue, and relying less on the vacuum usually employed in slap-tongue, I could create more of a 'click' sound than a 'slap'. This attack was better defined, sounded mechanical, and could be achieved at an extremely low dynamic (*Tongue-clicks* - AF: 06.m4a).

To summarise: I removed as much of the tonal and pitch elements as possible from the slap-tongue technique, and introduced a hard attack with short events at an extremely low dynamic. This closely resembled my 'imagining' of the sound of the 'old clock'. Introducing a 'vent' key (C3), the opening of which changes the resonance of the saxophone 'tube', resulted in a slight change in timbre. The alternate (on/off) depression of this key results in a 'tick-tock' effect (fig. 18).

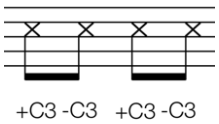


Figure 18: Notation showing the use of the C3 (vent) key.

Notating imaginings

I aimed to make the score as concise as possible to mirror the deceptively simple premise (fig. 19). There is a repeated quaver rhythm, with a quaver pulse given at sixty beats per minute to signify seconds. The note heads of the quavers are crosses rather than triangles as recommended by Weiss (Weiss & Netti, 2010, p. 145), or bisected circles mentioned by Risatti (Risatti, 1975, p. 151). This is to indicate a more percussive sound and not influence the style of articulation. I needed the performer to follow the text instructions relating to the extended technique: a similar reasoning to naming the extended technique 'tongue-click', representing the required sound. There are no bar lines and the absence of a final bar line alludes to timelessness; a constant never-ending ticking. Through my experience with previous compositions, for instance *Fragile Dyads*, I have found that saxophonists presented with no indication of a finish point deliver a natural and satisfying ending. By that I mean that the ending is organic in nature, and the performers rely on aural and visual clues to bring a work to a close, rather than a dictated ending. In effect the performers end when they have nothing more to say. The text indications I have given support my imagined sound: the direction 'Light delicate ticking' resulted in sounds that were soft and very delicate. The most important signifiers of intent are the title and the description of the composition. These two pieces of information relay at least some part of my 'imagining', with the notation and extended technique in support.

The wording of the description of the extended technique was challenging. I had to supply enough information to facilitate the technique, without assuming to answer any questions relating to physiological aspects or player experience. For example, I do not advise on tongue position as that encourages a debate such as 'which part of the tongue is the front, top or underside?'. Instead I opted to rely on the saxophonists 'imaginings'. If they could

'hear' their version of my description then they would refine the extended technique to match their 'imagining'.

The saxophonists invited to take part in this study were at an advanced stage in their musical development, although some performers had more experience than others. Performers included graduate performance students (lesser experience) and professional performers (extensive experience). The performers were from different countries (and so different cultural backgrounds), including Hong Kong, Greece, Macedonia and Spain.
The performers were given a score and no other instruction. I encouraged the performers to create a 'live' recording, rather than a studio (or edited) recording, where realisations might be enhanced to achieve a desired outcome. I wanted to hear the raw result of a solo saxophonist or group performing the score. This resulted in background noise in some recordings.

Figure 19: *Clockwork* - score

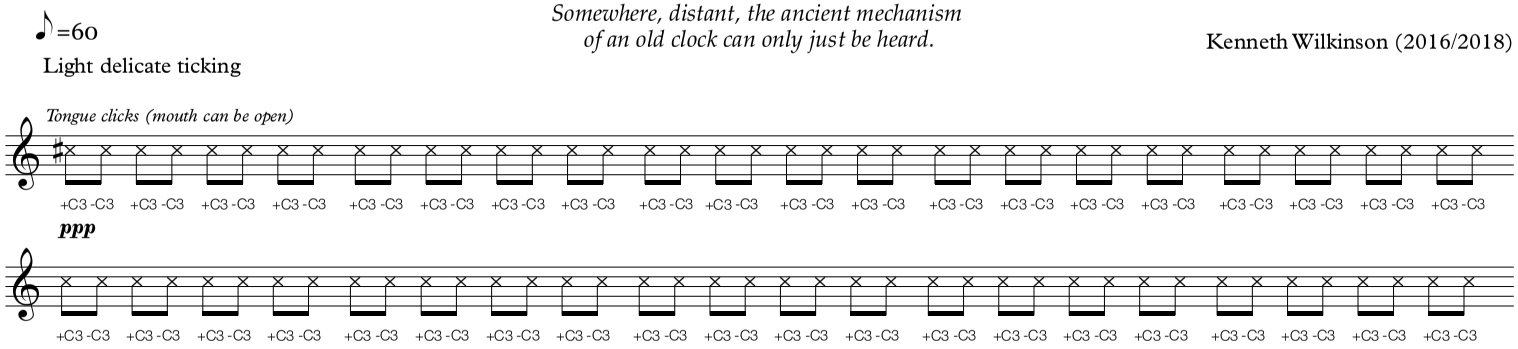
Use tongue-clicks to create a light delicate ticking sound, similar to secco (no air) slap-tongue.
Put the tongue flat against the underside of the reed, press the reed to the mouthpiece,
then quickly release the tongue away from reed.
Try to bring away the rear area of the tongue first, the mouth can remain open if easier.
The resulting sound is soft and very delicate.

Use the key C3 (RH high E key) to
change the timbre of the tongue click,
+C3 (on) -C3 (off):

Clockwork

Somewhere, distant, the ancient mechanism
of an old clock can only just be heard.

Kenneth Wilkinson (2016/2018)



Performance

Clockwork can be performed as a solo or by a group of saxophonists.
In a group performance the saxophonists should start at different times, not syncronising with other players, but maintaining their own exact rhythm and tempo.
Try not to succumb to being in unison with other players in the group; maintain your exact rhythm and tempo.
The result will be a complex clockwork mechanism; more players equaling greater complexity.

This score can be downloaded at www.kennethwilkinson.eu

Performances

The following recordings are a sample of the performances I received. I recorded *Clockwork* as a solo piece to illustrate my 'imagining' (*Clockwork performed by composer* - AF: 07.m4a).

Solo tenor saxophone (*Clockwork sample* 1 - AF: 08.m4a)
This performer found the description of the extended technique clear, and could produce the desired sound with little effort.

Solo tenor saxophone (*Clockwork sample* 2 - AF: 09.m4a)
This performer understood the instructions, but had difficulty achieving the dry 'click' sound. This was mitigated by the performer's 'imagining'. The produced sound has a 'wetter' quality, but the performer related that this sounded similar to a clock ticking.

Solo baritone saxophone (*Clockwork sample* 3 - AF: 10.m4a)
This performer also found the technique instructions clear and could produce the 'click' with little effort. The size of the instrument introduced the sound of key movement at times, which is not unattractive and reinforces the idea of a mechanism.

Solo soprano saxophone (*Clockwork sample* 4 - AF: 11.m4a)
Again, the performer found the instructions clear and could produce the required sound. The technique seemed more difficult on the smaller instrument until the saxophonist acclimatised to the process.

Saxophone trio (*Clockwork sample* 5 - AF: 12.m4a)
This was a group consisting of sopranino, soprano and alto saxophones. The performers were saxophonists at the Music Conservatory of Larrisa in Greece. These saxophonists mostly disregarded the narrative text description.

Saxophone quartet (*Clockwork sample* 6 - AF: 13.m4a)
An ensemble consisting of soprano, alto, tenor and baritone saxophones. There was more focus on achieving a 'correct' sound to match the narrative, rather than execution of the extended technique.

Overview of the performances of *Clockwork*

All the saxophonists in this case study were able to create an 'imagining' and performance closely related to the text description. The instructions relating to the extended technique presented few problems and all performers were able to create a 'tongue-click' to some extent. Reviewing the recordings, most were remarkably close to my 'imagining'.

There were unexpected issues raised by this study:
Clockwork was used as a basis for a performance workshop at the Conservatory of Music in Greece. A translator was present to overcome any language difficulties. The students understood the instructions relating to the extended technique when relayed by the translator, but had difficulties understanding the premise of the piece. The translator could not deliver a nuanced version of the description of the 'old clock'. The students overcame this issue by deciding to ignore the premise of the work and proceed using only the notation, and being aware that the piece alluded to 'something about a clock'. Three members of the larger workshop group formed a trio and recorded *Clockwork* without regard to my text description (*Clockwork sample* 5 - AF: 12.m4a). Their performance produced results that were the nearest to my intentions and expectations.

The text giving the premise of the piece seemed in some cases to hinder the realisation. The more experienced performers (for example the saxophone quartet) were intensely focused on giving the 'correct' imagined sound. There were detailed discussions relating to timbre and dynamic level. The saxophonists raised issues relating to the physical production of the sound and the technique, the 'hardness' of the 'ticking' (whether the sound produced was too accented), and how the clock should sound. One member of the quartet enquired about the amount of air in the oral cavity, while another complained about getting an air bubble behind the lower lip when performing the technique. There was a marked difference in approach between seasoned performers attempting to recreate the extra-musical sound as described, and less experienced players that just 'followed the instructions' as prescribed in the score.

The notation alone (of an admittedly relatively simple concept) communicated the premise of the work efficiently. None of the performers disclosed any particular problems, and I was satisfied that the realisations were close to my concept. Performers following the instructions precisely produced the more successful realisations. This group of performers used the descriptive text as an affirmation that they were executing the extended technique correctly, and matching their 'imaginings'; 'Oh yes, it sounds like old clockwork'. Other performers used the descriptive premise as a starting point, a target sound to be achieved:

this resulted in a path toward a more complex realisation. In some instances this led to a deviation from the scored instructions, and experimentation with other (albeit closely related) extended techniques to produce the sound they desired. The prose had in some ways become an obstacle rather than a facilitator, especially with more experienced performers. Rather than limiting choices to achieve clarity the descriptive text encouraged further complexity.

Scintilla

Composer - Kenneth Wilkinson

Scintilla ('A tiny trace or spark of a specified quality or feeling.' (Angus, 2010)) is a composition for saxophone quartet. In contrast to the previous case study *Clockwork*, in which the premise was an imagined sound, this composition is based around real-world sounds. *Scintilla's* structure and musical material is informed by the implied rhythms heard within rainfall. The score (and title) does not offer textual description of the premise of the piece. The 'rain' section of the composition relies on extended techniques that allow little variation of timbre due to their more mechanical nature. This results in consistency between performances, and less reliance on an interpretative 'layer' from the performer.

Aim:
To test how effectively a score conveys a premise without support from a given narrative.

The sound of rain

I recorded the sound (texture) of rainfall. There were two elements in the audio recording that caught my attention: the background texture which was more dense and ill-defined, and foreground events that were more specific, louder and had more 'tone'. I transcribed the stronger foreground events, and used the time between these events to create an overall symmetrical structure and prominent melodic points.

Timbral coherence was an important consideration in choosing how to portray rainfall. I needed to create a background texture, with stronger foreground elements, but both sounds needed to have an overlap of timbral qualities. Too much of a contrast between them and the overall rainfall texture effect would fail. I decided to use an extended technique that can be percussive and delicate: key percussion. Weiss describes 'key percussion':

> The keys of the saxophones are relatively large and the saxophone tube is a good resonating body so that already during normal saxophone playing key sounds are often (too) clearly audible. These sounds can be reinforced and used as percussive accents. [...] The effect is a kind of pizzicato with a dynamic range of pp and p (Weiss & Netti, 2010, p. 176).

In order to create a sonic background and foreground I used two derivatives of key percussion and made use of the differences in the resonance of the saxophone body. The lighter and more delicate sounding 'key-clicks' were used in the background rainfall texture,

producing little pitched sound (*key-clicks* - AF: 14.mp3). Stronger, more resonant 'key-pops' in the lower register were used for the foreground events. Key-pops encompass more tone because of the resonance of the saxophone body (they use more of the 'tube'), and because they were arranged as single events rather than in fast runs they can be played with a stronger finger action. This helps create the 'pop' sound (*key-pops* - AF: 15.mp3).

Notation

On the score (example opening section; fig. 20) the key-clicks are denoted by the use of cross shaped note heads. The rhythm is complex, but in order to give the impression of a free-flowing organic texture, rather than metronomic precision, I gave the direction: 'aim for shape of phrase rather than rhythmic precision'. The stronger key-pops are denoted using diamond shaped note heads, with the saxophone fingering given on the first occurrence. I found the transcription of a real-world texture (and how I 'imagined' the reproduction on saxophones) to notation a challenging process. There is a limit to the amount of sound that can be produced from the action of a key and pad hitting a tone hole, however I used this limitation to my advantage to narrow variables. During the production of early sketches of *Scintilla* I recorded an example of my 'imagining'. I played and recorded all members of the saxophone quartet (soprano, alto, tenor and baritone) to create a texture as close as possible to my 'inner' hearing (*Scintilla - example texture performed by composer* - AF: 16.mp3).

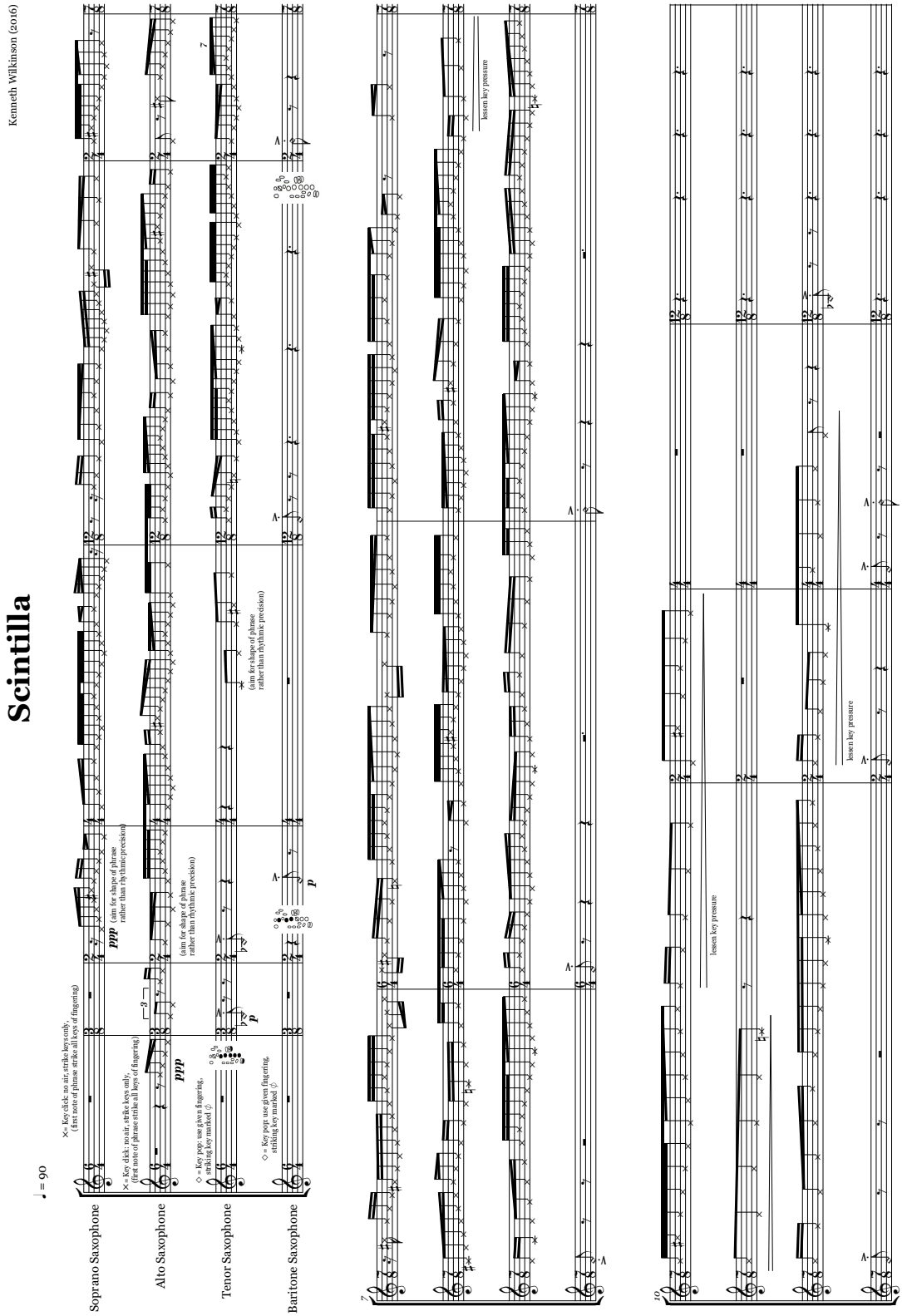


Figure 20: *Scintilla* - opening section, example of rainfall texture.

Rehearsal and recordings

The following recordings are excerpts from rehearsals of the opening section of *Scintilla* with the Quirk saxophone quartet.

Rehearsal 1 (*Scintilla rehearsal 1* - AF: 17.mp3)

The rhythmic gestures became the main focus in initial rehearsals, possibly because of the requirement of less metronomic playing, and the lack of the more usual 'feedback' from passages made up of 'blown' notes. The resistance afforded when producing a note on the saxophone gives 'something to work against', with the resulting physical process helping the performer 'place' the note. In gestures containing key percussion that physicality is much less evident. In this recording the soprano saxophone player counts the beats while the remaining quartet members play.

Rehearsal 2 (*Scintilla rehearsal 2* - AF: 18.mp3)

In this recording of the opening section it can be heard that the realisation of the 'rain texture' is moving closer to the sound I 'imagined' (and my recorded sketch).

Reflections

Although my recording of the *Scintilla* opening texture was based on an earlier sketch which had a more dense texture, the variance in timbre to the Quirk rehearsal recordings was surprising. The members of the quartet play Yamaha saxophones (as do I), with similar mouthpieces, which aided consistency. Some of the differences in timbre might be as a result of the recordings taking place in different locations with different recording equipment. In the rehearsal recordings there seemed slightly less 'energy' in the overall sound. The saxophonists in the Quirk quartet were using identical fingerings for the key-pops to my recording, yet produced a 'flatter', less resonant sound. This was particularly evident in the baritone 'pops'. Also, the key-clicks seemed less percussive.

The absence of a given narrative for the performers does not appear to be an obstacle, as a 'rainfall' texture similar to my recording is produced, but not with quite the timbre I had 'imagined'. On reflection, although I executed the extended techniques in a similar manner to the Quirk saxophonists, there was a difference. This difference I attribute to my inner 'imagining': I had an inner sound to aim for that the other members of the Quirk quartet were not a party to. The range of volume available in the production of key-percussion sounds is narrow. Perhaps because I was aware of the timbre I required, I executed my key-percussion techniques differently: more 'explosively', with a harder attack. In effect, I was mirroring aspects of the *Clockwork* case study by using my 'inner narrative' to refine and affirm the timbre I wanted.

Chapter 6: Development of musical material (category 2)

The focus of this chapter is to explore the response of performers to notation that is based on the development of musical material. In this scenario, prescription or extended techniques are used to describe elements of the composer's musical 'colour palette' to the performer. Unlike the works explored in chapter 5 (category 1), the notation is not supporting an initial extra-musical premise. There are two compositions used in this investigation: *Study* (2018), written for solo saxophone; and *Smudge* (Jolly, 2018a) composed for the Quirk saxophone quartet.

Study for saxophone

Composer - Kenneth Wilkinson

Study is a composition written for this research project that fulfils two aims: 1) To be challenging yet playable: I did not want to deter engagement by the performer because of extreme complexity. There needed to be 'room' for the saxophonist to be able to experiment with interpretation, rather than being at the limit of possibilities, with any achievable interpretation being a success. 2) The extended techniques enhance the lyrical nature of the piece: they are used to add 'colours' to the musical line and support the text directions relating to tone colour.

Aims:
1) To investigate if the composer 'imaginings' were successfully conveyed to the performer.
2) To explore differences in the interpretation of the notation.

The notation

The notational symbols used are regularly employed in saxophone repertoire and so the score is provided without programme notes (fig. 26). Bar lines are not used except to indicate the end of the piece. This gives an amount of freedom in relation to the 'flow' of the piece, although the work is intentionally named '*Study*' with the implications of accuracy that intimates. Rests with pauses are used to give an overall structure, mirroring a compositional device used by the composer Ryo Noda in his series of works: *Improvisations I*, *II* and *III* (Noda, 1974, 1975). Alongside the prescribed extended techniques there are text directions that relate to timbre and the approach taken to produce the resulting sound.

For example, the direction '*whispering*' (fig. 21) implies an indistinct, less focused tone, which is not clearly heard, perhaps more 'air' than pitch.

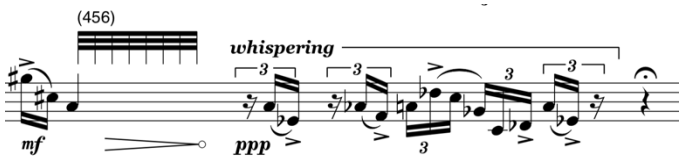


Figure 21: *Study* - first '*whispering*' triplet gesture.

I intend '*afterthought*' to direct a 'throw-away' gesture, a thought tacked on to a larger idea (fig. 22).

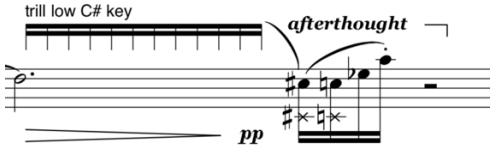


Figure 22: *Study* - showing the direction '*afterthought*'.

Extended techniques

There are three extended techniques used in *Study*:

Timbral trills: indicated with fingering instructions (fig. 23). The rhythmic notation is intended to be an indication of speed rather than an exact number of fluctuations. Gould (2011) recommends giving an indication of a timbral trill such as '*key trill*' or '*alternative fingering*', then writing in the trilling note and adding the usual '*tr*' indication (Gould, 2011, p. 255). I decided against this method as it does not allow for an indication of speed, and also might result in the performer using a different trill fingering to the one intended. The Londeix nomenclature (see appendix 1) is used to describe the keys to trill (in brackets).

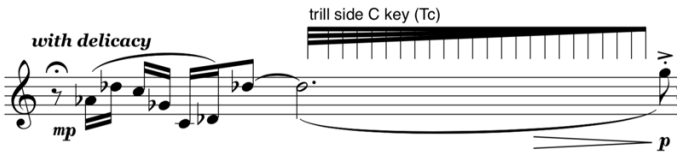


Figure 23: *Study* - example of notated timbral trill.

Harmonics: indicated by the use of a cross-headed note showing the fingering to be used, above which is the sounded note (fig. 24). Again, this notational practice is common in saxophone repertoire, which deviates from the orchestral norm: the use of a small circle above the note and a diamond shaped note head.

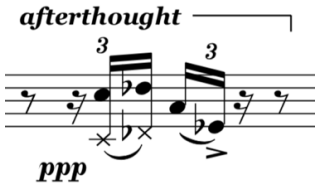


Figure 24: *Study* - example of notated harmonic gesture.

Multiphonics: the sounding notes of the multiphonic are given, shown by the use of diamond shaped note heads (fig. 25). This method is generally accepted in current saxophone repertoire and recommended by Claude Delangle (2017), the professor of saxophone at the *Conservatoire National Supérieur de Musique et de Danse de Paris*, as a method of showing exactly what the composer intends. The symbol used for the lower note of the multiphonic, a 'quarter-tone plus an eighth-tone higher' (Weiss & Netti, 2010, p. 13) is a derivative (due to notational software the down arrow is on the right of the symbol rather than the left) of the microtone accidental symbols recommended by Weiss and Netti. Note that saxophone fingerings for multiphonics change dependent upon the member of the saxophone family used. The composition *Study* is intended to be performed by most members of the saxophone family, and so the multiphonic requested (with the fingering given) is one of the few that uses the same fingering across the saxophone family.

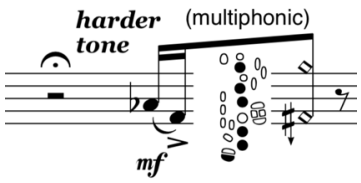


Figure 25: *Study* - example of notated multiphonic.

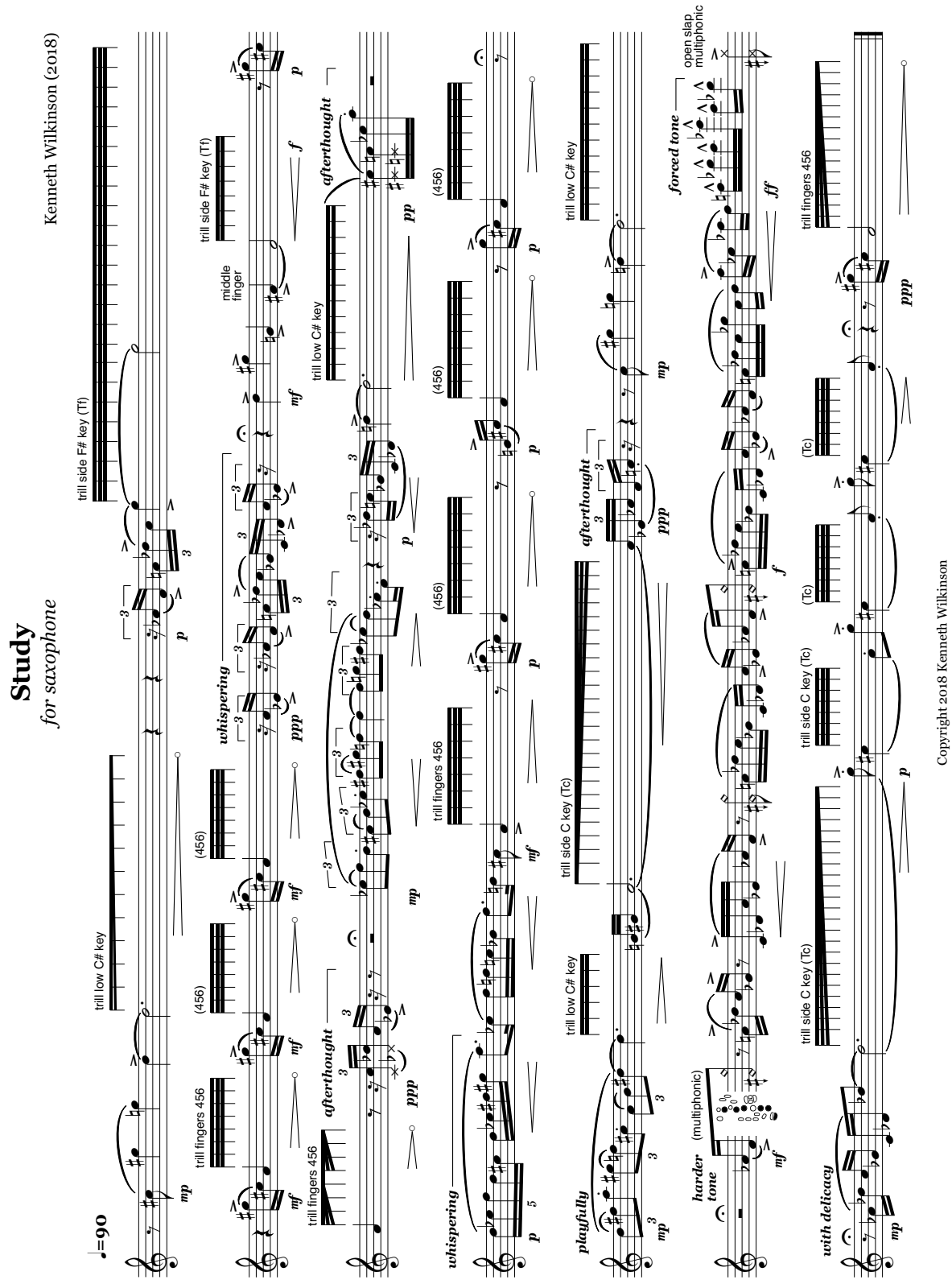


Figure 26: *Study* (2018) - score.

Recordings of performances

In order to listen to a 'wide spread' of interpretations, participants from different countries were invited to take part. To facilitate ease of recording it was recommended that a portable device such as a mobile phone might be used to record performances. I depended on 'inner hearing' rather than experimentation on my instrument to compose *Study*. This placed me in the same position as the participants, precluding any personal bias of well-tested or familiar musical gestures. I recorded *Study* on the alto saxophone (*Study - performance by composer* - AF: 19.m4a).

The process of recording my own work revealed a number of interesting issues. For example, there was a mismatch between my 'imagining' of the sound relating to the direction '*whispering'* and the sound I produced. To clarify, this was not the case of a composer 'hearing' the sound of 'a saxophone' executing a technique or direction, this was a scenario whereby the composer has a more personal 'imagining'. I could 'hear' myself in performance. In my 'imagining' of *Study* I 'heard' the direction '*whispering*' as a breathy sound, almost without tone or pitch, hinting at the musical phrase. As an experienced jazz performer this was not an unknown sound or technique, yet I was unable to create any sense of 'breath' in the timbre. On reflection this may have been due to my performance repertoire demands at the time, which required a precise and pure sound at the expense of some flexibility, affecting the choice of my mouthpiece and reed set-up. Yet it was disturbing in a composer-performer dynamic to 'hear' myself perform material I was unable to realise in the real world.

Participant recordings

See appendix 3 for details of participant recordings and results.

All the notational symbols employed in *Study* are widely used throughout classical saxophone repertoire, and can be referenced in publications such as Risatti's (1975) *New Music Vocabulary*. Yet I observed some confusion in the recorded interpretations. Some participants interpreted all symbols according to convention, others misinterpreted or did not execute directions. Similarly with text directions: several participants altered some aspect of performance to reflect the instruction, others made no change. Note that *Study* (with the connotations of exactness the title implies) gives a tempo indication at the beginning and does not direct any changes of tempo. Many participants deviated from the tempo marking by a large extent and rallentandos were employed in some instances. This behaviour perhaps hints at the relative status of different aspects of the notation, with some performers seeming to regard pitch, for instance, as more important than tempo. In this

case study composer 'imaginings' were not successfully conveyed to all performers. One saxophonist (participant 7) performed *Study* as intended, other performers realised the intended musical 'colours' but made major changes to the score.

This case study raised an interesting issue relating to performer agency. All but one participant made considerable changes to tempo and the flow of musical phrases. This approach to interpretation is explained in Barthold Kuijken's (2013) discussion of performer attitude: *The notation is not the music*. Kuijken uses a performer 'compass' to illustrate the inclinations of a performer (fig. 27).

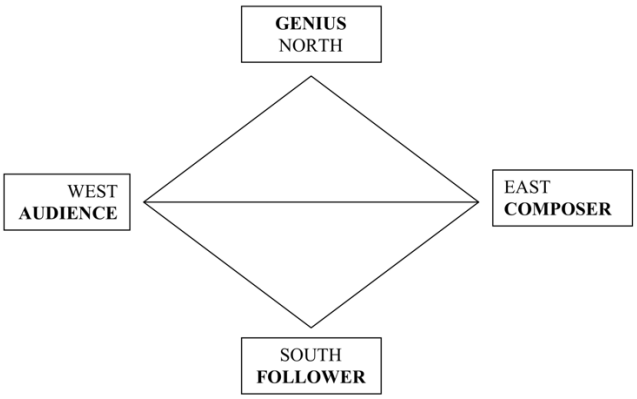


Figure 27: Kuijken's performer compass - *The notation is not the music* (Kuijken, 2013, p. 102).

Accompanying the 'compass' is Kuijken's description of attitudes:

> North, above the line, I would place those performers who somehow believe themselves to be superior to the composer and/or the audience.
>
> South, below the line, I place performers who see themselves as subservient to the composer and/or audience.
>
> West, I place the performer who pays most attention to the audience.
>
> East, I place the performer who pays more attention to the composer (Kuijken, 2013, p. 102).

Kuijken illustrates how musicians span a number of 'compass points', their 'attitude' not only influencing their interaction with notation, but also the depth of cultural research behind interpretation. Although Kuijken's discussion is focused on interpretation of Early Music, his arguments are an insight into current saxophone practice: Claude Delangle, a renowned exponent of contemporary music, gave a presentation discussing saxophone composition, prescription and extended techniques. After an in depth discussion of the best

use of notation, Delangle remarked: '...after the composer has left the room, the music is mine, I will do what I want with it' (Delangle, 2017).

Smudge

Composer - Chris Jolly

The next case study uses a composition specifically written for an ensemble in order to explore the composer-performer dynamic. For this I enlisted the help of the Quirk saxophone quartet, a professional ensemble that performs internationally with a repertoire spanning a wide range of genres. As a classical ensemble it is somewhat unusual in that not only are the four saxophonists respected classical performers, two of the members are also composers and jazz saxophonists. The members of the Quirk saxophone quartet are: Sarah Markham (soprano saxophone), Kenneth Wilkinson (alto saxophone), Chris Jolly (tenor saxophone) and Sarah Hind (baritone saxophone).

Smudge (2018) was composed by Chris Jolly. His compositions often feature extended techniques and are performed regularly worldwide, published by Saxtet Publications (Saxtet, 2018) and Clarinet & Saxophone Classics (Samek, 2018).

Aim:
To explore the composer-performer dynamic, and gain insights into the performer's approach to interpretation.

Jolly gave a more detailed insight into the composition: *Smudge* was inspired by the music produced by the band 'Too Many Zooz' (Zooz, 2018), in particular the rhythmic elements of their track *Limbo* (Too Many Zooz, 2014, Track 3) (*Limbo - Too Many Zooz* - AF: 30.mp3). *Smudge* is based solely on the development of musical material, there is no underlying narrative, and the title of the work has no significance. The structure consists of four bar 'chunks' of music, the transitioning between 'chunks' containing the majority of the musical development. He employs two contrasting extended techniques, one percussive, the other containing harmonic elements. The soprano saxophone player in the Quirk quartet requested a lyrical melody, and so the slower middle section was added (Quirk, 2018).

The Quirk saxophone quartet gave a performance of *Smudge* in St Paul's Hall, Huddersfield, on the 8th March 2018 (*Smudge - Performance by the Quirk saxophone quartet* - AF: 31.m4a).

About the score

The preface to the score (see appendix 5: scores) gives an overview of the work but no specifics as to instrumental performance:

> Smudge was written for Quirk Saxophone Quartet and their performance at the World Saxophone Congress in Zagreb, Croatia. As in much of my work, the relentless groove and hooks are present almost all the way through this work, giving way briefly to a calmer middle section that is dominated by a soprano melody. The use of extended techniques throughout should always be a positive addition to the textures created. If there is a similar sound or a sound that is better suited to a group's interpretation they should always be used over ones that are marked. (Jolly, 2018a, preface).

The advice that: 'The use of extended techniques throughout should always be a positive addition to the textures created' (Jolly, 2018a, preface) might be difficult for a performer to interpret. I requested clarification from the composer:

> With any use of extended techniques in my music I want it to be accessible for as many players as possible. I don't want to make saxophonists feel they can't play my music just because they can't achieve the exact extended technique I ask for. I hope I make it clear that any alternatives can be used instead of the written technique but the 'positive addition' means that it shouldn't be a sound that is totally alien to the sound world that has been created with the other, more traditional notation. For example if the exact multiphonic cannot be achieved, an alternative would be totally fine with me as long as it isn't overpowering the music (unless that is its purpose) or the multiphonic is so unstable that it is not giving the effect of a multiphonic (Jolly, 2018b).

In terms of notation the score is relatively traditional in nature. There is an anomaly in the notation in that extended techniques (apart from the multiphonic component notes) are shown using a cross-shaped note head (fig. 28), rather than the accepted method of using different symbols to demark separate techniques. Instead a text description above the staff is used to clarify which extended technique is required.

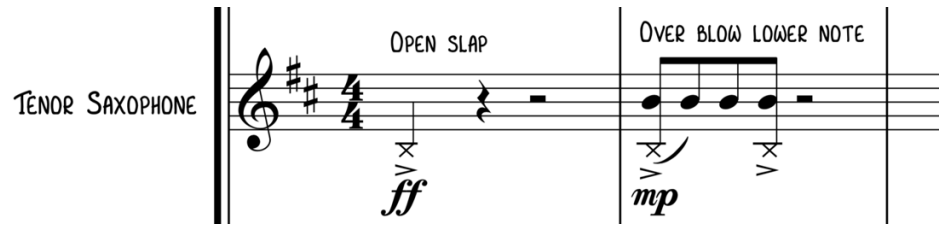


Figure 28: *Smudge* - slap-tongue and harmonic techniques denoted with same notational symbol (Jolly, 2018a, bars 1-2)

The score gives numerals above multiphonics (fig. 29) to help the performer identify in a treatise the instrumental fingering to facilitate the multiphonic. The composer has not specified to which publication the numerals refer, presumably assuming performers will be using a similar publication. The lack of specification of the treatise might result in the use of a different reference source, resulting in the production of a different sound to the one intended.

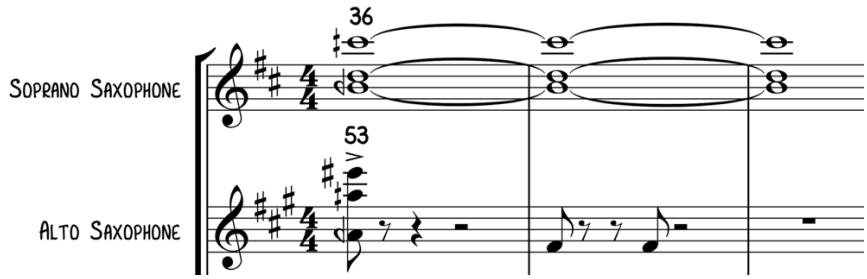


Figure 29: *Smudge* - showing numerals above multiphonics (Jolly, 2018a, bar 1).

In actuality, the numerals in the score refer to the publication: *Les sons multiples aux saxophones* (Kientzy, 1982). There is an error throughout the *Smudge* score, the middle tone of the multiphonic shown in the alto saxophone part (numeral 53) should be an A natural (fig. 29). Questions were asked by the performers in relation to the production of intended sounds: although markings instructing dynamic range are present in the score, there are no descriptions of the 'colour' of the sound. This resulted in requests for more description from the composer. The lack of detailed instruction in the score might present a challenge for ensembles without access to the composer, although the offer outlined in the preface could be taken.

Insights from the composer and performers

On the 8th June 2018 I interviewed members of the Quirk saxophone quartet with a view to gaining insights into their approach to performing the composition *Smudge* (a full transcription of the interviews can be seen in appendix 4). At the time of this interview the composition had been rehearsed over a period of months and performed twice. This was not a group discussion, the format was interviewer (myself) and one participant at a time.

Observations from the interviews

(Quotations are taken from the interview transcript in appendix 4.)

Over the last few years Jolly (the composer) has asserted that there is 'nothing' behind his music. In fact he is often bemused, as reflected in the interview, when listeners to his compositions comment that they can hear what he is trying to communicate. As Sarah Hind relates: 'That's what he always tells me, "it's not about anything, I just wrote it"'.

Statements such as this alongside his self-deprecating manner: 'I don't think I'm that complex [...] anything I do think of that sounds too complicated, I forget about it, because it sounds too complicated' puts forward a certain impression. I suspect this demeanour is a stance to provide some emotional distance between him and the performer. He is reluctant to believe 'music' can convey emotional or extra-musical ideas, questioning how such ideas can be mutual when 'Everyone has a different story, and a different image in heads and minds'.

Jolly remains true to this pattern in the case of *Smudge* and states that the work does not embody a narrative, a claim that he affirms a number of times throughout the interview: 'No, there's no narrative or story, it's more of a rhythmic exercise'. It would be difficult to dispute this repeated assertion from the composer himself, and it does tie in with his preferred compositional method. Jolly is an avid consumer of all genres of music, constantly making 'playlists' (over one thousand to date) from which he draws musical material. He is fascinated by rhythm, especially overlaying rhythms and patterns that subtly change over time.

If we accept that there might not be a narrative, we can argue that there is definitely an 'imagining'. Jolly talks about hearing what he writes and is concerned about realising that 'inner hearing' accurately. To that end he uses his advanced knowledge of the instrument to recreate as closely as possible his 'inner sound'. He uses the Kientzy treatise to source multiphonics and ensure that the component pitches fit his harmonic structure. His primary instrument (tenor saxophone) is used initially to test multiphonics and extended techniques, which once selected, are then experimented with on the actual member of the saxophone family to be employed. There is such concern with producing the correct sounds (matching his 'imaginings') that he considers allowing performers access to his compositional influences, a bespoke 'playlist'. This is a composer on one side of the 'gap' taking great care to accurately match his 'inner hearing' to the physical manifestation of sound. Interestingly, Jolly introduces a 'third party'. He places himself in the position of the 'listener' in order to drive the compositional process, and to some extent to ascertain when the composition is complete; his inner 'listener' being satisfied.

Despite the composer's protestations that music cannot convey emotion, he does concur that music has an emotional effect. He makes use of this effect in the slow middle section of *Smudge*, writing a lyrical melody for soprano saxophone. His knowledge of the performance qualities of the performer enables him to instruct '*espress.*', secure in the knowledge that 'unleashing' Sarah Markham will add the desired layer of emotive interpretation.

The score of *Smudge* is relatively simple in nature, and although the composer offers some leeway in regard to extended techniques, he expects more traditional aspects of notation to be executed exactly. I suspect the lesser use of notational prescription to define the sound-world is a result of having the composer present in the ensemble, as the members had direct access to his thoughts regarding sounds and 'colours'. There is almost an element of 'self-sabotage' offered with the score. In the preface the composer states:

> If there is a similar sound or a sound that is better suited to a group's interpretation they should always be used over ones that are marked (Jolly, 2018b, preface).

Is this invitation placing the performers' 'imaginings' above that of the composer? It could be argued that offering performers a choice such as this nullifies the composer's diligence in ensuring his inner sounds matched the physical realisation, and may reduce the advantages of prescription as a concept. Jolly's explanation of the reasoning behind this approach was that he wanted his publications to be 'accessible'. If an ensemble were struggling to achieve the sounds he had instructed, they could instead substitute sounds they could produce. I feel this might be a dangerous precedent. Jolly believes in a two-way process, with composer and performer developing ideas together, although he pushes this dynamic to its extreme. He is willing to accept a performer making substantial changes that alters the composer's initial premise.

There is a certain amount of conflict in the arguments put forward by the composer. For instance, he is concerned about multiple interpretations. Rather than using more detailed notational prescription to ensure performance accuracy, he is inclined towards the use of text: 'Words can only be interpreted in a few different ways, whereas notation, the more notation you put on there the more complex it seems [...] [resulting in] even more different interpretations of it'. In works by other composers with a strong narrative, he suggests using text in 'as plain English as possible' to ensure a more accurate sound-world. This concern with an accurate realisation is at odds with his willingness to allow performers to alter his compositions and create their version of his 'imaginings'.

The use of notation in *Smudge* echoes the composer's sensibilities regarding communication through music. There is a reliance on text to instruct extended techniques and 'colour', with the notation appearing straightforward. He uses the Kientzy treatise in a functional way to find multiphonics, but does not make use of notational treatise such as *New music vocabulary* (Risatti, 1975), *Music Notation in the 20th Century* (Stone, 1980), or *Behind*

Bars (Gould, 2011), any of which would have provided options for symbolic representation of extended techniques. Perhaps the composer's lack of confidence in the ability of notation to convey his 'imaginings' accurately is a result of his experience of saxophone repertoire: 'I sometimes find it hard to decide on which notation to use, for different types of slap [tongue] for example. There's always that question isn't there? [...] there's always going to be that uncertainty, questions about what that means [...] to get that sound you can hear'. I agree with Jolly that there is no fully established standard usage of symbols to represent extended techniques or timbre, even across the scores of major composers of saxophone repertoire. In fact in some works, such as in Christian Lauba's *Steady Study on the Boogie* there is not even agreement on the same page (Lauba, 1995, p. 3).

The preference for descriptive text to reinforce composer intention is reflected in the comments of the baritone player, yet the soprano saxophonist would have preferred more prescription. There was a concern that if a performer could not execute complex prescription it might result in a sense of failure. Both saxophonists' starting point was that *Smudge* had a narrative and I was surprised at the strength of feeling displayed. They were prepared to dispute Jolly's assertions of there being no narrative, even going as far as commenting: 'He might just not know what he was thinking of, it might be hidden'. There was a desire for 'meaning', and even if there wasn't a specific 'story', there had to be narrative content. The need for narrative was so entrenched that when I explored the notion of lack of narrative with Sarah Hind she put forward different methods of creating her own. When I probed her self-narrative, questioning whether this might override the composer's intention, the response was: 'If it's imperative to the composer that it has to be portrayed in that exact way then it needs to be explicit in the score'. Sarah Markham refused to believe a lack of narrative: 'Every piece has a narrative with my way of thinking'.

Conclusions

My strongest impressions from the interviews was from the responses related to narrative. It seemed almost intrinsic to the performers to be given some kind of narrative or emotional element, and if need be, invent one. Members were comfortable with the use of textual descriptions to inform intent. With text instruction a performer could portray the narrative within their limitations, whereas notational prescription carries the danger of successful or unsuccessful execution. Although the composer asserts that notation cannot convey ideas or emotion, I would change his assertion to 'convey accurately his ideas and emotion'. He is aware that music, through notation, has an emotional effect. An effect he used effectively in the slow middle section of *Smudge*.

Chapter 7: Describing a narrative (category 3)

This chapter explores whether the use of notational prescription and extended techniques might support the telling of a story, and whether the performer receives some sense of the narrative and associated sounds imagined by the composer.

Maï

Composer - Ryo Noda

The inclusion of *Maï* by Ryo Noda (1978) as a case study allows a focus on the communication of a narrative to a lone performer; there are no other participants. I decided on a composition by Noda for two main reasons: firstly, his works have become part of the standard repertoire for classical saxophonists and have a related body of knowledge embodying cultural traditions from the East, with associated spiritual and religious connotations. Secondly, I have not previously performed a composition by Noda. This gave me the opportunity to be my own 'guinea pig', investigating the composition from the viewpoint of a performer. Not only does *Maï* have a strong underlying narrative (Category 3), but communicates this narrative through gestures based on a different instrument to the saxophone family (Category 1), the shakuhachi.

Apart from his cultural origins in Japan, Noda studied with Frederick Hemke (USA) and Jean-Marie Londeix (France). Noda's compositions were influenced by the extended techniques that Londeix championed (Christensen, 2015), resulting in his solo saxophone compositions becoming useful pedagogical studies in extended techniques and prescribed notation. His compositions have a duality to their nature: *Improvisation I* (1974), *II* and *III* (1975), *Maï* (1978) and *Phœnix* (1988), are works demonstrating a fusion of ancient and modern influences. The works are based on the musical gestures and timbres of the shakuhachi flute, an instrument that can be traced back to the Rōnin, nomad travellers playing ancient Japanese music (Christensen, 2015). The compositions combine modern instrumental techniques and symbolic influences from the shakuhachi tradition to describe those gestures.

Two interpretations

This case study involved making two recordings, each with a different approach to interpretation. The first recorded performance was based upon a reading of the notation and

any other information supplied with the score. The second performance was recorded after a period of research to inform the interpretation.

Aim:
To explore the use of notational prescription and extended techniques in support of a narrative.

An autonomous score

First recording: (*Maï - first recording* - AF: 32.m4a).

The *Maï* score has three elements: the notation, a guide to the symbols used and text describing the narrative (see Appendix 5: scores*)*. For this part of the case study I used only the information given in the score (although I allowed a translation of the narrative description from French to English). My first instinct as a performer was to compare the structure of the piece to the supplied text, searching for gestures or musical 'colours' that might support the narrative:

> Battle of the Sea
>
> At twilight one night in Autumn, while the moon reflected its silver light on the surface of the waves, General Kyotsun plays his flute.
>
> Standing at the prow of the ship, he seizes his sword and cuts the plate which goes down to his feet and disappears into the sea.
>
> On his doorstep the phantom of the Samurai appeared. Facing him his wife asks him, "Why did you go?" "To save my army" he replied, "because I knew the battle was lost in advance and I also saved the lives of my men and their families."
>
> "And me," she said. "Did you think about me!" (Bunte, 2010, pp. 33-34)

Some elements of the narrative were more obvious in the score than others: I could imagine the sound of an ancient flute being portrayed in the opening section (section 1 as marked on the score), and the flute theme returning (section 3 marked on the score) perhaps portraying the spirit of the Samurai. The betrayal and anguish felt by the Samurai's wife is evident in the response to the returning flute theme in the last two lines of the score. The middle section (section 2) proved more difficult to decipher. Section 2 is longer than the other sections, and I found difficulty 'hearing' which dramatic elements of the narrative matched the musical gestures. Noda uses only two bar lines: at the end of section 1 and another at the end of the work. Paused rests of different lengths, including two with a given length in seconds, are used to give an overall structure and add a dramatic component.

Some symbols used in the notation were unknown to me (one of which was not explained in the supplied symbol guide). The lack of familiarity with some symbols presented an obstacle to interpretation as I had no sonic inner reference for the intended sound. The less familiar symbols included (what I assumed to be) a variation of a glissando (fig. 30). This proved difficult to realise because of the time available to execute. My production of these particular types of glissando was ill-defined and not easily heard.

Figure 30: *Maï* - showing glissando symbol between E and B quarter-tone lower.

Other symbols relating to timbre were ambiguous: Noda uses a symbol for 'cutting tone (Japanese style)' (fig. 31) but I was unsure of the intended 'sound-colour'.

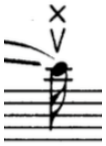


Figure 31: *Maï* - showing the symbol for 'cutting tone'.

Similarly, I was unsure of the production of sound indicated by the use of the 'relax the lips' symbol (fig. 32). There is a rhythmic indication on the note stem, and so I assumed there would be some 'movement' in the sound rather than a constant timbre. There is no indication as to how far the 'lips relaxed': if I loosened my embouchure to a large degree then pitched tone would disappear leaving only an air sound.

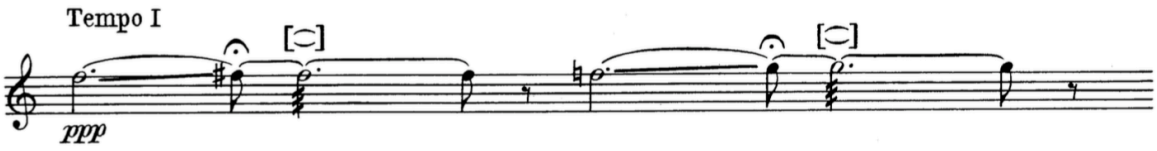


Figure 32: *Maï* - showing use of the 'relax the lips' symbol.

As vibrato shape and amplitude is prescribed, I assumed the composer intended little or no vibrato at other times, except for a section marked '*espressivo*'.

The influence of the shakuhachi tradition

Second recording: (*Maï - second recording* - AF: 33.m4a).

My second performance of *Maï* is influenced by an understanding of the cultural context. During the recording I took a decision to embrace techniques that were foreign to my usual performance practice at the expense of a more 'polished' performance.

The period of investigation into the musical context behind Noda's composition led to a different approach to the interpretation of *Maï*. Michael Christensen suggests that Noda's compositions combine the performance practices of both the saxophone and shakuhachi, and are influenced by the spiritual nature of the honkyoku (Christensen, 2015). *Maï* reflects the honkyoku ('original music') compositions for shakuhachi: meditative works concerned with the mental state of the unobserved performer rather than public performance (Tann, 1989). Christensen's advice relating to the performance of *Maï* focuses on the 'imagining' of the performer, suggesting the saxophonist placed themselves in the position of a character in the narrative, adding a theatrical dimension (Christensen, 2015). During sections 1 and 2 of the score I imagined the Samurai, his quiet contemplation, sacrifice and elements of the sea. In section 3 I imagined the spirit of the Samurai, and the anguish and betrayal felt by his widow.

In terms of notation, this period of research answered questions raised by the first recording. Many of the symbols in *Maï* relate to shakuhachi techniques. Traditional honkyoku music had different notational methods dependant on particular schools and instruments, with a focus on fingerings rather than pitch. This focus reflected the Zen philosophy of process being more important than product. As Western notation became more usual in Japan, shakuhachi performers combined the influences of both societies, leading to a shift from the religious to the secular use of the shakuhachi (Lee, 1988) and a general use of printed notation (Simon, 2014). Noda's composition reflects this combination of East and West.

A different approach to the notation

Rather than solely an instruction of pitch and duration, some notational symbols in *Maï* allude to shakuhachi techniques. For example, according to Bunte there are articulations and timbres specified in Noda's works that mirror the shakuhachi tradition (Bunte, 2010):

Often grace notes (*atari*) are used to begin phrases rather than the use of a tongued articulation, implying a less strong execution (fig. 33).

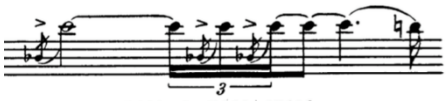


Figure 33: *Maï* - showing shakuhachi grace notes (*atari*).

A traditional method to bring a musical gesture to an end is the use of a *kitte*: an abrupt, almost explosive end to the note; quite often combined with a portamento (*suriage*) (fig. 34).

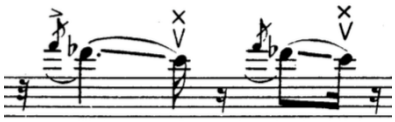


Figure 34: *Maï* - showing *suriage* and the *kitte* ending.

Other markings which might usually indicate a strong tongue articulation, such as *sfz*, in fact suggest an explosive breath attack (*muraiki*). This particular articulation is directed during a passage containing numerous trills, perhaps portraying the rippling waves of the sea (fig. 35). The trills are executed using alternate key fingerings to give a softer, less precise sound.

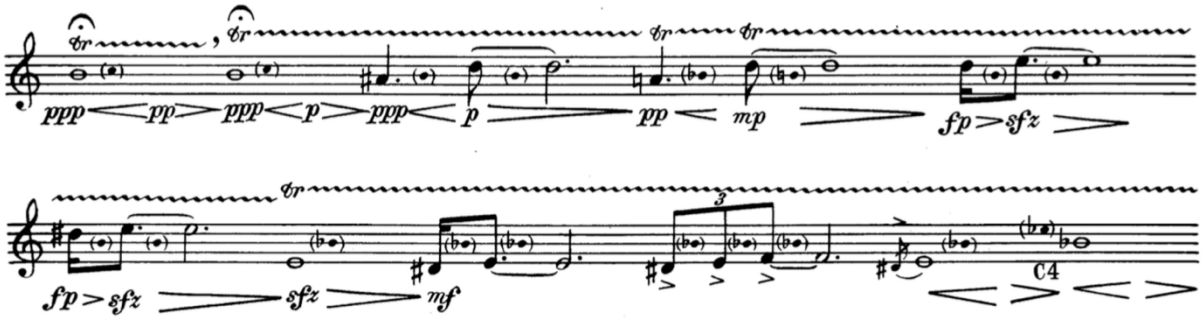


Figure 35: *Maï* - showing trill passage with the use of *muraiki* (*sfz*).

The multiphonic section (fig. 36) relates to a compositional device used to add timbral colours: *goro-goro*, translating to 'rumble', perhaps indicating thunder or a storm (Christensen, 2015).

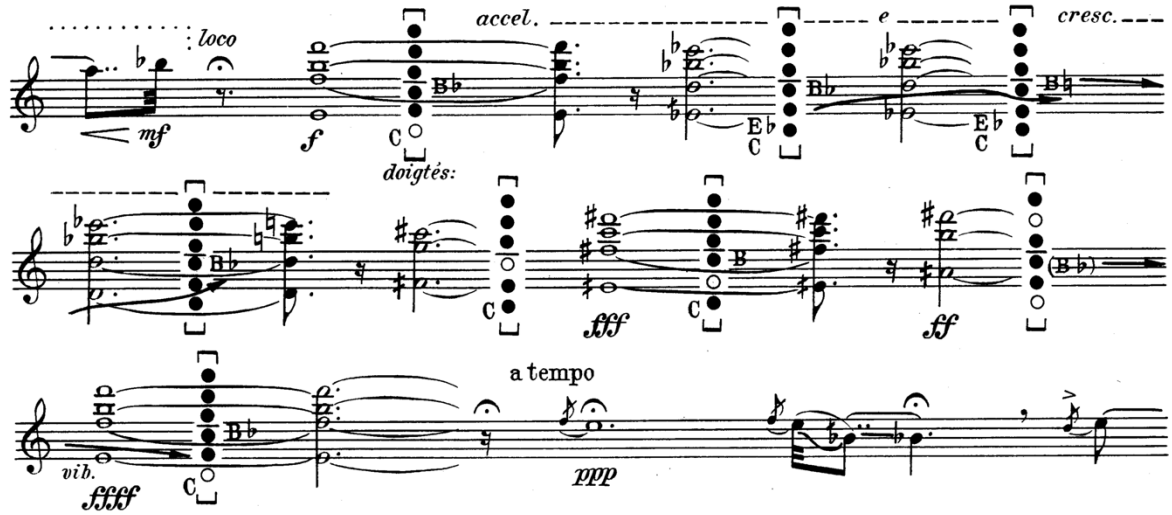


Figure 36: *Maï* - showing the multiphonic *goro-goro* passage.

Bunte also explains the technicalities in executing the 'relax the lips' symbol (fig. 32). The timbre consists of more air sound than tone, allowing the octave to split. More general facets of the shakuhachi tradition can be applied to a reading of the score. For instance, contrary to my assumptions in the first recording, the prescription of vibrato using the symbol of a wavy line (*yuri*) does not suggest lesser use of other types of vibrato. It is also common to use a diaphragm vibrato (*komibuki*) similar to vibrato used in modern flute performance, as opposed to jaw/embouchure vibrato (Bunte, 2010).

The period of research also highlighted the way in which Noda's use of notation offered an interpretation based upon the connection of the shakuhachi with the influences of Buddhism and the religious principles of Zen (Sanford, 1977); (Mabbett, 1993). This opened other avenues of interpretational layers: such as a greater emphasis placed on the thoughts and mental state of the performer at the time of performance; also, a celebration of the organic differences between timbres and execution of musical gestures (Simon, 2014). This is a contrast to the constant awareness of tone-matching, and a pursuit of 'perfection' sometimes encouraged in French classical saxophone practice. Shakuhachi performance practice seems to have a resonance with 'life', with much discussion of 'breath phrases', stillness and calm, and imagery such as musical gestures having the shape of a bamboo leaf (Tann, 1989).

Reflections on the two performances of Maï

From the point of view of the performer the two recordings brought about a different approach and state of mind. In the first recording I was concerned with 'correctness', I felt

pressure to interpret notation accurately, perhaps reflecting Hind's fear of failure mentioned in her Quirk quartet interview. This concern inhibited my ability to concentrate on the narrative of the work during performance. When listening to the first recording I am aware of that inner battle; there is a sense of effort and the musical gestures are at times too 'strong'. There is perhaps a sense of superficiality, hinting at more work to be done, as Greene writes: 'The attitude of the performer toward the score supports the view that it is neither a finished work in itself nor a complete set of instructions through which a work can be fully recreated' (Greene, 1974, p. 506). During the second performance I felt more 'freedom', the sense of 'correctness' hindering my first performance was replaced by a striving to give the correct 'colours'. This was not a negative state of mind, but a concern with telling my version of the narrative as well as possible.

In both recordings the use of extended techniques and prescription instructed sounds that supported the narrative, albeit a 'basic' set of sounds executed according to usual convention. It was only after the period of research that more nuanced gestures and 'colours' were considered. A culturally informed reading led to differing interpretations of notational symbols. The signifier remained constant, but the signified concept gained additional connotations. Seeger talks of perceiving other traditions through the filter of our own, making uniformed changes (Seeger, 1958). He advocates bi-musicality (Hood, 1960), developing a cultural understanding of other musics. Bruno Deschênes, a non-Japanese shakuhachi player (having received the master title in Japanese shakuhachi performance) suggests a further step towards understanding other musics, defining the term: *transmusicality* (Deschênes, 2018). Deschênes describes a process of a cultural shift of identity, the music influencing a mental state parallel to the relevant culture.

It is worth noting that none of the treatises discussed in chapter 3 contain comprehensive information relating to all the extended technique symbols in *Maï*, with only *Parameters of the Saxophone* showing Noda's prescription of wide vibrato (Londeix, 1989, p. 67). Also, there are no recordings available of Ryo Noda performing *Maï*.

Unlike my previous case studies, *Maï* was dependant on a strong emotional narrative that is given to the performer. My next case study *Ensemble* does not allow the performer access to the implied narrative.

Ensemble

Composer: Kenneth Wilkinson

Tonal qualities are perhaps the most variable aspects of performance, and arguably the most important (Holmes, 2012). In *Ensemble* there is an organic, almost vocal quality to the sounds. As Snekkestad remarks: 'I've come to hear my saxophone overtones as a whispering voice, more and more eager to tell me something' (Snekkestad, 2016, p. 4). Not only do the individual sounds produced change due to instability, but the texture as a whole becomes 'alive' in a similar way. In this scenario, it is more challenging for the performers to secure their 'tonal imagination': the search by the performer for 'their sound', a matching of their 'inner' heard sound to the sound they produce (Raschèr, 1983, p. 8). This encourages an element of trust, that the instruction given by the notation is producing the intended sound. In *Ensemble* my compositional approach was to think in visual terms. There is a background 'wash' using multiphonics, at times overlapping to create a more dense texture. Over the 'wash' are percussive elements of key-clicks and 'pops' used as interjections.

Aim:
To explore the use of extended techniques and notational prescription to imply a sense of narrative without allowing the performer access to that premise.

Coherence between 'imaginings' and performance

Ensemble is not supplied with an explanation of a narrative (the title is intentionally vague). I limited the number of techniques used in order that the variables might be manageable. As much as possible I maintained coherence between my 'imagining', notational instructions and the directions relating to performance equipment. In practical terms this involved:

1) The use of a single treatise as a reference: *The Techniques of Saxophone Playing* (Weiss & Netti, 2010). My musical palette was based on the Weiss treatise and I only employed sounds I could 'imagine'. The reference numbers above the multiphonics in the score relate to the Weiss and Netti publication, and the performers were asked to only use the fingerings given in the publication (fig. 37).

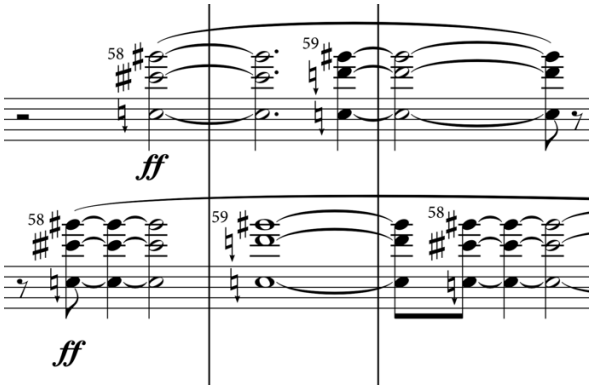


Figure 37: *Ensemble* - showing multiphonic numeric references relating to *The Techniques of Saxophone Playing* (Weiss & Netti, 2010).

2) Key-clicks and 'pops': I verified that the fingering and resultant sound on each member of the saxophone family matched my 'inner hearing' and gave the fingerings in the score (fig. 38).

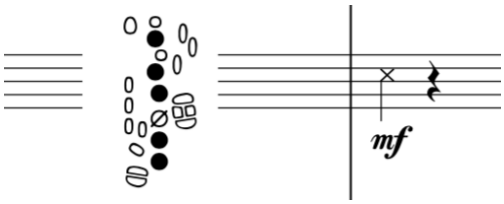


Figure 38: *Ensemble* - showing key-click fingering.

3) As much as possible I established an equivalence of performance equipment in order to mirror the saxophones and accessories I used to inform my choice of sounds. I ensured all performers had modern rather than vintage instruments, classical saxophone mouthpieces (either Selmer or Vandoren), and classical saxophone reeds were employed.

The overall structure consists of six performer parts (see appendix 5: scores). Three parts giving a multiphonic texture and three parts employing the percussive elements. There is no intentional melodic material to avoid the use of common gestural devices to evoke a 'Pavlovian' emotional response (Ferneyhough, 1995, p. 23).

A sense of narrative

The recording of *Ensemble* took place in St Paul's Hall at the University of Huddersfield (*Ensemble* - AF: 34.m4a).

Creating a composition for the exploration I was undertaking imposed a restriction: as the main focus of this thesis was an exploration of 'shared imaginings', I had to adhere to only using sounds available from my 'inner hearing'. This presented a challenge as the sounds produced by extended techniques were less ingrained in my psyche; I might 'hear' a particular sound but have difficulty identifying the precise method of production. My lack of instant familiarity with the sounds I was employing meant it was quite taxing to 'hold the imagining' in my 'inner hearing' for an extended period of time.

The use of a common treatise as a reference point was successful in securing similar sound-worlds between composer and performers. The performers had little difficulty in understanding the notational and required actions. The saxophonists rendering the multiphonic textures approached the interpretation in an interesting way: they annotated their scores with the saxophone fingerings sourced via the numeric references (fig. 37). The pitched material of the multiphonic grouping illustrated in the notation was then ignored, the musical gesture becoming a rhythmic indication; they preferred an executive notation over a conceptual notation (Cazden, 1961). Questions were asked regarding the dynamic range of the percussive parts. The percussive events have an inherently narrow range of dynamic level, and performers wondered whether they should match dynamic markings across all parts (globally) or within their own part (locally).

The nature of the extended techniques proved testing: the production of a multiphonic on a saxophone is often not instant, there can be a delay in the tone element becoming evident, or part of the multiphonic cluster sounding. This trait meant positioning the multiphonic sound at the required time was problematic. Also, there are no obvious audio cues within the ensemble parts, which was at times challenging for the saxophonists.

The extended techniques used are demanding and there are moments where performers can be heard struggling to remain in control of the sound they are producing. I welcome this aspect of the performance as it adds a sense of 'vulnerability' to the soundscape, supporting any emotive element the listener might add.

As to whether I could hear the (my) narrative implied in the score in the final realisation; the answer can only be subjective. The timbres I heard in the performance matched quite successfully the 'colours' I 'imagined', perhaps in part as a result of my prescription of equipment. I did get a strong sense of narrative from the performance, but it is difficult to be objective considering the inherent bias: in effect I succeeded in conveying my narrative to myself. Seeger asserts that there is a difficulty in associating meaning to music, and that continued association of a sound with an affect by the listener might give the impression of an emotional narrative (Seeger, 1966). Anecdotal evidence from listeners support Seeger's assertion: listeners describing the performance of *Ensemble* used words such as: sadness, unease and expectation. One student listening to the rehearsal commented: 'This sounds more like film music than a piece'. A performance can only ever be a 'version' of the initial 'inner hearing', yet the recorded performance of *Ensemble* is remarkably close to the composition I 'imagined'.

Chapter 8: Conclusion

As a composer my ethos is simple: I write what I 'hear'. Perhaps that transcriptional approach is the result of many decades of performance, whereby a sound is 'heard' before (and as) it is produced; a constant matching of imaginary sounds and produced sounds, a circle of constant refinement. There are caveats alongside my ethos: I am 'true' to my 'imagining'; there is no allowance for accessibility. I only inhabit the world of saxophones; it is the only language I speak with any fluency.

A summary of outcomes

In most of the case studies the notation enabled a secure communication of intent between composer and performer. With regard to my compositions I could notate relatively accurately what I 'imagined' and the realisations were close to my intentions. The more controlled the environment the more successful the notational prescription appeared to be: the performance of *Ensemble* was remarkably close to my 'inner hearing', demonstrating that an agreement of performance parameters between composer and performer creates a fundamental on which can be built a more precise realisation.

The use of notational prescription and extended techniques in *Clockwork* and *Scintilla* was also successful in conveying my 'imagining', but to differing extents. I believe this difference was the result of the descriptive narrative: the performers of *Clockwork* had access to the premise of the composition, whereas in the *Scintilla* work they did not. The *Clockwork* case study revealed an interesting use of 'inner hearing': the performers used an 'imagining' of narrative either as an affirmation of a correctly produced sound, or as a starting point for a target sound. Some performers subverted the notational instruction by deviating from the extended technique instructed, finding a different path to 'their' sound. In *Scintilla* the premise was not given to the performers and so they lacked an 'aiming point'. This resulted in a realisation using the correct execution of notation, but lacking some elements relating to my 'imagining'.

In *Study*, some participants interpreted the notation as intended, while others 'did nothing'. The most revealing participants 'did something': they observed a symbol and allocated an incorrect action. This was a failure of signifier and signified: although the notational symbols employed in the score were in common usage in classical saxophone repertoire, some performers were not using the correct signified concept. *Study* also brought to light issues regarding performer agency, with participants making extreme changes to the score.

The case study *Smudge* was concerned with the use of notational prescription and extended techniques to instruct different musical 'colours', rather than dealing with a strong narrative. There were contradictions in approach by the composer: time was taken to be sure of an accurate transcription of the composer's 'imagined colours', yet the composer allowed performers to change the score; the product of that 'inner hearing'. There was a debate revealing a strong desire by the performers for narrative. So imperative was this desire that if the composer of a work asserted a lack of narrative, the performers would create their own.

Interpretation of narrative was the focus in my preparations for the performances of *Maï*. This case study prompted me to re-evaluate the validity of my realisations, especially in the light of Seeger's comments:

> If the stimulus is a product of the particular music tradition that we carry, we perceive it as such. If it is a product of a tradition we do not carry, we perceive it as we would a product of the one we do carry, making such changes as we are accustomed to (Seeger, 1958, p. 194).

The use of notational prescription and extended techniques in *Maï* is particularly effective. They form the basis of a musical 'colour palette', which combined with context (and mind-set), encourage a detailed culturally informed performance. It is worth noting that a focus on musical narrative (either given or invented) became apparent at some point in all three categories of case studies.

In summary

At the beginning of this research project I intuitively assumed that the use of notational prescription coupled with extended techniques would allow a more accurate presentation of a composer's 'imagining'. This in turn would lead to a performer having a more informed basis on which to create their 'imagining'. The outcomes of the case studies support my assumption. The use of notational prescription and extended techniques are effective in 'narrowing the gap' insofar as they instruct actions that can be used to allude to the 'imaginings' of the composer. This alluding to intent is more successful if there is an agreed symbolic language and resultant performative action. The performer can then build their version of the composer's 'imaginings' and contribute to the conversation using the same language. A culturally informed interpretation might overlay this conversation, refining the performative actions. Other influences exist alongside this process, including performer 'attitude' and performer ability. Technical possibilities and equipment choice are also a consideration.

Appendices

Appendix 1: Saxophone keywork naming systems

The systems in common usage throughout the saxophone repertoire for designating saxophone keys were designed by Jean-Marie Londeix, and Eugene Rousseau. The Londeix system is used in compositions supporting this research (fig. 39).

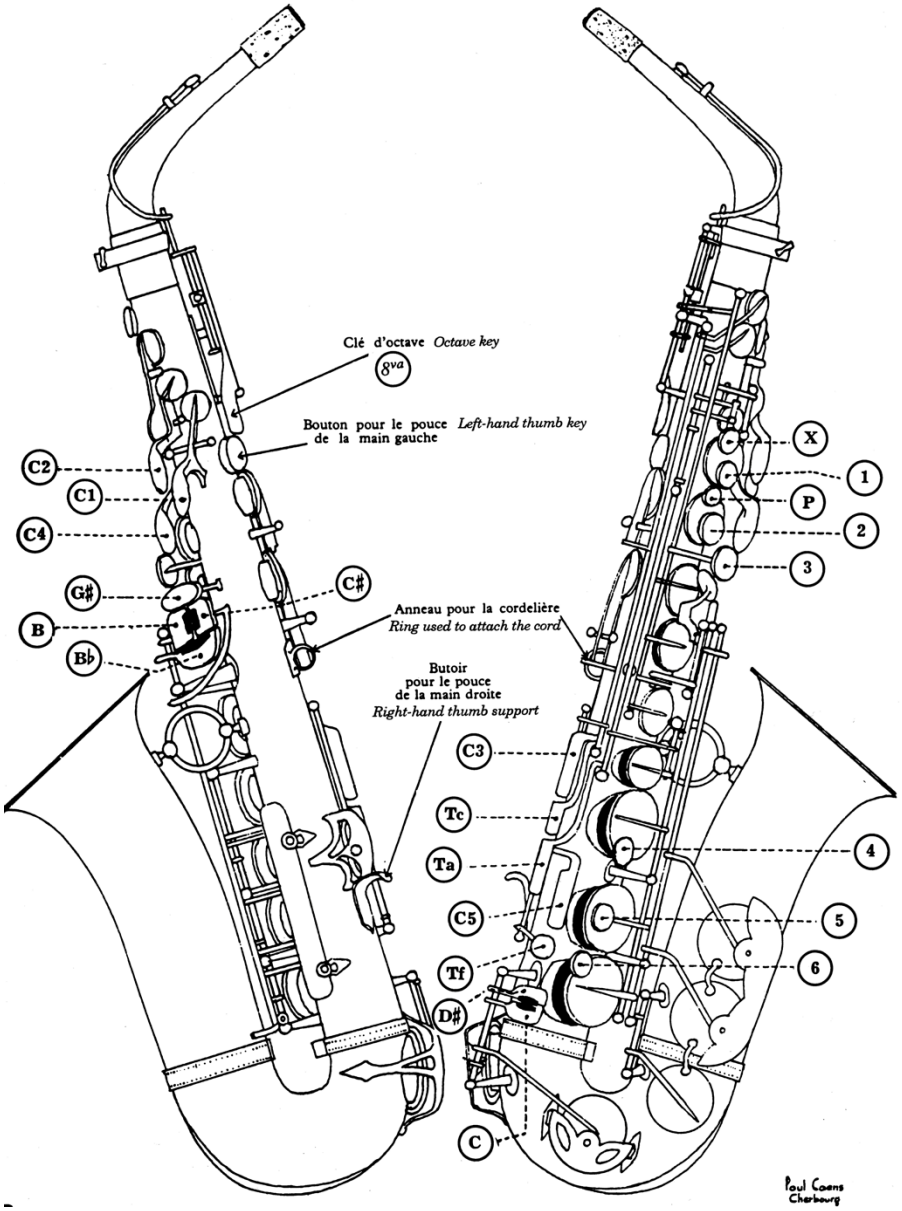


Figure 39: *Hello! Mr. Sax or Parameters of the Saxophone* - Londeix fingering system (Londeix, 1989, p. 6).

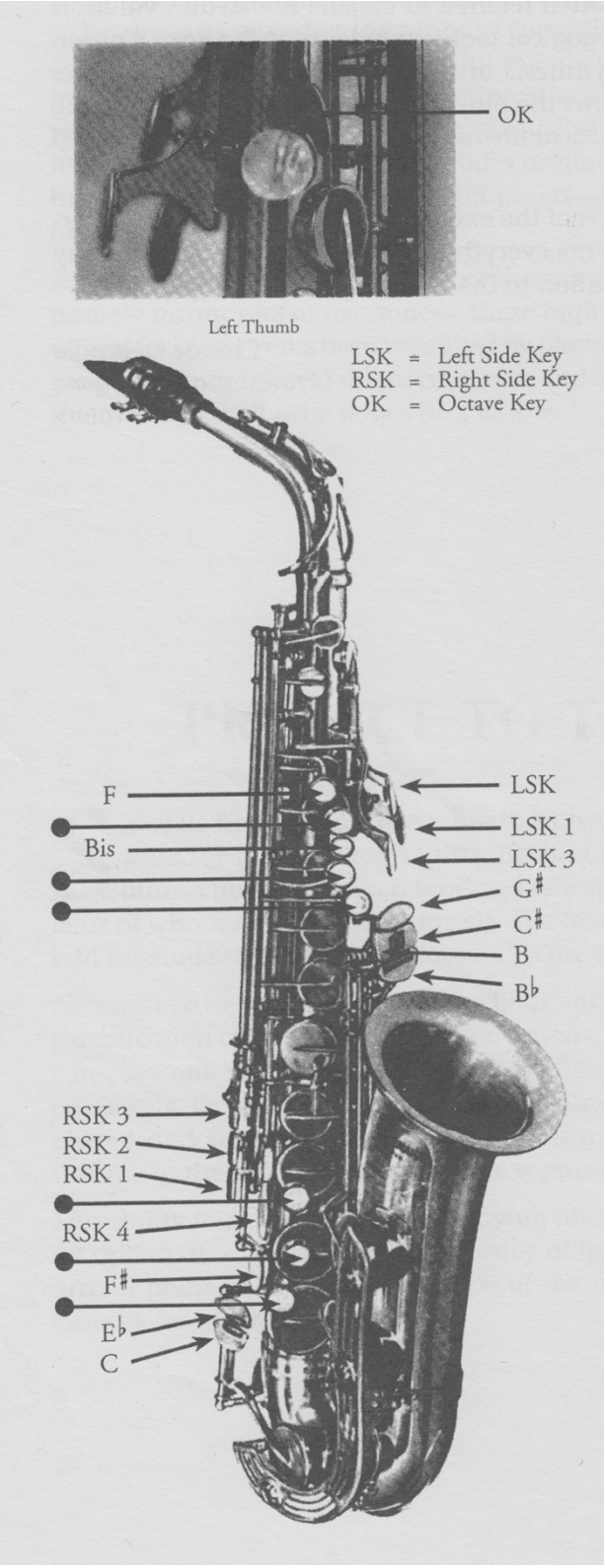


Figure 40: *Saxophone High Tones* (Rousseau, 2004, p. vi) - Rousseau fingering system.

Appendix 2: Performance testing of neck screws

Performer comments during the experiment (bold indicates preferred neck screw):

Neck Screw	Size	Sarah Markham performance comments (Capelle Study)	Kenneth Wilkinson performance comments (Noda excerpts)
1 Default Yamaha		A thinner sound. Less responsive on production of lower notes.	Sounds and feels thin, response is good in mid-range register.
2 Bronze	small	Much easier to play, more responsive throughout registers. Breath lasts longer.	Warmer sound, has more resistance and focus. High notes have clarity. Response very good.
3 Brass	small	Affects how I play; makes me feel as though I am shying away from the sound. Used much more air.	Not as responsive as the small bronze, slightly harder to produce the high notes.
4 Nickel Silver	small	Easier to play, in a similar way to the bronze screw. Very focused sound.	More responsive but a thinner more direct sound.
5 Stainless Steel	small	Harder to play at softer dynamics, seemed hard to control.	Easier to play, a very focused but a hard sound.
6 **Bronze**	**large**	**Enjoyed playing this. Everything more open; encourages flamboyance. Very responsive and warm sound.**	Much more colour in sound. Responsive with a slight resistance (good). High notes easy to produce.
7 **Brass**	**large**	Works well, response good; feels like the rest of the saxophone, as though part of the whole instrument.	**Very easy to play, with little resistance and an open sound. Not as warm a sound as the bronze but much more energy and focus.**
8 Nickel Silver	large	Quite like this, again encourages flamboyance. Good at low dynamic range. Very focused.	Very even throughout range. Very focused with little resistance. Very easy to play.
9 Stainless Steel	large	Felt 'loud'. Seemed reluctant to play at the lower dynamics.	Dull sound, slow, 'stodgy' sound and feel.

Listener comments during the experiment (bold indicates preferred neck screw).

Neck Screw	Size	Sarah Markham listener comments (on Noda excerpts)	Kenneth Wilkinson listener comments (on Capelle study)
1 Default Yamaha		A focused sound. Quite bright with projection.	Focused sound, with some warmth.
2 Bronze	small	Slightly darker sound with more presence. More depth and colour, flute-like in higher register.	Rounder warm sound. More depth evident at lower dynamics.
3 Brass	small	Not as much depth to the timbre as the bronze screw, but more focused, perhaps more energy.	More presence, slightly brighter than the bronze screw. Perhaps more energy. Good focus on lower dynamics. Tone matching very even.
4 Nickel Silver	small	Very focused sound, seemed precise. Slightly thinner, brighter sound.	Compact, focused sound, perhaps thinner. Very fluid, seems to respond well, supporting the performer's technique and phrasing.
5 Stainless Steel	small	Similar to Nickel Silver screw, but more of an edge to the sound, emphasised high harmonics. A harder sound?	Seemed comfortable, similar to the Yamaha screw but wider sound and more presence.
6 **Bronze**	**large**	**Depth of sound, tone remained as dynamic level lowered (as in the glissando). More colour and presence.**	Very refined sound, precise. Not as much colour as the smaller version of this screw?
7 **Brass**	**large**	Similar to the bronze neck screw, but slightly thinner sound although more focus. A harder sound rather than the warmth of the bronze screw.	**More focused than the bronze large screw. Lots of colour, very focused at low dynamic. Engaging sound.**
8 Nickel Silver	large	Lacked the warmth and depth of the bronze and brass screws. Very focused, almost flute-like response.	Brighter sound, almost verging on 'tinny'. Seemed to lack depth of colour.
9 Stainless Steel	large	Quite a hard sound with few colours underpinning the tone. Very definite. Articulation evident (perhaps screw creates too much resistance?).	Thinner sound, although quite attractive, very focused and precise.

Appendix 3: Study: Participant audio files and results

Alto saxophone (*Participant 1* - AF: 20.m4a)
The tempo varied from around 70 bpm to over 100 bpm. The trill speed markings and niente symbols were not observed. The *'trill fingers 456*' instruction resulted in the trilling of fingers separately rather than together (together is the convention). The beam markings in fig. 41 were interpreted as an articulation rather than a trill speed. The multiphonics in the semiquaver section were strong (fig. 42), leading to a successful execution of an open-slap multiphonic. There seemed no attempt to interpret the directions '*whispering*' or *afterthought*'.

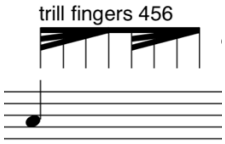


Figure 41: *Study* - showing trill speed indication.

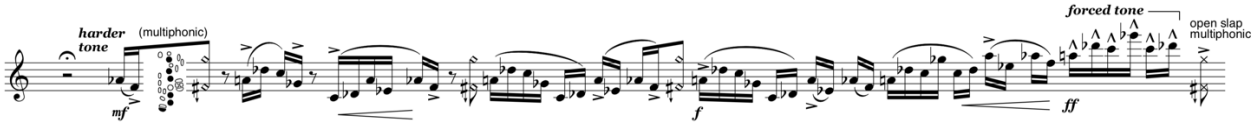


Figure 42: *Study* - showing semiquaver passage with multiphonics and open-slap tongue multiphonic.

Alto saxophone (*Participant 2* - AF: 21.m4a)
This was a very 'placed' realisation, with much slower passages, the overall speed was around 70 bpm. Most of the extended techniques were understood and executed except for the beam markings in fig. 41, which were realised as a trill at a constant speed. The multiphonics in the semiquaver passage (fig. 42) were successful, as was the slap-tongue (although it sounded closer to a closed slap-tongue rather than an open slap tongue). There was a change in timbre for the directions '*whispering*' or *afterthought*'.

Soprano saxophone (*Participant 3* - AF: 22.m4a)
This was a stylised version, with use of rubato and a dramatic rallentando towards the end of the semiquaver passage (fig. 42). All the extended technique directions were executed as directed. The directions '*whispering*', '*afterthought*' and '*playfully*' were all signified by a change of timbre or volume. The instruction '*afterthought*' was executed particularly slowly. This might have been a result of word definition. Rather than my intention of a 'throw-away' gesture, almost unheard, this participant might have interpreted the instruction as a 'slower reflection'.

Alto saxophone (*Participant 4* - AF: 23.m4a)
The trill speed markings were not observed, and the beam markings in fig. 41 were interpreted as an articulation rather than the trill speed. The *'trill fingers 456*' instruction resulted in the trilling of fingers separately rather than together. None of the instances of harmonic notes (as in fig. 43) were executed. The execution of the multiphonics and open-slap tongue in the semiquaver passage (fig. 42) was successful. There seemed little change in sound to portray '*whispering*', '*afterthought*'.

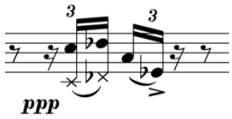


Figure 43: *Study*: Showing example of harmonic notes.

Alto saxophone (*Participant 5* - AF: 24.m4a)
Most symbols were interpreted successfully, although the beam markings in fig. 41 were interpreted as an articulation rather than the trill speed. The multiphonics in the semiquaver section (fig. 42) were executed, but not the open slap-tongue. A dramatic rallentando was also used. There was a change in timbre in one instance of '*whispering*'.

Baritone saxophone (*Participant 6* - AF: 25.mp3)
The tempo varied from around 60 to 80 bpm. This was a nuanced realisation with longer silences between phrases; very 'placed'. All symbols were interpreted and executed, although the *'trill fingers 456*' instruction resulted in the trilling of fingers separately rather than together. *Study* presents particular technical challenges for a saxophonist opting to perform the work on a baritone saxophone.

Alto saxophone (*Participant 7* - AF: 26.m4a)
This participant interpreted all symbols, extended techniques and descriptive text successfully. This version is the closest realisation to my 'imagining', in some ways closer than my own performance. A constant tempo is kept throughout.

Tenor saxophone (*Participant 8* - AF: 27.mp3)
This realisation is very slow and dramatic, with the tempo moving between 50 and 65 bpm in places. All symbols and extended techniques are executed successfully. In the semiquaver passage (fig. 42) the multiphonics seem to exhibit a less percussive quality than the other performances. There is a change in timbre associated with the text directions.

Alto saxophone (*Participant 9* - AF: 28.m4a)
Most notational symbols and extended techniques are read successfully in this version, although the *'trill fingers 456*' instruction resulted in the trilling of fingers separately rather than together. There is timbral change associated with some text directions. There are pauses between some phrases, and the tempo is not constant.

Alto saxophone (*Participant 10* - AF: 29.m4a)
In this version the multiphonics and open slap-tongue in the semiquaver passage (fig. 42) were executed. Other techniques were not evident, the beam markings in fig. 41 were interpreted as an articulation rather than the trill speed, the trill speed markings were not observed and harmonic notes (fig. 43) were not present. There was no evident change associated with text directions.

Appendix 4: A discussion of Smudge

A transcription of a discussion relating to the thoughts of the composer and performers during rehearsals of the saxophone quartet composition: *Smudge* (square brackets denotes material I have added for clarity).

Chris Jolly

The composer of *Smudge* and tenor saxophonist in the Quirk saxophone quartet.

KW: What is the premise of the piece, are there any influences?

CJ: Inspired by the track *Limbo* by the band 'Too Many Zooz' (Zooz, 2018). The 6/8 feel of that track, mainly rhythmic stuff, using that repeated bass line, or, blocks of harmony and block chords. I quite like how that merges into 6/8 and 5/8 just by dropping a quaver, you can change the feel. It's similar to my arrangement of Music for a Found Harmonium.

KW: Is *Smudge* based on the development of material?

CJ: Yes, it's based on four bar chunks of music, and the ways of getting there, between chunks. The intro is a fragmented version of the four bar thing that happens.

KW: Does it have any narrative, or story behind it?

CJ: No, there's no narrative or story, it's more of a rhythmic exercise.

KW: How do you choose your sounds and extended techniques?

CJ: I attempt to use them in a harmonic way. The multiphonics I try to make sure they all fit the harmony, it's hard that though isn't it? Some of them sound so different on different instruments, and some of them aren't possible on certain instruments. Some will speak easier as well. I like to think that I start with ones that will fit harmonically with the piece (that's multiphonics, and slap-tongue).

KW: How did you choose the sounds for *Smudge* in particular?

CJ: The hard slap-tongue is to add a percussive element.

KW: Are the multiphonics harmonic?

CJ: I'm not sure, they've developed into the one's Sarah [Markham] suggested. She gave me some alternatives [to use on the soprano saxophone part]. I just wanted two distinctly different sounds, so that there was two different sound worlds with the multiphonics. Your multiphonic though [alto saxophone part] is part of the percussive element. So I've got the harmonic thing, and the percussive thing.

KW: So you don't mind performers changing what you've written? When I asked about the multiphonic written in my alto saxophone part, and how it was tricky to produce it in a very precise well defined way, you said 'just change it'.

CJ: Yes, changing that was OK because that was part of the percussive thing. It was more Sarah's [Markham] that I had to make sure that was the right kind of sound harmonically. Hers started off as being notes that would appear in the harmony of the piece, but I think it's developed into being two different sound worlds, with the two different harmonic multiphonics in it. It was fine because there was enough in my part and your part to build some sort of harmony.

KW: Do you find notation limiting?

CJ: I sometimes find it hard to decide on which notation to use, for different types of slap [tongue] for example. There's always that question isn't there? Is it an 'open' [mouth] slap or a 'closed' slap? Do you want the pitch, do you not want the pitch? The only way I know how to do that is to write it in performance notes. I'm not sure I've done performance notes for *Smudge*, I must have written it above the music.

KW: So you're finding issues with there not being an established standard notation for extended techniques?

CJ: Yes.

KW: Have you ever changed what you were going to write because it was too hard to notate, in particular with software packages?

CJ: No, because I don't think I'm that complex. Maybe anything that I do think of that sounds too complicated, I forget about it, because it sounds too complicated.

KW: Do you expect performers to execute the score exactly? Is the score autonomous?

CJ: To a certain extent. I expect traditional notational elements to be exact. I would give them leeway on the extended techniques. If I could describe what I wanted in words, and it wasn't how I'd have interpreted it in regards to extended techniques, but it matched the description, then it's fine. One of the reasons I take that approach is so it's accessible. So more people are able to play it if they can interpret those trickier techniques in their own way.

KW: Can you expand on what you mean by word description helping with issues with non-execution of a specific technique?

CJ: Like the multiphonics [in *Smudge*], if that instrument, or you, can't get that [particular] multiphonic, if you can find an alternative that works... like we did with Sarah, she couldn't get those two multiphonics to speak at such a low dynamic. Even though I wanted them as part of the harmony, it just wouldn't work, we couldn't get them to speak at that dynamic. As long as they follow the description. So say for example I want all the open-slaps to be a percussive sound, if they could achieve a percussive sound that had the same attack and sound as an open-slap [tongue] then that's fine. For example the multiphonics that are used in the soprano [in *Smudge*], if they're not achievable comfortably at the dynamic written, find alternatives as long as you've got the difference in sound colours between the two multiphonics.

KW: Where do you get your sounds from, you mention in the past, playing around with 'silly sounds' on your instrument?

CJ: Whenever I start writing I usually start on my instrument, and find something. For interest, and something different. Expanding the saxophone palette.

KW: You're interested in developing a wider saxophone colour palette, yet chose to play a saxophone from 1938, with fewer keys to help extended techniques and has a particular sound?

CJ: I suppose if it's achievable on mine, it's achievable on anyone's. I don't always start with my tenor, it might be other instruments. And if I'm looking for a multiphonic I will just look through the book, and look at the harmonies that are produced. I wouldn't even hear

them before I'd decided on some sort of harmony. From that harmony I'll think, well, are there any multiphonics that I could add to this harmony?

KW: Which treatise do you use as a reference for extended techniques such as multiphonics?

CJ: Kientzy [(Kientzy, 1982)].

KW: Do you not ever think of using the Weiss from 2010 (Weiss & Netti, 2010)?

CJ: No, the Kientzy is the book I've always had.

KW: When you're searching for multiphonics, do you try them on the instrument they will be performed on?

CJ: Yeah, yeah.

KW: When you come to writing notation, have you a sound or colour in mind, are you imagining a sound?

CJ: I usually start with a four bar thing, and then whatever that tune or groove is I strip it back to how could I get there. I probably have gone through the [imagining] process to get where I've got. But then I'll think, how can I build it up to that? instead of it being an organic thing, it's probably more formulaic.

KW: Do you use extra-musical ideas, or emotional ideas, and think how you might convey those ideas?

CJ: No, no, no. I don't think I've ever. Or if I do, do that, I don't think music can convey that. It's funny how people listen to my music and tell me they can hear meaning or emotional stuff, that just isn't there. It has nothing to do with that.

KW: Do you think music through notation can convey extra-musical ideas, about life or emotion?

CJ: No, because everyone hears things differently. Everyone has a different story, and a different image in their heads and minds. A lot of it is learnt stuff, like when you hear a major or minor chord, happy and sad. Music for film has a huge effect on peoples' emotions.

KW: Where do your compositional ideas come from usually?

CJ: I'm influenced by what I'm listening to, like that 'Too Many Zoos' thing. I really enjoy listening to that and thinking differently about it. It's so simple what they do, it's quite easy to analyse it as it's going along. So it's influences of other pieces, how I get to what I have.

KW: What's the compositional process for you?

CJ: It's hard that. In *Smudge* I heard something, then get a certain section, a sketch, and you know something is going to happen, there is a momentum, you know what's going to come next. You can hear it, and before you write it down, you can sing it. Then all of a sudden it's off into another section. Which is what you hear in *Smudge*. You hear one little section finish and all of a sudden drops into this other little thing, that's kind of similar but a different idea. The development of material in *Smudge* comes from how you get from one idea to another, how do you build up to it. The other thing is length, how long does the piece have to be? That can dictate how long you can go with an idea. When you need to wrap it up.

KW: The middle section of *Smudge*, to most listeners (and performers) seems to be laden with emotion. How do you explain that, is there any embodied emotion? It's a very quiet section with a soprano saxophone solo under an ensemble drone effect. Completely different to the rest of the work.

CJ: Sarah [Markham] told me to write it [Chris laughs]. She told me to write her a lyrical soprano solo so I did. I think it's influence again, I was influenced by other music I listen to. Gorecki, his Third Symphony. He died recently and he'd finished his Fourth symphony. He was supposed to be at the premier of the symphony, but he died, and they cancelled it. That kind of thing [music] influenced the slow section. I think it's the beginning of his third symphony.

KW: How did you write the slow section, it's so different to the other sections?

CJ: There's no emotion behind it, none. [laughs]. I didn't think in the traditional sense of harmony, it's an aural thing, I see where it should go. It's one of those things where when your piece has got momentum you know what's going to come next. So I kind of sung that melody as I was writing it, and then just wrote it down. And it was more what should come next in my head, me as a listener, that was the main thing I think. Me as a listener, what do I hear next? As I'm listening to that what do I hear next? I can hear if something doesn't sound right, or I can repeat that section again, or I can put two bars in there. And then other things will come out of it, such as your alto line [rising crotchets below the soprano solo]. Probably a similar way to how I wrote the first bit, there's still a lot of repetition in there.

KW: When I hear Sarah Markham playing the soprano solo, and it sounds absolutely beautiful, is that what you've written, or is something else happening?

CJ: I knew Sarah would be playing it so I didn't have to worry too much. I know Sarah's playing and what the potential of the saxophone is, I didn't need to worry too much that when I pressed play in Sibelius [notation software] it sounds horrible. I know that there is going to be that level of emotion from a human playing it that's going to add another layer.

KW: That's interesting, so you as a composer wrote the melody knowing that it has no embodied emotional element or narrative, but you relied on the player to add that layer.

CJ: Yes, and I encouraged that by indicating a slow speed and adding *espress.* on Sarah's part. I try and write things on the music to try and make sure it's as I'm hearing it. Like the gradual speeding up through that section, I put stringendo, in brackets maximum crotchet equals sixty-six. I didn't want it to get out of hand, because that's not what I had in my mind. Some people might read that stringendo and really rush through it.

KW: So you are imagining your composition?

CJ: Yeah. I do hear it as I'm writing it, but for me what I'm hearing kind of already exists, I'm just writing it down, what I'm hearing is... I'm not.... I don't think I'm consciously putting that note there, it's just what is going to happen next, because of the music that's coming up. It's the cognitive thing of what should come next, the expectation of which note should be next.

KW: At the beginning of the process your approach is quite functional, and then there is a period of refinement?

CJ: When I'm putting it together I probably think like that, the build-up to the groove, there is a sense of 'I'll do them four bars'. Then, what do I think should be dropped in next to build it? That little idea should be in so I'll build it next. Then what's the next four bars? It's that whole argument that...hmmm Tom Johnson is it? What's that French guy? One of them argues that only the notes are important, one of them argues that only the sounds are important. It's all about sounds and expectations, so he'll only change a sound if he thinks the listener is ready for that sound change. Instead of thinking, no it needs a change of sound because that's the process.

KW: Which are you?

CJ: I'd like to think I'd take a bit of both. It's like the *Progressive Recognition* piece [an earlier work using a mathematical process for sopranino saxophones], that was an obvious process because I'd written down all the combinations. I had the process, I had the piece, I didn't even need to listen to it, it just existed. When I did listen to it, the listener in me liked a section, and said I want to listen to that again, so I put repeats in.

KW: After hearing the Quirk recording of *Smudge*, is there anything you might change?

CJ: No, I've tried really hard recently to forget about a composition once I've written it. If I was to do anything else it would be a new piece of music. I would leave that as it is and move on.

KW: Any thoughts on the notation in *Smudge*, might you do things differently?

CJ: No, because I think there's always going to be that uncertainty, questions about what that means, and which multiphonic and which fingerings, to get that sound you can hear. Which [type of] slap-tongue is that?

KW: How might that uncertainty be lessened?

CJ: Be more descriptive with words. Performance notes. People play someone's music and it just turns into the norm for that composer doesn't it? At the minute, if a composer is

consistent with their notation and descriptions, it's probably more likely to be [performed] how they hear it.

KW: Do you feel the *Smudge* score is accurate enough to get the performance you wanted?

CJ: I think so, I'm happy with it and I don't think I've had to change too much [during the initial rehearsal period]. Certainly not from a notation point of view. But I don't know whether that's because me as a composer is in that ensemble. If I wasn't there it would have probably been a lot harder.

KW: What are your views on the composer/performer balance of responsibilities?

CJ: It depends on how much they know about that composer's music. If they know the kind of sounds that they [the composer] generally write, then they'll probably have a good idea of how to get those sounds. Or get close to if you couldn't get exactly what was written. It also depends on their [the composer] description of the piece, if you get some sort of composer's notes or whatever. [The notes] might mention what liberties they might give to the performers.

KW: If the composers gave a narrative, should the performers change things to match the narrative, or rely on reading the notation and assume that's enough (how much can they recompose)?

CJ: I think they should be able to change things to match the narrative. If the composer has gone to the trouble of writing that [the narrative] down, then it obviously means something to them. If they didn't write it down then it wouldn't matter.

KW: Any thoughts about what might narrow the gap between the composer and performer?

CJ: The only thing I can think of is more words, description.

KW: You mention words a lot, but never notational changes?

CJ: Words can only be interpreted in a few different ways, whereas notation, the more notation you put on there the more complex it seems. [Resulting in] even more different interpretations of it, potentially. Maybe, influences of that composition should be mentioned,

if you put a little listening list together of pieces that inspired that piece of music. Someone could go away and actually listen.

KW: You're talking from the point of view of a composer that doesn't rely on a narrative basis for his works, how might that work with a composer that relies on a strong narrative? How do you convey a more accurate sound-world if you're trying to show an idea rather than material influenced by your listening? [I gave the example of Stacy Garrop's *Fragmented Spirit*, the given programme notes consist of a dark and moving poem (Garrop, 2008).]

CJ: That's where the words would help. I would be tempted to put it in as plain English as possible [rather than my given example of Garrop's *Fragmented Spirit* prose]. Because again, a piece of poetry, there's another layer of interpretation on there isn't there?

KW: So you're trying to avoid multiple interpretations?

CJ: Yeah.

KW: How do you know the point at which you've achieved the realisation you wanted? You don't work from an initial idea or extra-musical concept, instead working with chunks of sound, development during the process. When do you stop refining?

CJ: If it feels right from a listener's point of view, from hearing it. When we run things through I will know at that point if it's going to work, or needs changing.

KW: Does the recording of *Smudge* by the Quirk quartet cause you to consider future methods of working with notation?

CJ: No, I don't think so.

KW: Is it a two-way process? In our last rehearsal we rearranged [as an ensemble] a section of music, changing pitched sounds to slap-tongue.

CJ: I don't mind that process at all. I'd already expressed a potential problem for me in that area [of the composition].

KW: Even if the instance of a composition having a strong narrative from the composer? In effect a performer making substantial changes, alters the work away from the initial premise that only the composer is fully party to?

CJ: Yeah, for me it is [OK].

KW: Any other thoughts?

CJ: It's interesting thinking of how to interpret your music better, I'd not thought previously, to have a listening list.

KW: When you were performing *Smudge* [in the quartet] did you change your method of playing, or your alter your initial thoughts about your composition?

CJ: No. It [playing in the quartet] probably influenced changes that came about during the rehearsal stage.

Sarah Hind
Baritone saxophonist in the Quirk saxophone quartet.

KW: When we first started rehearsing *Smudge*, what were your initial thoughts about the piece?

SH: The extended techniques didn't present a problem, but I knew keeping the rhythmic drive might be a challenge, because that's obviously what the opening section is [about]. I knew he was listening to 'Too Many Zoos', I was comparing how Leo Pelligrino [the baritone player in 'Too Many Zooz'] plays the bari. Which is not how I play the baritone. I knew he had based *Smudge* on that, so I thought my baritone playing might need a bit more of that.

KW: Are you aware of Chris's method of composing *Smudge*, or the background to the work (apart from the Too Many Zooz influence)?

SH: I already know it's not about anything according to him [the composer]. Because he told me. That's what he always tells me [about his compositions], 'it's not about anything, I just wrote it'.

KW: The slow section sounds as though it's very emotion laden, what are your thoughts on that? Do you think it sounds emotional?

SH: Yes. He might just not know what he was thinking of, it might be a hidden.... I don't think he's specifically told us it's about nothing, he hasn't said: "look guys, remember this [section] is about nothing". Because we've discussed dynamics, and going towards a certain climatic point.

KW: But there's no story or narrative behind that section?

SH: But sometimes emotions don't have a narrative, it's just a feeling.

KW: So why does it sound emotional?

SH: Because it's more lyrical, and Sarah [Markham] plays it so beautifully. It's slow and quiet, it must be emotional. With the rhythmic stuff it's more mechanical isn't it? With the change between the 6/8 and the 4/4, and you do have the colours from the different techniques. Whereas in the middle section it's more vocal. So you're thinking of colours in terms of vibrato.

KW: Apparently the middle slow section has no emotional content, Chris states that there is none, so the emotions you are hearing are not intended, what are your thoughts on that?

SH: Chris didn't write anything about vibrato, we've added things to that section ourselves.

KW: Let's be cynical for a moment. Chris wrote a slow section, without any embodied narrative, put the direction '*espress*.', and in a way 'unleashed' the force that is the player Sarah Markham, knowing it would result in a beautiful emotional performance. What do you think?

SH: Yes. hmmm. Would I like him to have a narrative? No, because I can make up my own so it doesn't matter. I can feed off what she [Sarah Markham] is putting into the melody.

KW: Is that how you approach all music, using your own metaphors and narratives?

SH: Sometimes I do, I'll make up my own words to the melody. I think there is this notion of a romantic composer, tortured soul. But there's also beauty in process isn't there?

KW: If a composer had a narrative, would it be important?

SH: I think sometimes it's helpful to know, for instance in Shostakovich.

KW: Could it be essential that you try and find out what the composer has imagined?

SH: I don't know if it is,... no, I don't think I've always researched every piece that I've played. So maybe every piece of music I've played up until now has been ****!. Because I don't know what the composer wanted.

KW: The composer might no longer be living to ask?

SH: Yeah, and how do you know what they wrote down was true anyway. He [Chris Jolly] could have said to you [about the slow middle section] "Oh yeah, I was thinking about this time when duh duh duh...", and he could have been lying.

KW: Yes, but everybody could be lying, at some point don't you have to trust what people say?

SH: I don't know. Yeah, I agree that you should probably always try and find out, I know that I haven't, so I don't know if I can say that it's essential.

KW: So as a performer, you tend to rely solely on the score?

SH: Well and having heard lots of other music. Hearing other people play, that you think play convincingly.

KW: How do you process notation, for instance in the Quirk quartet, that is put in front of you?

SH: I don't know, it depends what the music is. In *Smudge* I literally react to Sarah [Markham] in that middle section.

KW: What are your views on notation, is precision by the performer important?

SH: In terms of articulation and things?

KW: Let's assume that the basic elements of notation can be executed well, is there anything beyond the notation?

SH: Notation can't express a tonal colour can it, in basic notation? So, no, I have my own decisions about that. Going through the process of trying different things helps you even if you don't know what the composer's intentions are. To make your own emotional decisions. When I play a melody I might be inclined to be really over the top with things sometimes. Going through a process of trying different ways might be more musical or emotionally satisfying, rather than playing it in a less dramatic way.

KW: That's your satisfaction, from your point of view, not the composers?

SH: I can't guarantee anyone else's satisfaction.

KW: What about the composer's satisfaction, their intent, the composition wouldn't exist without them?

SH: I wouldn't play something in a different way to what the composer would want, or I would try not to, but I always work on the assumption that the composer won't have any idea that I've played it. It's quite interesting with Chris there [the composer], because he'll say 'oh yeah, that is what I wanted'. Then you have more of an idea of if you are satisfying the composer's needs.

KW: Do you think a composition is autonomous, and the notation provides everything you need to perform the work, it has its own life, you don't need the composer?

SH: I think that's what happens isn't it? Once you've written it, and you've let go of it, as a composer you've said I've put as much information in there as I can, and now it's to be played. In the same way as in a [theatrical] play there could be an ambiguous line, and it's the actor's or director's decision as to where they emphasise that, and it could have a different meaning, it could be not quite how it had been written. That's interpretation isn't it?

KW: What would help you narrow the gap between composer intent and the realisation by the performer?

SH: Having a preface to the composition. I could make more of an effort probably to research things.

KW: But you might not have the time, or the resources might not exist, what in that situation?

SH: More description, with extended techniques especially. What the intended sound is. Not just the direction and how to play it, because that might not work on my saxophone. But if you know, oh ok, that slap-tongue needs to have a tone to it, or something, then you can start to work with that. I don't know if I'd want things dictated.

KW: So you might not like more prescription?

SH: I think I would find that stressful, because I'm quite negative, and I would think I won't be able to do it how it's meant to be. There are so many specifics to that [notation]. Is it a failure for me to play it and not manage to do all that? Because I can't do what they've asked me to do?

KW: Aren't you doing something far more complex at the moment, in a way re-composing works that you perform? Wouldn't it feel more secure and a little easier if the notation gave you more indication of what was expected? [I again gave the example of *Fragmented Spirit* by Stacy Garrop]

SH: In some pieces more word descriptions would help.

KW: What do you feel about a composer having an extra-musical ideal and communicating that through notation, is it possible?

SH: You listen to some music and relate it to what you might feel. I don't compose but if I did, that's how I would approach it.

KW: How does that correlate to your earlier comments, that you usually rely on the notation rather than research what the composer intended. As you say, if you composed, you would want to express ideas?

SH: When I say I don't think about it, I am thinking in terms of emotion, I'm always trying to convey something.

KW: What happens in the situation that you might unintentionally subvert what the composer's intension were?

SH: Well something in the score should make sure that I don't do that. If it's imperative to the composer that it has to be portrayed in that exact way then it needs to be explicit in the score. But then also, I just think why don't they just record it then and be done with it? But you have to have some distance, even if you said to me exactly how you felt, I can't comprehend it because I've got different history.

KW: What could be done with the score to narrow the gap between composer and performer?

SH: Something to set the scene, similar to a stage direction. I don't know... comments on the sort of sounds that you're looking for, the extremities of the dynamics, because *forte* doesn't mean *forte*, it's not a level, so maybe tell us in decibels.

Sarah Markham
Soprano saxophonist in the Quirk saxophone quartet

KW: Did you find any issues with *Smudge*?

SM: Yes, the second multiphonic in the opening section wasn't an easy choice on a soprano saxophone, also, use of slap-tongue in certain parts of the register on a soprano presents its own challenges. Slap-tongue is more difficult on the soprano than the other larger members of the saxophone family because of the size of the reed, mouthpiece, and tube.

KW: Did you overcome the multiphonic issue?

SM: I practised it. He [the composer] said it didn't matter what I did as it was an effect, I could change it, and so I suggested a multiphonic that might work better.

KW: Chris [the composer] said that the multiphonics fell into two types, percussive or harmonic. Were you aware of which type of multiphonic you were playing?

SM: No, in fact, if he'd have told me that I would have played it differently and there would have been no need to change it. Because now you've told me that, it feels more like a percussive sound that is a constant, like a rumble.

KW: Do you think there might be a lack of information in the score?

SM: It's just knowing what the composer is asking for.

KW: What do you think about the piece having no narrative, that it's based on a four bar grove?

SM: I don't think I work like that. If I like a piece I assume that there is something to it. The fact that he says it has no premise I would choose to not believe, because there could be a sub-conscious element at work. There is a reason why he's written it, even if he doesn't know why.

KW: Even though he states there isn't a premise, he based *Smudge* on music he like to listen to?

SM: Just because of the very fact he's choosing material to copy, there's got to be something there because he's human. I would always make the assumption that there is something there.

KW: Would it change the way you felt about a piece if there was no premise or narrative?

SM: I would just choose to disbelieve that.

KW: Did the notation give you all the information you needed?

SM: Yes, but there were errors in the score, and there are still errors in the score. I felt comfortable with my interpretation based on what I saw. Until you revealed the information about the types of multiphonic. I talked to Chris [the composer] about anything in the notation that needed clarifying, and the conversation has ended, and he is happy with his piece. Although, the conversation didn't go much beyond 'do you really mean that note?'. He probably needed to express more clearly what he intended with the multiphonics. He kept saying the multiphonic in my part needed to be soft, but that particular multiphonic does not lend itself to a low dynamic range. If he'd have said it was percussive, I would

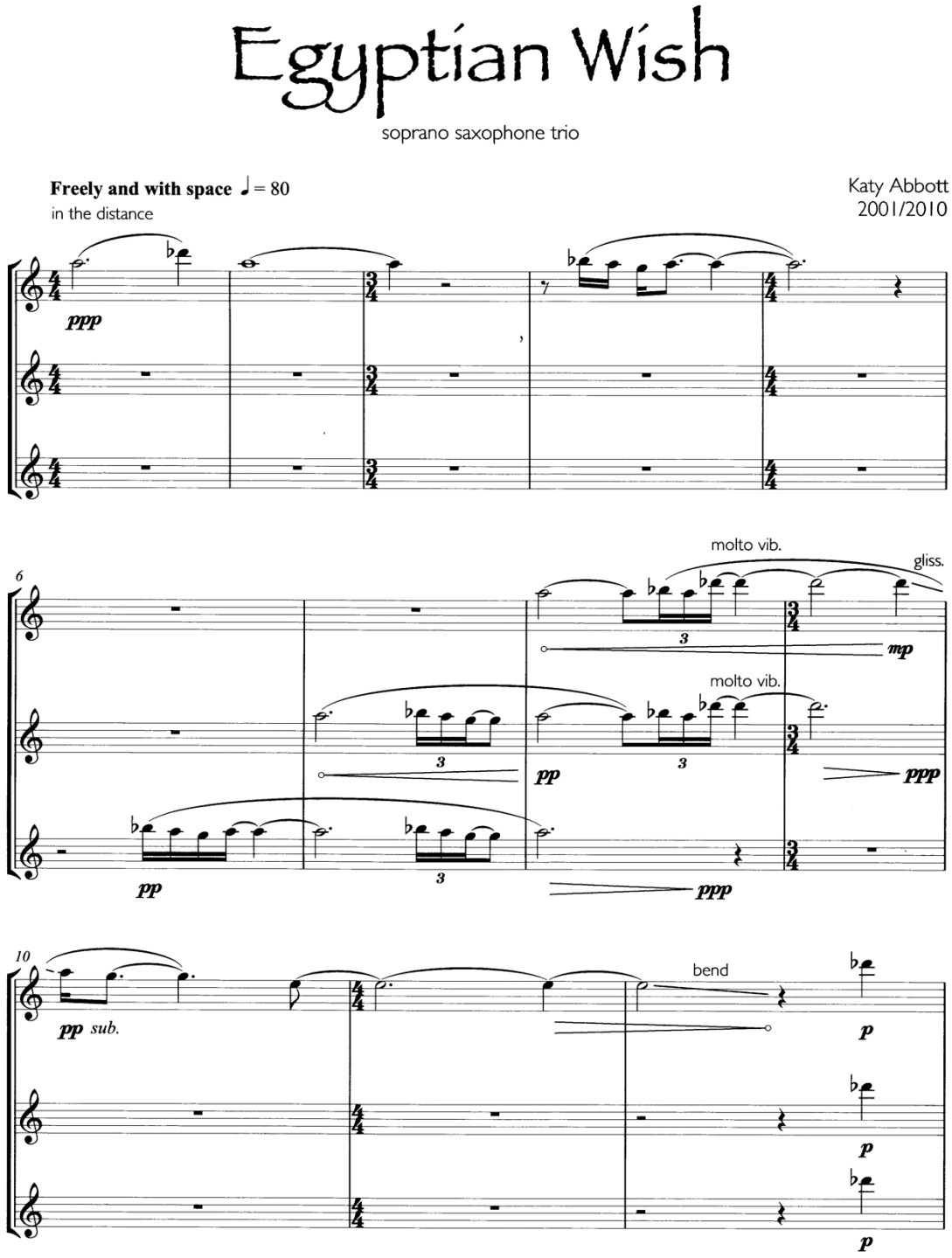
have known, and played it slightly differently to get the effect he wanted. He kept saying the pitches didn't matter, he kept telling me what wasn't a problem instead of what he actually wanted. Perhaps more prescribed notation would have made it more clear to me what he imagined.

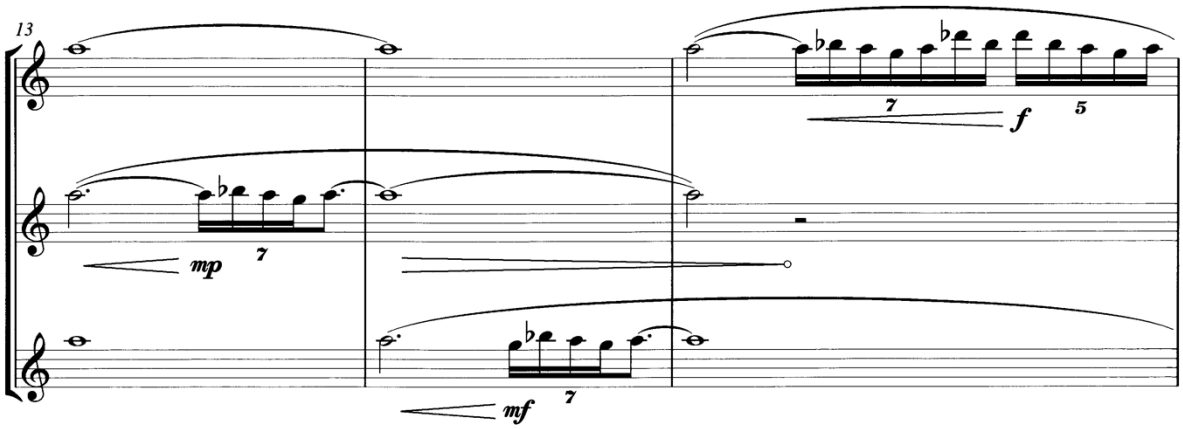
KW: So, you prefer compositions with a narrative or story?

SM: Every piece has a narrative with my way of thinking.

Appendix 5: Scores

Egyptian Wish – Katy Abbott

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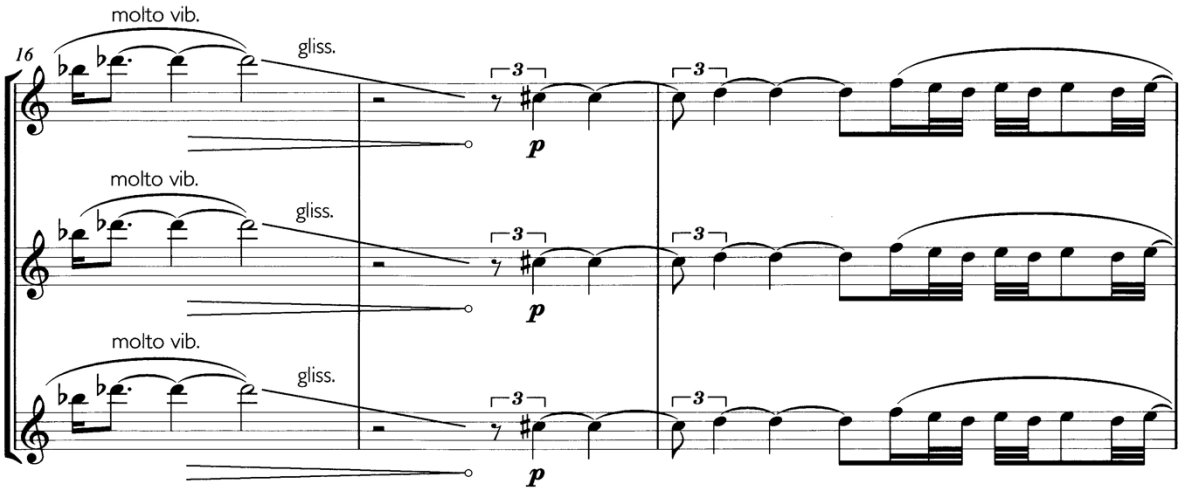
7
mf
7
f
7
5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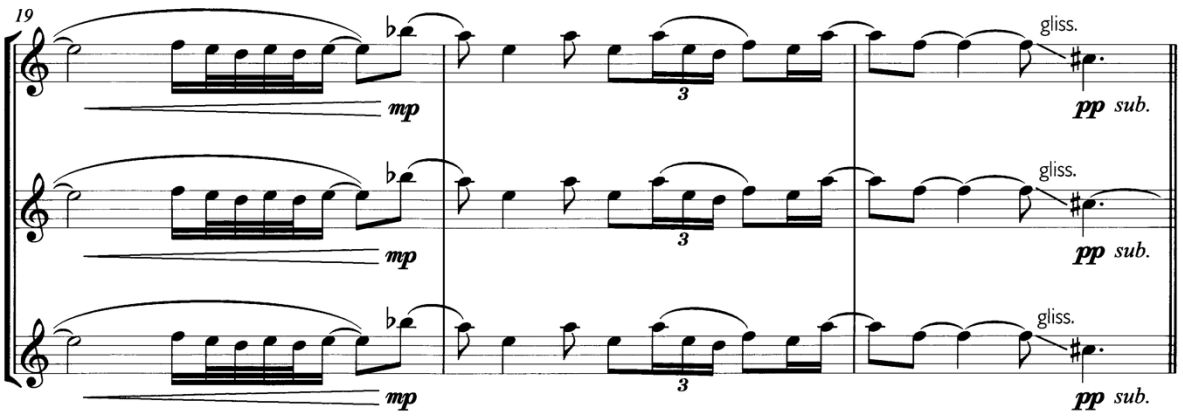
gliss.
molto vib.
gliss.
molto vib.
gliss.
3
p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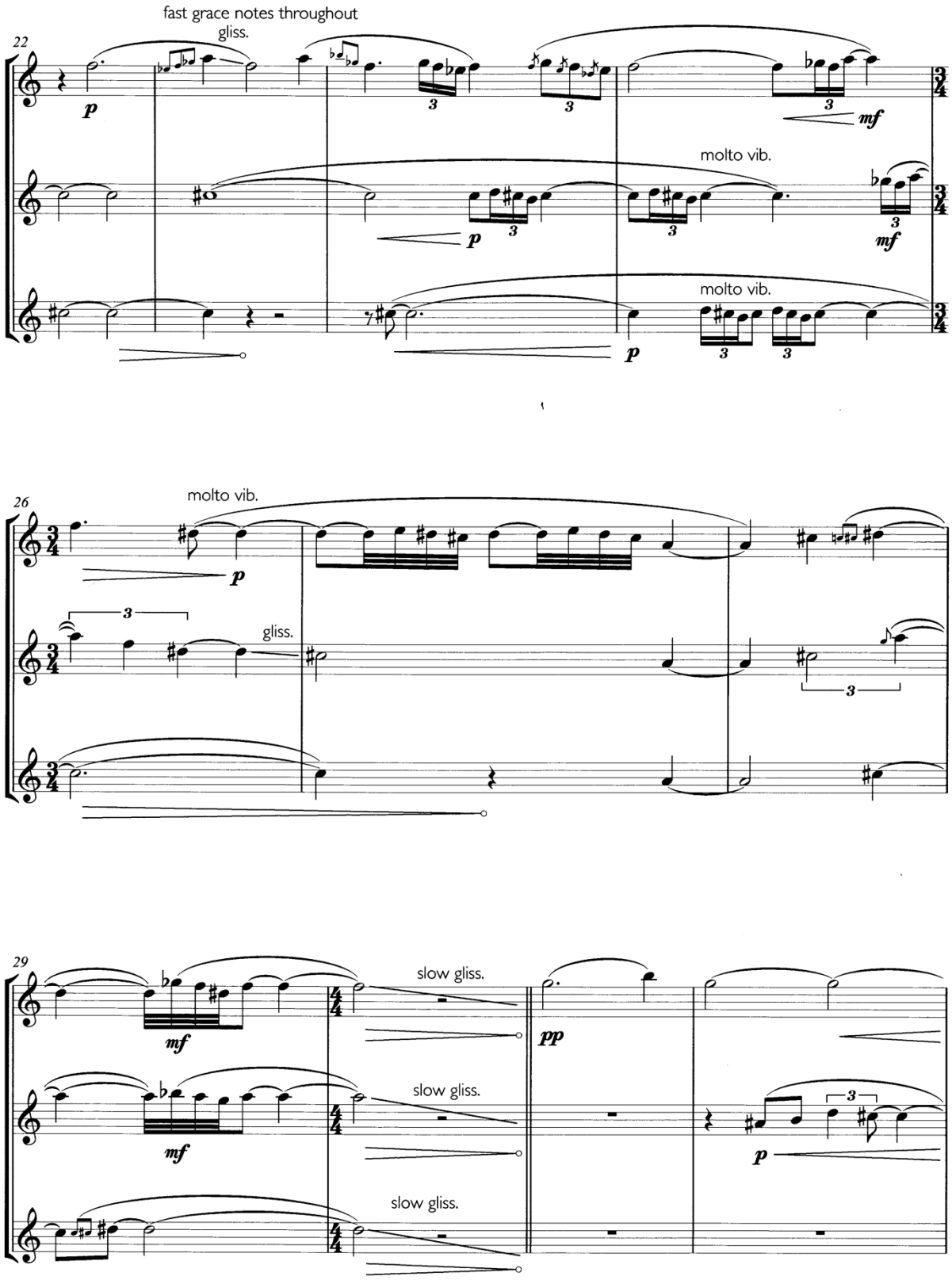
mp
3
gliss.
pp sub.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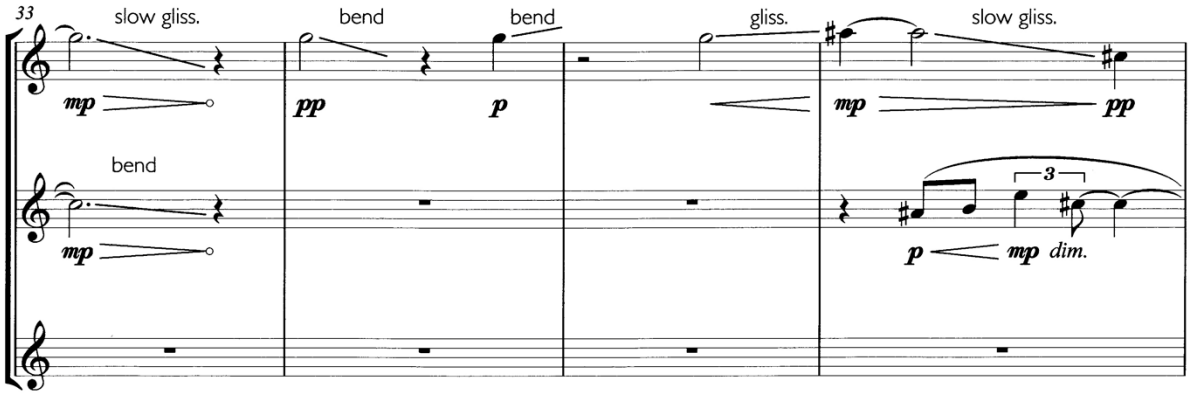
fast grace notes throughout
gliss.
molto vib.
molto vib.
26
molto vib.
gliss.
29
slow gliss.
slow gliss.
slow gliss.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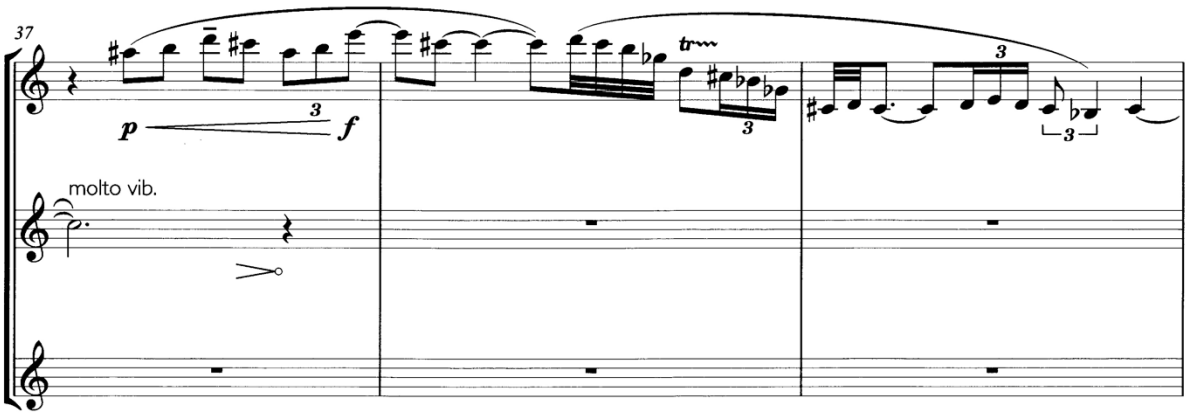
slow gliss.
bend
bend
gliss.
slow gliss.
mp
pp
p
mp
pp
bend
mp
3
p
mp dim.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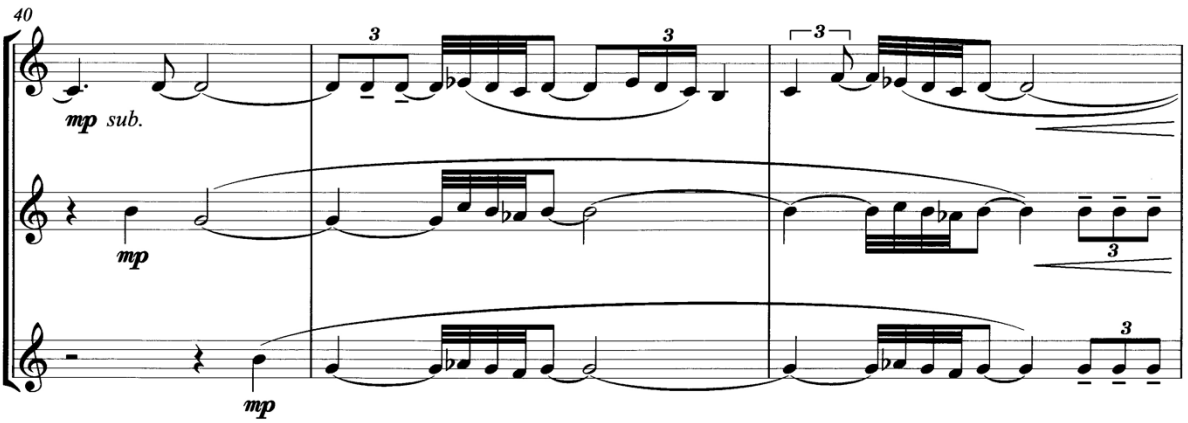
p
3
f
tr
3
3
3
molto vib.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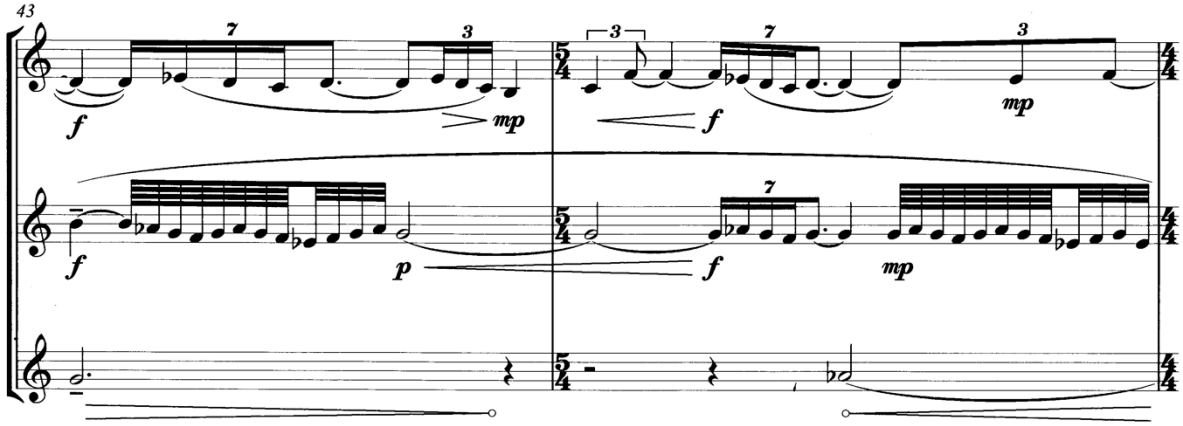
3
3
3
mp sub.
mp
3
3
mp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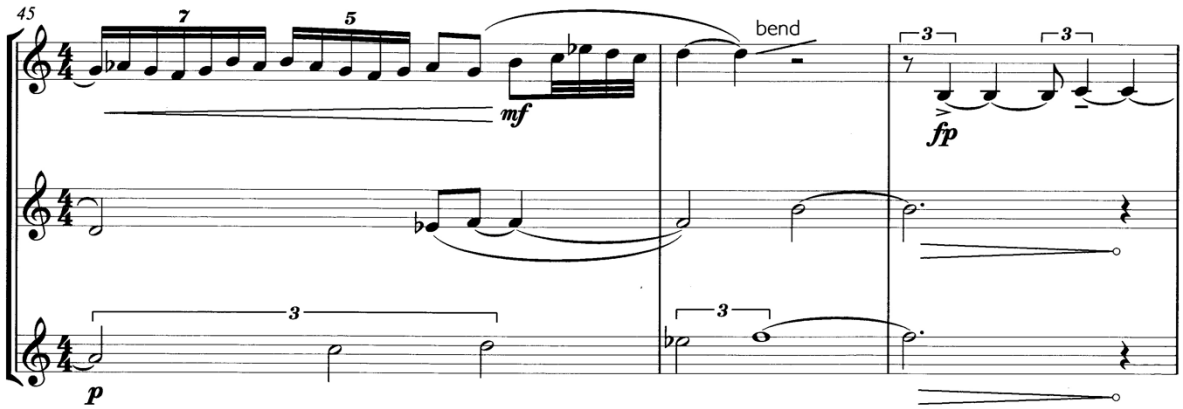
f
mp
f
mp
f
p
f
mp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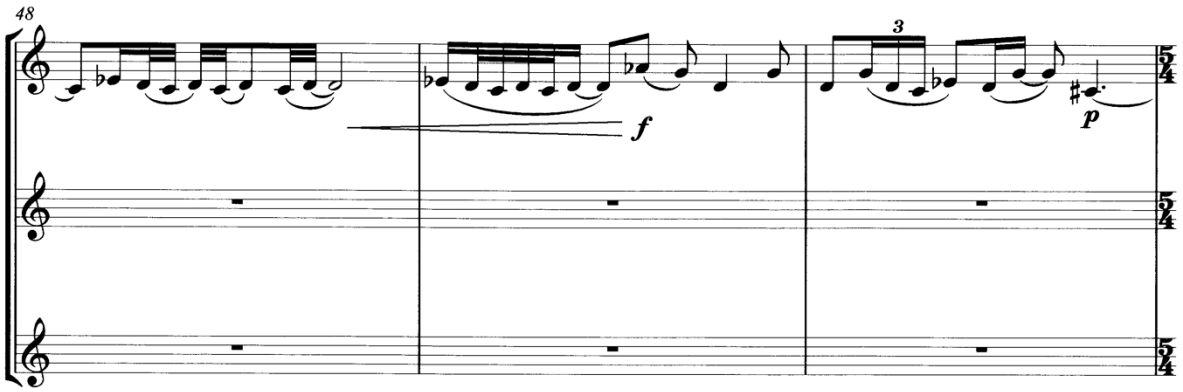
mf
bend
fp
p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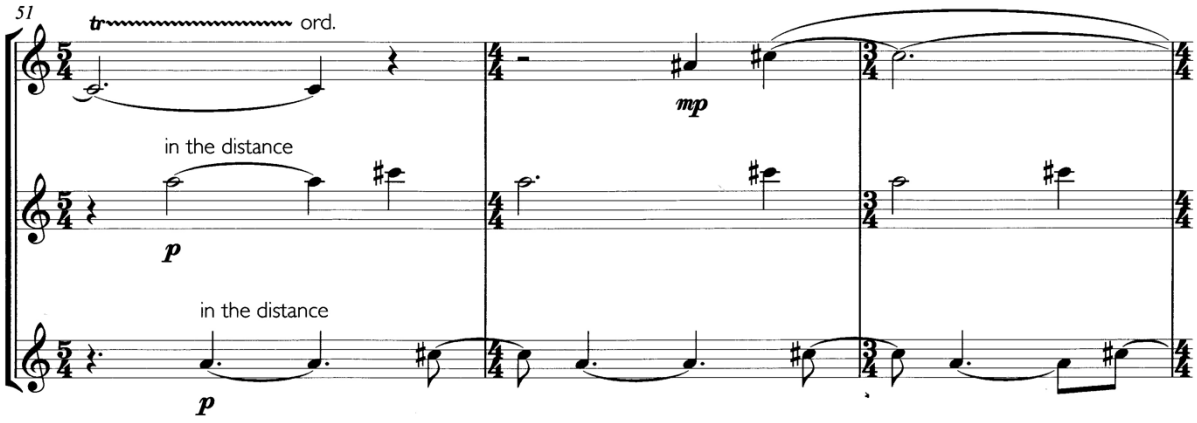
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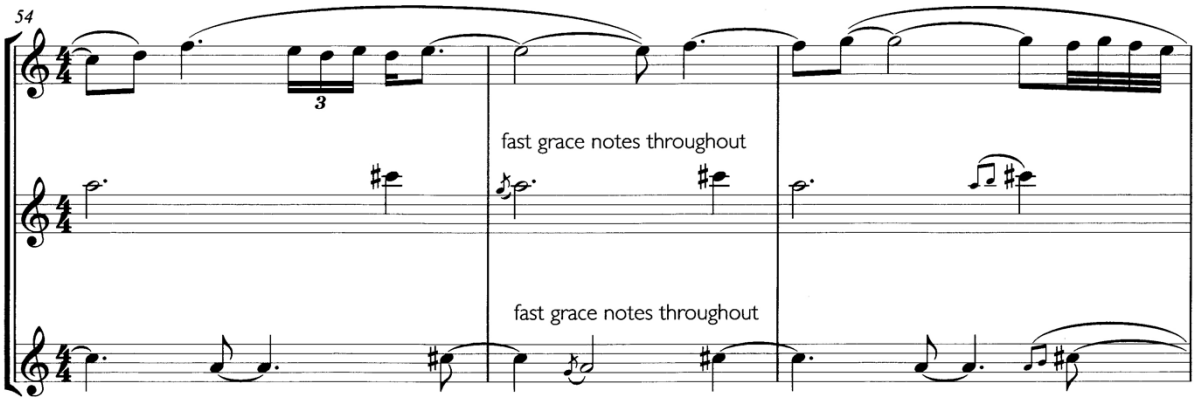
tr
ord.
mp
in the distance
p
in the distance
p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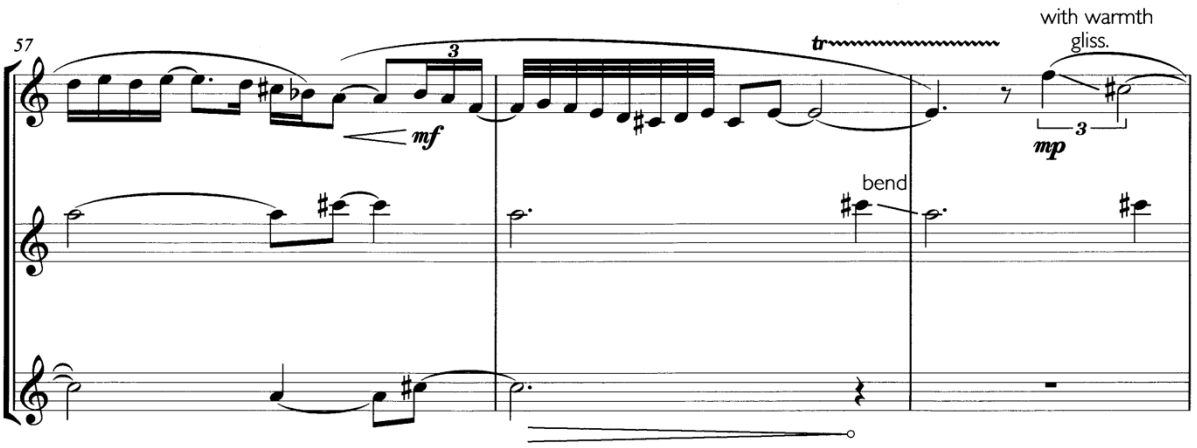
3
fast grace notes throughout
fast grace notes throughout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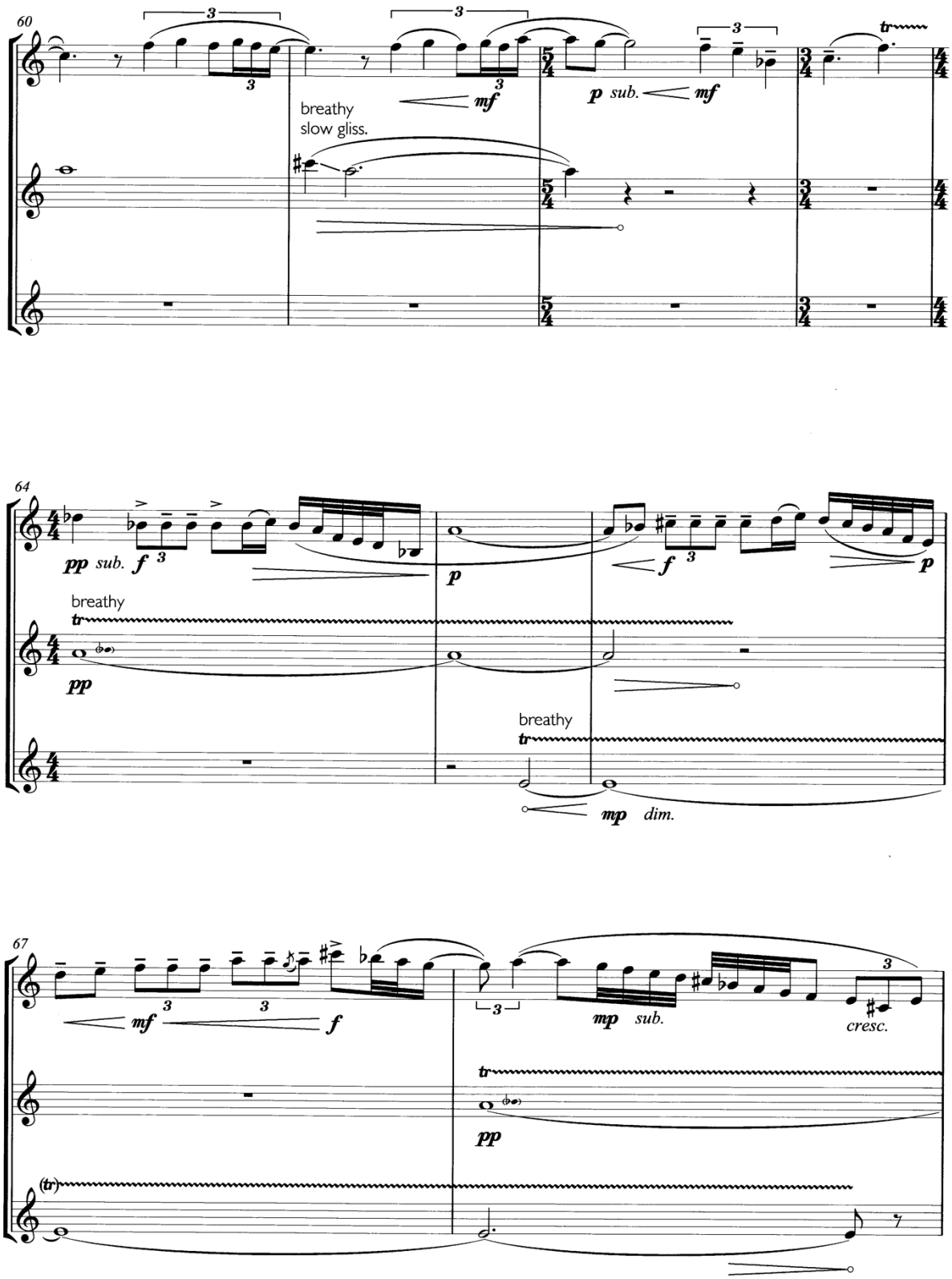
mf
tr
with warmth
gliss.
3
mp
bend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mf
64
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pp
breathy
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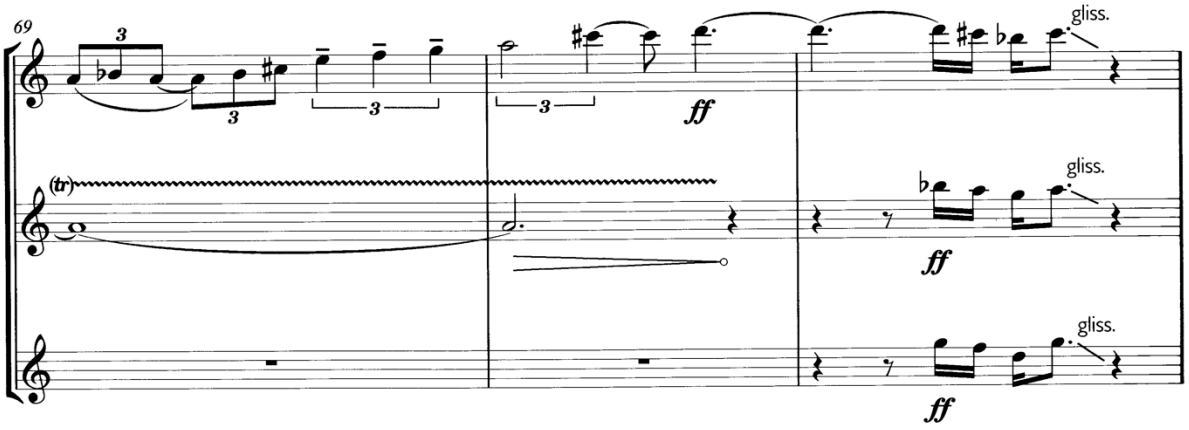
67
mf
f
mp sub.
cresc.
pp
(tr)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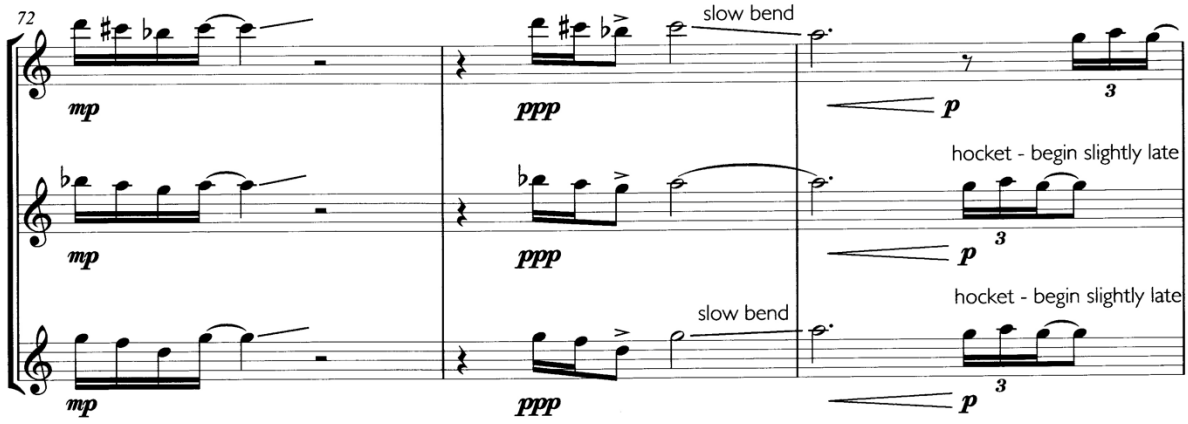
gliss.
gliss.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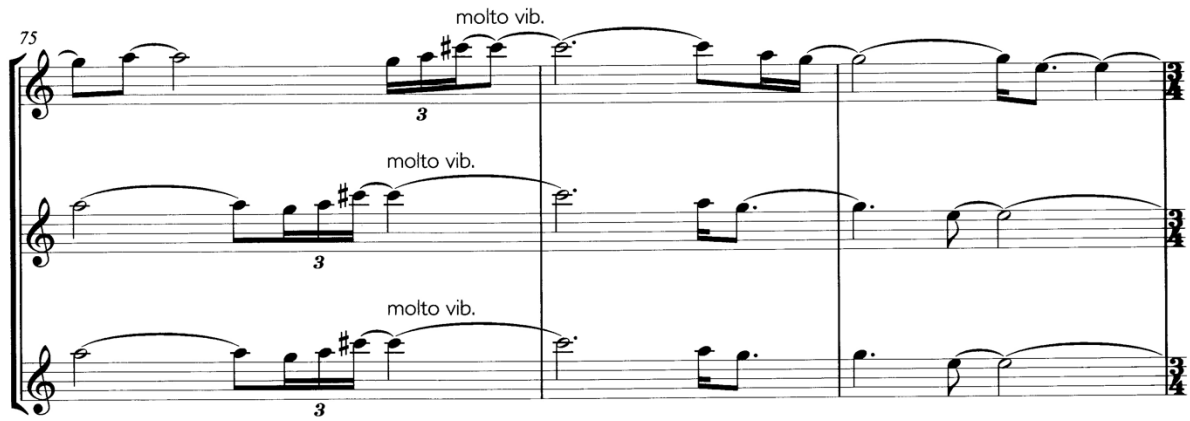
mp
ppp
p
slow bend
hocket - begin slightly late
slow bend
hocket - begin slightly late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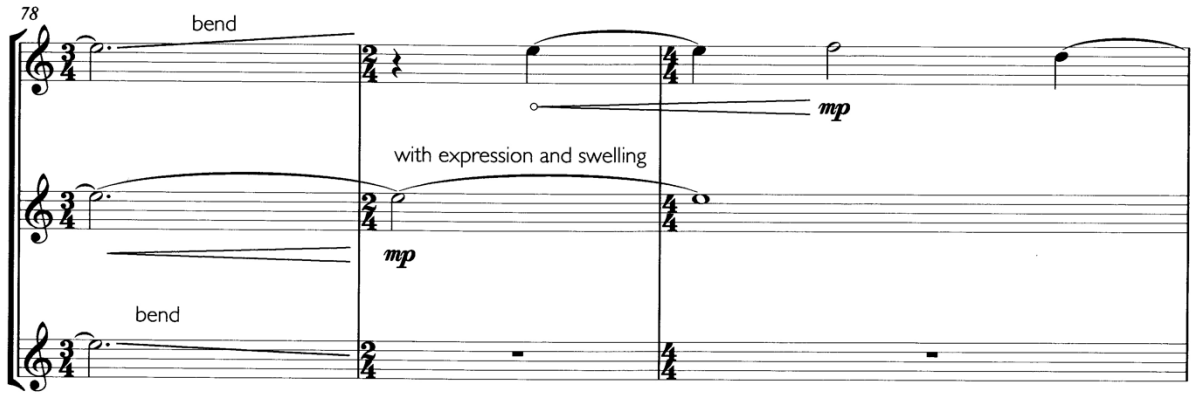
molto vib.
molto vib.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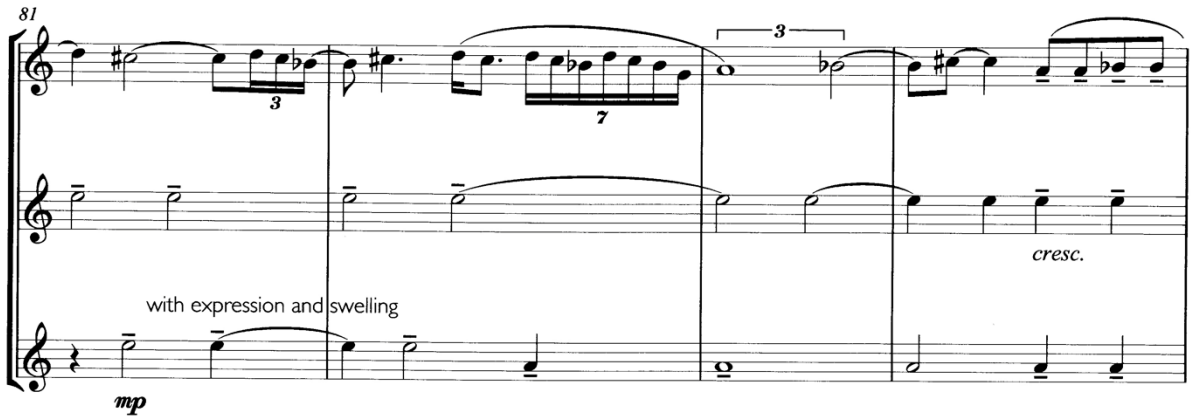
bend
mp
with expression and swelling
mp
bend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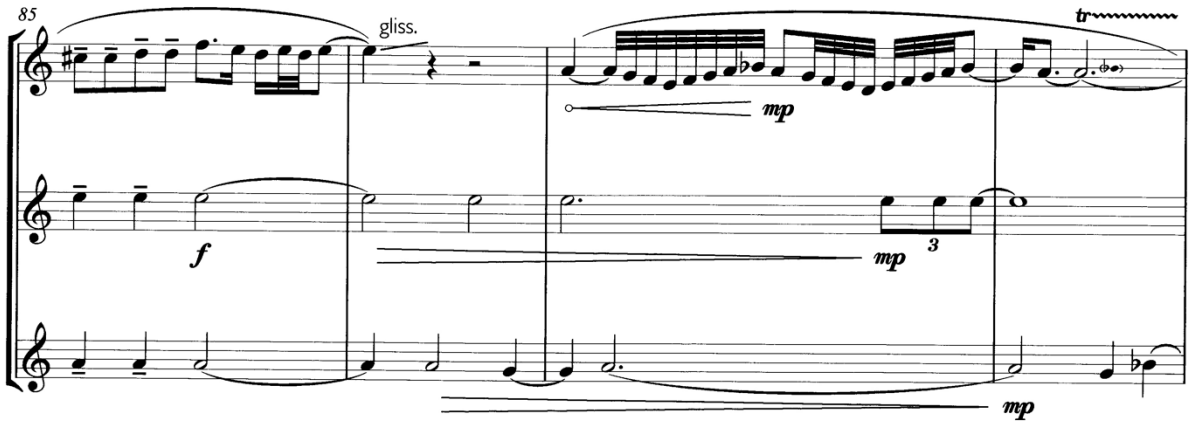
3
3
7
cresc.
with expression and swelling
mp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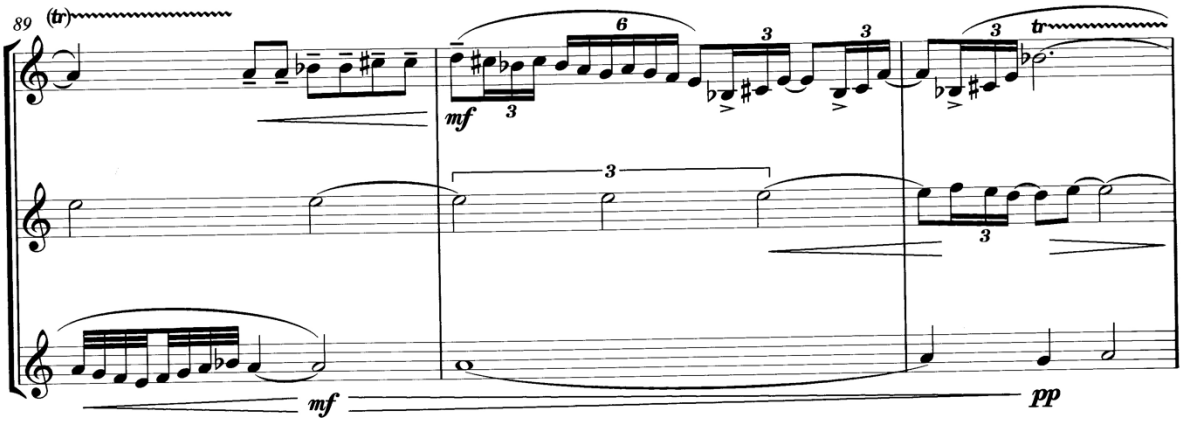
3
mp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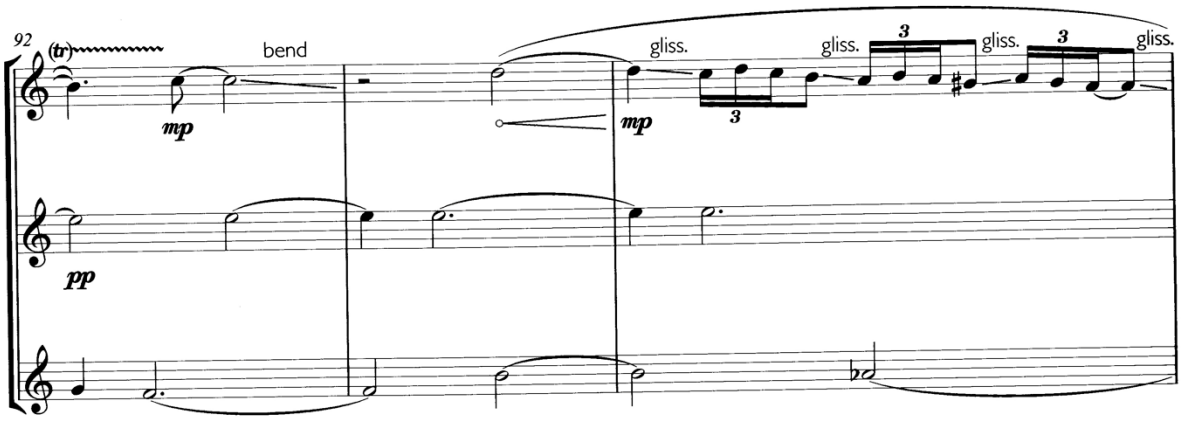
mf
pp
tr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bend
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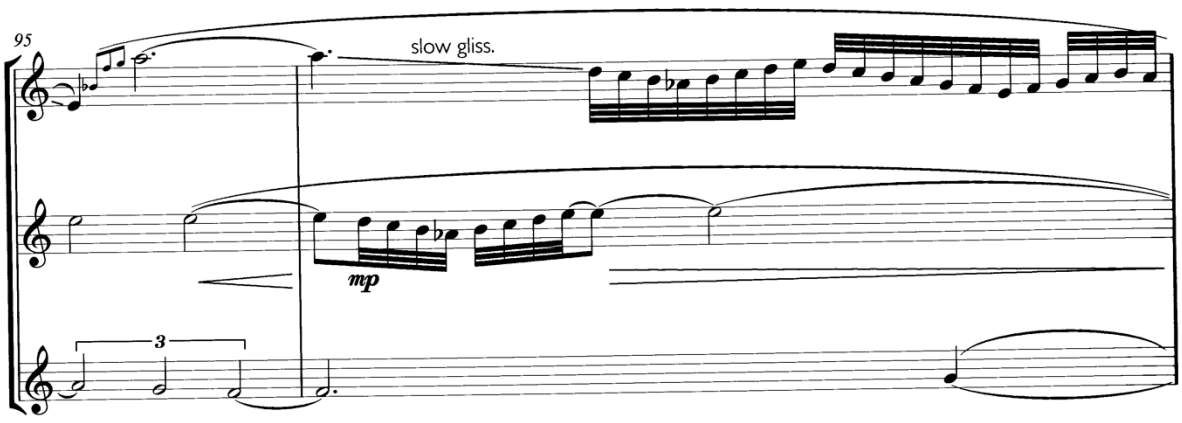
gliss.
gliss.
gliss.
mp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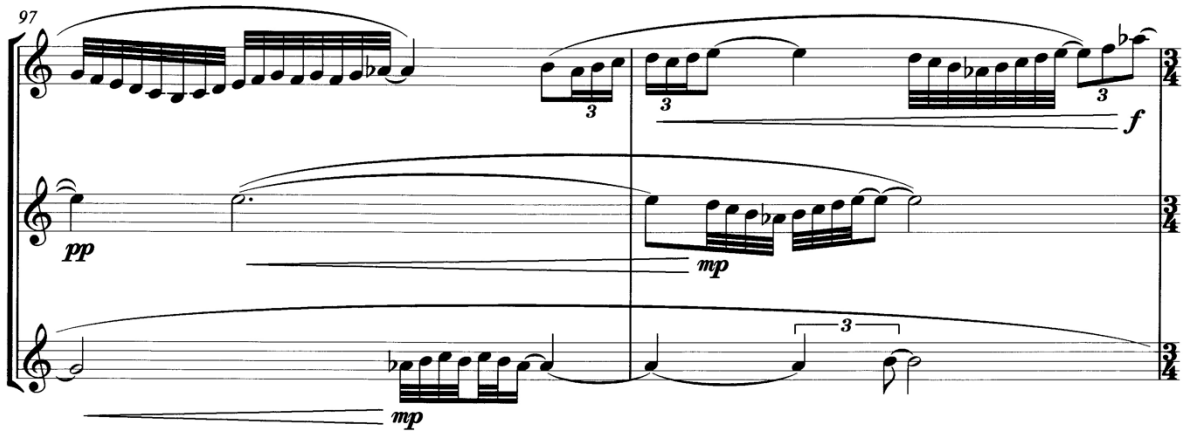
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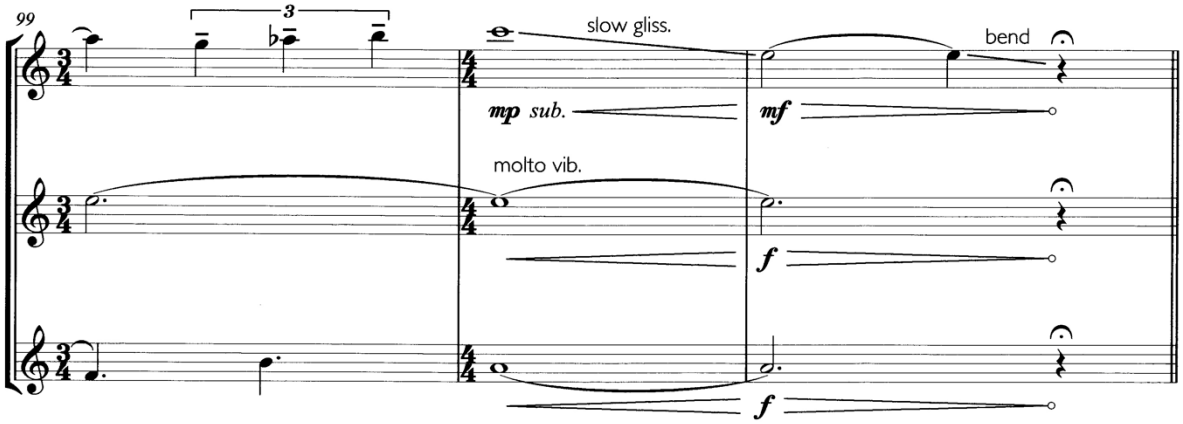
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bend
mp sub.
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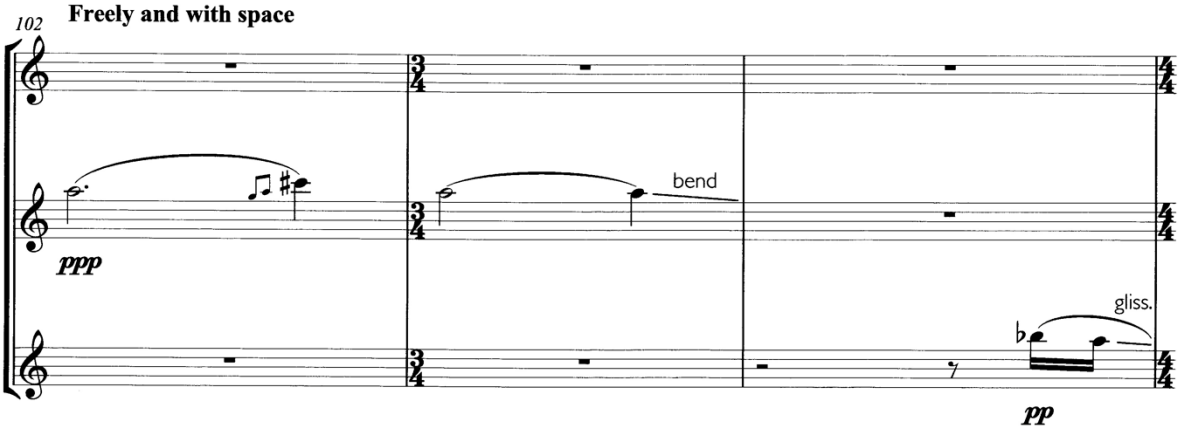
molto vib.
f
f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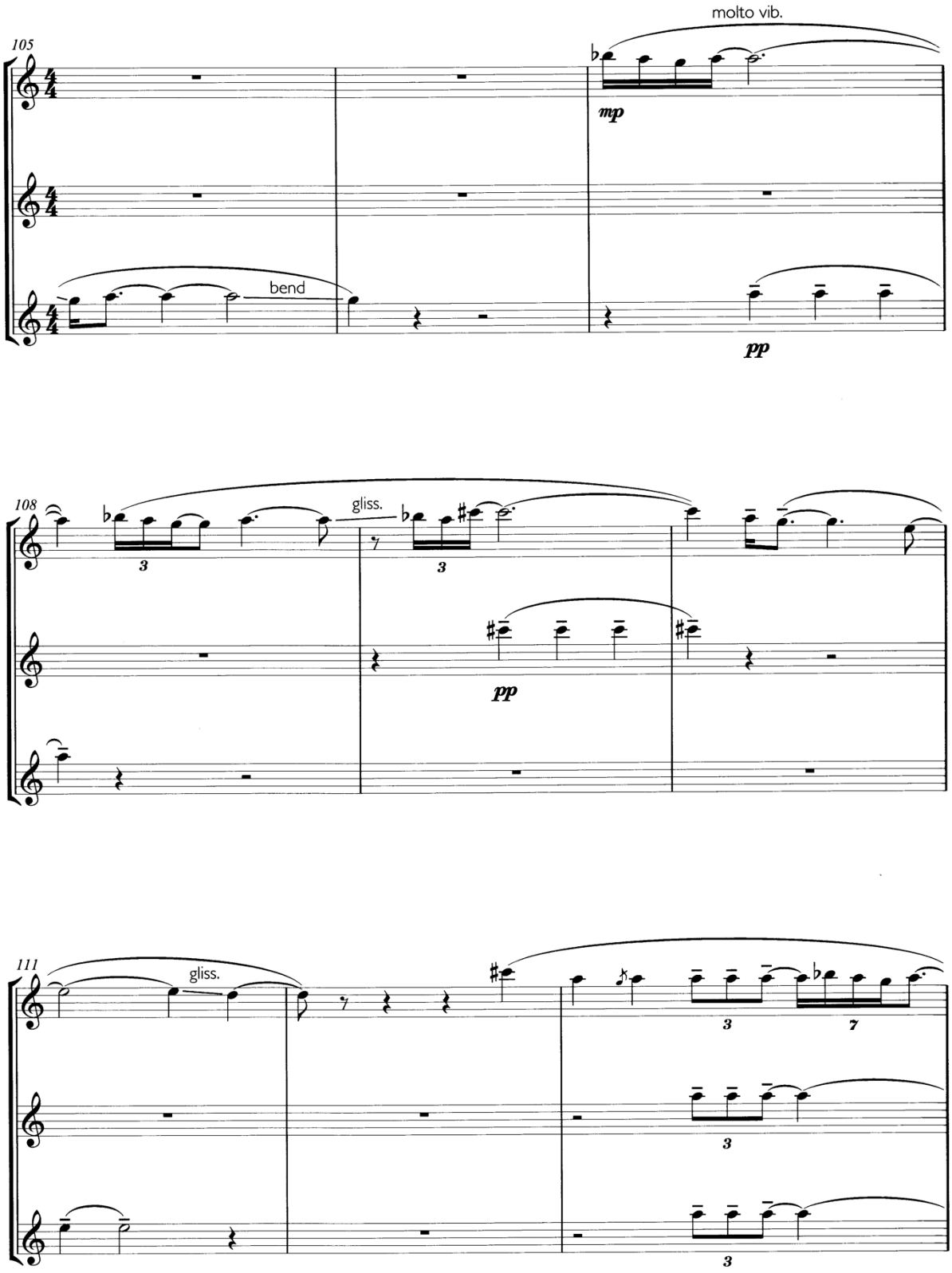
Freely and with space
bend
ppp
gliss.
pp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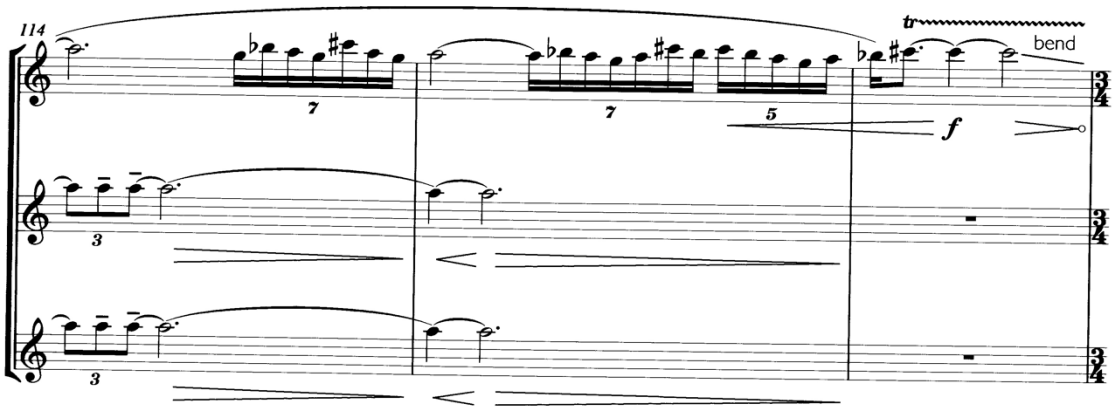
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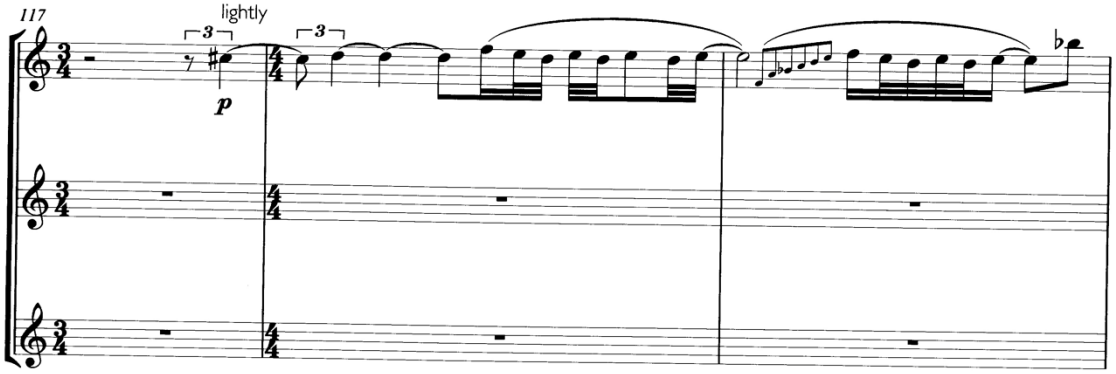
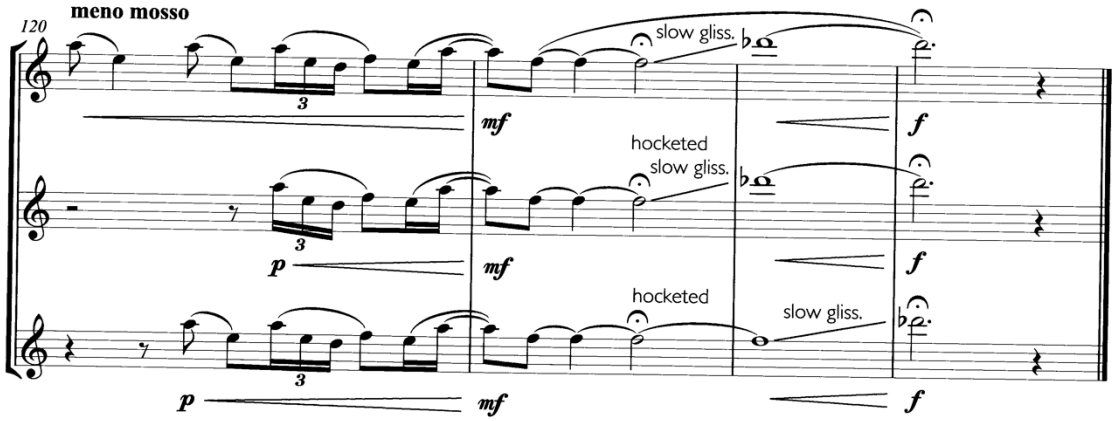
bend
f


117
lightly
p


120
meno mosso
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A few words from Chris Jolly:

Smudge was written for Quirk Saxophone Quartet and their performance at the World Saxophone Congress in Zagreb, Croatia. As in much of my work, the relentless groove and hooks are present almost all the way through this work, giving way briefly to a calmer middle section that is dominated by a soprano melody. The use of extended techniques throughout should always be a positive addition to the textures created. If there is a similar sound or a sound that is better suited to a group's interpretation they should always be used over ones that are marked. If there are any questions about the extended techniques I would be more than happy to answer them personally – contact me through my website – www.chrisjolly.com.

C. Jolly, March 2018

Chris has built a varied career in all areas of music. He has worked across the UK as a saxophonist with the Quirk Saxophone Quartet, the Equinox Saxophone Ensemble, and as part of his own jazz quintet. He also enjoys performing regularly with numerous function bands based in the North of England. In addition, Chris has performed at the last four World Saxophone Congresses and has composed works performed at the Congress in St Andrew's, Scotland and Zagreb, Croatia. He has had many compositions and arrangements published, which have been used as educational tools and as part of an advanced ensembles' repertoire. Chris is also passionate about music education, recently taking on a leading role at Tameside Music Service where he both delivers and promotes excellent quality music tuition for everyone in the community. Adding to the breadth of his experience in education, he is also visiting saxophone tutor at Keele University.

I have always tried to ensure I follow a simple rule in the creative process – to play music I enjoy listening to and listen to music I enjoy playing. I have found that this then feeds in to my own composition with more successful results. I enjoy writing my music more if I am enjoying my inspiration, it is a positive cycle to be in. My hope is that others then enjoy playing my music more and share my enjoyment of the creative process. Above all else you must have fun playing my music.

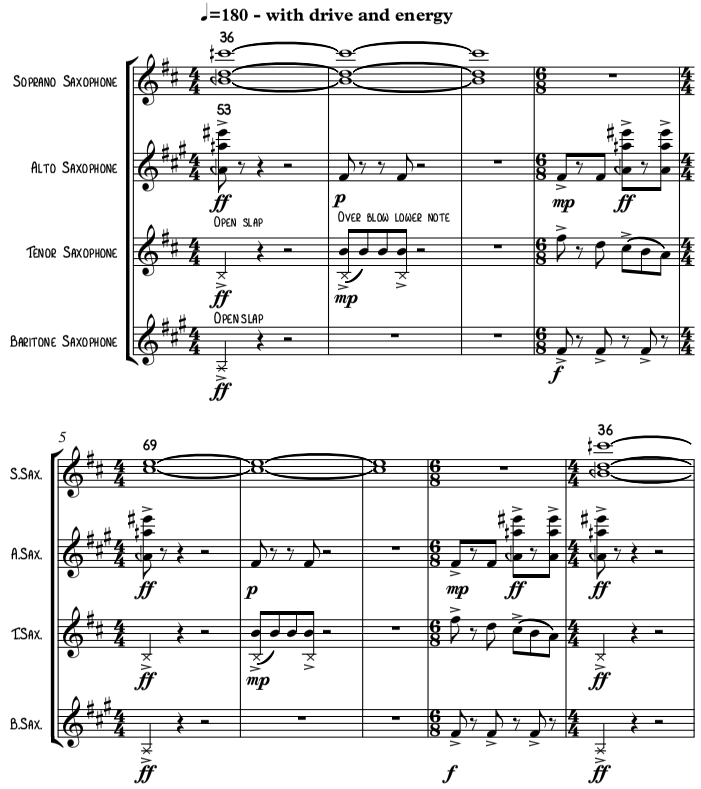
Also Available:

TRIp – trio for alto saxophone, bass clarinet/baritone saxophone and piano
Twisted Feather – for solo alto saxophone, loop and effects pedal
Bonk! – duet for 2 bass clarinets or 2 baritone saxophones

SMUDGE

for Quirk

By Chris Jolly



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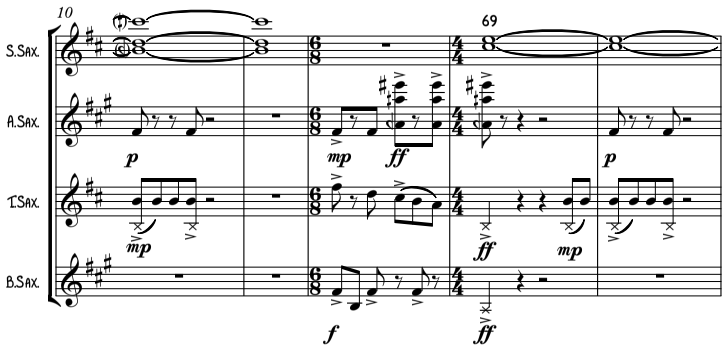

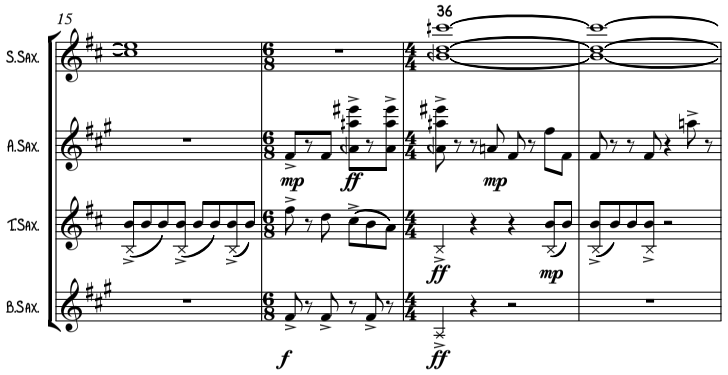

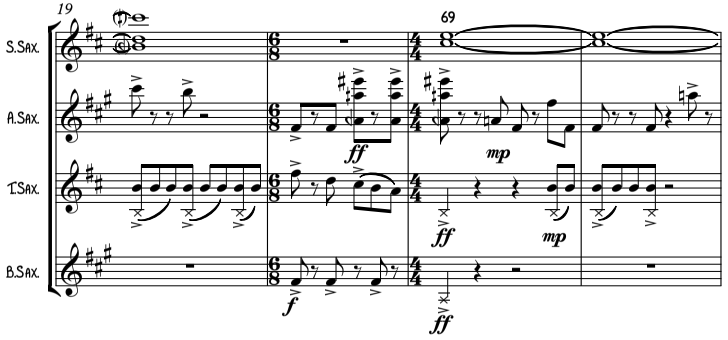

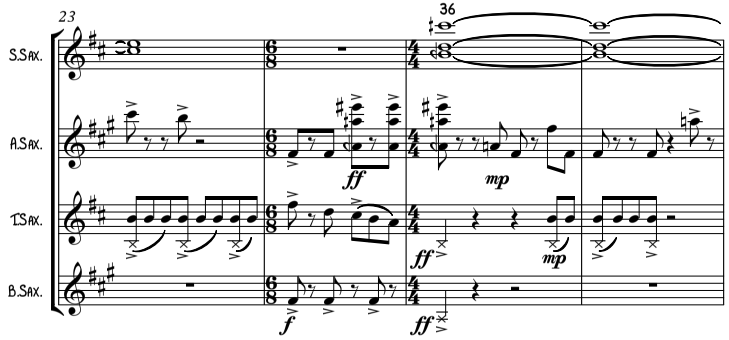

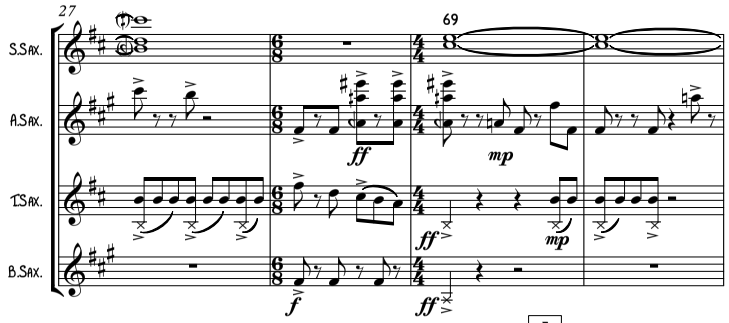

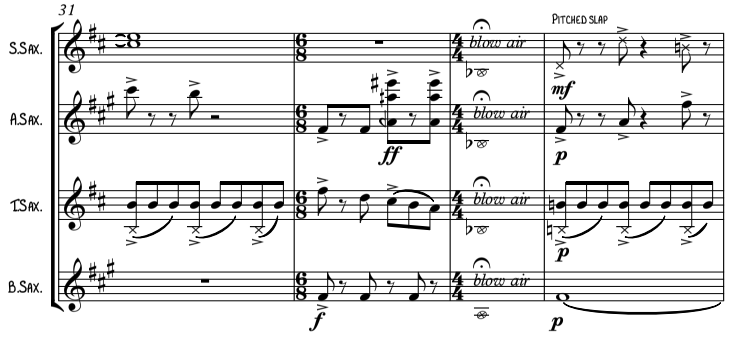

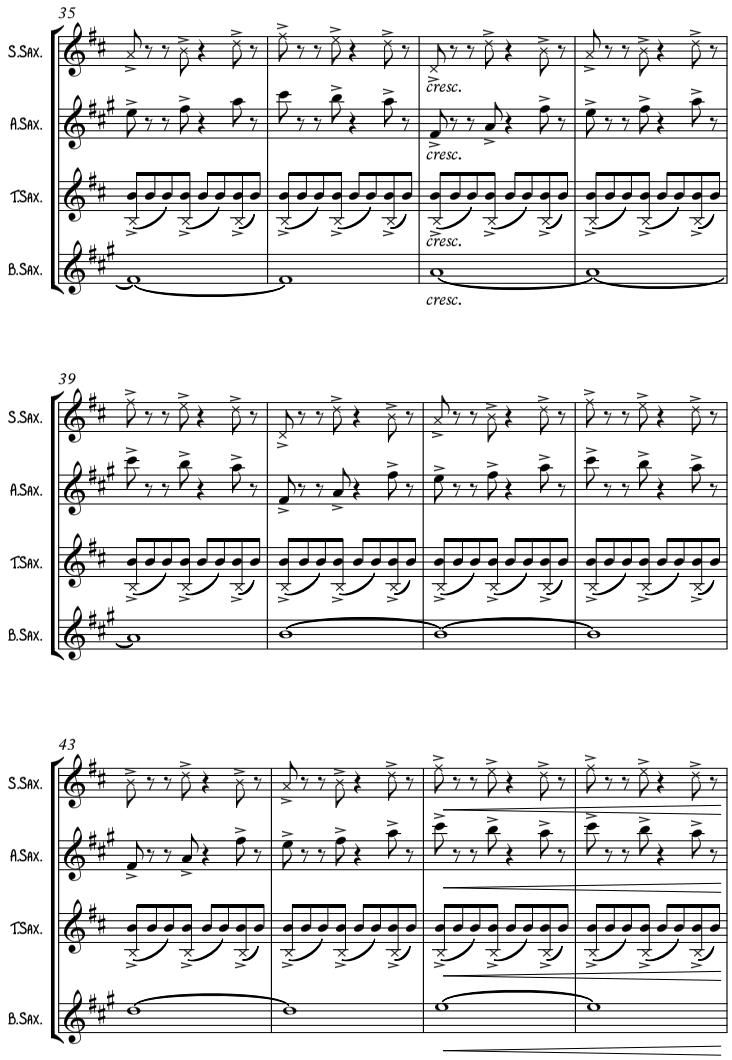

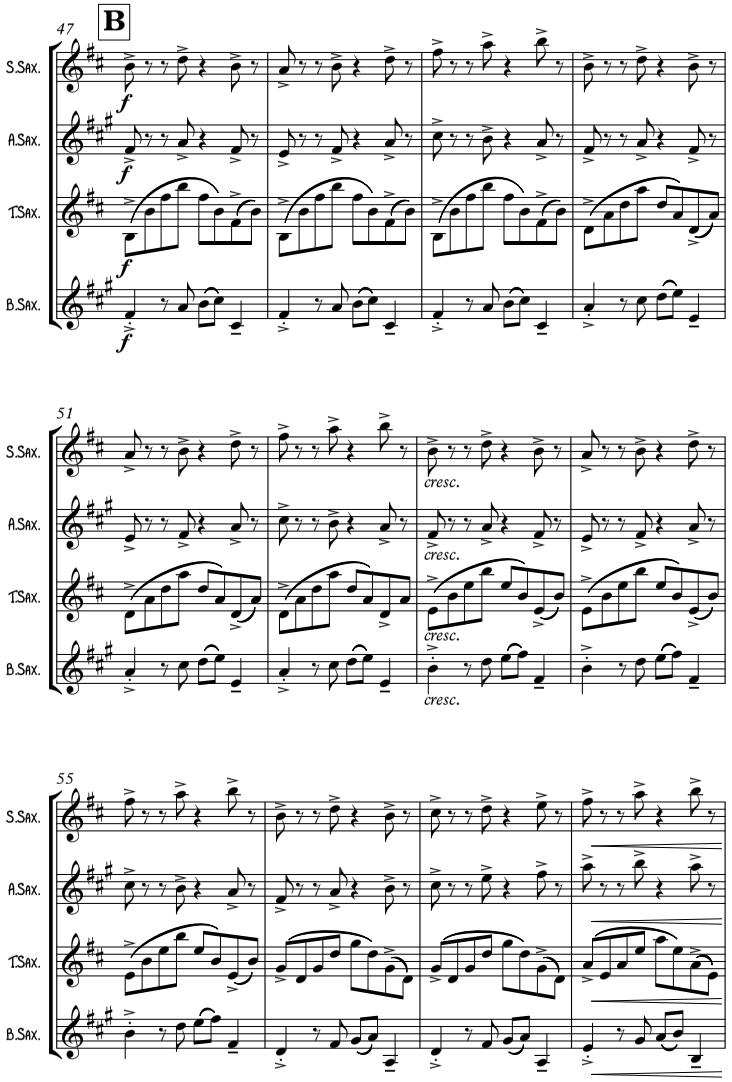

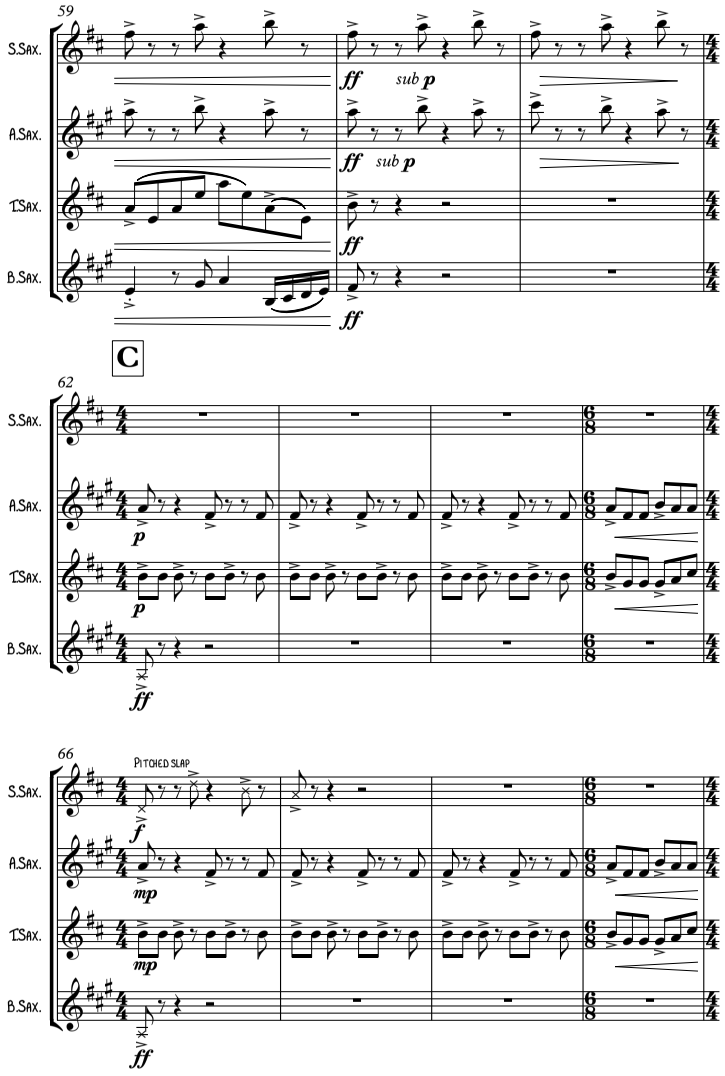

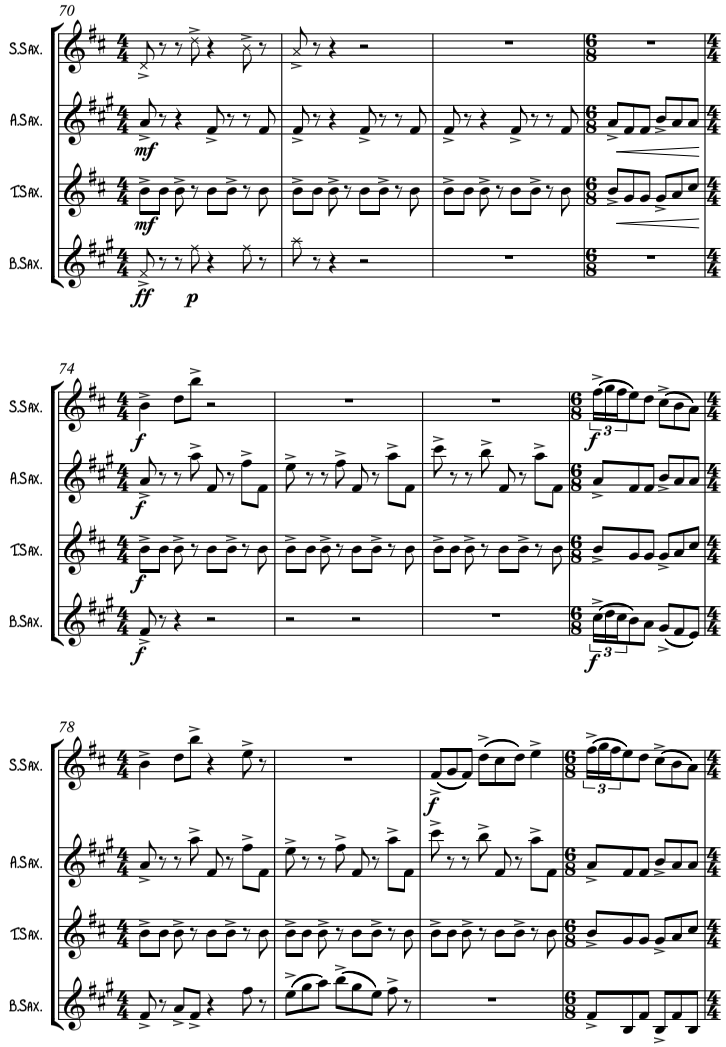

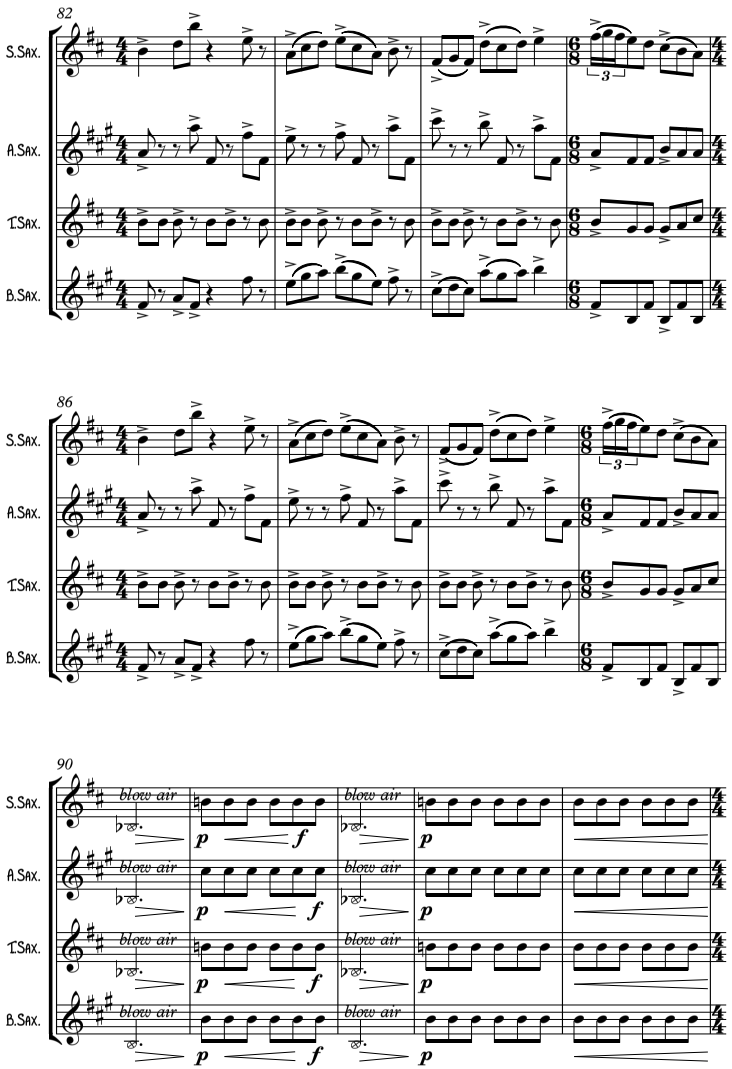

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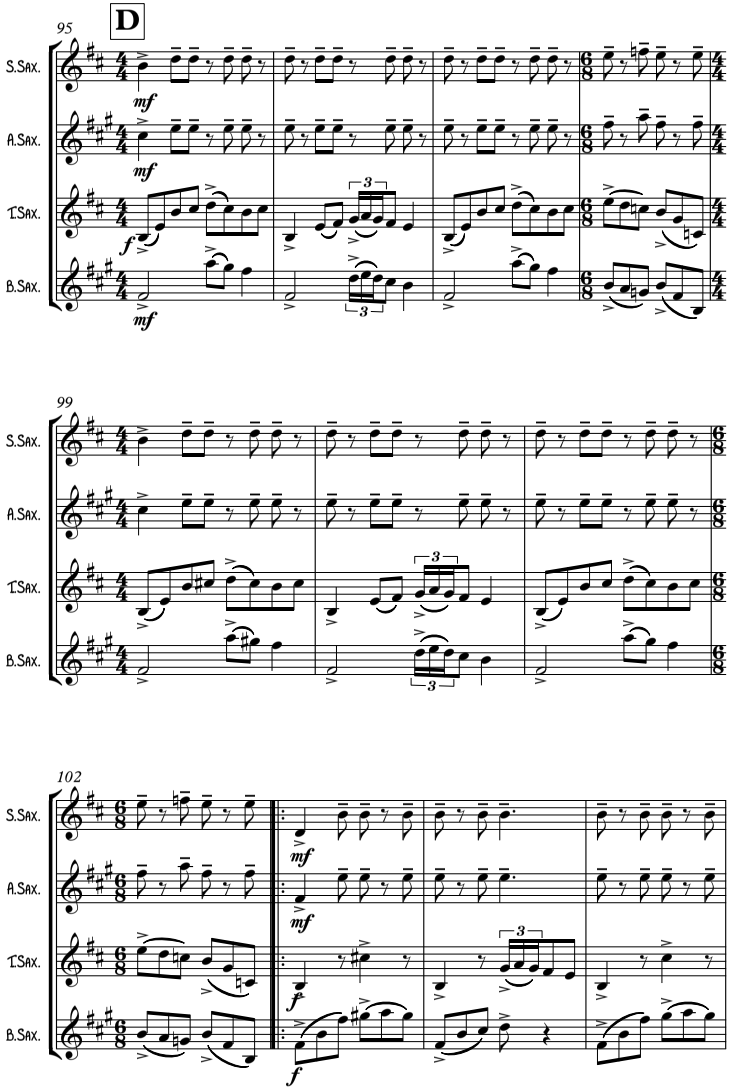

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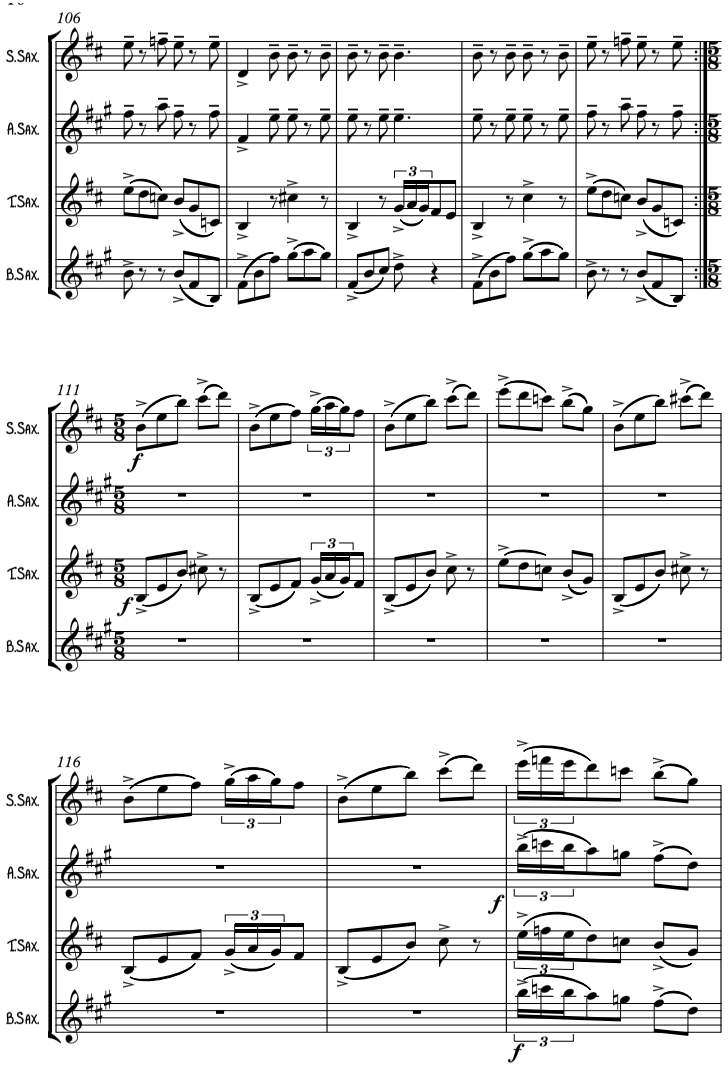

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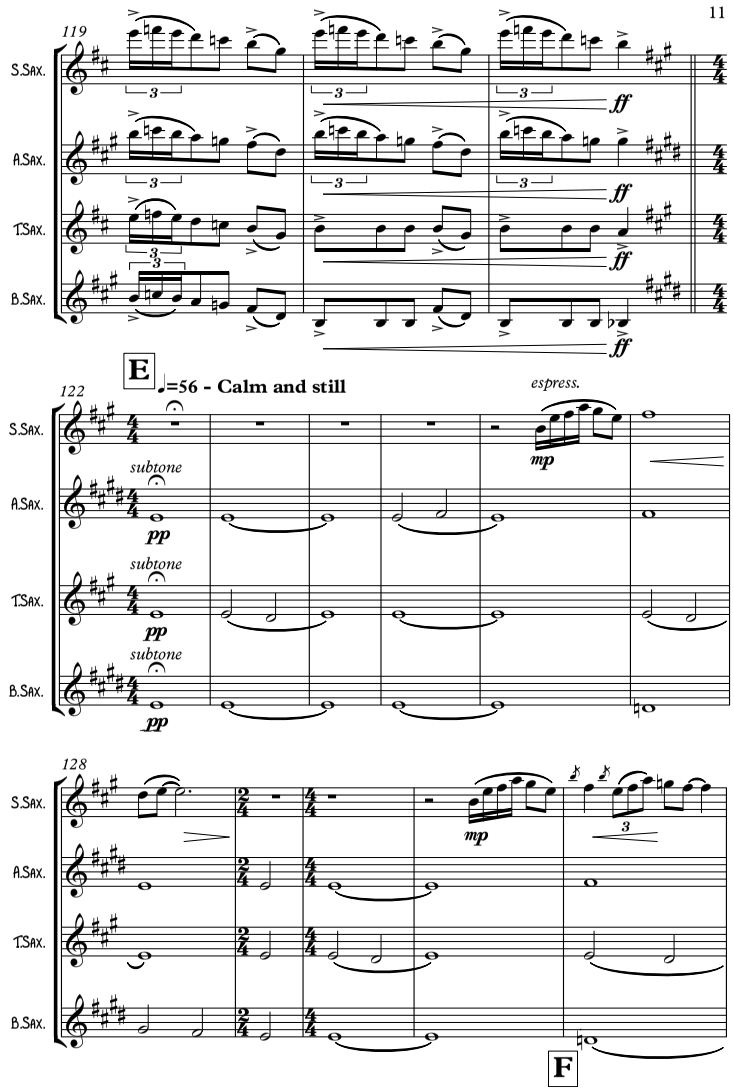

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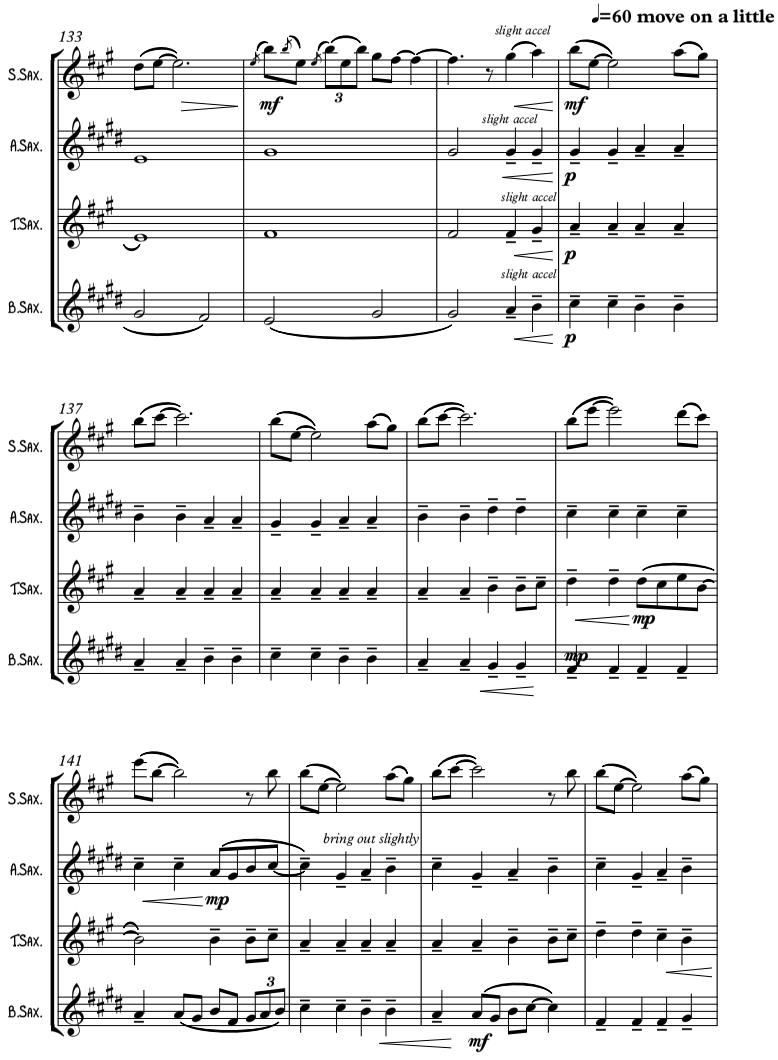

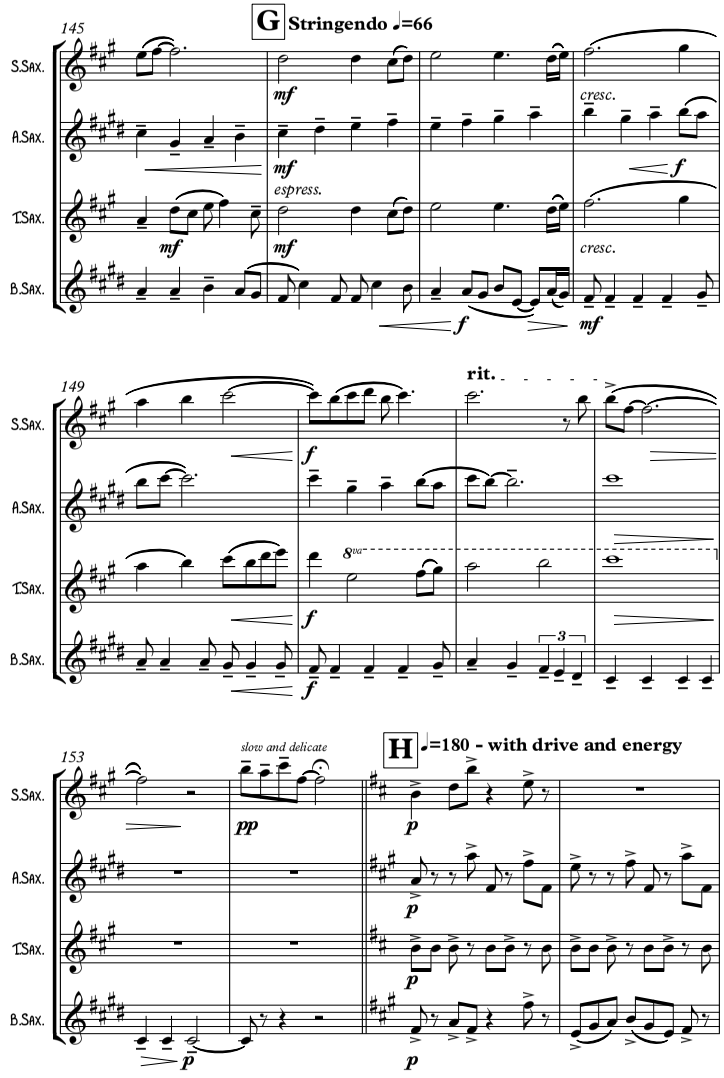

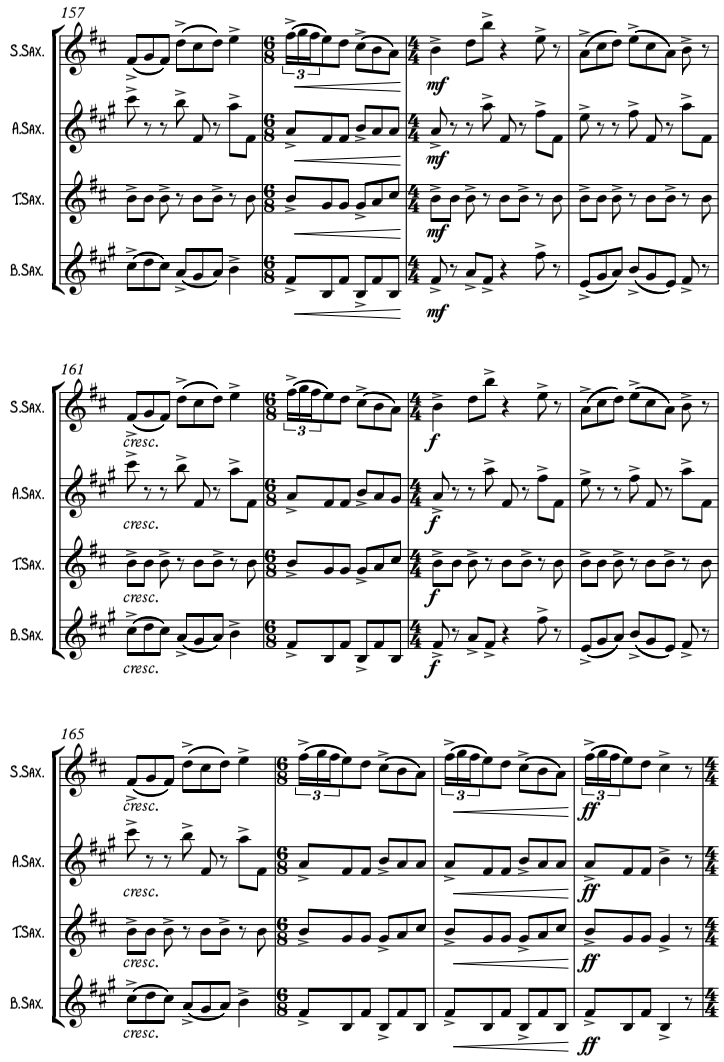

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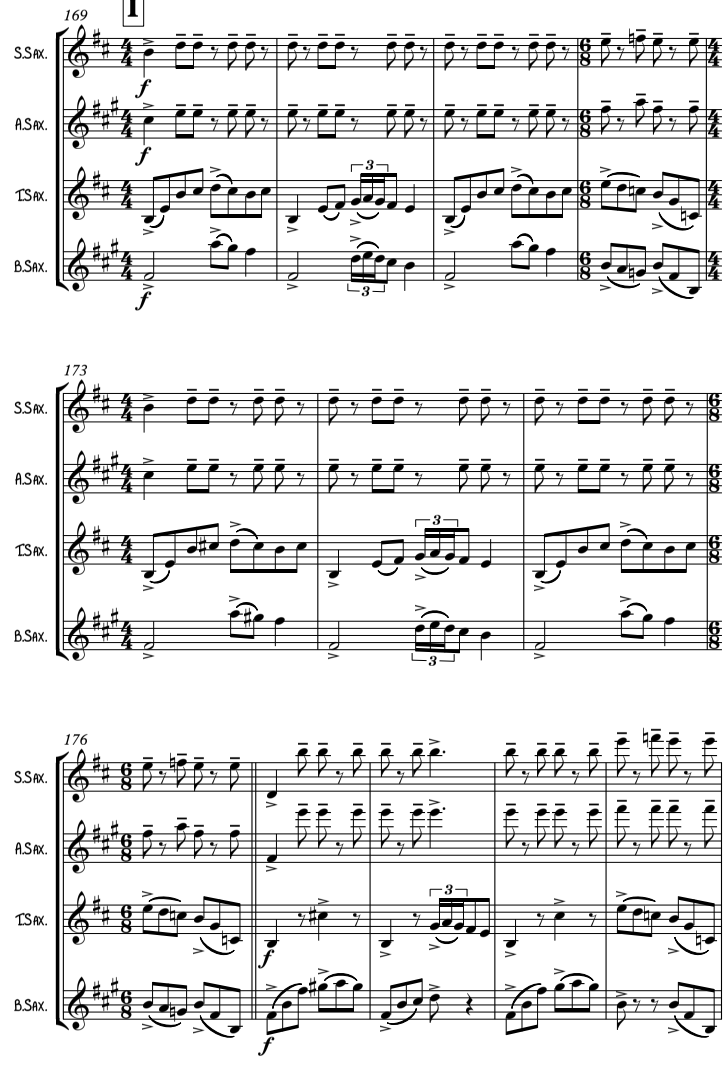

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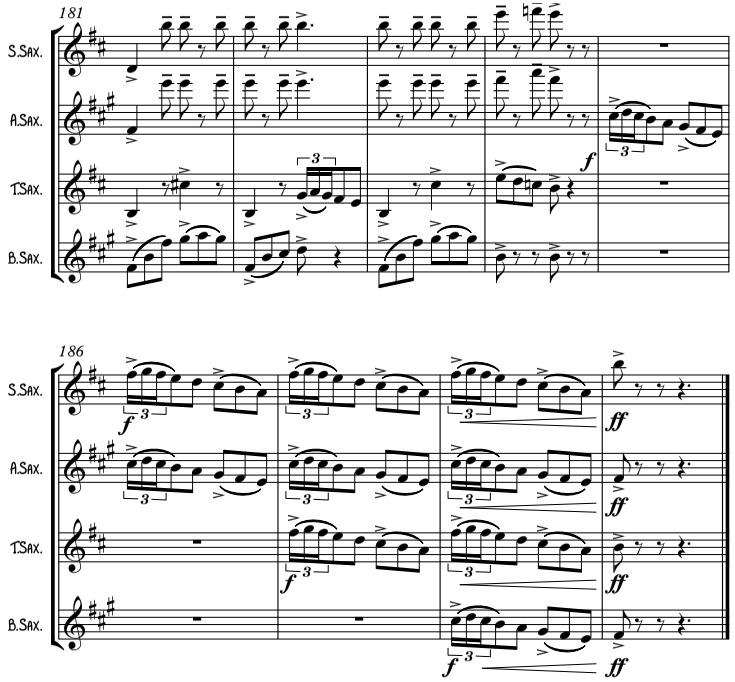

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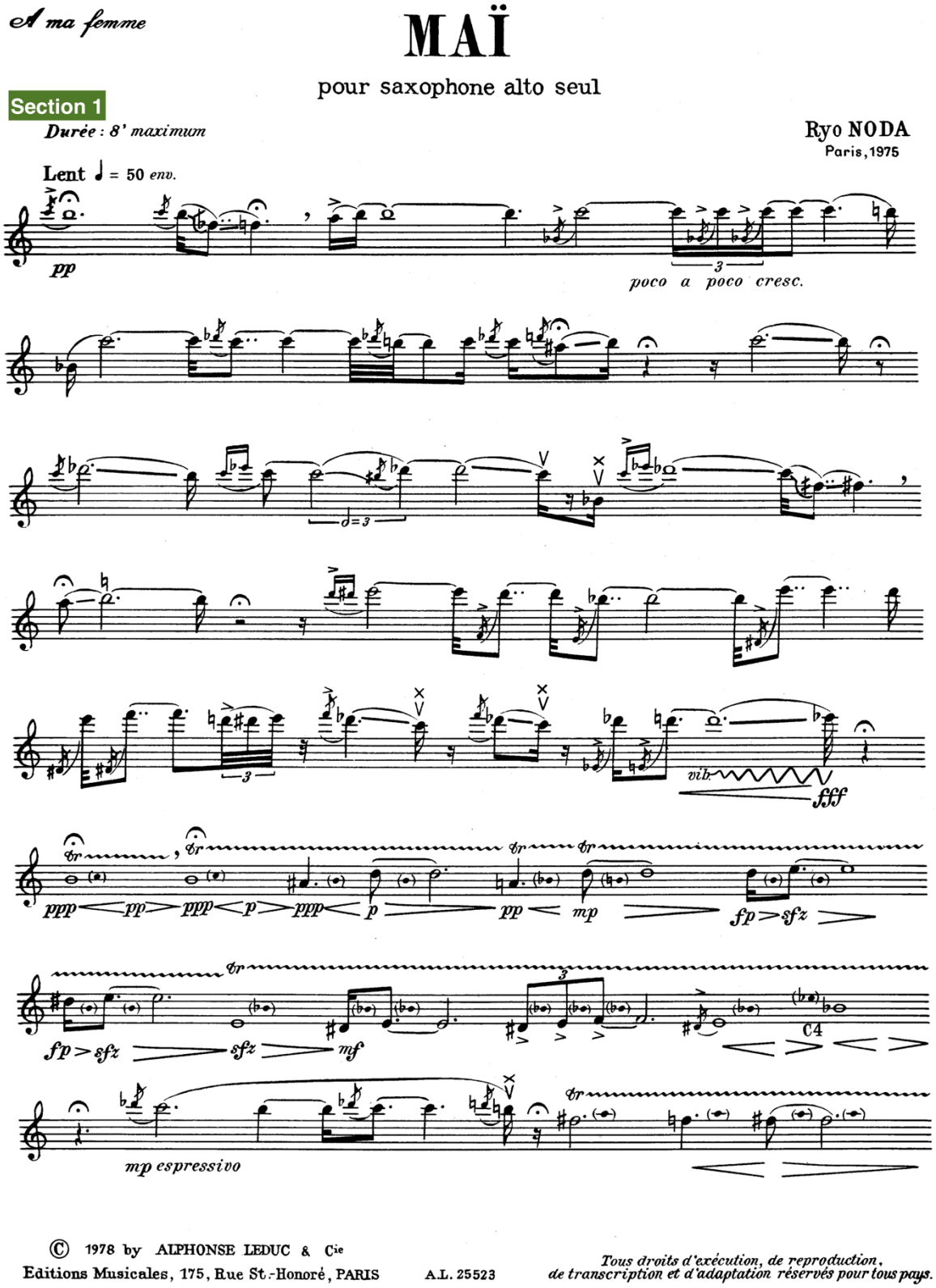
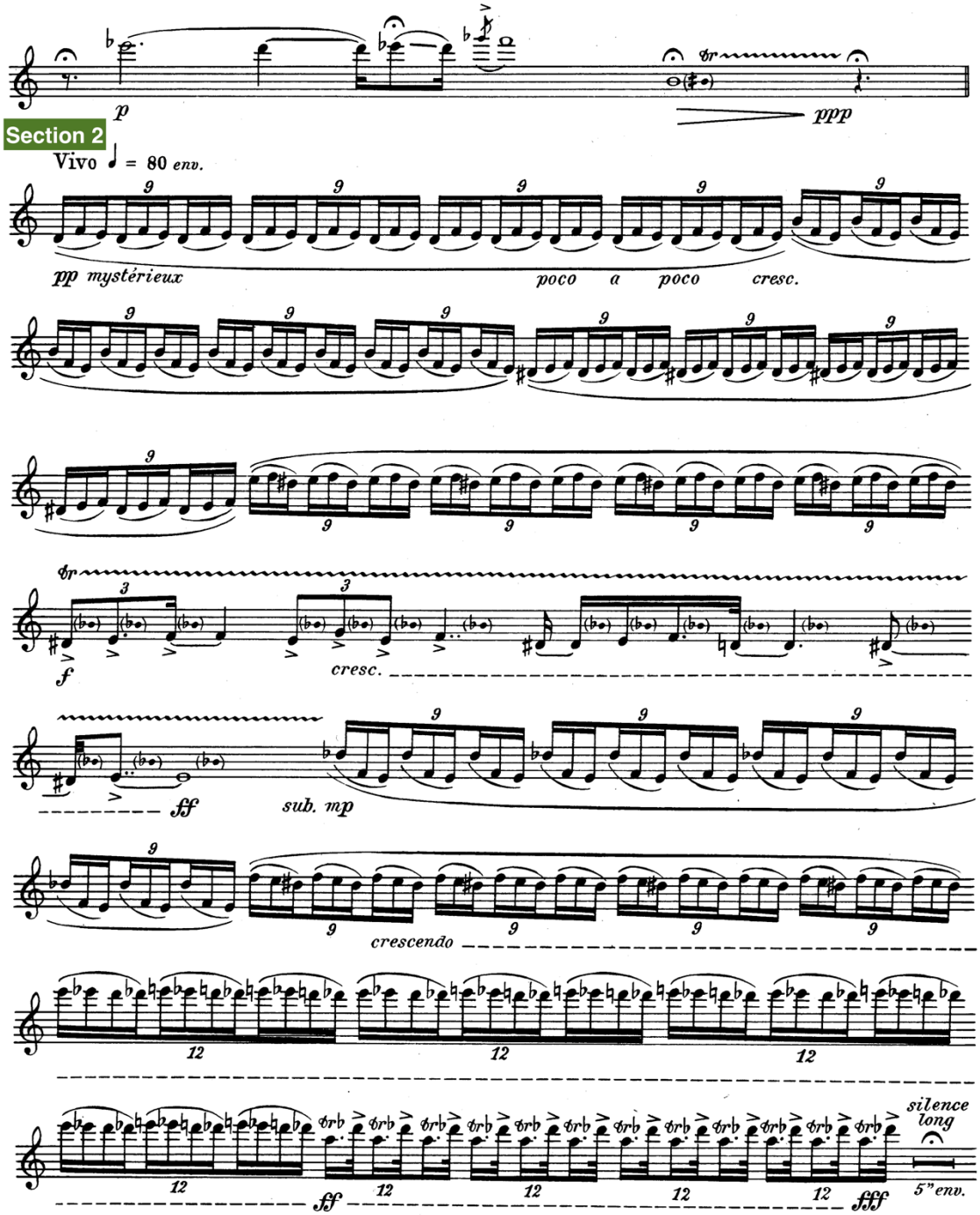
Maï – Ryo Noda

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ppp
Section 2
Vivo ♩ = 80 env.
pp mystérieux
poco a poco cresc.
f
cresc.
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crescendo
ff
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silence long
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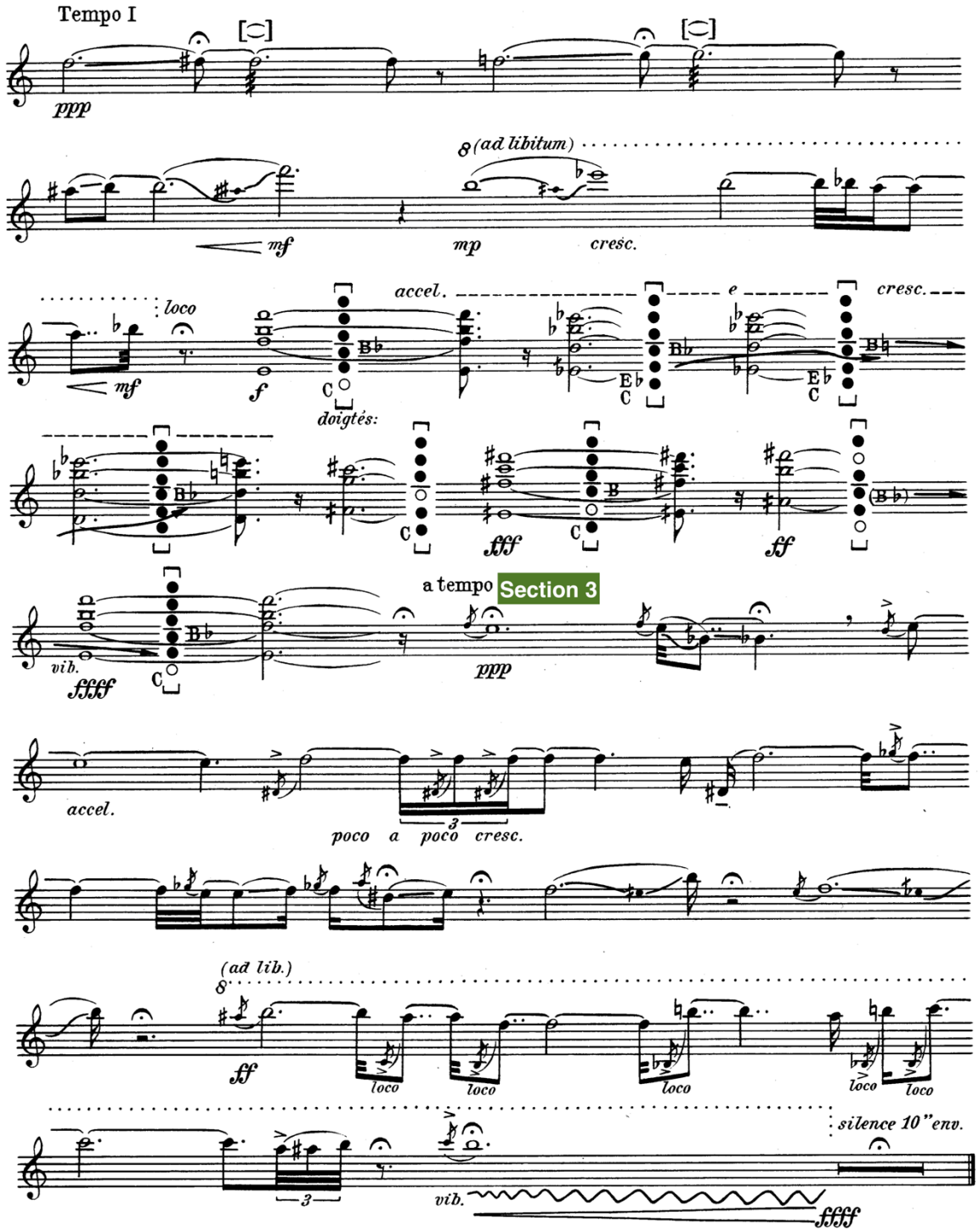

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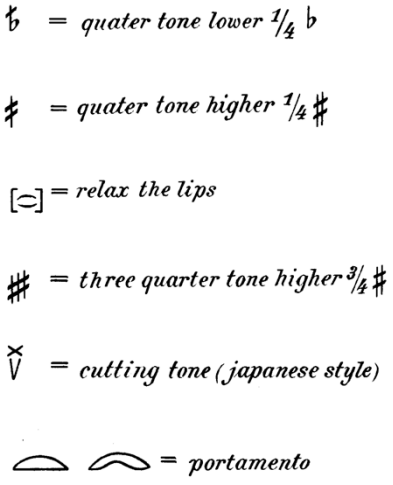


M A Ï
LA BATAILLE DE LA MER

Au crépuscule d'une nuit d'automne, alors que la lune réfléchit sa lumière d'argent à la surface des flots, le Général Kiyotsun Taira joue de la flûte.

Debout, à la proue du navire, il saisit son poignard et tranche la natte réunissant ses cheveux qu'il dépose à ses pieds, puis il disparaît dans l'onde.

Au seuil de sa demeure, le fantôme du Samouraï apparaît. Lui faisant face, son épouse lui demande : "Pourquoi es-tu parti" ? "Pour sauver mon armée", répond-il "car je savais la bataille perdue d'avance et j'ai ainsi épargné la vie de mes hommes et de leur famille".

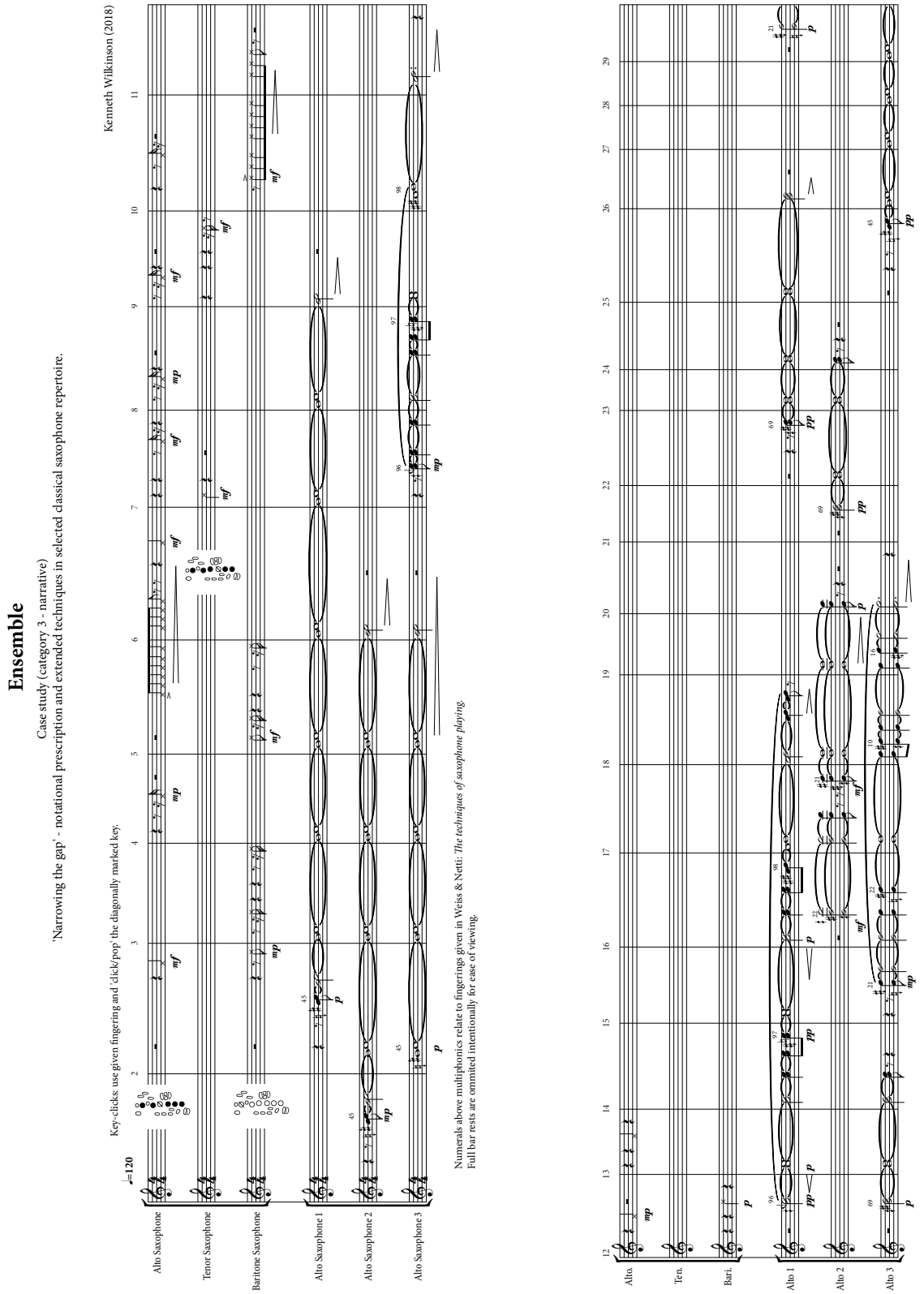
"Et moi", dit-elle, "As-tu pensé à moi" ?

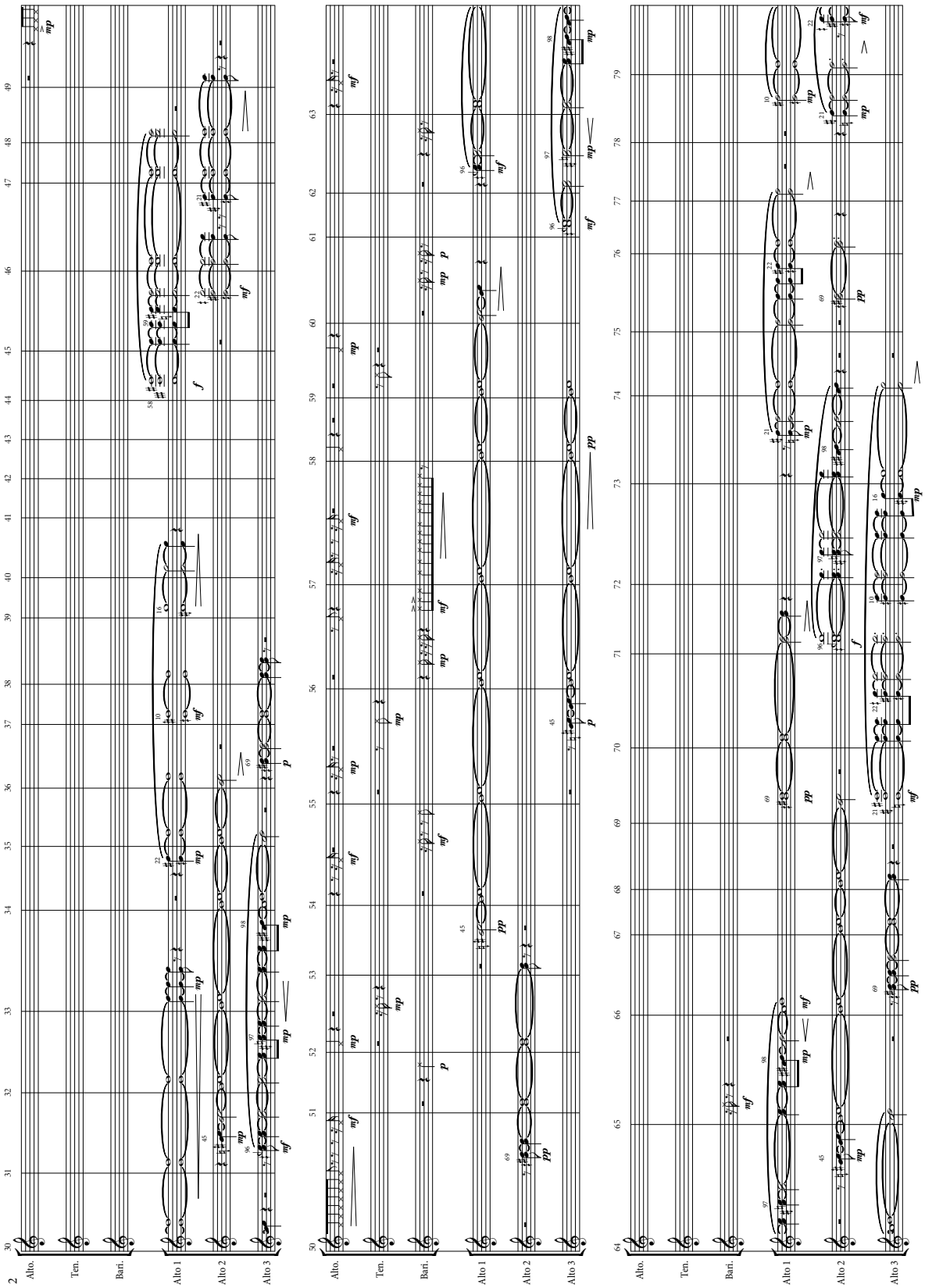
GIT DE HEIKE

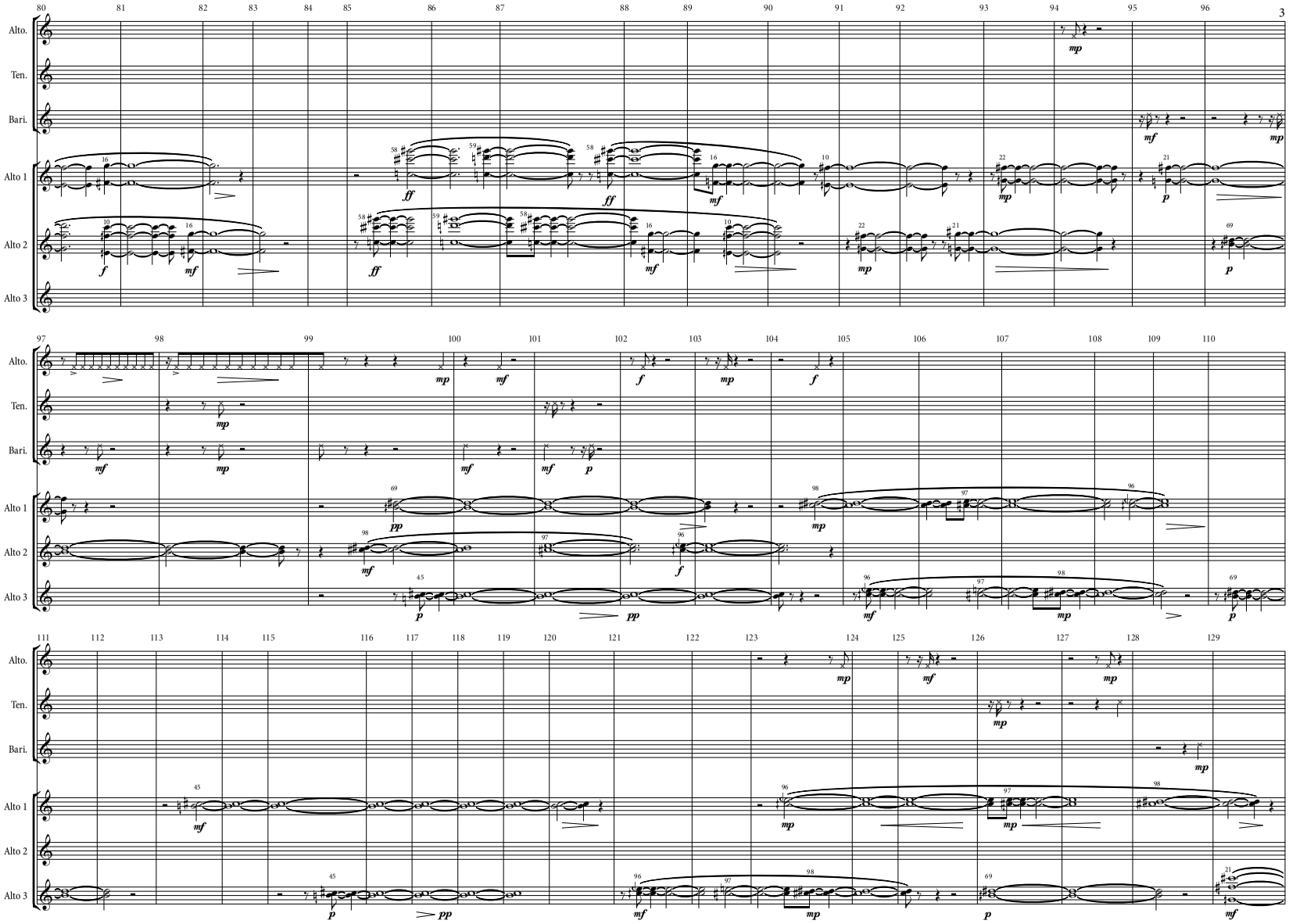
Texte de Jean Leduc d'après le récit de Ryo Noda

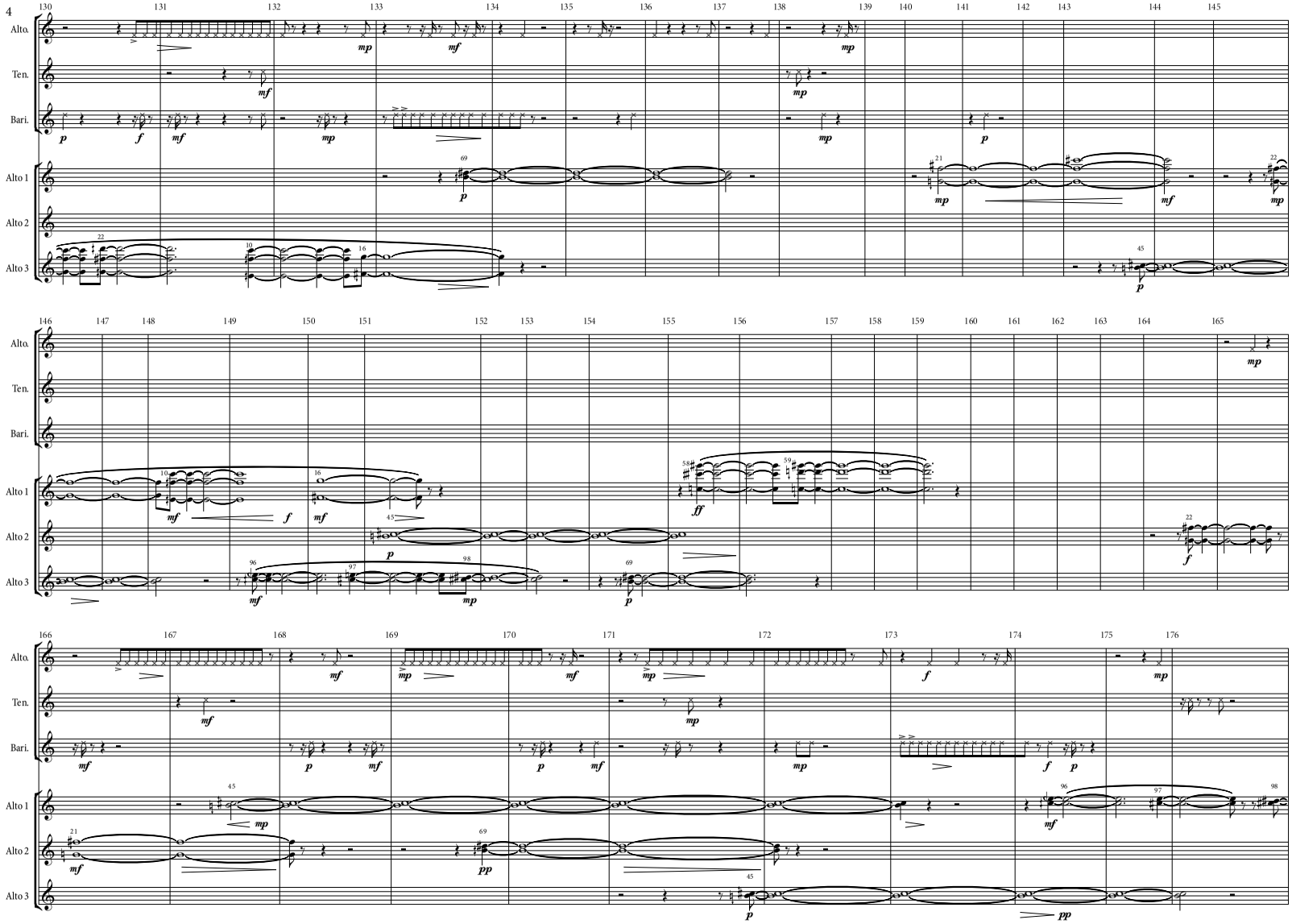
Ensemble - Kenneth Wilkinson

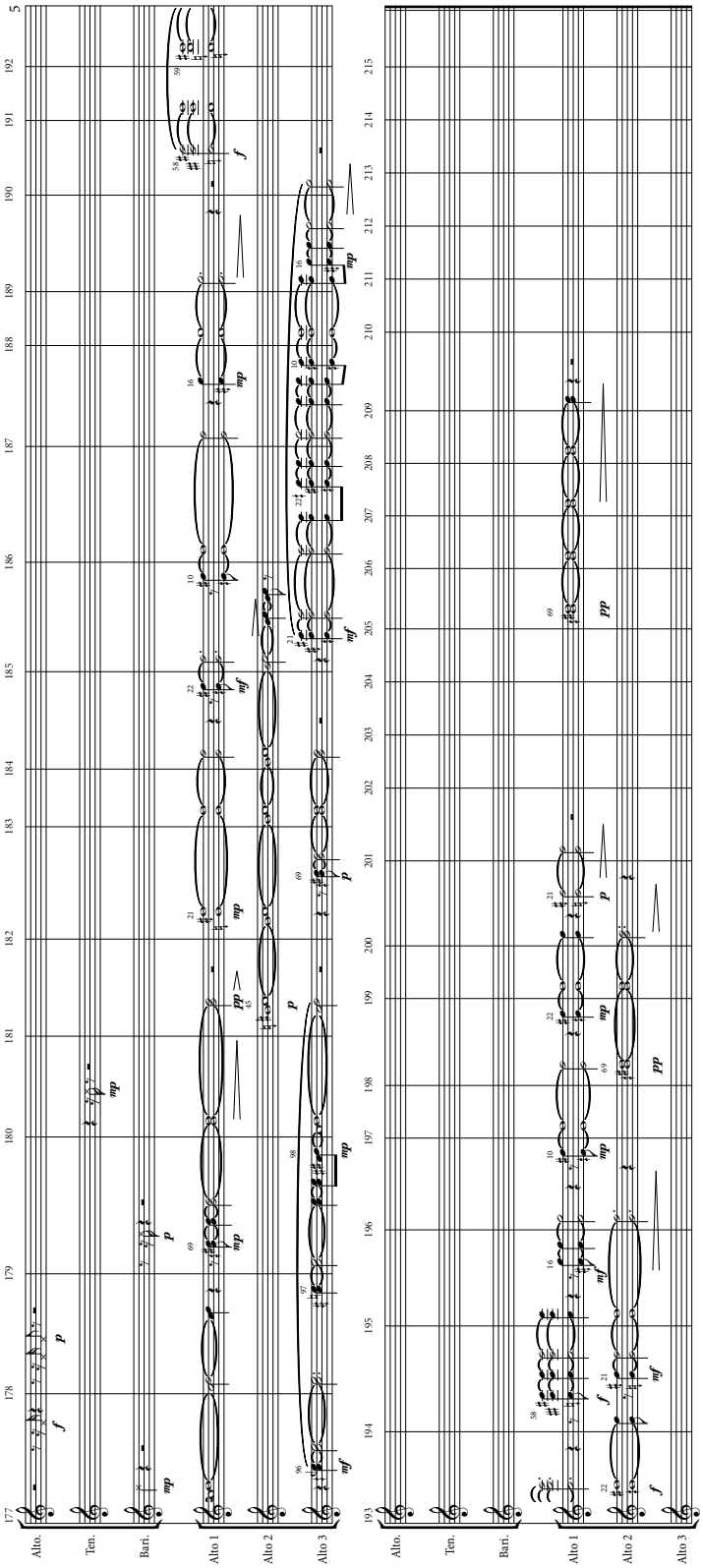
For ease of reading an A3 score is also provided.




2
Alto.
Ten.
Bari.
Alto 1
Alto 2
Alto 3


Alto.
Ten.
Bari.
Alto 1
Alto 2
Alto 3


4
Alto.
Ten.
Bari.
Alto 1
Alto 2
Alto 3


5
Alto.
Ten.
Bari.
Alto 1
Alto 2
Alto 3

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