THE UNIVERSITY OF HULL

# Composing for improvisers:
# Information flow, collaborative composition and individual freedom in large ensembles

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## Abstract

Rooted in the lineages of European 'free' improvisation, jazz, the New York 'Downtown' scene, Chicago's AACM, and various 'indeterminate' approaches, this research project deals with the creation and evaluation of a portfolio of compositions, each of which explores particular facets of the open-ended and interpretable links between composer, performer and piece, exploiting interactive and real-time elements inherent in collective music-making. The compositional models I have developed here focus specifically on large groups of improvisers, and aim to function malleably in ways that encourage collaboration and prioritise the freedoms, personal voices and creative powers of all involved, whilst maintaining a degree of compositional integrity.

Following an iterative methodology of experimentation, performance and reflection, this portfolio evolves, via several pieces that each focus on particular criteria, towards *Micromotives*, a collection of pieces designed to be collectively constructed in real-time by a large improvising ensemble. *Micromotives* provides a modus operandi that is largely consistent with that of free improvisation, bypassing fixed authority figures, timelines and personnel groupings that are common yet arguably problematic staples of many comparable approaches that have emerged since the 1960s (Butcher, 2011; Stenström, 2009). Instead, performer obligations are removed so that predetermined materials can be referred to as and when they are desired. Any player can try to instigate collective action at any time, and is able to communicate detailed information in real-time by way of a series of bespoke hand signs. Underpinned by an ethos of invitation, as opposed to direction, *Micromotives* allows larger numbers of improvisers to maintain high levels of individual freedom whilst simultaneously enabling constituent pieces to be distinguishable from one another, encouraging modes of collective synchronicity that are virtually unheard in large ensemble free improvisation.

# 1 Introduction

The purpose of this project is to explore the negotiation of control and 'voice' within the composer-performer relationship, with the aim of finding effective compositional models that are designed explicitly for improvisers.[1] This process necessitates an investigation into perceptions of freedom in 'free' improvisation, and questions received values of compositional authority that are exacerbated by text-based copyright laws.

My personal experience of working as an improviser, performer and composer over more than a decade helped to crystallise the following research questions:

1. In which ways might it be possible to create distinct compositions that also allow improvisers to use their individual languages and approaches unfettered, and to interact in ways that are consistent with those of small-group free improvisation?
2. To what degree can such compositions be engineered to be distinguishable from one another, and from wholly improvised music, and to what degree might they be able to retain a sense of themselves across multiple performances and ensembles?
3. How can these questions be successfully applied to larger groups of improvisers?

The research presented here documents a process of reflection and iteration that led to the creation of a portfolio of compositions, each of which being designed to respond to these questions, either in part, or in full. I will argue that it is possible to align these aims, and will show how the compositions presented here succeed and fail in this regard. I will also detail how this process served to highlight several important considerations, relating to modes of information flow and contingency that many practitioners see as defining characteristics of improvisation. I will demonstrate how these aspects can be easily compromised or overlooked in attempts to bring together

[1] 'Voice' is used here, and throughout the thesis, to refer to personalised creative approaches that are often highly developed in experienced improvisers and composers, making it possible to audibly differentiate music-makers in various contexts.

compositional and improvisational approaches, especially in the context of larger groups. Such demonstrations are not designed to criticise particular musics or approaches, but rather serve to highlight my specific compositional aim of enabling players to work in a way as consistent with free improvisation as possible. I will also argue that it is logical and sensible, in the context of my aims, to reconsider the nature of 'works' and ownership, and to expand widely accepted ideas of musical ontology, often rooted in concepts of reproducibility and precisely attributable authorship (Cook, 2018; Durham, 2002).

Composing for improvisers in any sense is seen by many as a paradox, demonstrated by Eddie Prévost's assertion that

> "The contest between classicism…and the improvisational must be maintained. There is no happy meeting point between the two forms because ultimately they represent entirely different world views…As well [as] being the enforcement of musical property rights, the composition is a powerful agent of possessive individualism in general, whilst improvisation proposes and practises a freer dynamic of human relation, however problematic". (Prévost, 1995)

Whether or not the camps of composition and improvisation represent oppositional positions, it is inarguable that composing for improvisers presents a conundrum. Indeed, any attempts to marry composition's inherent predetermination and tendencies towards attributable authorship, reproducibility and text with improvisation's need for contingency, and emphases on communality, ephemerality and event are destined to require either significant compromises, or else critical shifts in thinking.

But rather than accept Prévost's position in this instance, it might be more accurate and useful to view such efforts towards integration as dealing head-on with paradigms that are operating more or less openly all around us. If we acknowledge the experiences of practitioners like Derek Bailey, George E. Lewis and John Zorn,

and accept the swathes of scholarship from musicologists, philosophers and anthropologists such as Nicholas Cook, Bruce Ellis Benson, Jo Freeman and Philip Bohlman, then we can reasonably accept that any musical performance by human beings involves at least a degree of improvisation and real-time interaction, ranging from micro-nuances in timing, intonation and phrasing to more overarching control of sound content and placement. Furthermore, we can acknowledge that improvisational practices are implicitly contextualised and structured by time constraints, stylistic expectations, tradition, instrumental physicality, and collective and/or personal histories and hierarchies.

On inspection, the apparently ideologically opposed forces of composition and improvisation can instead be seen to exist on a continuum, on which the practice of composing specifically for improvisers presents itself as an important area for exploration, and one in need of greater understanding. A fruitful approach might be to consider how *best* to compose for improvisers in a way that acknowledges specific compositional desires whilst enabling individual players to retain fundamental real-time decision-making capabilities.

## 1.1 Improvisation

### 1.1.1 Improvisation: traditions

Within the multitude of overlapping and interconnected improvisational practices, it is possible for any number of practitioners to identify themselves in similar ways even though their practices might have very little in common. Each of the countless improvisational sub-cultures that exist around the world has its own shared understanding of tradition, style, context and function. One need only imagine pairing, say, an idiomatic modern blues guitarist with a drone/noise improviser to see that, although the individuals involved might justifiably call themselves 'improvisers', the two might struggle to work together, embodying wholly different approaches and aims, aesthetic assumptions and biases.

Through working with various musicians on the genesis of this portfolio it has become clear that my particular biases and assumptions come largely, although not exclusively, from my experiences with European free improvisation, Downtown/ Chicago experimentalism, and jazz, free jazz and post-jazz, with their emphases on personal voice, performance, sociality, virtuosity, renewal/development and aurality/ orality (Prévost, 1995; Lewis, 1996). The pieces composed for this portfolio are conditioned and assessed via these particular experiences, understandings and aesthetic preferences.

### 1.1.2 Improvisation: freedom

Having positioned myself to some degree, it is important to note that the predominant focus of this portfolio is to compose for practitioners of so-called 'free improvisation'. Also known as 'meta-music', 'non-idiomatic', 'trans-idiomatic' or 'total' improvisation, this is a hugely complex and multifarious practice with so many permutations of approach, language and ideology that virtually every individual engaged in it has a unique understanding of its mysterious processes (Toop, 2016).

Meanings and aspects of 'freedom' have been endlessly debated by practitioners, with David Toop (2016) describing an "elusive dream of complete freedom", thwarted by perceptions of legitimacy, physical and musical habits, social inhibitions, and cultural expectations. Other practitioners have similarly questioned the terminology, with Frederic Rzewski (2007) stating that free music is "no more 'free' than, say, the act of making a pot of coffee in the morning", and Michael Francis Duch (2015) going so far as to say that free improvisation has become an idiom in its own right, with associated sub-genres.

Nevertheless, concepts of freedom sit at the heart of any discourse on free improvisation, and it is necessary – given that my aim is to give players a compositional environment as close to that of free improvisation as possible – to detail the aspects of improvisation that are commonly identified as embodying a

sense of freedom and which, therefore, will need to be maintained. As Simon Fell (2015) states, "the 'free' in Free Improvisation remains fundamentally important to many creative practitioners…those composers who wish to work with improvising musicians might do well to remember this".

Simply by considering the most obvious and immediate definitions of the word 'freedom', it is clear that any explicit obligations or restrictions on performers must be avoided. This poses an immediate contradiction to the compositional process, which inherently involves planning and therefore cannot help but limit options in performance. When Eddie Prévost (1995) suggests that "past planning does not always match the present need", he highlights the improviser's focus on the moment, on discovery and 'nowness', which defines free improvisation for many.

Pak Yan Lau (2018) labels this the 'aesthetics of possibility' – to feel free, musicians must share a sense of possibility at every stage, something that is severely impinged upon, if not entirely negated, by planning. John Butcher (2011) explains how predetermined compositional elements can easily lead to confusion and suboptimal performances when working with improvisers:

> "The brain must be operating in a very different way than when you've mapped things out, let alone when one reads music. This is one of the problems of combining improvisation with imposed structure; it continually pulls you back and forth between different cognitive systems. Often one hears improvisation inside formally structured pieces that seems to be just filling in the space, waiting for the next instruction". (Butcher, 2011)

Here Butcher not only indicates an unsatisfactory situation for the performer, but suggests that the outcome might also lack the creative spontaneity that was presumably hoped for by the composer.

### 1.1.3 Improvisation: information flow

Alongside being 'in the moment', the aspect most often identified as being fundamental to freedom in improvisation is the metaphor of 'dialogue'. Also commonly discussed as 'interaction', the emphasis on dialogue exposes a need for direct and unhindered flows of information between parties acting as members of a network. Creative power-sharing in this situation is fluid and negotiated in real-time, and there is at least the potential for this sharing to be egalitarian.

Of course, in practice, powers can be anything from completely equal to hugely weighted, based on factors such as experience, confidence, physical position, timbre, volume, lighting and sound system. Indeed, power dynamics within an outwardly egalitarian collective are often in constant flux, as players present materials, join, subvert, ignore, change direction, counterpoint, dominate, and attempt to influence and coerce – with open aggression in some instances, and subtler imbalances of power in most others – as David Toop (2016) notes, "any group believing itself to be…entirely democratic and free…is naively unconscious of clandestine power". Nevertheless, it is crucial in many contexts that improvisers are *theoretically* equal, and that no member of the network is outwardly differentiated from any other in terms of the mutually understood powers shared between them.

## 1.2 Organising improvisation

In addition to limiting perceptions of nowness, this need for equality poses further problems for the introduction of scores and/or conductors to the improvised scenario, a common occurrence in the context of larger ensembles. Toop elaborates:

> "Musicians choose to take part on the basis that nobody will tell them what to do…The territory they claim must be open to highly developed individual voices…yet that territory must also be made open and kept open by acts which

> are simultaneously self-serving and collectively motivated…Though a single player of extravagant gifts or selfish intentions can dominate and manipulate this vulnerable space, there is no way to determine its individual elements or control its outcome". (Toop, 2016)

In addition to skewing the types and levels of shared powers within an improvising group, the introduction of a score or conductor fundamentally changes the flow of information around the ensemble network. Rather than musical ideas having the potential to flow directly between players, a dominant model is provided – one that largely functions mono-directionally, and is designed to override other types of momentary information flow. From the perspective of the players, it is very difficult, under such circumstances, for dialogue to remain detailed, subtle and responsive. For the conductor it seems all but impossible to maintain any kind of purely coordinating and facilitatory role when wielding a baton. This can be observed in situations ranging from the ostensibly benign role of the 'prompter' in John Zorn's *Cobra* (1984) to Butch Morris's more gesturally directorial 'conduction' practice.[2]

Although Morris often focussed on the creative input of performers in discussion (Almeida, 2008), several participants have commented that his Conduction® method involved 'correct' interpretations of signs, to be learned and practised. Although more or less prescriptive versions of the practice are widely used by improvising orchestras around the world, Taylor Ho Bynum's (2017) description of Morris's "devastating glare directed at anyone who missed or misinterpreted a direction" depicts an authoritarian

[2] See section 2.2.3 for a more detailed discussion of the 'prompter' role.

slant that seems at odds with many conceptions of freedom.[3] This is almost antithetical to the anarchic, anti-hierarchical and individualistic ideals embodied by many practitioners of free improvisation, as Derek Bailey explains:

> "Lots of people do like to try and turn large group improvisation into something else a bit more tidy; they usually do it by imposing structures of one kind or another, don't they, like Butch with his conductions, Alexander von Schlippenbach with his scores and so on. Its [sic] OK. I just find that that...sort of misses the point". (Bailey, quoted in Martin, 1996)

If dialogue and possibility are inherent to a sense of freedom in improvisation, it is no wonder that so many improvisers are sceptical of, if not openly resistant to, the 'impositions' of compositional predetermination.

It follows that, if composing specifically for improvisers, it is paramount to consider very carefully the distinct ways in which their individual powers can be affected and potentially impinged upon. Solutions might be worked towards through a more nuanced understanding of the control dynamics and power structures at play – the myriad ways in which creative musical decisions are shared, assumed and/or delegated by various active partners, be they composers, performers, listeners, sound

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[3] Almeida (2008) positions Morris's conduction as the most controlled of his three case studies of organised improvisation in 1980s New York; Potter (2017) also notes Morris's high level of control. Nevertheless, many large ensembles around the world use (often personalised versions of) the practice, including the London Improvisers Orchestra (see http://www.londonimprovisersorchestra.co.uk/history.html [accessed 09/11/19] for a history of their use of conduction since touring with Butch Morris in 1997), the Berlin Improvisers Orchestra (see a video of LIO member Alison Blunt leading a conduction at https://www.youtube.com/watch?v=MYZmcDRA4Yg [accessed 09/11/19]), the Krakow Improvisers Orchestra (see a description of their use of conduction at https://www.ad-libitum.pl/artysta/krakow-improvisers-orchestra-kier-paulina-owczarek/ [accessed 09/11/19]) and the St. Petersburg Improvisers Orchestra (who mention 'conducted improvisation' as one strand of practice on their Facebook page https://www.facebook.com/pg/improvisers/about/?ref=page_internal [accessed 09/11/19]).

engineers, or their extensions and representations in the form of notation, instruments and amplification.

Even if a composer were to gain a depth of understanding regarding these factors, it seems reasonable to suggest, at least in the context of an ensemble whose participants find their collective output to be largely satisfactory and fulfilling, that a strong rationale is required to warrant the introduction of external predetermined elements to an improvised setting. If there is no clear variance to be achieved by such additions then there seems little incentive to add extra complications to an already highly complex process. As Zorn (2015) states, "I had no right to bring my compositions in unless I...could devise something that could not be a result of pure improvisation, something that could only happen in a context that I had created".

The situation that Zorn describes here, however – one that perceives the introduction of compositional elements as an *intrusion* – seems to apply exclusively to a wholly improvised setting, contrasting the many types of music making for which pre-existing materials are understood to coexist symbiotically with performer voice and real-time interaction.

Taking jazz as one of the "many musics of the world in which there is little separation between musical and social processes" (Born, 2010), the "traditional jazz dialectic between composition and improvisation" (Watson, 2013) has always placed significant emphasis on the interchange and creativity of performers in the moment. Across a number of jazz-based lineages, it is possible to see a general conception of composition as multiplicitous and amorphous, exemplified by a huge array of compositional models, from the purely curatorial, via the standard lead sheet, to the formalised and/or highly conceptual work of the likes of Anthony Braxton, John Zorn, Misha Mengelberg, Duke Ellington, Cornelius Cardew, Gunther Schuller, Carla Bley and Barry Guy.

### 1.2.1 Useful models of compositional integrity

In order to facilitate real-time performer creativity and freedom, many composers have explored non-traditional types of control. Where composers of Western concert music might specify pitch, rhythmic content, expression, dynamic, tempo and/or instrumentation, those writing for improvisers might prescribe 'seeds' for improvisation, section durations, personnel groupings, modes of playing or types of interaction. In some such models, often categorised as 'bounded', 'controlled' or 'organised' improvisation, decisions regarding personnel, performance space, ensemble formation and time of day might be of equal or greater importance to more traditional musical materials (Cardew, 1971). Notation may need to be radically rethought, if indeed there is any use for it at all.

Needless to say, the further one moves from notions of fixed works, singular authorship, portability, and textual authority towards more fluid or curatorial compositional approaches rooted in performance, ontological understandings of the pieces involved can become more debatable. In this context, it seems logical to follow the scholarship of musicologists, philosophers and practitioners such as Cook, Kramer, Small, Goehr, Service, Zorn and Braxton in expanding notions and definitions of a 'composition' beyond 'reproducible product' towards 'shared activity'. With this in mind, it becomes more plausible to consider pieces as 'distinct' and 'distinguishable' from one another, through contrasts in performativity, functionality, interactivity and ethos, potentially alongside more traditional components of material, affect and structure.

We are then invited to view individual pieces as "fields of activities" (Braxton, cited in Restructures, 2007), "spaces that frame, enable and contextualise human action" (Iyer, 2009) and "framework[s] of activity" (Benson, 2003) that reject "seeing music as a literary or material construction in which performance appears as the icing on the cake… [and] recognise music as the performing art we all know it is" (Cook,

2018). As Zorn (2015) says about his 'game pieces', "it didn't really matter what the content was. The music could go just about anywhere. The piece was still itself...they always somehow retain their own identity, the way baseball differs from croquet... Each piece is a different world".[4]

### 1.2.2 Compositional design and performer need

Of course, evaluating overall successes or failures – with improvisations as with performances of composed music – is dependent on a complex and extensive network of factors. But one element, shared globally but increasingly problematic in the context of my aims, is that of matching compositional expectations to performer interpretation. Within any area of music, the players who are able to render compositions most successfully are those who share the biases and understandings of a particular community and tradition – they are "specific *kinds* of musicians that have specific *kinds* of skills" (Zorn, 2015). Such performers are most likely to respond to given structures and materials in ways that correspond to their design.

This point serves to emphasise a possible pitfall in writing for improvisers, and one that was encountered while developing several of the portfolio compositions: unless the composer has a substantial understanding of the performer's individual practice and micro-tradition, the potential for mismatch is high, easily resulting in a needlessly difficult and ultimately unsatisfactory process for all involved. Differences in definitions of terminology can deepen these issues, and generate misunderstandings in verbal discussion. It is no surprise, then, that many composers concerned with experimental types of notation and improvisational elements often form long-lasting partnerships with specific performers, for example John Cage with David Tudor; John Zorn with Marc Ribot, Kenny Wolleson, Ikue Mori etc.; and Richard Barrett with the ensemble ELISION.

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[4] Examples of Zorn's 'game pieces' include *Baseball* (1976), *Hockey* (1978), *Pool* (1979), *Croquet* (1981), *Rugby* (1983), *Cobra* (1984), *Xu Feng* (1985), *Ruan Lingyu* (1987) and *Bezique* (1989).

## 1.3 Large improvising ensembles

There are many performance contexts in which one might choose to try and negotiate the issues raised above, so it is important to detail the rationale for my specific focus on large ensembles in this project, which I have taken to be six or more players.

Improvising in bigger groups often poses significant and specific challenges for players, historically attracting various types of compositional intervention. Harald Stenström's 2009 thesis on free improvisation collates the opinions of several improvisers and musicologists to conclude that the preferred number of players is 3-5, quoting Bergstrøm-Nielsen's suggestion that the ideal improvising ensemble size is one "big enough for the individual to be able to get varied impulses and small enough that everyone can make themselves heard as an important part of the group". In this scenario, players are able to clearly and instinctively understand their roles, their impact on the overall sound, and the ways in which they are able to influence the actions of the other musicians. Smith and Dean (1997) suggest that in small groups, it is possible for players to "influence the output of another improvisor, or of the group as a whole" and furthermore to bring about "substantial transition points...where many parameters change at once". In this way, through intuitive negotiation and interaction, experienced improvisers in small numbers are often able to generate clear and complex musical structures, at times producing results that are so synchronous that they might even appear to have been predetermined.

In groups above this size, Fell (quoted in Stenström, 2009) notes that the "difficulties and uncertainties of improvised music making are multiplied proportionately", while Bailey (quoted in Martin, 1996) deems large scale improvisation "a high risk activity and...kind of impossible", commenting that "they are often not coherent". Zorn (quoted in Duckworth, 1995) is more explicit, stating, "if you free-improvise with a ten-piece group, it's going to be a mess".

Considerations and issues regarding ego, ideology, density/balance and role/agency become increasingly problematic, and it can become very difficult for players to hear and interact with one another effectively due to the sheer number of musical events occurring and necessary physical spacing of players. Of course, it is very possible for large ensemble improvisation to be balanced, un-egoistic and musically rewarding,[5] but this is often achieved through sparse individual contributions in a context of long-standing partnerships. Musicians more commonly experience a reduction of musical space and, critically, a shift in the nature of personal responsibilities, as Fell (2015) comments: "there is a social dynamic within large ensembles which can easily lead to abdication of responsibility, depersonalised rebellion or provocation, and which can be pitiless when encountering weakness".

Some eventualities are certainly common within the practice. Per Zanussi (2017) lists "the most basic clichés: Tentative introduction, gradual buildup, ecstatic section, fade", to which one might add: slow or ill-defined changes in material/approach; and matching of dynamics.[6] Other occurrences are infrequent in larger groups, such as synchronised movements en masse, extended solo textures and the emergence of distinct sub-ensembles.

Although there are plenty of large improvising ensembles currently in operation, it remains notably rare to see wholly unmediated large scale free improvisation, certainly in comparison with the relatively large number of small improvising groups, and it is perhaps no coincidence that numerous ensembles, composers and arts organisations have sought compositional means to provide structure to this potentially hugely powerful but unpredictable and difficult activity.

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[5] Derek Bailey (quoted in Martin, 1996) has said "when large group improvisation is good, it is quite amazing, something incomparable"; Harald Stenström (2009) has said "I reject decidedly the notion that large ensemble improvisation would be impossible...The possible musical reward has about the same musical odds as improvisation in small groups, and can include everything from catastrophe to success"; Ben Watson (2013) describes 'LS/MR/DB/TH/AB/SL/EP' from the 'Company 5' record as "a rare example of collective free improvisation by more than 5 musicians being completely successful".

[6] These common occurrences were corroborated by British composer/improviser Chris Burn in conversation with me (2019).

This is witnessed in: the development and continued use of 'conduction' and 'soundpainting' techniques by prominent ensembles such as those detailed above (see footnote 3), as well as in various ad hoc festival/pedagogical collaborations; the commissioning of composers by large improvising ensembles; the substantial number of large, composer-led groups; and the expanding number of festival commissions that focus on longer forms and larger groups.[7] Such activity suggests that, while there might be a meaningful interest in large improvising ensembles in a number of contexts, there is a general consensus that some method of external structuring is often beneficial.

## 1.4 Criteria

My aim in this project was to create compositions for large groups that not only produce distinct 'frameworks of activity' and retain a sense of themselves in various contexts, but also that maintain a sense of possibility in each moment and allow improvisers to both incorporate their personal voices, and to interact freely at all times. In order to satisfy each aspect of this, and to give clarity and structure to an iterative research methodology, I produced a set of clearly defined criteria. These were broadly divided into two categories: specific requirements regarding performer control, dialogue and momentary possibility – in other words, improvisational freedom, as described and defined above; and stipulations relating to compositional

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[7] Examples of festival/pedagogical collaborations include the Match&Fuse festival, each iteration of which has featured a performance by the Eirik Tofte Match&Fuse Orchestra who use a version of Walter Thompson's soundpainting system; and the Banff International Workshop in Jazz and Creative Music 2018, which included a conduction led by Tyshawn Sorey. Examples of commissions by large ensembles include the Glasgow Improvisers Orchestra's collaborations with composers Una MacGlone, Barry Guy and George E. Lewis; and Berlin's Splitter Orchester's collaborations with Øyvind Torvund and Matthias Spahlinger. For examples of composer-improvisers who lead large ensembles to work with personal compositional approaches see footnote 18. Festival commissions exploring combinations of composition and improvisation in large ensembles include those by Marsden Jazz Festival (Simon Fell, 2014), Manchester International Jazz Festival (Anton Hunter, 2014), Lancaster Jazz Festival (Cath Roberts, 2016), Cheltenham Jazz Festival (Rachel Musson, 2019) and the PRS New Music Biennial (Sam Eastmond, 2019).

integrity and design, and a desire to counteract the potential pitfalls of large group improvisation.

### 1.4.1 Improvisational freedom (criteria)

There is some overlap in the criteria here, as each individual point can be ultimately reduced to Prévost's (1995) two key elements of free improvisation: "dialogue and heurism".[8] However, the criteria have been separated and specified to illuminate particular implications for my compositional thinking.

- Improvisation must be the default scenario in performance. Introducing improvisation into predetermined and fixed compositional structures is antithetical to concepts of 'nowness' in free improvisation, but enabling compositional elements to be used within an improvised setting can allow improvisation to retain its fundamental characteristics of possibility and dialogue, if they are seen as potential extensions of the practice rather than inhibitors. Players must always retain choices regarding when to play, what to play and who to play with.
- There must be no obligation for performers to do anything at any time. No member of the ensemble should have authority to impose their ideas on others.
- There must be no differentiated conductor, in order that information is able to flow directly between players, as is commonly the case in small group free improvisation. Individual powers must be equally weighted between players with any member of the ensemble able to try and instigate particular actions at any time.

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[8] Prévost's preferred term for free improvisation is 'meta-music'. He defines "heuristic discovery" as "the discovery of freshness in perception...The intention is to transcend all previous experience of music production and...consumption. The intention is making music, and listening to it, as if for the first time". He states that dialogue "is the interactive medium in which the products of heurism are tested. Sounds are placed; placed in contrast to, in parallel to, in imitation of, in respect to, without regard to, other sounds. Minds struggle, coalesce, defer or acquiesce. Inner debate meets outer debt. Instant decisions dictate the immediate direction of the music" (Prévost, 1995).

- Introduced structures and materials must be flexible enough to accommodate multiple interpretations, and able to be abandoned as soon as they cease to serve their purpose. They should be accessible to players with a variety of lineages, languages, approaches, and methods of sound production. This cannot be all-encompassing but efforts can be made to move in this direction.

### 1.4.2 Compositional integrity (criteria)

Whilst observing the above list, my aim was to give individual pieces a 'sense of themselves' across multiple performance contexts, e.g. differing renditions, performers and performance spaces. My criteria in this regard were not so much informed by a desire to allow my compositional voice to come through, although this was more important for some pieces in the portfolio, but rather were concerned with creating pieces that were, to some degree, audibly and/or performatively distinctive.

- Compositions should be identifiable as being distinguishable from one another and from other relatable practices.
- Sonic results should clearly be impossible to achieve through free improvisation alone. To avoid certain predictable tropes of large group improvisation, there should be options for various types of synchronicity and strong, nimble structural events.
- Players should be given the means to bypass, to some degree, the need to explore and establish social dynamics as a pre-cursor to effective creative interaction (Linson, in Toop, 2016). To aid this, compositional elements should aim to inspire conviction, trust, daring and non-habitual playing, even in groups of performers who haven't played together before.
- To mitigate any difficulties in understanding individual roles and contributions within large groups, there should be mechanisms to allow players to hear and/or intuit their roles with some clarity.

In combination, these sets of criteria constitute what can easily be seen as a list of irreconcilable and contradictory, even paradoxical, aims. Indeed, I will show how my attempts to bring together the described improvisational freedoms and compositional integrity will encourage a broader ontological understanding of a 'piece'. But I will argue that in *Micromotives*, the collection of pieces that functions as the principal constituent of the following portfolio, all criteria from both categories have largely been satisfied.

I cannot say the same for the other pieces in the portfolio and, indeed, these were most often not intended to address every criterion. Instead, they should be seen as iterative experiments that have informed the evolution of *Micromotives*, whilst attempting to satisfy various needs and desires that came about as a result of the nature of the collaborations involved. With these exploratory pieces, I have sought to address particular issues or explore defined approaches or material types. In order to clarify the evolutionary process throughout the portfolio, I will detail what has been learned at each stage, specifying how working on the smaller pieces helped to define and consolidate the eventual criteria stated above. Broadly speaking, a shift occurs throughout the portfolio, from an initial focus on the score and compositional authority towards improvisational freedom, performance and collaboration.

Before beginning my commentary on the individual pieces of the portfolio, culminating in a deeper discussion of *Micromotives* and final conclusions, it is important to acknowledge several key compositional approaches already in existence which address similar concerns to those encapsulated in my research questions, and which satisfy some of my criteria.

## 2 Review of existing approaches

In this chapter, I will briefly detail a handful of the innumerable compositional approaches and performance traditions that have incorporated models of creative distribution, balancing predetermined elements with real-time processes and/or improvisation. To make the most direct comparisons, I will focus on some of the models of the mid-late 20th and early 21st Centuries that constitute my direct lineage, and that correspond to multiple aspects of my stated criteria. My understanding of some of the successes and failures of these approaches, in relation to my specific aims, has helped to clarify the research questions, hypotheses and compositional criteria of this project.

### 2.1 Indeterminacy and experimentalism

In the early 1950s,[9] a significant number of composers began to show a shift towards indeterminacy in composition, re-distributing creative decisions between composer, performer and, in some instances, contingent or chance elements. The rise of such approaches, seen in the work of seminal figures such as Henry Cowell, John Cage, Morton Feldman, Earle Brown, Christian Wolff, Henri Pousseur, Karlheinz Stockhausen and even Pierre Boulez, can be seen to reflect a combination of desires that in some ways resonate with my own: from one perspective, to loosen elements of compositional control that had become increasingly totalitarian through the establishment of avant-garde and modernist ideologies in Europe, and from another, to provide structure and coherence to the creative possibilities of improvisation (Lewis, 1996).[10] Cage's (2009) concept of experimentalism – compositional methods

[9] Earlier in a handful of instances, including some compositions by Henry Cowell and Charles Ives.

[10] Examples of early indeterminate works by these composers include Cowell's *Mosaic Quartet* (1935), Cage's *Water Music* (1952), Feldman's *Intersection 2* (1951), Brown's *December 1952* (1952), Wolff's *For Pianist* (1959), Pousseur's *Mobile* (1956-58), Stockhausen's *Klavierstück XI* (1956) and Boulez's *Third Piano Sonata* (1955-57).

that lead to materially unforeseen outcomes in performance – gained further traction through the 1960s, as can be witnessed in the proliferation of 'open' notational approaches found in Cage's 1969 book *Notations*.

But although many of these compositions invite or increase improvisational elements in performance, few explicitly demand improvisation as it has been described above – reliant on contingent dialogue and personal voice – with some composers, perhaps most vocally Cage, directly opposed to it.[11] Performers of indeterminate and experimental music continue to have multifarious relationships with improvisation and there is often no requirement for them to be improvisers at all. Ben Watson (2013) has described the differing aesthetic priorities of free improvisation and experimental 'classical' practices, suggesting that "the latter required recognition of the classical tradition in order to appreciate its 'subversion', while Derek [Bailey]'s [free improvisation] band reckoned they could make significant music simply by playing it".

It is perhaps telling that many indeterminate composers, having decided to share creative powers, have gone on to display specific aesthetic preferences for the performances of their pieces, leading to descriptions and comparisons of 'better', 'worse' or even 'correct' and 'incorrect' renditions.

Discussing the performance of Feldman's graph-based scores (e.g. *Intersection I,* 1950), Philip Thomas (2007) points to a conflict between the soundworld that Feldman imagined and that which the scores allow. He is corroborated by Lawrence Dunn (2017) and John Snijders (2018) in suggesting that a level of good will and contextual understanding are necessary to render these scores successfully – to validly perform Feldman's graph scores one needs to know his soundworld and sonic preferences.

Cage transferred many elements of compositional control to performers in the hope that, in turn, specific performance decisions would be similarly outsourced,

[11] Although Cage's attitude to improvisation did change notably throughout his career, embracing it at certain points (Feisst, 2009).

stating “The performer can use similar methods to make the determinations that I have left free, and will if he's in the spirit of the thing.... I have tried in my work to free myself from my own head. I would hope that people would take that opportunity to do likewise” (Cage, 1970 quoted in Thomas, 2007).

Wolff, on the other hand, seems keen to see how radically his pieces can be realised, encouraging the inclusion of performer taste, judgement and voice, and very rarely demonstrating any judgment on specific versions (Thomas & Payne, 2019). Instead, his approach is to “imagine the most extreme interpretation...[and ask myself] can you handle that?” (Wolff, 2017). Thomas (2007) describes this approach, saying that “[Wolff] does not demand that the performer enter his world but instead encourages a process of negotiation between the performer, the score (Wolff), and other parties (ensemble members). The score acts as a prompt for dialogue, an arena for investigation”.

### 2.1.1 A turn towards real-time

It was supposedly David Tudor’s preference for creating fully notated versions of Cage’s indeterminate piano pieces that prompted Wolff to develop contingent procedures that relied on real-time reactions in his 1959 piece *For Pianist* (Hicks & Asplund, 2012). Wolff describes a shift in thinking and practice at this time, saying

> “All this incredibly complex, intricate stuff wasn’t really necessary. You could get much more directly to the point by opening up the score to the performer...This wasn’t of course just improvisation...But on the other hand it gave the piece a certain character and identity that helped the players, because it’s very hard to improvise from zero...We discovered right away...that your free choices weren’t exactly that free. They involved dialogical choices...in response to...the other person”. (Wolff, quoted in Duckworth, 1995)

Wolff's rationale for moving towards real-time indeterminacy incorporates not only the desire to control the unpredictability of free improvisation, but also to generate compositional integrity via the sharing of creative contributions between composer and performers. In this way, Wolff moves towards understanding some of his compositions through the socio-cultural environments or types of performativity that they create, an approach that will be used in the analysis of some of the pieces presented below.

Alongside prioritising contingency, openness, interaction and process in a way that is perhaps closer to games than traditional musical scores (Nyman, 1974), Wolff is also relevant here due to his experiments with self-organising large ensembles. In *Burdocks* (1970-1) Wolff challenged the hierarchies and conventions of standard orchestral practice (Saunders, 2010), suggesting that players decide several significant aspects of performance democratically. The notation consists of text instructions, graphics, cueing systems and highly indeterminate and interpretable standard notation, giving players a high degree of choice over the sounds they produce.

Corresponding to my aims in this project, Wolff is interested in enabling performer agency within the context of distinct compositions, stating "I'm trying to see how little I can indicate and yet come up with a piece that's clearly itself, one that still has a life of its own" (Nyman, 1974). However, a significant difference remains in that Wolff's pieces retain a level of performer obligation and very rarely rely on free improvisation per se.

### 2.1.2 Free improvisation and experimentalism

There are a host of other composers who emerged in an environment where free improvisation, African-American, and European avant-garde lineages were less delineated. Experimentalists such as Vinko Globokar, Frederic Rzewski and Cornelius Cardew had seminal outputs within the realms of both composition and

free improvisation, being rooted in the avant-garde by way of their pupillage with Leibowitz, Babbitt and Stockhausen respectively, whilst pioneering free collective improvisation through their involvement with New Phonic Art (Globokar), Musica Elettronica Viva (Rzewski) and AMM (Cardew) from the mid-late 1960s.[12]

Composers such as Pauline Oliveros have prioritised real-time processes, listening and interaction in ways that often resemble free improvisation. Her "improvisation-based" concept of 'deep listening' is built on foundations of aural awareness, interaction, meditation and ritual (McMullen, 2010).

Although some of the work of these composers does rely on the kind of interactivity and contingency found in free improvisation, particularly that of Oliveros and Cardew,[13] pieces often remain predicated on a series of obligatory instructions, which largely define their compositional integrity.

## 2.2 Composing for improvisers

Composer-improvisers such as Richard Barrett and Malcolm Goldstein have made not only improvisation but *improvisers* themselves intrinsic elements of much of their compositional work, attempting to synthesise the personal voices and practices of performers with compositional models. Bassist Christopher Williams (2019) has said of his performances of Goldstein's work: "His scores and my performances deconstruct any would-be opposition of notation and improvisation by showing that

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[12] In terms of their significance as composers, Globokar's earlier *Discours* pieces are excellent examples of indeterminate notation combining graphics, text and standard notation; Rzewski has been called "one of the…most important living American composers" by Michael Schell (2018); Cardew's *Treatise* (1963-67) is one of the most widely cited examples of graphic notation and his influence has been noted by Michael Nyman (1974), Howard Skempton and Michael Parsons (2019). Regarding the same composers' importance within a fledgling European improvisation scene, AMM and New Phonic Art were established in the 1960s as groups dedicated to free improvisation, the former comprising Eddie Prévost, Lou Gare and Keith Rowe alongside Cardew and other collaborators, the latter comprising Jean-Pierre Drouet, Michel Portal and Carlos Roqué Alsina alongside Globokar. Alvin Curran (1995) has written at length on MEV's commitment to free improvisation, but also details a number of compositions that the group performed extensively (Curran, 1976).

[13] E.g. Oliveros's *The Well and The Gentle* (1982-83) and Cardew's *Schooltime Special* (1968).

physicality belongs to both practices, linking over-time and in-time processes in unexpected and fundamental ways".

Barry Guy and Chris Burn have done significant work with large improvising ensembles, specifically focussing on those comprising experienced improvisers with highly developed personal languages. Guy's output has often combined a mixture of standard notation and virtuosic graphics (e.g. *Un Coup De Dés*, 1994), including his work for the London Jazz Composers Orchestra and the Barry Guy New Orchestra, alongside commissions for the Glasgow Improvisers' Orchestra and Globe Unity Orchestra. Guy (2012) has said that "these scores were characterized by my utilizing the creative improvisational voice within defined (and sometimes not so defined) structures that allowed freedom as well as finite through-composed sonorities".

Burn is one of a number of affiliated composer-improvisers, alongside John Butcher and Phil Durrant, who began composing for large groups of improvisers in the 1980s. In line with some of my aims, Burn's rationale for structuring large-group improvisation included a desire to avoid the kinds of clichés described above (e.g. Zanussi's 'tentative introduction, gradual buildup, ecstatic section, fade'), and to generate results that wouldn't be possible through free improvisation alone. He has described how his compositions became less prescriptive over time, ultimately focussing on predetermined personnel groupings.[14] This approach is one shared by many other composers with similar goals (e.g. Barrett; Butcher) but, in a bid to extend performer freedoms, is one that I seek to avoid in the later pieces of the portfolio.

Although very much rooted in the Western classical tradition, Krzysztof Penderecki explicitly embraced the possibilities of improvisation with *Actions for Free Jazz Orchestra* (1971), written for Don Cherry's New Eternal Rhythm Orchestra.[15] This piece is carefully structured, with precise given materials designed to act as

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[14] As detailed to me by Burn in conversation (2019), and in the liner notes of *The Place 1991* by Chris Burn Ensemble (Burn, 2001).

[15] A line up of 15 players, derived from various configurations of Alexander von Schippenbach's Globe Unity Orchestra and Cherry's Eternal Rhythm through the late 1960s.

'stimulants' for extrapolation, thereby only encouraging real-time interaction and performer voice in compositionally delineated areas (Häusler, 2001).

### 2.2.1 Jazz-based approaches

Given my personal background and aesthetic biases, it is perhaps most relevant to mention those composers wishing to extend 'formal' compositional possibilities within the context, and as extensions, of jazz, free jazz and post-jazz practices, enlarging the scope of structural possibilities, and aiming, in Anthony Braxton's words, to "find a new formal space" (Restructures, 2007).

Whilst being leading figures in jazz, composers such as free jazz pioneers Cecil Taylor and Ornette Coleman; European large ensemble (co-)leaders Alexander von Schlippenbach (Globe Unity Orchestra), Misha Mengelberg (ICP Orchestra) and Mike Westbrook; and AACM alumni such as George E. Lewis, Henry Threadgill, Wadada Leo Smith, Muhal Richard Abrams and Roscoe Mitchell, have been cited, or described themselves, as being significantly influenced by the formalised structures of contemporary classical composition.[16]

George E. Lewis (1996) cites the output of several of the above as

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[16] Michael Wilderman (2018) states that Taylor "immersed himself in 20th-century classical composers, including Stravinsky" while studying at the New England Conservatory; Coleman produced a number of concert works for classical performers including *Sounds and Forms for Wind Quintet* (1965), which Alan Bates (1972) describes as "a characteristic example of Coleman's wholly composed pieces, which conform to the post-Schoenbergian idiom"; Schuller's concept of 'Third Stream' music was explicitly concerned with combining jazz and classical aesthetics and techniques; von Schlippenbach's website states that his music "mixes free and contemporary classical elements"; Joslyn Layne (n.d.) describes Mengelberg's classical heritage, including being inspired directly by Cage after meeting him at the Darmstadt International Summer Course; Westbrook's classical influences are exposed in one instance by his arrangements of Rossini's operatic themes (*Big Band Rossini*, 1987); Lewis has worked as a composer of 'concert' music throughout his career, writing for the likes of the London Philharmonic Orchestra; Threadgill describes using "an intervallic language that's kind of like serialism" (quoted in Shteamer, 2010); Smith's interests in formal compositional approaches include the development of his *Ankhrasmation* graphic language; Abrams has said "I…concentrated on Duke [Ellington] and Fletcher Henderson for composition. Later I got scores and studied more extensive things that take place in classical composition" (Panken, 2007).

> "examples of work that retains formal coherence while allowing aspects of the composition to interact with the extended interpretation that improvisers must do – thus reaffirming a role for the personality of the improviser-performers within the work". (Lewis, 1996)

Here, Lewis articulates a general aim for this group of composers, in relation to the more traditional jazz-based compositional practices in which they were initially steeped: to expand the possibilities in terms of structure, material and notation, whilst remaining within a context predicated on performer voice, collective creativity, event and improvisation – an approach defined by some as 'avant-garde jazz'.

Another innovator of free jazz with contemporary classical influences (Szwed, 2012), Sun Ra is notable here for developing methods of directing large numbers of improvisers within compositional frameworks, including a set of physical gestures that was to inspire Butch Morris.[17] His compositions, which incorporate Duke Ellington-/Count Basie-inspired big band swing, noisy synth explorations, static experimental soundworlds and raucous improvisation, remain heavily reliant on the personal voices of ensemble members, revelling in semi-synchronicity and demonstrating what could be called an 'aesthetic of imperfection' (Hamilton, 2000). Derek Walmsley (2015) explains:

> "compositions like "Saturn" are portals or spaces within which players can express themselves and explore new relationships. Sun Ra was no democrat, but his pieces have the same kind of freedom that you find in gospel church services or dance events, where people suddenly join hands or move together, seizing the moment and forgetting themselves. The beauty of "Saturn" is that it is both a four minute pop song that lodges in your mind forever, and a matrix of possibilities which contains multitudes". (Walmsley, 2015)

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[17] Morris cited several other influences, including Horace Tapscott, Charles Moffett and Lukas Foss (Ratliff, 2013).

Amongst such a wide-ranging compositional catalogue it is difficult to pinpoint common characteristics in Sun Ra's approach to musical organisation, but Walmsley describes both a significant space for spontaneity and individual performer voice, as well as a clarity and reproducibility in compositional structure. This combination is common amongst the above examples, but Sun Ra is significant here due to his focus on large ensembles, working predominantly with his Arkestra for most of his career, and with whom he developed a performance practice so deeply embedded that the ensemble has been able to clearly retain its sonic and performative identity under different leadership since the early 1990s.

### 2.2.2 Some contemporary developments

Variably rooted in jazz and/or free improvisation and/or concert music are the many practitioners of a younger generation, several being disciples of the above, currently experimenting with methods to unite compositional and free improvisation practices on large scales – large, in terms of both composition and ensemble. Composer-improvisers such as Tyshawn Sorey, Taylor Ho Bynum, Alex Ward, Matt London, Cath Roberts, Anton Hunter and Rachel Musson have used a mixture of predetermined timelines and player groupings, mobile forms, mixed notational approaches and suggested points of coalescence and departure in some of their recent work.[18]

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[18] E.g. Sorey's epic 2018 work *Pillars*, for eight improvisers (he names Morris, Braxton and Feldman as inspirations); Bynum's *Navigation* (2013), which uses a mobile form and shares directional duties; Ward's compositions for his project 'Item 10', which aim to "stimulate rather than trammel the performers' improvisational instincts and responses" (Ward, quoted on the Cafe Oto website regarding a 2017 performance: https://www.cafeoto.co.uk/events/alex-ward-item-10/ [accessed 15/11/19]); London's *Rituals* (2018), for ten improvisers, which is largely graphic, using predetermined player groupings, some conductor-controlled interactions and a rigid timeline; Roberts' compositions for her 10-piece, Favourite Animals, that employ fluid structures, often allowing players to choose independent routes through the score; Hunter's *Article XI* (2014), which asks individual players to improvise on given themes or seeds before developing and incorporating the results into the final composition; Musson's 2018 piece for 9 players, *I Went This Way,* which follows a fixed timeline and set text, using graphics, player groupings and pitch sets.

### 2.2.3 Anthony Braxton and John Zorn

AACM alumnus Anthony Braxton and NYC 'Downtown' luminary John Zorn require some emphasis here, due to their prolific and systematic compositional outputs for large groups of improvisers, and their substantial influence on the development of the methods utilised in the following portfolio. Both mostly compose for improvisers specifically, and are products of complex confluences of multiple traditions, between them citing the direct influence of many free jazz, avant-garde and experimental pioneers including Ornette Coleman, Lee Konitz, Cecil Taylor, Earle Brown, John Cage, Mauricio Kagel, Karlheinz Stockhausen, Charles Ives, Olivier Messaien and Arnold Schoenberg.[19] The two share many artistic characteristics, writing and speaking extensively about their music and conceptual approaches, sharing a predisposition towards extensive series of compositions (e.g. Braxton's *Ghost Trance Music* and Zorn's *Masada*), and both being initially steeped in jazz whilst later distancing themselves from it.[20]

In particular, various aspects of Braxton's *Compositions 350-358* (2006) and Zorn's 'game pieces' were influential in the development of approaches found in this portfolio, specifically regarding the use of compositional structures that accommodate performer freedom and voice, and so I will detail them in turn.

The culmination of Braxton's *Ghost Trance Music* (GTM) series, *Compositions 350-358* (2006) give especially high levels of creative powers to individual players, managing to

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[19] Zorn's influences are famously eclectic, with Napalm Death, Henry Mancini, Carl Stalling, Frank Zappa and Burt Bacharach cited (for a more comprehensive list see https://rateyourmusic.com/list/TheBungler/artists-that-influenced-john-zorn/ [accessed 15/11/19]). Zorn also cites Braxton as a significant influence, taking up the alto saxophone after hearing Braxton's 1969 record *For Alto*, which has tracks dedicated to Cecil Taylor and John Cage.

[20] Braxton preferred to refer to his output as 'creative music' whilst Zorn has commented that "The term "jazz," per se, is meaningless to me in a certain way. Musicians don't think in terms of boxes. I know what jazz music is. I studied it. I love it. But when I sit down and make music, a lot of things come together. And sometimes it falls a little bit toward the classical side, sometimes it falls a little bit towards the jazz, sometimes it falls toward rock, sometimes it doesn't fall anywhere, it's just floating in limbo. But no matter which way it falls, it's always a little bit of a freak. It doesn't really belong anywhere. It's something unique" (Milkowski, 2019).

align compositional and improvisational practices in a way that satisfies many aspects of both.[21]

The pieces have a highly flexible structure, allowing players to jump to different positions – perhaps much further down the timeline, to an associated set of secondary materials, or even to a different composition – alongside mechanisms that enable players to establish independent sub-groups that can be directed to specific areas. Erica Dicker (2016) explains:

> "One can think of GTM as a musical super-highway – a META-ROAD – designed to put the player in the driver's seat, drawing his or her intentions into the navigation of the performance, determining the structure of the performance itself". (Dicker, 2016)

Braxton incorporates an array of symbols to indicate options for activity, which Dicker says "can be thought of as portals or highway exits off the META-ROAD". But although this approach satisfies many of my criteria – having no set structure or timeline, giving individuals high levels of creative freedom, and sharing powers equally around the group in performance – Braxton rarely uses free improvisation explicitly. There are, of course, many spaces where this might happen, but most commonly, players refer to given materials and/or structures, perhaps streams of pitches, graphics with specific meanings, or a certain 'sound classifications' (e.g. 'long sounds').[22]

This highlights a notable difference between my aims and Braxton's approach, seen in my emphases on making free improvisation the default performance scenario and removing performer obligation. In Braxton's compositions, performers are able to exercise very high levels of freedom, but there remains an assumption that

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[21] Recorded by 13 musicians for the 2007 Firehouse 12 release '9 Compositions (Iridium) 2006'.

[22] Graham Lock (2008) details some examples of Braxton's sound classifications in his paper '"What I Call a Sound": Anthony Braxton's Synaesthetic Ideal and Notations for Improvisers'.

performers refer to the score in some way at all times. Even where performers move away radically from the notation and structure, there is an understanding that they know how this departure relates to their position on the 'meta-road', that they are moving *away from* something, and possibly that they will return. The predetermined structures provide clear contexts in which individual freedoms are to be understood. In contrast, my criteria prioritise the freedoms of each individual performer to such an extent that ultimately it is impossible to utilise any kind of predetermined timeline.

Some of Zorn's game pieces (see footnote 4 for examples) also go some way towards satisfying my criteria, particularly in their reliance on free improvisation for sonic material. *Cobra* (1984) in particular has established itself deeply in the repertoire of experimental ensembles and improvising groups both in and out of the academy. Its eradication of predetermined timelines, groupings and materials, alongside its collective model of real-time structuring, means it is lauded by many improvisers as an example of compositional structure that allows improvisers the freedoms they are accustomed to.

Zorn explains that with *Cobra*, he "tried to create a context where anything could happen at any moment, and everybody had equal control" while Edward Strickland has described it as offering "admirably democratic or quasi-anarchic schemata" (Brackett, 2010). But the retention of a pseudo-conductor figure in the form of a 'prompter' seems to contradict this. This role is variably understood and indeed, it seems that Zorn himself has multiple views of it. On one hand, he describes the prompter as being purely in service to the performers, existing only to coordinate the desires of individual players. On the other, it is portrayed as a vital element of compositional control. He explains in one interview, "I set the situation up, I set the rules up. They [the performers] make the decisions" (Brackett, 2010) whilst stating in another that "In *Cobra* the players are making all the decisions. Or ninety percent of them – I'm also part of the band, so I can make decisions too" (Smith & Dean, 1997). This latter standpoint is reinforced by his statement that

> "Ultimately, I'm the best prompter there can be, because then I can be a complete fascist!...a lot of times, people make calls that I know are going to end up in a train wreck, and I have to know when to say no...You've got to pick the right person for the job [of prompter]. It's crucial. The prompter can make or break a performance, no matter how inspired the band is. The prompter is a direct source of energy and inspiration for the entire group". (Zorn, quoted in Brackett, 2010)

This clear maintenance of compositional and directorial hierarchy is underpinned by the assumption that performers will actually follow given directions. At most points within a performance of *Cobra*, any potential for egalitarianism, and indeed performer freedom, is compromised by a requirement for players to follow the prompter: the choice of cards and the placement of downbeats act as orders for action. Zorn did include a rather convoluted method by which players can extricate themselves from this obligation, known as the 'guerrilla systems', but even in this instance, any efforts to do this must be sanctioned by the prompter.

Smith and Dean (1997) summarise some of the political implications of *Cobra* quite neatly: "Like improvisation in general, Zorn's piece embodies the need for both self-dependence and social responsibility. The political aspect of the music is here more to the fore than in many modernist works... so *Cobra* emphasises the political possibilities of improvisation. But it is striking that in spite of Zorn's democratic intent, the piece permits even a totalitarian guerrilla system to dominate".

As I have demonstrated here, a significant number of composers have investigated similar areas to those that this project is concerned with, some of whom have created solutions that satisfy several of my stated aims. However, if compared to free improvisation, the presence in most of these examples of more or less hidden specificities and/or various kinds of obligation limits the scope of individual performer agency, potentially warping direct modes of information flow and removing senses of possibility and contingency in performance.

Although individual sub-cultures within free improvisation practices may have cultural expectations in many respects – indeed, this aspect of practice seems as critical to success as it is impossible to eradicate – free improvisation remains uniquely appealing to many, in part due to its lack of explicit direction, the potential for creative equality and capability for information to flow directly between participants. These are, therefore, key elements that I aim to maintain in the compositional strategies presented in the following chapter.

# 3 Portfolio

## 3.1 Overview

I have been able to clarify my understanding of improvisational freedom, and thereby refine my objectives and compositional criteria, via the generation, rehearsal, performance and analysis of the pieces that make up the following portfolio. I will detail the specific aims, successes and failures of each piece in turn, and ultimately show how the final piece, *Micromotives*, acts as the culmination of this process by successfully maintaining the key elements of performer freedom and agency set out in my criteria (see section 1.4). This will be presented fully in section 3.6.

This portfolio is broken up into four main parts. Each section contains associated discussion and conclusions that detail the advancement of knowledge and understanding related to aspects of performer agency, personal voice, notation, and modes of collaboration and distributed creativity through the research process.

The first part (section 3.3), regarding the piano and violin duet *how not to dance,* shows the beginnings of my practical research and represents a first attempt to align free improvisation and compositional integrity. As might be expected, its failures are perhaps of more interest than its successes, highlighting notions of 'integrity' strongly rooted in a paradigm of singular authorship, and emphases on formal structure, reproducibility and unity.

Section 3.4 presents four smaller-scale pieces, each with specific points of investigation, the conclusions of which helped to refine my eventual criteria surrounding performer freedom and compositional integrity.

Section 3.5 details the *Grid Pieces*, which explore larger forces without pre-determined groupings or instrumentation, alongside a much more flexible timeline and more explicit power sharing among performers. My use of a questionnaire with performers of these pieces helped to illuminate a number of contrasting viewpoints in

key areas relating to power dynamics and personal expression in improvisation (see section 3.5.5).

Finally, in section 3.6, I will present *Micromotives*, which takes in the knowledge acquired thus far, and proposes a solution, potentially one of many, that I believe satisfies all of my research criteria.

Each of the compositions in the portfolio was generated and analysed following the same methodology:

## 3.2 Methodology

1. Define specific lines of investigation, questions and rationale for composition, commonly in consultation with the performer(s).
2. Create a composition draft with accompanying predictions.
3. Rehearse the draft with performers and record the rehearsal.
4. Auto-ethnographically reflect on the sonic results and discussion.
5. Create a new iteration, incorporating performer feedback and my reflections.
6. Perform and/or record the final version, on multiple occasions and/or with different performers where possible.
7. Compare various renditions to aid understanding of creative processes in performance and compositional authority.

This methodology did not always function in a linear and finite way. Rather, in line with Lawrence Halprin's concept of 'RSVP cycles' (Williams, 2019), the various stages of the process were often mutually influential, unpredictable and non-hierarchical.[23] There were many instances when later stages influenced earlier ones, and when steps

[23] Each letter of 'RSVP' stands for a part of the creative process: R is Resources, in this case the performer, instrument(s), performance space, research questions etc.; S is Scores, i.e. the notation or other processes used to convey ideas and lead to; P or Performance; V is 'Valu-action', the process of reflection, analysis of actions and revisions based thereon.

were repeated. It is important to recognise that the scores here commonly acted as starting points for collaborative development between myself and the performers.

Regarding step 4, other than using a questionnaire with the *Grid Pieces,* I generally found that the most effective way to discuss pertinent topics in any depth was by way of more open conversation with players, which could be recorded for later transcription and analysis.

Having outlined the overview and methodology, I will move on to the portfolio itself.

## 3.3 Indeterminacy fail

***how not to dance***

for violin and piano, composed Oct-Nov 2016

Performed and recorded by Aisha Orazbayeva and Joseph Houston at St Paul's, University of Huddersfield, 26/01/17; recorded by Flora Curzon and Henry Tozer at the Vortex, London, 04/07/17.

This piece came about through an opportunity to write for Aisha Orazbayeva and Joseph Houston during their visit to the University of Huddersfield. Although my focus in this portfolio is on larger forces, it presented a valuable opportunity to try out several notational approaches with musicians strongly rooted in the Western classical tradition.

My initial aim was to present a complex, unfamiliar visual environment that had no obvious musical interpretation and would require performers to negotiate a unique path through it, interpreting notation freely and personally.

I was, in part, inspired by the graphic approach of Barry Guy, but having little prowess in design, and with practicalities of rehearsal time in mind, I opted for a much clearer time-based approach, with most of the score following a left-to-right timeline, and approximate timings given for each section.

I used various types of indeterminate notation, including a version of Earle Brown's 'time notation' (in movement VI) and different types of lines to signify synchronicity, continuity and cueing (see Figure 1).

The result was a multiple-option timeline – a main trajectory, with various 'filters' and extra materials that could be referred to along the way, if desired. There were three levels of obligation indicated by different colours: primary, obligatory materials (outlined in red); secondary, flexible and interpretable 'springboards' (green); and tertiary, optional 'filters' (blue).

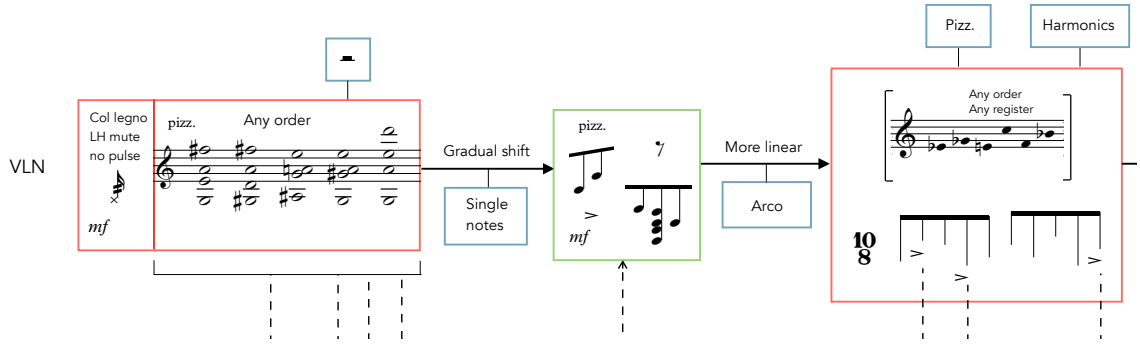


Figure 1. Extract from movement II of *how not to dance*

Several sections suggested broadly specific shapes, gestures, patterns or interactions, whilst other areas were significantly freer, with movement IV in particular employing a non-time-based approach with various inspirations for improvisation positioned evenly around the page (see Figure 2).

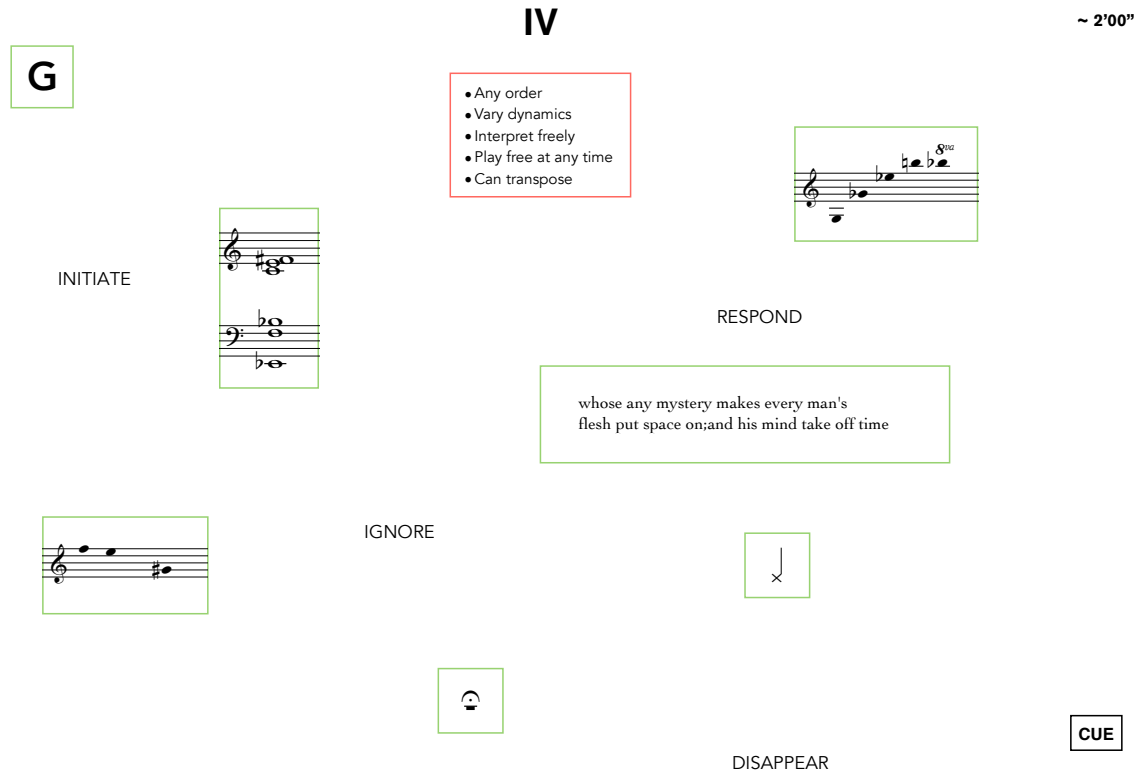


Figure 2. Movement IV (full) of *how not to dance*

Rehearsal highlighted the specificity with which I expected some things to be rendered, leading to a handful of revisions in the score. I hypothesised that, between

different interpretations and takes, movement VI (featuring 'time-notation') would be most clearly similar, IV most divergent, and the remainder somewhere in between. Overall, I imagined the piece would be quite clearly recognisably itself in various renditions by different performers.

Aisha and Joseph seemed to find most of the notations to be fairly intuitive, and were able to play a version of the piece quite quickly. Results corresponded broadly to my intentions, with some clear moments of synchronicity and musical dialogue arising at times. The materials and timeline gave the piece a clear structure and, in more improvisational moments, the given 'springboard' materials did push the performers in certain directions, mostly with strong suggestions of character.

Discussion with Joseph highlighted some confusion regarding the general approach, and a lack of certainty as to whether the performance had gone well or badly. Being asked to improvise in dialogue with one another, whilst simultaneously processing a substantial amount of written information and rendering the score accurately, had led to contradictions regarding performer roles, inadvertently pulling players in several directions. They were unduly constrained in some places, and would have benefitted from more direction in others.

On reflection, there were several areas of the piece where I had conceived quite specific sounds, processes or effects but, in a bid to maintain openness, had not given enough relevant information. Notations closest to standard notation were deemed somewhat associative and clichéd, inducing a lower level of conviction in the players. In a bid to engineer a collaborative creative arena, and enable improvisational freedoms to co-exist with compositional integrity, I had inadvertently produced the same situation that induced Feldman to reject indeterminacy and return to standard notation – one in which there was a mismatch between compositional intention and sonic results (Thomas, 2007).

I wanted the players to improvise freely but, in focussing on a need for reproducibility regarding structure and material, had provided overly prescriptive constraints. The players might have been able to improvise in some sense, but associated 'freedoms' were, in reality, highly restricted. The process seemed more akin to 'painting by numbers' than free improvisation, limiting the sense of contingency and scope for dialogue between players.

Joseph considered movement V most difficult to interpret and in performance this section was directionless and overlong. This movement contained a huge amount of information, requiring some time and practice to understand the requirements and processes involved.

Movement IV was judged most successful, encouraging deeper and more instinctive listening and interaction in ways that corresponded more closely to free improvisation. This notation was highly flexible with no timeline, allowing improvisation or materials to be freely incorporated at any time, whilst giving integrity through recognisable pitch-based materials and specific interaction types (e.g. 'initiate' and 'ignore'). The intuitive nature of this movement seemed causally linked to perceptions of its success, suggesting that, whilst time and practice might be expected requirements for more standard notational approaches, working with improvisers might warrant the use of more immediately clear and inviting formats.

I wanted to compare versions of this piece by different performers, so invited Flora Curzon and Henry Tozer to record it. In advance of the recording, I made a handful of minor revisions to the score, clarifying several processes. I was aware after the first performance that the notation was dense and complex enough to suggest a 'correct' mode of performance, so I emphasised on this occasion that an interpretative approach would likely render more satisfactory results. I clarified that notation was to be treated flexibly as a default and that, if the players felt that the performance should

proceed in a certain direction, they should feel free to follow their instincts in the moment.

On comparing the two performances, they are recognisably two versions of the same piece, with aspects of structure, melody, rhythm, interaction and affect all clearly shared at times. The pace, flow and, occasionally, character of some sections was quite different, with Aisha and Joseph generally moving between ideas more quickly, lingering less on rests and held notes. There are many reasons that could have led to such differences, and it should be noted that the first was made during a live concert, whilst the second had no audience present and fewer time pressures.

Differences in performer backgrounds, taste and technique were also highlighted, with Flora and Henry veering towards more tonal ideas or pseudo-romantic gestures at times, settling into repetitive patterns in several places, with quieter dynamics overall, while Aisha and Joseph tended towards a more chromatic approach with a more frenetic feel.

As anticipated, movements VI and VII had most similarities in character and material, due to a more determinate and traditional approach to the notation in these areas.

### 3.3.1 Section conclusions: understanding backgrounds and clarifying roles

Comparing the experience of working with different pairs of musicians on *how not to dance*, it is possible to draw several conclusions. Aisha and Joseph are experts in performing music from the 'New York School', and are renowned for their performances of the music of Cage, Brown, Feldman and Wolff, with a vast experience of indeterminate notation. As such, they are very familiar with the soundworlds of these composers, and are members of a specific community, with its associated performance expectations and traditions.

In line with earlier observations regarding the 'validity' of interpretation within this body of work (see section 2.1 regarding performances of Feldman's *Intersections*), having to work with my notation – which, at times, bears some resemblance to that of Brown and Wolff – but without the necessary awareness of my practice, was problematic. I had wanted the performers to bring their personal voices to the piece, to use the notation as a springboard, and to improvise with it, but hadn't given the space or relevant information for them to do so. Instead, I had overloaded with detail in an attempt to provide compositional integrity. As the sound of the piece became clearer to me during the compositional process, I had added further prescription, compounding a compositional hierarchy, and creating a situation where the performers were simply trying to render the score with some accuracy, unable to engage with it creatively.

It is possible that Flora and Henry's relative lack of experience with indeterminate notation of this type actually helped them interpret more freely, and inject more of their personal voices into the performance. Comments during rehearsal certainly indicated less preoccupation with my compositional intention and soundworld, and our pre-recording discussion gave me an opportunity to highlight my desire that this score should be treated more as broad guide than rigid blueprint, and that performers should prioritise interaction and creativity over interpretation if such conflicts arose. It is easy to see that some of this was taken on board, simply by observing the approximately seven-minute increase in performance length from one duo to the other.

The experience also served to highlight several biases and assumptions that I had acquired as a result of my background and practice, alongside some of the ways that these were perhaps at odds with those of the performers. It seems reasonable to suggest, although, of course, this is not always the case, that within the circles I had mostly operated within, predominantly rooted in jazz and free improvisation, a fluid and interactive engagement with notation is commonly assumed, and performances

of notated compositions are presumed to contain a substantial level of personal creativity and voice.

Appreciating that Aisha and Joseph perhaps exemplify a different implicit understanding, one where performer voices are required largely to adapt to the needs of the compositional soundworld and structure, was an important lesson, one that was explicitly reinforced when working with Serge Vuille, as I will detail in section 3.4.4. These assertions are not made in order to judge either of these traditions, but merely to observe a difference; and to note how that difference, if not properly acknowledged and effectively negotiated, can cause suboptimal results and a level of dissatisfaction on both sides. If we accept that all compositional and notational designs are made within a context of collective understandings and traditions, it follows that, when bringing together divergent backgrounds, it becomes exponentially more important to clarify expectations and roles, and to have these directly correspond to notation and/or structure. By and large, I failed to account for these issues in the first performance, but was able to offset them somewhat by way of verbal discussion in the second.

## 3.4 Who exactly is in charge here?

In this section I will discuss the development and performance of four smaller-scale pieces – *A Net Flow of Air*; *Chained Melodies*; *Listen, Distil*; and *Golden Sugar* – each exploring and developing particular ideas that helped to advance various areas of understanding, leading to a more clearly defined set of research criteria and paving the way for the development of the piece that I will argue satisfies these, *Micromotives*.

These pieces share several characteristics: performers/instrumentation are specified; individual players have clearly assigned roles in most areas; structures are largely pre-determined, with suggested durations (all under ten minutes); and they are the results of collaboration with performers from inception to performance.

The fact that these pieces are not for larger forces precludes them in some ways from fully responding to the questions posed in my introduction, but they are included here due to their usefulness in interrogating specific questions regarding material types, structure and control, namely:

- How can structure be used to aid compositional integrity and how flexible can it be?
- Who generates material and/or controls the soundworld?
- Which types of notation stifle improvisational responses and which act as useful springboards for them? What kinds of text and phraseology encourage intuitive engagement? How do process-based materials and more traditional musical materials function differently to one another in this context?
- How can elements of recall, development and repetition be incorporated without hindering the improvised flow?
- If matching expectations and biases between composer and performers is critical, how can discussion and collaboration be used to maximise this kind of compatibility?
- Which powers can be shared? Who has power and at which points? Can power move freely and transparently between players and/or between composer and performers?

### 3.4.1 *A Net Flow of Air*

For solo tenor saxophone and effects, composed Jan-Mar 2018

Performed and recorded by Joshua Hyde at St Paul's, University of Huddersfield, 19/03/18; recorded by Tom Challenger at his studio in Brockley, London, 11/06/19.

I was offered an opportunity to work with saxophonist Joshua Hyde on a solo piece as part of his Huddersfield performance. In initial conversations, Joshua showed an openness towards collaboration, encouraging me to write an instrument-specific piece, and showing a preference for more textural materials, over the pitch-based/melodic ideas I had suggested. There were several other ways that our dialogue influenced the constituents and development of the piece, including the incorporation of effects and approach to improvised aspects. I wanted overall to explore varying levels of structural control, and to experiment with different kinds of notation and text.

The piece begins with a fully notated part, before presenting multiple, highly interpretative text options in the form of a grid. As the piece continues, the number of available options diminishes, thus gradually moving creative control from performer back to composer, and finishing again with a morphed, fully notated version of the original material. I wanted to observe how the compositional soundworld, engineered via the fully notated lines, and the types of text used, might impact the improvisational aspects.

Initial drafts of the prescribed passages were ill-defined, leading to sluggish movement and a general lack of clarity and purpose in the first rehearsal run-through. I also noted that, for the most part, this first rendition sounded as though it could have been fully improvised, thereby going against one of my overarching criteria. Additionally, Christopher Williams, who had tried an early version of the piece on double bass, expressed concern regarding a perceived separation between composed

materials and directions for improvisation. He was also keen to eradicate a sense of 'blockiness' that came from moving abruptly between improvisational ideas, preferring to transition smoothly.

With these observations in mind, I hypothesised that providing more compositional detail would aid focus, character and flow, and give a stronger understanding of performer role. To achieve this, materials became more pitch-based and intervallic, with increased rhythmic and dynamic information and a suggested tempo. Open-ended text instructions became more focussed, moving away from words like 'free', or self-contained ideas such as 'repeated sound, broken rhythmic feel' towards interactive directions designed to relate directly to surrounding materials, such as 'develop', 'contrast' and 'intensify', as well as highly interpretable, malleable, and deliberately vague springboards like 'play for the space' and 'battle' (see Figure 3).

These changes in text reflected an increasing awareness of pre-existing text-based approaches for improvisers, such as *Alligator Char* (2011) by American composer Christopher Burns, which manages to provide inspiration without being overly prescriptive, at least in relation to my personal performance practice.[24] The result of my changes was a shift in emphasis towards role, duration and affect/intensity.

It became clear that directing improvisers to move quickly between free playing and notated materials, or indeed to incorporate their personal voices into ill-defined compositional frameworks, implicitly required them to forge some kind of link between their improvisational practice and my compositional structures. Both Williams and Hyde suggested in discussion that increasing levels of compositional information and providing more directional types of text might, counter-intuitively, act to heighten the perceived sense of performer 'freedom'. With predetermined areas more detailed, the creative focus of performers could be directed towards their improvisation alone, rather than on aligning their practice with a given compositional soundworld.

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[24] Note that this is a different person to the British composer-improviser Chris Burn.

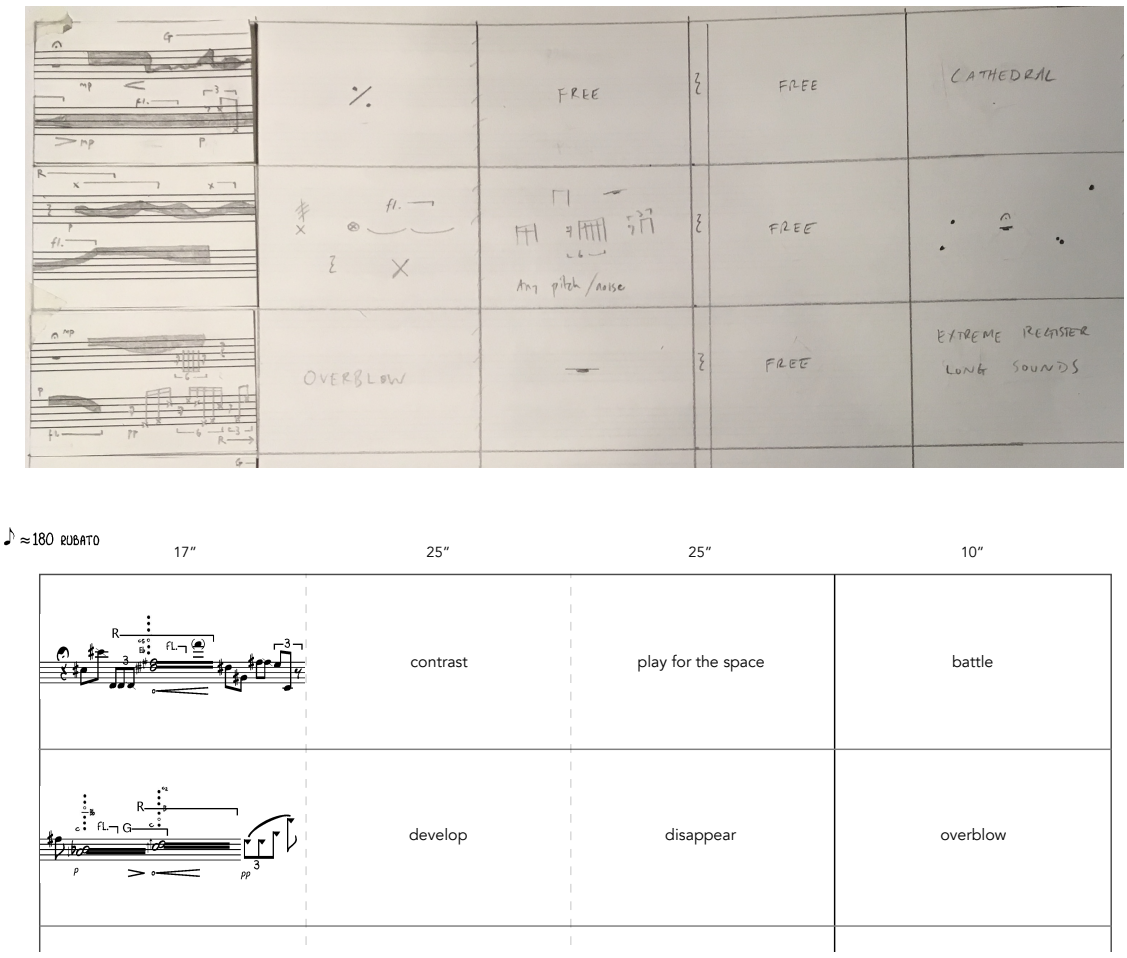


Figure 3. Extracts from initial sketch and final versions of *A Net Flow of Air*

The final version of the piece had clearly defined materials and roles, alongside a more concise and focussed structure, and text that related increasingly to given materials, whilst maintaining openness for performer creativity. It was more obvious to performers which areas were fixed and which were open, with more gradual transitions added to alleviate the 'blockiness' of earlier versions.

Several months later I was able to try the piece with Tom Challenger, a saxophonist much more rooted in free improvisation and jazz than Joshua, who worked more usually within the western classical tradition. Perhaps unsurprisingly, Tom was able to quickly and easily use the text-based notation within his improvisation approach, finding some aspects of the notated parts more testing. He spent some time working on multiphonic and 8th tone fingerings that his instrument was able to accommodate,

unlike those given in the score, which have been designed for Joshua's more modern saxophone. He also had a different electronics set up and opted to use a combination of pedals and instrumental techniques to achieve similar sound outcomes to Joshua's pedals, for which the piece was designed.

Tom raised a potential issue regarding the piece's combination of detailed notation with improvisation, suggesting that the level of practice required to gain fluency of the predetermined materials could have the negative consequence of creating overfamiliarity relating to the improvised areas. This, he suggested, could lead to diminishing levels of intuition and spontaneity, resulting in similar interpretations and predictable navigations through the structure. He also noted a positive corollary of the same issue, noting that greater familiarity might lead to increased ease in cohering improvised and composed ideas.

It is important to contrast Tom's observation here with that of Christopher Williams, above. Christopher indicated that more detail and prescription would free up mental capacity and be beneficial to intuitive creativity in performance, whereas Tom suggests that high levels of information could necessitate increased practice and overfamiliarity, at odds with the necessary contingency of improvisation.

Of course, both might be simultaneously true, highlighting the need for awareness over the balancing of control types in this area of compositional practice. The information and materials given need to be detailed enough to produce compositional integrity, something that was lacking in my initial drafts of *A Net Flow of Air*, whilst also helping performers intuitively understand their roles, but not so difficult as to risk consolidating predictable renditions.

The different suggestions from Tom, Christopher and Joshua showed some divergences in background and priorities: Tom showed heightened awareness of the contingency of improvisation; Christopher was perhaps more concerned with how the notation and improvisation were linked; and Joshua commented more on the overall compositional structure and the clarity of notation used.

Comparing various versions by Joshua and Tom this piece demonstrates a strong yet fluid structure, making it recognisable as itself in each rendition, and clearly not the result of free improvisation alone. Unlike performances of my initial drafts, the increased volume and clarity of information in the final version made later performances easy to follow in the score.

In line with my criteria, compositional integrity is audibly maintained by way of: the given melodic and textural lines, that recur and are developed in various ways through the piece; the effects and sounds utilised; the instrumentation; and the overall progression of events. Broadly speaking, when approaching areas of highly prescribed notation, Joshua was softer and smoother, producing a ghost-like version at several points, where Tom tended towards a more defined and punchy sound.

The text-based areas were predictably the most open-ended, with high levels of performer control and a reliance on improvisation producing very contrasting performances between players. Corresponding to my criteria regarding performer freedom, the personal voices of each player had space to be heard here, with Joshua opting more often for exploration of texture, space and sound, where Tom more often used a linear and pitch-based approach. Both utilised a wide range of dynamics, articulations and intensities. Additionally, the incorporation of structural flexibility allowed the performers to choose unique routes through the score at certain points, thereby temporarily accessing some of the sense of momentary possibility of free improvisation, albeit in a context of relatively high compositional control. The performers and performances are very different but remain quite clearly versions of the same piece.

### *3.4.2 Chained Melodies*

For improvising quintet, composed Apr-May 2018

Performed and recorded by DriftEnsemble at Phipps Hall, University of Huddersfield, 19/03/18.

This piece was commissioned by Colin Frank for DriftEnsemble, a group of postgraduate composer/performers based at the University of Huddersfield. Consisting of percussion, recorders, prepared guitar, electronics and violin, the ensemble are rooted in contemporary classical practices, and often play free collective improvisations as part of their programmes.

I wanted to use this opportunity to investigate the degree to which I could engineer compositional integrity, not through the incorporation of traditional materials concerned with sound, but by prescribing structure, groupings of players and processes. Unlike *A Net Flow of Air*, this piece was to have no specificity in terms of pitch, rhythm, phrasing, articulation, tempo, or technique, but would focus on the ways in which the players interacted with one another, including some more antagonistic types of exchange. Similarly to Zorn's conception of his game pieces (Almeida, 2008), I hypothesised that this approach would allow performers a significant amount of improvisational control over their contributions in real-time, and over the soundworld as a whole, whilst still giving the piece a sense of itself.

I made a clear timeline of events but chose not to specify sectional timings, only providing a vague suggestion for the overall duration. The structure retained some of the 'blocky' nature of the previous grid-based approach, with some specified hard transitions. Several elements were derived from *Unchained Melody*, a pop song made famous by the Righteous Brothers in the mid-1960s, including two short quotes that players could choose to incorporate at specified points. Other than the quotations, the score consisted entirely of text (see Figure 4). As with most of the portfolio pieces, any player was able to cue to move onto the next section at any point.

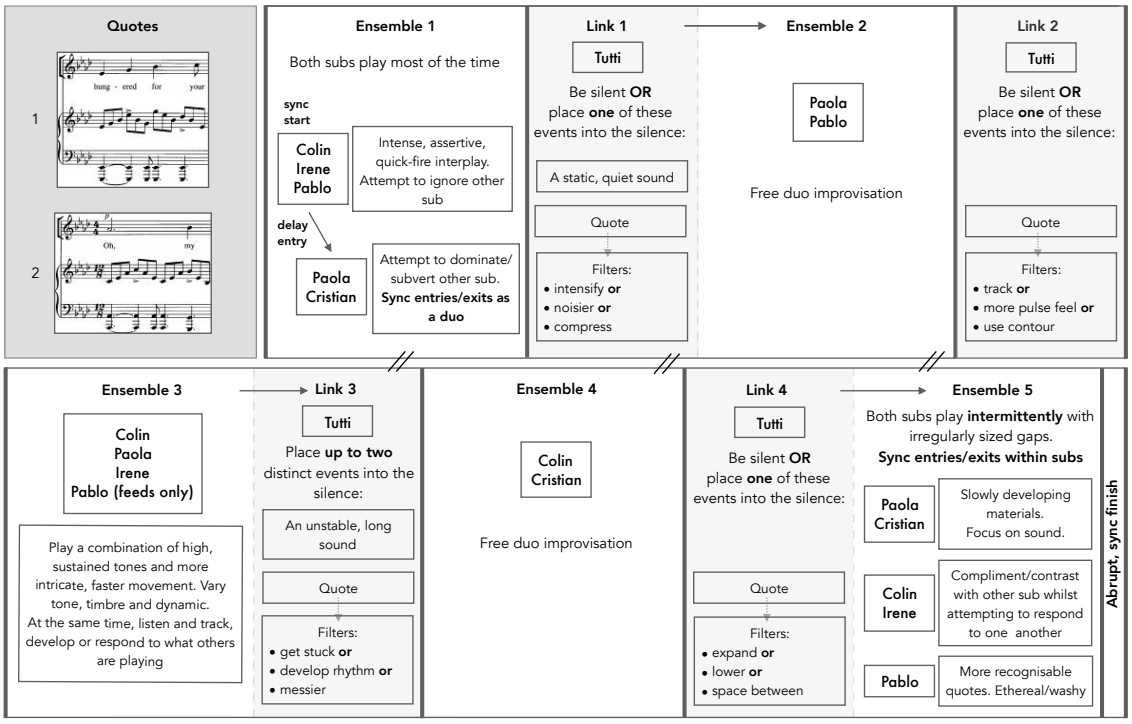


Figure 4. Full score of *Chained Melodies*

The backbone of the form is a series of 'ensemble' sections, symmetrically structured to start with the whole group before moving to a duo and then a quartet – marking the centre point of the piece – then moving back to a duo followed by the whole group again to finish. Between 'ensemble' sections are 'links', where everyone is able to play, but where directions aim to encourage silence, stasis and listening. These are the areas where players may refer to quotations, or to other players who are using quotations, if they wish.

From the outset of the project, I collaborated with the group on the development of the score, generating three successive versions to tackle questions that arose in rehearsal.

Several issues came up, alongside some notable discussions covering several topics: the meaning of various words, such as 'texture', 'intense' and 'dominate'; the logistics of signalling section cues; the importance of communication and listening; and the differentiation of gradual and sudden section transitions. The group found

certain interactions difficult, specifically those between sub-groups, and had some trouble keeping their place in the score. They showed an instinct to make the structural changes smooth and cohesive rather than abrupt and blocky, as intended, with one player commenting in rehearsal "the form feels very segmented, we should give it a breath through".

Some interactions, such as 'always two people improvising together', felt needlessly difficult or repetitive, so I made several instructions more specific, in this case indicating *which* two people were to be active at these points in the score. Most interesting, perhaps, was the unease the players seemed to experience during collective silences. In order to encourage silence in the 'link' sections, I upgraded its status, from one option amongst several to a default position, into which other singular events could be placed.

The use of quotes brought up some important issues for consideration, regarding the incorporation of stylistic sounds that were 'alien' to the personally developed improvisational approaches and languages of the individuals in the group. In this instance the regular 6/8 meter and major arpeggios were starkly at odds with the 'extended' techniques, noise-based sounds, atonality and lack of pulse found in much of the group's freer playing.

The use of more obviously referential or idiomatic language in the context of free improvisation is a contentious area discussed by many free players, with Derek Bailey stating that "Tonality is like an argument, and the answers to the questions are always the same... If you're looking to get away from that kind of thing, you have to use a different language. Atonality is a way of moving from one point to another without answering questions" (Watson, 2013).

Tony Oxley shared this perspective, commenting "I see no reason to bring [musical elements] from the past into this language" (Watson, 2013), and Eddie Prévost (1995) describes an "unease with emulation" that developed in some parts of the free

improvisation community in the mid-1960s. Ben Watson (2013) summarises "Bailey's insistence that 'idiomatic' playing has no place in Free Improvisation", describing it as "a break on the thrust towards musical community, a regress to possessive individualism". As Watson explains it, Bailey sees the inclusion of referential elements as an aggressive move, one that negates any chance of forging a communal approach, and removes the focus and sense of possibility from the situation.

The need to "reject all tonal, modal and atonal organisation in order to leave the way free to organise only through the powers of improvisation" (Bailey, 1980, cited in Lash, 2010, cited in Fell, 2015) may have felt necessary at a point in history when improvising musicians were "seeking to sever the hierarchical relationships that still bound Free Jazz musicians in quasi-traditional roles" (Fell, 2015) but, having witnessed a variety of post-modernist practices and sample-based approaches, some practitioners in the current times might have more inclusive perspectives. Many of today's free players have had a very different musical education to Bailey, and it could easily be the case that a player with no experience of jazz encountering tonal materials might have a wholly unpredictable response to them. Although I see no inherent issues in the incorporation of various stylistic and historical elements into a personal 'free' improvisational practice, I have encountered some of these difficulties first hand, and witnessing their use within *Chained Melodies* did remind me of the need for care, consideration and expertise in such circumstances.

As a whole, the group seemed somewhat uncomfortable with the levels of control they were given in this piece, attempting to regulate one another's outputs at times and opting to cement various elements in rehearsal, such as relative section lengths, shape and dynamic contour of certain areas, and who was to cue. This is no reflection on the skill of the group members and the quality of the ensemble, but it seems clear that there was, to some degree, a mismatch between the clarity and substance of the notation, and the strengths and backgrounds of the players.

Once more, this corroborates the need for accurate and detailed understandings of performer practices when composing for improvisers, and to match compositional details to performer needs. In this instance I could have engineered a more inviting and intuitively navigable environment for the performers, and ultimately achieved a result closer to my expectations, by providing more predetermination in structure, and more specificity in terms of soundworld, interaction types, and the use of quotations and silence, although this might not be the case with a different group of performers.

### *3.4.3 Listen, distil*

For chamber choir (SSAATTBB), composed Jun-Jul 2018

Performed by Via Nova at the College of the Resurrection, Mirfield, 02/08/18, Chantry Chapel, Wakefield, 03/08/18, and St. Peter's, Harrogate, 04/08/18.

*Listen, Distil* was commissioned by Via Nova's conductor, Daniel Galbreath, who saw me present my research and was keen to see how concepts relating to shared power, real-time contingency and improvisation could be incorporated into a choral setting. Writing for a choir gave rise to several challenges, not least that this was the only group I collaborated with as part of this project that was used to working with a conductor. Taking on board some of my tentative conclusions from the previous compositions, and partly inspired by some of the work of Pauline Oliveros, Robert Ashley and Stephen Chase,[25] I decided to focus on real-time processes as my primary materials. I designed these not only to provide structure and cohesion, but crucially to require performers to listen and respond to their surroundings, thereby maintaining the contingency and interaction of improvisation.

Text instructions provide clear roles within a semi-rigid overall structure. Individual performers, mostly named in the score, are instructed either to choose

[25] Specifically some of Oliveros' *Sonic Meditations* (1971); Ashley's *She Was a Visitor* (1967); and Chase's *jandl songs* (2007-).

from a number of given pitches and text fragments, sing or hum specific intervals based on sounds that they isolate from their surroundings, reinforce the choices of other singers by quick mimicking, or collectively move towards either 'dissonance' or 'consonance'. I provided transition types, dynamics and approximate durations for each section, alongside mechanisms whereby sonic materials generated in real-time could be reiterated, reinforced and developed.

Processes tended to follow the same sequence of events: listen to your surroundings, highlight or respond to something you hear, then reiterate and/or develop this. As with *Chained Melodies*, most of the score is text alone, and any ensemble member can cue the group to progress to the next section whenever they feel it is appropriate to do so. Arguably the moment closest to free improvisation is when a trio of singers are instructed to 'extend and develop into longer melodic lines… Weave around each other: Listen, develop, imitate, extrapolate, soar' (see Figure 5).

This approach functioned well in the context, with Daniel and the other singers understanding the majority of my intentions and instructions quickly and easily, with only a handful of minor tweaks and suggestions needed between the first rehearsal and performance. Although the wording of the score necessitated that most decisions were made in real-time, the performers chose to delegate Daniel the job of holding a reference 'D' pitch throughout section 1, and assigned transition cues to specific individuals.

In performance, extremely slow downbeats were very effective in indicating particularly gradual transitions, and it was interesting to observe how singers commonly gravitated towards text where options were available to use it, and instinctively presented their 'distillations' loudly and clearly even though these were mostly instructed to be *piano.* Uniquely in the context of this portfolio, the group quickly established shared, often modal, harmonic spaces for more improvised areas, such as the trio extrapolation mentioned above.

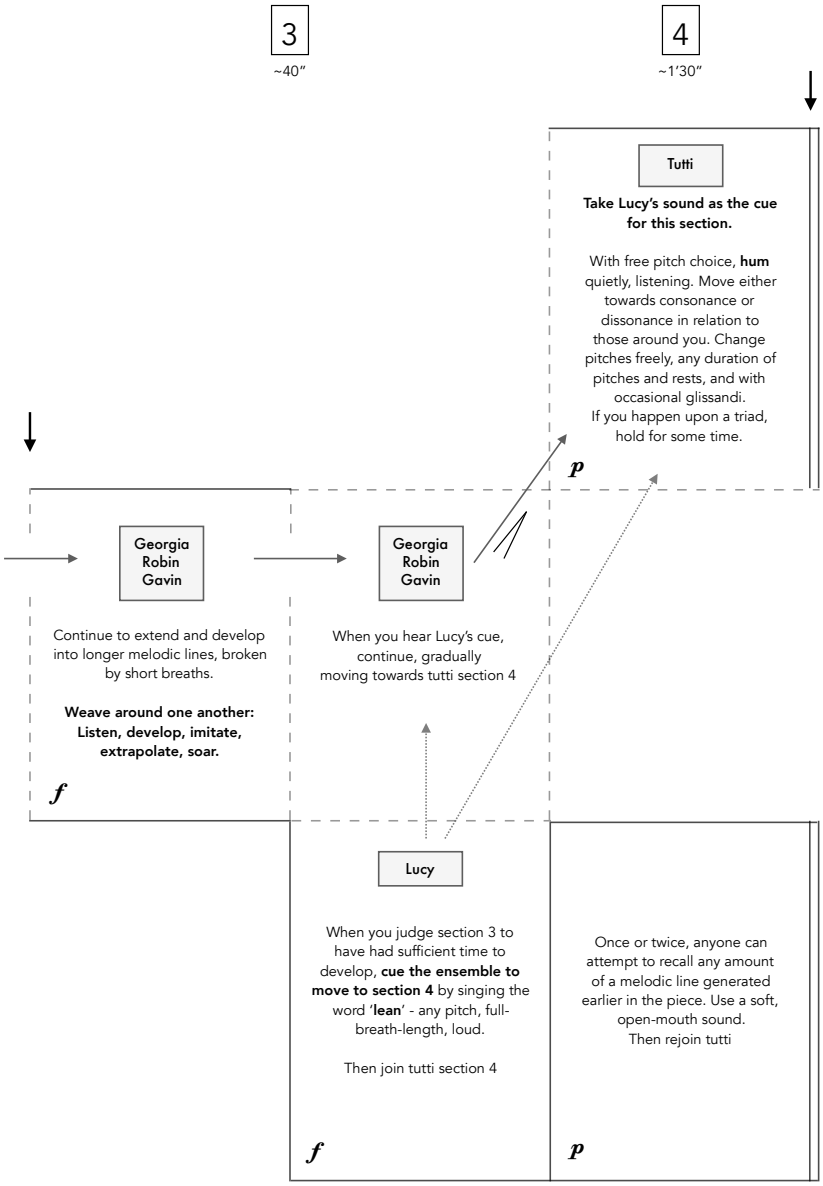


Figure 5. Extract from *Listen, Distil*

One of the singers questioned my predominant use of text rather than graphics in the notation. He had found the amount of text to be overwhelming, and impossible to assimilate whilst also trying to listen and enact the given processes, so had opted to memorise the text in advance. A more effective idea, he suggested, would be to assign graphics to specific processes and provide an explanatory key.

In my experience, both approaches have benefits and disadvantages (see 3.5 for an example of a graphic approach in the *Grid Pieces*) – as this singer described, fully

text-based notation risks either overloading performers with information during performance, or lapses in memory with potential for solidifying errors in interpretation, whilst bespoke graphical representations require a steeper learning curve, more practice time, and can have the effect of alienating performers early on. On balance, it is probable that in this instance a graphic approach would have been a better solution, although perhaps unpractical, given the tight rehearsal schedule.

Overall, *Listen, Distil* seems to involve a fairly even balance between composer and performer controls. Although the singers have a great deal of agency and choice regarding their contributions, with most of the sonic materials generated in real-time and exclusive to particular performances, the specificities of groupings, roles and processes mean that I retain a high degree of control of the overall soundworld, thereby creating a broadly predictable, recognisable and reproducible piece. The contingent nature of free improvisation is present, with singers required to make real-time decisions based on the actualities of the moment, but the sense of possibility is limited, due to the prescribed processes and structures of the score.

Comparing the sound waves of the three performances reveals a striking consistency in overall contour and duration, whilst showing how the details of each performance are able to remain unique (see Figure 6).

Daniel described his experience of the piece in his introduction for the Harrogate performance, saying, "you can hear the process happening…there's a very high state or alertness, of awareness…responses are very, very quick and very sensitive and there's a lot of emotional engagement with each other as well…it's…tremendously interactive. Every performance is a world premiere".

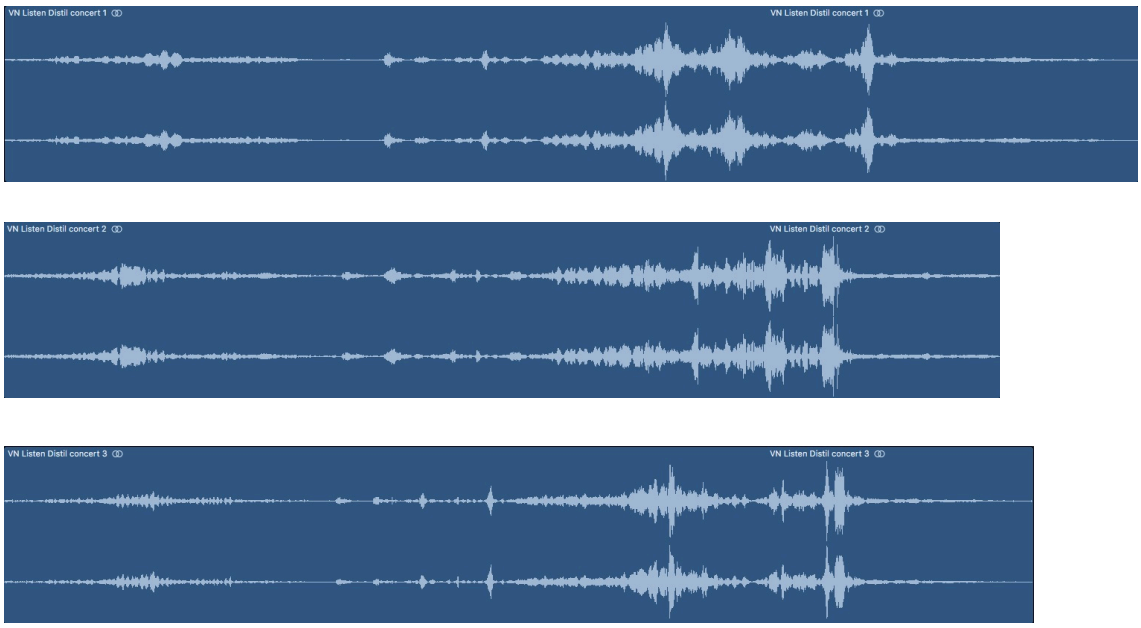


Figure 6. Waveform comparisons of the three performances of *Listen, Distil* by Via Nova

### 3.4.4 *Golden Sugar*

For two improvising drummers, composed Oct 2018 - Jan 2019

Performed by Serge Vuille and Colin Frank at St. Paul's, The University of Huddersfield, 21/01/19; recorded by James Maddren and Will Glaser at The Guildhall School of Music and Drama, 02/04/19.

*Golden Sugar* came about through an opportunity to compose for percussionist Serge Vuille, and is concerned with the juxtaposition and comparison of various levels and types of improvisation and interaction. There were several particular oppositions I hoped to explore, namely: 1) 'parallel' versus interactive types of improvisation between players, i.e. observing a shift in performer focus from the score to one another; 2) freer versus more bounded types of improvisation, e.g. text directions ranged in specificity from 'repeated phrase/gesture' to 'free solo'; and 3) interpretation versus improvisation more broadly, i.e. observing the differences between interpreting a 'lead sheet' score involving specific rhythms, tempo and pitches, and interacting more freely with choices of open-ended text 'springboards' like 'play for the space' or

'respond freely'. Within these areas, amongst different kinds of stimuli, I wanted to see where and how the two players might synchronise and diverge.

For the areas of the score that used lead sheet notation, I wanted to foreground the contrasting languages and approaches of the players, so I created an audio track of these sections using guitar and bass, designed to be heard only by the performers and to be hidden from the audience. I hoped the performers would be pushed into a similar creative space as when playing with a band, with the audio track encouraging the drummers to move beyond perceived obligations to render every note on the page, into a position where they felt comfortable to give the 'other musicians' space, and to engage with the written materials more freely.

I anticipated that observing two drummers go through this process simultaneously would highlight the similarities and differences in individual creative responses, allowing these congruences and divergences to become a focal point of the piece. Hiding the lead sheet and the 'band' from the audience would act to bring the drummers' real-time micro-decisions into sharper relief, exposing their aesthetic leanings, histories and personalities, and throwing a traditionally supportive ensemble role into the spotlight. The players are positioned back to back to encourage deeper listening and make visual synchronisation impossible. By using in-ear headphones, I hoped that, amongst the improvised landscape, the moments of coordination between the drummers would be even more striking for the audience.

The piece's structure was designed to be clearly audible in a bid to give highly defined roles and parameters for performers, and provide a central element of compositional integrity. I arranged the sections so that areas of interpretation were longest at the beginning, gradually speeding up and becoming shorter over the course of the piece, whilst the areas for more open-ended improvisation increase in length. The types of text seed within freer sections broadly move from suggestions of intensity and independence, such as 'saturate' and 'intermittently', towards more considered, interactive ideas like 'contrast' and 'expand'. As a result of the use of pre-recorded

audio, the piece is unique in the portfolio in having an entirely inflexible structure and duration, with the track giving performers set section timings, exact tempi and cues for transitions. I hypothesised that as the tempi increased through consecutive lead sheet sections, it would be progressively harder for players to retain a fluid and considered engagement with the material, and that more of the written rhythms and patterns would be rendered.

In a context so focussed on performer voice, it felt crucial for me to understand Serge's improvisational practice in order to develop structures and materials that would work effectively for him. But an early conversation exposed differing perspectives on this key topic. I had naively assumed that, as an expert performer of contemporary and experimental music, often involving improvisation, he would have an identifiable and defined personal language and approach that I would need to incorporate into my compositional approach. Serge seemed to have assumed the opposite, stating a lack of personal preference in improvisation and prioritising the compositional soundworld over his personal voice. He insisted that, although he was very comfortable improvising, he didn't have an improvisation practice as a performer, and expressed a desire to understand my compositional aesthetic, stating "I don't have a soundworld...as a player...I don't have a personal agenda as an improviser".

He shared my enthusiasm for experimental pieces for drum set, so I started work in earnest, inviting Colin Frank to be Serge's duo partner. Colin shares something of Serge's background and experience, and the dialogue between the three of us was useful in influencing subsequent revisions of the piece.

The initial rehearsal, with Serge and I, shed further light on the areas of potential mismatch intimated above. Although I thought that performer roles would be more or less clear, it wasn't obvious to Serge where his attentions and creative control should be directed. The approach exposed some notable assumptions and biases on

my part, that were potentially so entrenched that I'd managed to ignore the warnings given to me in our first discussion. I found myself pushing Serge towards more varied types of interpretation, that reflected the written materials more obviously and that utilised the drum kit in certain ways. He was keen to understand my preferences but eventually showed some exasperation in being directed in these ways, having not been given clear instructions, saying "If it's in your head, you can't ask me to find it in my head – it's not there… I can't go through the process of trying to understand what's in your head but you not telling me that". When I responded that I wanted to leave some of these elements open to allow for his creative input he suggested that I did have strong preferences for interpretation but hadn't communicated them effectively, saying "you know the things you want to control but you didn't tell me".

On reflection, it seemed that I was unwittingly trying to mould Serge into something he was not, to everyone's loss: he is a highly skilled percussionist specialising in contemporary music within the western classical music tradition, not a drum kit player with a background in jazz and expertise in lead sheet interpretation.

Despite this significant misjudgment, several elements, including the overall structure and use of text, did seem to work well, and we agreed several practical changes that would be made in order to aid clarity of role, and ease the confusion of amalgamating the somewhat contradictory information of the written score and audio track.

The concert performance worked broadly as intended, but I felt that the structure was too clear and 'blocky', with pulse-based areas of lead sheet interpretation feeling quite repetitive and drawn out. I therefore made some small but significant changes to the structure, swapping some sections, encouraging more fluid interaction at times, reducing specificity over use of particular instruments, and making transitions between sections more gradual.

It felt important to try the piece with drum kit specialists who did have the background and skillsets that I had unwittingly been biased towards, so I invited Will Glaser and James Maddren to record it. Being experts in jazz with many years of practice using lead sheets, Will and James very quickly understood their roles with almost no discussion, treating written materials flexibly and/or as springboards, and assimilating information from the score, audio track and each other simultaneously. They tuned their respective kits carefully, and choose to include certain cymbals and small instruments in their set ups, to help define their individual 'sounds'.

As a result of matching my notational and compositional approach to the experiences and backgrounds of the players in this instance, the performance much more closely met my expectations, with the notation acting according to its design. Potential corollaries of more fluid overall engagement with the notation were less obvious renderings of text-based sections at times, and a mixture of rhythmic approaches in the lead sheet sections, blending clear demonstrations of pulse with polyrhythmic and textural ideas. The overall structure came across as less delineated, in part due to details added in the score to this effect, but also owing to a more general rhythmic openness in interpretation, with more pulse used in free sections and more arrhythmic ideas appearing in pulse-based areas.

Broadly in line with my hypothesis, slower tempi seemed to suggest lower levels of rhythmic clarity, quieter dynamics and increased use of brushes and soft sticks, with a general increase in dynamic and rhythmic precision, alongside more use of normal sticks and snares, as the tempo increased. James and Will are largely easy to distinguish from one another on the recording, not only in terms of tone and attack, but also in their differing approaches towards precision and rhythm.

On comparing these experiences it is possible to deduce that the type of creative involvement that *Golden Sugar* demands from performers goes beyond many more interpretative models that emphasise composer soundworld, relying instead on the kind of highly developed personal voices and practices that free improvisation and

jazz-based practices tend to favour. For Serge and Colin, more rooted in classical interpretative practices that require performer flexibility in accommodating a wide variety of compositional voices, there was perhaps not enough of my personal soundworld to work with creatively and effectively.

With this approach, I moved towards a more curatorial and collaborative method, providing macro-structure and encouraging certain eventualities and modes of interaction and engagement, whilst giving the performers high levels of creative power in terms of interpretation and actual sound content. Compared to some of the other pieces in the portfolio, *Golden Sugar* demonstrates a higher degree of composer control in some areas, especially through the rigidity of durations and tempi. At the same time, this piece prioritises the personal voices and practices of the performers, in a way that arguably goes beyond any of the other pieces so far discussed. Although specified materials are numerous here, players almost always remain free to choose how they engage with the score, the audio and each other.

### 3.4.5 Section conclusions: balancing composer and performer voices

Although it can be hard to ascertain initially, when composing for improvisers it is paramount to understand the background of the performers involved, and particularly whether they work most effectively within given compositional soundworlds and structures, or whether they have developed more defined personal improvisational languages and approaches that need to be accommodated in the composition. It is, of course, impossible to fully delineate performer practices in this way, and any such analysis will struggle to move beyond generalisation but, nevertheless, my experience here has shown that there are significant and very real differences in approach that composers must be aware of. Matching compositional designs to player expectations can significantly increase the likelihood that all parties involved perceive the overall experience as successful.

Rather crudely, but perhaps usefully: players who are versatile, and specialise in the interpretation of compositional directions, might ask 'what has the composer set out and how can my creative contributions fit within that?'; whereas performers with more personalised and independent soundworlds and aesthetic biases might be more inclined to look at a compositional framework as a blueprint for personal development and ask, 'what can I do with this and how can I make it fit with my practice?'. As I have acknowledged, very little musical practice sits squarely in one area or the other, but it remains possible to see an implicit and critical shift in emphasis between these two loosely-defined standpoints, from composer voice to performer voice.

It was important for me to realise the extent that my personal background had led me to make certain false assumptions on the performers' behalf: that they would predominantly try to fit my compositional instruction into an already defined personal practice and soundworld; and that they would view more pronounced levels of detail in the score as encroachments upon their individual improvisational freedom. As a result, I had been concerned about being overly dictatorial, and had presumed that a scarcity of compositional detail would enhance performer freedom, which clearly is not always the case. As John Zorn (1980) notes, "One of the most difficult tasks in piecing together the equations for my compositions is balancing them just right so that the players have as much control over the piece as it has over them. There can't be too much or too little information on either side of the fence".

In any event, it is important to define roles clearly. When looking at the pieces in this section of the portfolio, it can be seen that providing more detail regarding structures, processes and soundworld (e.g. *A Net Flow of Air* and *Listen, Distil*) led to more agreement of success amongst a variety of performers.

If relying on personal language and practice in performers, such as in *Golden Sugar* and *Chained Melodies* (and indeed, *how not to dance),* success was dependent on an alignment of understanding between the performers and composer in terms of

process, approach, aesthetic and background, even assuming that all involved come with open minds and good will. It is crucial in such instances to align compositional demands with performer practice, allowing players to use their voices easily. Colin Frank, for instance, has a strong and developed personal performance practice that includes improvisation, but as a percussionist, my asking him to use a drum kit does not allow this practice to be most effectively used. Inviting James and Will to interpret lead sheets flexibly on a drum kit, on the other hand, matches exactly with their experiences and allows their personal practices to be instinctively incorporated into the compositional structure, thereby decreasing the need for discussion and potentially enabling more nuance in performance (see section 3.4.4).

Understanding these issues is necessary for the development of effective compositional materials. The backgrounds of some players might mean that they respond best to more defined sounds and techniques, clearer directions, delineation of open and prescribed areas, and processes that rely more on listening and responding than personal language. Others might engage more creatively with open-ended instructions, interpretative text materials, or suggestions of interaction types as opposed to sound.

#### 3.4.5.1 On freedom

Each of the four pieces presented in this section invites significant creative input from performers. However, referring back to my research criteria, there are several areas of compositional control that act to impinge upon individual performer freedoms, specifically in comparison to those commonly found in small group free improvisation. While timelines are fixed and personnel groupings and roles are rigidly assigned in advance, performer contributions remain fundamentally restricted, unable to move towards the contingency and interactivity of free improvisation.

These four compositions explore structure, material, freedom, interaction and collaboration in various ways. But although highly unpredictable, each also remains concerned with a compositional control of *sound*, with instrumentation and roles both largely fixed, often with specific individuals assigned particular tasks. Observing my criteria required me to further relinquish compositional control and increase performer choice, ultimately necessitating the removal of all aspects of performer obligation. With the *Grid Pieces* and *Micromotives,* presented in the following sections, I significantly expanded levels and types of performer freedom, control and contribution, necessitating a focal shift in my conception of compositional integrity – away from structure, reproducibility and sound, towards performativity, sociality and process.

## 3.5 Towards meta-composition

***Grid Pieces***

For 12 or more players, composed Dec 2016 - Nov 2017

Recorded by Ensemble Fractus at The University of Hull, 12/05/17 (*Orienteer*) and 13/12/17 (full piece as three amalgamated movements); performed and recorded by CUEE at City, University of London, 14/12/17 (*Relay*); workshopped with Glasgow Improvisers Orchestra, ICA, 25/07/17 (*Orienteer*); workshopped with a 2nd year composition class at the University of Hull, 09/11/17 (*Orienteer*).

In line with the particular focus of this project, the *Grid Pieces* represent my first attempt to marry significant performer freedoms with compositional integrity in the context of larger forces. I wrote three pieces, *Orienteer*, *Relay* and *Centrifuge,* which broadly became more controlled and predictable through the series. Initially, these were conceived as stand-alone pieces but once I had tried them all in performance, it became clear that it made more sense to combine them into a single entity, made up of three movements.

In reaction to the level of constraint in earlier pieces, I reduced my compositional control over sound and increased the onus on performer creativity, opting for non-specific instrumentation, alongside a more open and interpretative approach to structure. I hoped to generate compositional integrity not only through the use of certain pitch-based and rhythmic materials, but also via the instigation of specific types of interaction, sociality, processes and performativity.

In order to employ a more fluid and real-time approach to structure, and give individual players a large selection of material options at every stage, I used an 8 x 8 grid format. This allowed each ensemble member to create a unique and independent route through the score by choosing one of eight materials in each column. The

number of options was significantly expanded by making the grid readable in each of its four orientations.

Materials consisted of either broad and interpretable sonic guidelines (e.g. 'low, dense noise'), or interaction types, including mechanisms whereby generated ideas could be passed between players, developed and returned to. I hypothesised that this level of specificity would allow for the personal voices and individual interpretations of performers, whilst providing temporary, clearly defined and self-assigned roles.

I gave silence a significant weighting, partially for textural and structural reasons, but particularly to allow players not to play whenever they felt it appropriate. Approximately half of the options in *Orienteer* were silences, with the number diminishing in *Relay* and further still in *Centrifuge*.

I prescribed certain pitch materials, transition types and dynamics to bolster compositional integrity, allowing me to retain some control over soundworld, structure, shape and texture. These additions also helped to temper some of the potential clichés of large ensemble improvisation, such as exploratory openings, matching of individual dynamics to the overall level, slow changes in group approach, and *morendo* finishes.

Any player was able to nominate themselves to become a 'temporary hegemonic zone' (Potter, 2016), and trigger a section change at any time, eliminating any need for a conductor. Once a material block was chosen, players were required to engage with it until a section change was cued, although they were able to change their interpretative approach or drop out entirely if desired.

I used a graphic approach in the notation, with symbols designed to visually represent the actions they signified as much as possible, and to be readable from any angle. Although not a direct inspiration, there are some potential parallels to be drawn with Larry Austin's *Square* (1963), which consists of intersecting staves that can be read from any orientation.

### 3.5.1 *Orienteer*

The grid formation of this movement was designed to be highly malleable for individual performers, with four orientation options and eight materials to choose from at each stage, with an additional mechanism whereby players can rotate the score 90° any number of times in the second half of the piece before continuing in the new orientation. Alongside silences, which are always available in this movement, there are options to play free at almost every stage, with other material types carefully positioned to bias certain outcomes in terms of sound, interaction, density and texture (see Appendix 1 for planned structure and material biases). These elements are further balanced through the use of prescribed dynamics, with material blocks at the top of each column to be played very loudly, graduating to very quietly for those at the bottom.

I hypothesised that the high level of performer control might lead performances to be indistinguishable from free improvisation alone, and make compositional integrity difficult to perceive across multiple renditions. To counteract this, I included several materials that, through repeated reference, might become recognisable characteristics, including specific melodic and rhythmic materials. These remained highly flexible, with pitch materials using a version of Wolff's notation from *Exercise X* (1993), allowing players to read them in eight possible ways.

Different choices of orientation, of course, give different material options, but each follows the same structure in terms of the transition types between materials, indicated by dotted and thick lines. In this way, regardless of orientation, every player moves gradually between column 1 and 2, but shifts abruptly between 2 and 3, and between 3 and 4 etc. To allow sonic ideas generated in real-time to be consolidated, developed and recalled, I incorporated several types of responsive materials which allowed players to track each other in various ways, potentially encouraging sub-ensembles to focus on distinct elements amongst other concurrent activity.

I also added a structural feature, instructing all players to move to a specific set of materials, surrounded by a blue box, approximately halfway through. The box contains four material options: melodic material II; copy and transpose/move; and silence (see Figure 7). I hoped to instigate a central moment of sharp focus and clear identity, enhanced by making the transitions to and from it abrupt. To control the character of this section further, I added an instruction that players should attempt to perform a hocket with the pitch set. As it can be read in multiple ways, the likelihood of a hocket occurring with any accuracy was practically nil, but I hoped that attempting to perform one would encourage players to slow their movement, give each other space, and listen.

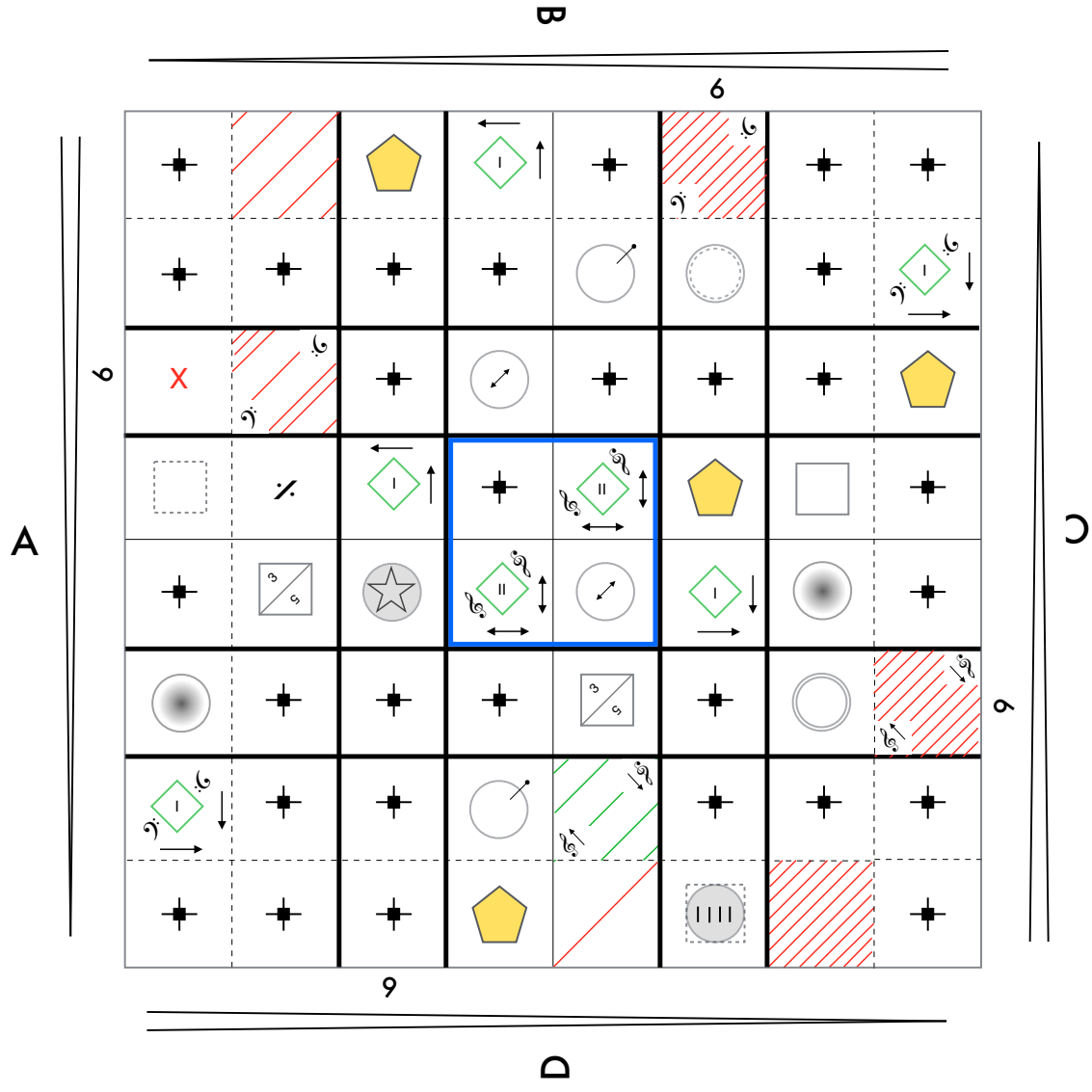


Figure 7. *Orienteer* grid

I was able to try *Orienteer* on several occasions – most instructively with the Glasgow Improvisers Orchestra and Ensemble Fractus – and made several alterations in consultation with players. This involved moving or changing a handful of materials to help consolidate aspects of integrity, and altering some graphic symbols to aid clarity or relate them more to their associated actions (see Appendix 2 for the first version that was rehearsed). On every occasion, it took approximately 45 minutes for players to become familiar enough with the notation and mechanisms of the piece before they were able to interact creatively with the materials and structure.

Several of my predictions transpired in practice, although the degree to which performances corresponded to the material biases put in place remained unclear. Various types of copying were effective, allowing ideas generated through improvisation to be tracked, altered, developed and returned to, as anticipated. As well as enabling repetition as part of this category, the 'rotate and repeat' mechanism also resulted in materials being developed over two consecutive sections, thus partially off-setting the potential for episodic progression that the block structure might have encouraged. Pitch materials provided clear points of synchronicity, and the blue box functioned as planned, producing striking similarities across the differing performances and ensembles (compare 3:38 in the Ensemble Fractus recording with 3:45 in the GIO recording).[26] Rhythmic ideas, including many areas of pulse-based and polyrhythmic materials, were audibly present in some performances, especially with Ensemble Fractus.

It became clear that the accurate observance of dynamics and transitions was critical, not only in relation to balancing ensemble textures and prioritising certain ideas, but also in helping overall results to be differentiated from improvisation alone. This was reinforced by several other occurrences: collective silences (see 7:24 in the GIO recording); solo textures (8:08 in the GIO recording; 9:42 in the Ensemble Fractus recording; 3:11 in the amalgamated version by Ensemble Fractus); and the occasional

[26] For specific audio examples, see Appendix 11.

emergence of distinct sub-ensembles to highlight specific materials or interactions (see Appendix 3 for a comparative breakdown of the Ensemble Fractus and GIO recordings of *Orienteer*).

However, the implementation of different transition types was more difficult than anticipated, with some gradual transitions coming through quite starkly and some hard transitions negated by tendencies to decrease activity in anticipation of a section change. In response, I encouraged players to use slower, curved downbeats for gradual transitions and to maintain intensity when moving towards hard transitions (See 0:53 and 5:16 in the Ensemble Fractus recording for exemplars of gradual and hard transitions, respectively).

Working with a singer in one instance, and with laptop players in another, highlighted a bias towards certain types of pitch-based instruments, with these players struggling to render a number of the given materials (e.g. the singer found the melodic materials all but impossible to pitch in context). It was also interesting to note that, although this was not specified or intended, players largely settled on one particular interpretation of each material block, often not deviating for the duration of a section. It was rarer for players to change approaches mid-block, play intermittently, or to stop playing altogether. Some players described a difficulty in interpreting materials whilst trying to improvise collectively, struggling to interact effectively with those around them.

Some of these observations might point to a more significant issue, at least in terms of the aims of this research project, whereby the structure and cueing system of the *Grid Pieces* might serve to negatively impact the freedom and creativity of individual players. As Simon Fell (quoted in Stenström, 2009) points out, "any group which simply feels it is waiting for the next cue will fail to make the best use of the musical space made available to it". This is one of the areas I sought to address with *Micromotives*.

### *3.5.2 Relay*

Before trying *Orienteer* with performers, I hypothesised that the levels of performer control involved might be so high as to obscure any sense of compositional integrity. Wanting to explore further the language and grid layout, I wrote another two pieces which attempted to provide more clarity in material, process and structure. The three pieces later became movements of a single, larger work, and share some pitch materials, intervallic structures and functionality.

In *Relay* (movement 2), I focussed on a single melodic line, running through the whole piece, and acting as a kind of backbone. Compromising some of the malleability of *Orienteer*, I specified that the melody should be represented at each stage, and split it into segments, to be passed between players at section changes in a similar way to runners passing on a baton in a relay race, by way of held notes and cross-fading.

This approach was partly inspired by the melodic focus and semi-synchronised heterophony of Braxton's *Ghost Trance Music* series and Wolff's *Exercise 10* (1973/74). I composed four phrases, each starting and ending with one of the fundamental pitches of *Orienteer* (the white notes in both melodic materials of that movement - Ab, G, C, E in the order they appear), and maintained several other elements, including the method of shared cueing and independent navigation, the option of multiple score orientations, and the vertical assignment of dynamics.

In each section, amongst many other available materials, only a single, assigned melodic phrase is available – i.e. in column 1, players can refer to the first part of the melody, but not to subsequent passages – encouraging the entire melody to be passed between players in sections up to the middle point, before the process recurs in reverse.

All transitions are gradual, to aid fluid relays and to make the overall form less 'blocky', with the exception of the central one, used to mark the midpoint. Non-melodic materials were more limited than those of *Orienteer*, and more biased to

favour particular material types at certain times (see Appendix 4 for the grid, structural plan and material biases of *Relay*).

I further encouraged the emergence of sub-ensembles by giving each orientation one main type of material in the first instance, indicating that some should be synchronised, and removing some options for silence.

Through the changes in approach regarding pitch materials, material biasing and structure, *Relay* was designed to have a different character and identity to *Orienteer,* and I predicted particular eventualities at several points in the structure, as I had done with *Orienteer* (see Appendix 4).

I was able to try *Relay* with the City University Experimental Ensemble (CUEE) on several occasions, the largest ensemble in the project. Its 23 players covered a wide variety of backgrounds and sound-producing approaches and, as Appendix 5 details, several of my predictions came to fruition at times, although it's important to note that this wasn't so clearly the case in all renditions.

The structure worked well to regulate this size of group, allowing some thinner textures to emerge and various materials to be heard, with players demonstrating secure understandings of their roles at each stage. The group was able to shift between materials quickly, en masse, and the strong transition halfway acted well to audibly mark the mid point.

A significant hurdle presented itself in that the majority of the ensemble were not versed in standard notation. This was particularly relevant due to the predication of this movement on a pitch-based melodic line. After several run-throughs, I concluded that the onus on the few readers present to play the melodic fragments was compromising their freedom of choice too greatly, and decided to change the performance guidelines, so that rendering the relevant part of the melody in each section was no longer obligatory.

This changed the nature of the movement but, taken as a whole, the nature of the melodic line and its relaying were still somewhat retained. When I tried this movement with Ensemble Fractus, made up predominantly of notation readers using traditional instruments, there were few issues regarding the melodic line, but I decided to keep this change as it offered the added benefits of encouraging closer listening and allowing other materials to be foregrounded.

Another more general issue regarding both ensembles was a lack of confidence in some players, perhaps due to their relatively low levels of experience with experimental music and improvisation. I would hypothesise that this factor also contributed to several less convincing aspects of performance which, if improved, could increase compositional integrity: dynamics weren't followed strictly, with the consequence that certain materials were disproportionately allowed to dominate or be subsumed; openings and finishes were largely tentative, defaulting to clichés of improvisation; and gradual transitions almost always resulted in a lull in volume and activity rather than a fluid morphing of material.

The relaying mechanism was somewhat problematic in both ensembles, resulting in hesitance or uncertainty at various points in most renditions.

### *3.5.3 Centrifuge*

With this third movement, I wanted to eliminate some of the stasis and 'blockiness' of the others, whilst making its contour and soundworld more predictable. To further explore the structural capabilities of the grid, I employed a different operational approach, maintaining a single orientation with players starting in the middle before gradually moving out towards the edge. As the number of material options changes with each concentric ring, increasing from 4 to 12, then 20 and finally 28, the number of different material categories reduces, so that in the final section, there are only four types represented – tacet (8/28 bias), long single noises (2/28 bias), tracking (6/28 bias) and specified pitches (12/28 bias). In this way, the piece is designed to move from a

generative state, with individuals initiating ideas, featuring themselves and contrasting with each other, towards a final stage consisting predominantly of a repeated, semi-synchronised 'chord', the components of which are controlled through the prescription of pitch, dynamic, register and technique. There are fewer options for free playing and silence compared to *Relay* and *Orienteer*.

I hypothesised that this movement would have the strongest individual identity, moving from one defined state to another in a semi-audible process, and that it would be recognisable in various performance versions. Players now had more freedom in one sense, able to move around sets of materials as they pleased rather than having to wait for cue points, but, in comparison with the other movements, control overall was weighted with the composer. This contrast is exemplified by two player comments, one saying, "I like how you can move between boxes freely, you're not stuck with one box like in the other ones" and the other commenting, "This feels really locked down compared to the others in terms of choices".

In performance, the structural progression of this movement was generally smoother than *Relay* and *Orienteer*, with some clear differences between sections but with fewer obvious mass movements.

The positioning and definition of materials and dynamics led to an effective balancing of player voices and regulating of texture, with significantly more cohesion in the ensemble sound and several striking synchronicities and sub-ensembles (e.g. the unison G beginning at 7:28 and coming into focus around 8:08; and the pulsed repetitions in violins at 11:08).

Space for performer creativity remained relatively high in the first half, evidenced by several strong independent gestures that come through earlier on in this performance (e.g. the marimba at 1:10), but the overall shape was still broadly predictable, with synchronised, held chords gradually dominating. The clarity of this

shift was slightly compromised in this recording by one or two players losing their place, and mistaking several materials relating to noise for those indicating pitch.

### 3.5.4 *Grid Pieces* (three movements amalgamated)

Once I'd tried each of the movements individually, I felt that they shared much more in terms of performativity, structure and soundworld than they differed, and that bringing them together to become three movements of a single, larger-scale piece was a stronger proposition. In this new version, each movement would demonstrate its own independent internal progression, whilst overall there would be a gradual shift of control, from performer to composer, as the ensemble work became more unified and the sounds more synchronised.

I added link sections between the movements in order to reinforce key materials and add continuity and cohesion to the piece as a whole. I also designed a specific sub-ensemble mechanism that would enable small groups of players to temporarily disengage from the normal progression of the piece, to work together on small groups of defined materials. This sub-ensemble mechanism shares some characteristics with the 'guerilla' systems found in *Cobra* and, although it was little explored in practice, helped to pave the way for the development of *Micromotives.*

At the time of writing, there has not been an opportunity to have this amalgamated version of the piece performed without the hindrance of time constraints, but Ensemble Fractus did try a very quick run-through. The results of this are somewhat ambiguous. In this recording, it is possible to differentiate the melodies being passed between players in *Relay,* with some longer synchronised lines audible, and *Centrifuge* does seem to encourage longer notes, tracking between players and synchronised chords, but many other aspects that were rendered clearly by the same ensemble in other versions were lost. With more time I predict this would have a largely clear sonic and performative identity, with some distinct differences between movements.

### 3.5.5 Questionnaire: an informal trial of formal feedback

I decided to use a questionnaire with some members of GIO and Ensemble Fractus, to gain further insight into individual performer experiences relating to *Orienteer*. Although this experience soon led me to change my evaluation methodology, and to focus on more informal discussion to obtain performer feedback, the answers I received through this more formal route did bring up some important points. The questions asked were:

1. Did the score allow you space for genuine creative expression through improvisation?
2. Did you feel engaged with the music-making process?
3. Did you feel empowered and able to direct change in the music in real-time? In comparison to there being a conductor, for example.
4. Did you feel like you were part of a democratic unit?
5. Do you think the score allowed space for you to be heard?
6. Did the materials allow you to interact meaningfully with other players or were you too bound?
7. How clear were the score/materials/directions? Were any more successful than others?
8. How do you think the given materials changed the way you played or interacted with other players, if at all?
9. What did you think of the musical results? Would you change anything? Musically or technically.
10. Any other thoughts?

The nine responses from members of Ensemble Fractus suggested that: 1) players overwhelmingly felt that they had space for genuine creative expression through improvisation; 2) they were engaged with the music making process; 3) they felt able

to influence the direction of the piece;[27] 4) they felt part of a democratic unit; 5) the score allowed space for them to be heard; 6) most felt that the materials allowed meaningful interactions and that their improvisation was both bound and free at different times, with some finding free playing options to be compositionally intrusive, and others enjoying the scope to develop ideas via various copying mechanisms; 7) most thought the materials were clear or very clear, but complex, and some saw the cueing system and other structural elements as problematic with potential to get lost; 8) given materials made several players listen, imitate or refer to other people's ideas more than they might have done if improvising freely, with the score providing opportunities to develop materials; and 9) most enjoyed the musical results.

In line with their greater experience, the five respondents from GIO showed a heightened engagement with ideology and a more developed understanding of how improvisational and compositional approaches might interact with one another.[28] Answering the question regarding creative expression, one respondent highlighted some naivety on my part in saying "no, but that's not the point!", whilst another was "ideologically against expression". Everyone said they felt engaged with the process and one person commented that "conductors are a blight on improvised music", while another talked about "being led by the music". Most thought that creative responsibilities were shared, and all felt that the score helped to provide space for individuals to be heard. Three of the five felt that improvisational interactions were inhibited to some degree by the piece, although not significantly, and they unanimously agreed that the nature of their interactions was altered in some way. Potential similarities to Zorn's game pieces were indicated, with one person describing

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[27] One respondent mentioned the importance of physical positioning in the room in this regard, stating "Due to my location within the room it was difficult to direct, but I was confident in my control when I did so".

[28] At the time, most respondents had been members of GIO for the majority of its 15 year history, also regularly performing independently around the world as free improvisers.

a “permission for anything to happen” and another suggesting it was “game-like”. Players overwhelmingly enjoyed the experience.

The variety of responses showed how several of the questions had been ambiguously phrased, showing some lack of understanding on my part regarding concepts of personal expression, interaction, power dynamics, and the use of the word ‘democracy’. Through this process, several ideological and theoretical viewpoints were brought to my attention, set out below.

### 3.5.5.1 Personal expression and entextualisation

I had made an assumption that personal expression, freedom and improvisation were all intrinsically linked but, of course, this is not a view shared by everyone. Many improvisers disregard notions of self-expression, seeing themselves instead as being in service of the music (Schuilling, 2019). When interviewing improvisers post-performance, Wilson and MacDonald (2015) have observed that

> “The improvisation was sometimes characterised by interviewees as an external entity or process, within which events arose independently of those creating it… Improvisers could perceive themselves as having more or less agency in relation to the music from moment to moment”. (Wilson and MacDonald, 2015)

Floris Schuilling (2019) corroborates this, suggesting that some performers regard the results of collective free playing as entities in their own right, as seen in descriptions of ‘doing what the music needs’.

Alongside Nicholas Cook (2018) and Christopher Williams (2019), Schuilling borrows the anthropological term ‘entextualisation’ to describe this phenomenon, which Karin Barber (quoted in Williams, 2019) defines as “the process of rendering a given instance of discourse as text, detachable from its local context”, and suggests

that the entextualisation of improvisations serves to give them text-like qualities more normally associated with scores and compositions. He elaborates that this may have two purposes for improvisers: firstly, to allow them to distance themselves from the music they create, thereby removing some pressure from individual contributions and interpersonal relationships; and secondly, to create an object which contributors are then able to discuss.

### 3.5.5.2 'Meaningful' interactions and enacting group change

More than one respondent questioned my use of the word 'meaningful' in relation to the types of interactions that occurred, pointing out that understandings of the word are personal and not necessarily shared. Wilson and MacDonald (2015) have documented how individual members of collective improvisations can have quite different understandings and analyses of the event, particularly regarding perceptions of diversity and homogeneity, i.e. how one player's contributions relate to those of others. Correspondingly, although the questionnaire elicited a general agreement that player interactions were altered in some way by the presence of the score, there was less agreement over the ways in which this happened, and whether this impact was positive or negative.

I was interested to find out if players felt they had power to enact musical changes on a group level when performing the *Grid Pieces*, but had failed to acknowledge the ways that this might be the case in purely improvised music. Many improvisers have commented on the varying types and levels of agency and power that can occur during collective free playing (Wilson & MacDonald, 2015; Smith & Dean, 1997), including David Toop's (2016) descriptions of illusory democracy and "clandestine power". It is important to observe the ways in which some of the compositional approaches in this portfolio don't necessarily empower any more or less, but can instead simply alter the nature of power dynamics and information flow.

Rather than using sound and body language alone, as in an improvised context, the *Grid Pieces* allow individual players to explicitly suggest a change in texture and material, and to coordinate it across the whole group with a downbeat.

### 3.5.5.3 Democracy

As the question 'Did you feel like you were part of a democratic unit?' unwittingly exemplifies, the widespread use of the word 'democratic' is widely misplaced in descriptions of musical activity (Adlington, 2019). Rather than pointing to any particular social system of governance that involves voting, majority rule and obligations to follow laws set by that majority, the word is most commonly used in relation to musical practice to mean 'distributed creativity' (I will suggest more appropriate political analogies in relation to *Micromotives* in section 3.6.4.3).

In addition to the kinds of ideological and experiential mismatches that can be found between composers and performers (as detailed in 3.4), the questionnaire responses demonstrate how a number of potentially contrasting ideologies and understandings can be seen to coexist between the players themselves in larger ensembles. Indeed, this would be almost impossible to avoid, even if that were desired. Some players consider these to be critical to their understanding of the processes in operation, and others barely think about them at all. But unlike any real-world version of democracy, where the group might aim to reach a clear and open consensus, these contrasts often go undiscussed. Instead, various languages, approaches and ideologies are left to wordlessly intermingle and negotiate in real-time, with no requirement for players to be explicitly aware of them.

### 3.5.6 Section conclusions: understanding the *Grid Pieces*

#### 3.5.6.1 Compositional integrity

The *Grid Pieces* have a broadly distinguishable identity across various ensembles and performances, through soundworld, performativity, materials and structure. The movements progress in compositionally controlled ways, showing particular characteristics and strong, obvious moments of synchronicity, with several players observing the individual functionalities of each. In performance, materials were able to come through recognisably at various points, with the melodic/pitch-based materials and certain types of tracking notably clear. Several other eventualities acted to reinforce integrity and help to differentiate this from free improvisation alone, such as sudden mass shifts, extended solo passages, and collective silences, and the material biases created more predictable contours in some instances. At times, it was audibly clear that various elements of predetermination were at play, but the overall level of unpredictability led to some results being difficult to distinguish from free improvisation.

#### 3.5.6.2 Performer freedom

Although players were able to negotiate the structure as they wished, often with options to play free or be silent, the types of materials given often acted to restrict levels of personal freedoms when compared to those found in free improvisation. Contributions were strongly conditioned in many places, with limited scope for personal voices to be utilised effectively. Some players observed feeling a decreased sense of freedom as the movements progressed, in line with my attempts to increase compositional integrity, and correspondingly, *Centrifuge* had the most audible and predictable structure, whilst impacting performer freedom most acutely.

However, several performers viewed the narrowing of options described here as positive, acting to offset a level of vulnerability associated with higher onuses on performer creativity than they were perhaps used to. One performer in Ensemble Fractus described the *Grid Pieces* as a 'hostile environment', an exposing space where the impact and judgement of individual contributions is heightened. Andrea Khan (1991) offers a useful architectural comparison with her depiction of London's Crystal Palace: "all eyes are weakened equally...a glass building denies the safety of the interior by emptying it...[there is] no protection, no place of escape...[it is] hostile to the individual". It is important to note that this performer had little experience of improvisation and experimental practices; nevertheless, this statement reinforced the fact that only a certain sub-set of performers would respond positively to my aims regarding heightened performer freedom.

On analysing the results of the questionnaire, particularly from members of GIO, I concluded that instead of encouraging the kinds of performer freedoms found in free improvisation, the *Grid Pieces* were more accurately concerned with *challenging* improvisational instincts, particularly in a large group context. Where performers may instinctively want to match dynamics, or perhaps focus on arrhythmic or non-melodic materials, these scores invite them to maintain specific dynamics, and play strongly rhythmic or melodic ideas. Asking players to interact and improvise within the confines of a chosen material creates a difficult set of opposing constraints to reconcile, requiring them to balance their instincts in the moment with the specificities of the score.

### 3.5.6.3 Ontology

Observing the *Grid Pieces* overall, it is clear that the ways in which creative responsibilities are shared are more ontologically significant than the specific sonic contributions of the individuals involved – the pieces prescribe performativity more

than sound. This relates to Zorn's conception of his game pieces as stated in the liner notes of *Pool* (1980): "as well as being a composition, POOL is a performance...My concern is not so much with how things SOUND, as with how things WORK". However, the *Grid Pieces* are in many ways more controlled than Zorn's game pieces, prescribing not only functionality and structure, but also providing suggestions and constraints on sound and interaction types. Although performers have freedom in terms of material interpretation and structural navigation, and although some elements fundamental to free improvisation are encouraged, such as responding to stimuli and interacting with one another in real-time, there remain correct and incorrect ways to interact with the score.

In this way, it can perhaps be seen as more closely tied to the experimental practices of Cage, Globokar and Stockhausen, than to free improvisation. Consolidating the Cagean link, there is some sense at certain points that players are able to progress through the piece while remaining largely unconcerned with the contributions of others. Once a material has been chosen, they are encouraged to prioritise the information in the score (e.g. play high, loud, noise-based sounds) over any collective ideals they may have (e.g. balancing volumes), in other words to go against their instincts, although they are always able to interpret freely and stop playing as desired.

The G*rid Pieces* combine an unknown, open, complex and interactive environment with a requirement that players take on significant levels of creative responsibility, an approach which could be seen as compositionally aggressive, and which potentially, if not deliberately, could create the 'hostile environment' described above. Players are both empowered to incorporate their voices and enact group change, and powerless against the decisions of others. In this way, it is possible for the score to generate a kind of musical battleground, where one player can be stopped or dominated abruptly by another individual or sub-group of players.

There are other compositional approaches that actively seek these more antagonistic kinds of sociality, such as Rodrigo Constanzo's *Battle Pieces* (2013-15), and indeed, such power struggles are commonly seen in free improvisation. However, in the case of improvisation, tacit assumptions of "underlying common purpose" and good will are prevalent (Adlington, 2019), elements which are arguably not always present in the *Grid Pieces*.

#### 3.5.6.4 Language

As alluded to in the discussion of *Chained Melodies*, the incorporation of referential or stylistic language within a largely improvised soundworld can be problematic and, in this instance, the inclusion of broken diminished 7 chords, pop/rock-based grooves and minor pentatonic licks was jarring. The tracking materials compounded this by enabling these elements to be focussed upon, expanded and developed by multiple players, as happened on one occasion, in which an idiomatic groove became a collective focal point for some time.

However, it should be noted that these instances came about in the context of student ensembles, and I would argue that these issues would be less pertinent with seasoned free improvisers or experimental performers, for whom shared cultural expectations would invite the use of more personally developed languages, or else very careful negotiation of more stylistic materials (see section 3.4.2 for a discussion of uses of referential language within group improvisation).

#### 3.5.6.5 Sociality

It is important to note that, although powers to cue sections were equally available, they weren't necessarily equally utilised. The piece requires individuals to take responsibility and control in order for it to progress, and so the confidence of the players became a significant issue. Some players were less comfortable assuming temporary control in directing the group, while certain others tended to bring

themselves to the fore, making bolder decisions in interpretation, or choosing materials like 'ignore and feature'. This led to some notable weighting in creative control at times, with the relative confidence or leadership tendencies of some players potentially overriding more considered choices regarding the rate of progression through the score. Such concerns became increasingly important in relation to *Micromotives*, where the selection of players represented a pivotal compositional decision (see section 3.6.4.5).

### 3.5.6.6 Comparing with research criteria

The *Grid Pieces* represent several advances towards the fulfilment of my criteria, allowing individual performers to manipulate the structure and materials to suit themselves and their surroundings. They incorporated some elements of free improvisation, namely real-time decision making, direct information flow, and evenly distributed creative powers between performers, but these remained quite limited in scope, with a broad A-B timeline in place and coordinating powers restricted to section cues.

To satisfy all my criteria, I needed to: make improvisation the default scenario, rather than a selectively available material option; and remove performer obligation, present here in the requirements for players to follow the cues of others, choose only from a selection of given materials, and interpret those materials faithfully.

Through compositional control of structure, performativity and materials, the method employed in the *Grid Pieces* led to both the constituent movements and the piece as a whole having broadly distinguishable identities, whilst effectively regulating larger forces and giving players clear understandings of their roles. But my aims, specifically relating to performer freedom, necessitated a more flexible and dynamic attitude towards structure, one that could allow for changes in performer approach or reversal of decisions.

I needed to develop a less 'invasive' kind of overall functionality that could accommodate personal voices (Fell, 1998 cited in Stenström, 2009), whilst allowing me to engineer an overall soundworld that was more clearly unattainable through improvisation alone. The negotiation and dialogue, both between composer and performers and between performers themselves, would need to be more open-ended and explicit, with a flatter hierarchical structure and more evenly distributed creative powers.

## 3.6 A structure as flexible as the players

### *Micromotives* and Union Division

For approx. 7 - 18 players, composed from Oct 2017 (ongoing at time of writing)

Performed by Union Division at City, University of London, 11/09/18, and at the Vortex, London, 21/05/19 and 06/08/19.

> "Collective free improvisation is fired, not to say controlled, only by the needs of each party involved...The value of the relationships within the collective is the shifting patterns of influence, the giving and accepting of information".
> (Eddie Prévost, 1995)

My experience with the *Grid Pieces* suggested that several of my criteria would need to be addressed in greater depth in order to achieve my aims. I needed to give more control to both composer *and* performers – to enable players to feel closer to a scenario of free improvisation, whilst giving the composition a stronger identity.

I hoped to create an environment that gave players in a large group access to the complex, nuanced and networked sociality often found in small group free improvisation, allowing them to exert influence or follow others as they wished and to rely as much as possible on their ears and instincts in the moment; in other words, to facilitate the direct information flow and contingent interaction that Prévost mentions in the above quote.

At the same time, it was clear that although the *Grid Pieces* did retain some integrity across various ensembles and iterations, there was scope to enhance this in a new compositional model. I wanted a structure that could be differentiated reliably from free improvisation, to encourage more striking moments of synchronicity and structural events, and to allow for more fluid and agile movement between musical ideas in the context of a large ensemble.

There were several developments that needed to occur in order to achieve this:

1) Any given structures had to be fully flexible. The *Grid Pieces* provided a multiple-scenario timeline with a great deal of choice, but still broadly followed an A-B progression from left to right on the page. In order to eliminate the timeline altogether and allow players a full range of possibilities at every point, given structures would need to be able to be incorporated at will, in real-time, and abandoned as soon as they ceased to be interesting or useful.
2) The *Grid Pieces* allowed for directorial powers to be shared only inasmuch as players were equally entitled to cue section changes whenever desired. To further flatten the performer-composer hierarchy and increase information flow around the group, I needed methods which could be used to communicate and coordinate a much wider range of musical ideas, including predetermined compositional materials, with one another in real-time.
3) The overall environment, and any given structures and materials, should aim to be more accessible to various backgrounds and lineages. *Relay* and *Centrifuge* in particular were materially biased towards traditional instruments and readers of standard notation. Given materials should be more interpretative and able to be more easily incorporated into various types of practice.
4) Any sense of obligation needed to be removed. No one should ever feel they *had* to play. Players should also not be obliged to follow any suggestions from others, or to remain with materials or sub-ensembles that they have chosen to engage with. Furthermore, players should not feel excluded from any activity that has been established independently of them. They should be free to follow their instincts, including those to play free or be silent, at all times.

### 3.6.1 No obligations: improvisation as a default

My initial starting point was to focus on extending performer powers and to investigate ways of using flexible structures, and so I decided to work on a sub-

ensemble exercise (see Appendix 6) for unspecified instrumentation. I developed a method by which individual performers could use hand signals to establish sub-groups within the larger ensemble, that they could then direct towards specific, independent activities. This methodology would allow individual players to intuit their roles clearly within the context of a large group, giving them powers not only to cue section changes, as in the *Grid Pieces*, but also to decide which types of materials would comprise the upcoming section, and who should contribute.

I imagined that the sub-ensembles would work as splinter groups contra to a main, default approach, in this case to play a provided melodic line. Against an increase in performer power, I envisaged that I would need to assert more compositional control in terms of overall shape, texture and material, and so I fixed several components of the formal structure.

But structural predetermination introduced obligation to the performance situation, and I realised that this would need to be removed. The most sensible way to achieve this, and a significant breakthrough in terms of moving towards my aims, was to make improvisation the *default* position. Instead of having a semi-fixed structure or timeline from which players could deviate, improvisation was now an environment *into which* predetermined elements could be incorporated. This is in line with Richard Barrett's approach, which he described in 2014:

> "[M]y involvement with combining notation and improvisation hasn't begun from taking a notated composition as a default position and 'opening up spaces' for improvisation within it, but instead from free improvisation as a starting point, and using notation not to restrict it but to suggest possible directions or possible points of focus for it". (Barrett, quoted in Williams, 2019)

This key step meant there would be no timeline, structural expectations or durational requirements, creating an environment that eliminated any tendencies players might have to "fill in the space, waiting for the next instruction" (Butcher, 2011).

It followed that, although materials and structural mechanisms were provided, there should be no requirement for players to refer to any of them, as this again would be an obligation and an impingement on improvisational freedom. Now, players would have power to determine their roles and balance their personal voices with use of predetermined elements fluidly, as they saw fit at any given moment.

Immediately, however, this posed questions regarding the ontological nature of the piece, as it would now be theoretically possible to perform it by improvising alone. I will go into some depth on this in the discussion below but, suffice to say, once any kind of timeline or obligation was eliminated, it became sensible to move away from concepts of works as finished, singularly-authored objects, and to re-conceptualise this entity as something between performative *practice* and *piece* – a collective way of working that prioritised improvisation and sociality whilst allowing for the incorporation of predetermined materials.

### 3.6.2 Sub-ensemble system: a first iteration

I organised a group of players to try this experiment, which became a pool of musicians called Union Division. Although there were no instrumentation requirements, I tried to balance frequencies, timbres, approaches and backgrounds, with some players rooted in predominantly jazz-based practices and others more experienced with 'new music' or free improvisation. We rehearsed for the first time on 15th January 2018 with nine players including myself (tenor sax, tenor sax, trumpet, trombone, el. bass, drum kit, piano, cello and el. guitar).

This first iteration of *Micromotives* comprised a sheet of materials alongside a group of 'mechanisms' with accompanying key and hand signals (see Appendix 7).

One page of materials was divided into 'States', 'Interactions', 'Textures' and 'Figures', with another containing several melodic fragments, that could also be played as one long line or in sections. The hand signals were to be used to instigate activity and communicate information with various constituents of the group, e.g. set up a sub-ensemble; suggest a 'role' (dominate; counterpoint; accompany); and indicate to 'swap players' or 'finish'.

This initial trial was generally very successful, with most players understanding the materials and instructions easily, showing some comfort in using the hand signals to coordinate with others, and quickly becoming more adventurous and experimental with the given structures and methods. The sub-ensemble methodology worked well in the main, allowing players to interact in group sizes more comparable to small group collective improvisation.

Above all of the other pieces in this portfolio, my choice of players was reaffirmed as a critically important compositional parameter. Not only was it imperative that players had the confidence, expertise and experience to be comfortable with this level of openness and creative distribution, but they also needed to value certain kinds of individual improvisational freedoms and have highly developed personal voices – Zorn's (2015) "specific *kinds* of musicians that have specific *kinds* of skills". The slight predominance of jazz-rooted performer backgrounds led to an overall soundworld closer to Sun Ra and Anthony Braxton than the large ensembles associated with Christian Wolff, Barry Guy or Chris Burn.

The music was dynamic and unpredictable, often changing abruptly, offering some clarity in sub-ensemble interactions and allowing compositional materials to come through well. The system regulated individual contributions and balanced texture types to some extent, but more extended solos/duos, and especially silence, remained very rare. The ability to create multiple concurrent sub-ensembles acted to compromise individual understandings of the ensemble sound as a whole, somewhat negating instincts to regulate overall density and play less. In larger groups, John

Stevens (2007) has noted a more generalised tendency to neglect thinner textures, with cellist Hannah Marshall commenting that "using silence is the hardest thing in a big group". Observing this proclivity in rehearsals over several months led to my later addition of the 'X number of players only' mechanism, designed to encourage more prolonged solo and duo textures.

Comparisons players drew to established conduction and soundpainting systems illuminated a key difference: that where other conduction systems might be predicated on a largely mono-directional information flow, and a singular vision relying on a degree of obligation to follow directions, the *Micromotives* hand signals encouraged networked interactivity and collective creativity based on suggestion. Several members of Union Division commented at various points on being disillusioned with conduction or large ensemble improvisation more generally, but felt that the *Micromotives* system managed to effectively bypass many of these perceived flaws.

Some players were tempted to *direct* others in various ways (e.g. indicate for another player to refer to a certain material), and it became important to regularly state the importance of maintaining an invitational, rather than directional, mentality. The ethos generally lacked clarity at this stage, with some players feeling obliged to follow the suggestions of others, and with improvisation still being discussed as an *option* rather than the *default.*[29]

Other issues involving sociality were also unclear, particularly regarding the method of establishing sub-ensembles, leading to some unease at times. Partly as a consequence of this, one player bowed out of the project after this rehearsal. He felt that he had to play in a certain way, that his practice and language were not compatible with the system, and had issues with committing to unknown actions

[29] Over the ensuing months of rehearsals, it became clear that the sense of obligation to follow instructions, particularly in a large group, was so embedded that it needed restating in every meeting. In later rehearsals we began with a collective improvisation, to set the tone and establish a default modus operandi.

before potentially having to choose between subduing his musical instincts or creating an "adversarial social position".

### 3.6.3 Further developments

Through rehearsal, discussion and reflection, the ethos behind the practice crystallised alongside its functionality. Making improvisation the default position had been a critical shift in approach, but to enable this fully, players needed to truly feel no obligations. By emphasising this point time after time in rehearsal, I was able to engineer an environment that was more accommodating towards various approaches in sound production, and allowed individuals to incorporate their voices and personalities, largely untempered. To aid this, the method by which players tried to instigate group action was altered to give potential accomplices a point at which they could either opt-out or commit to suggested musical situations.

Further mechanisms appeared, to enable an increasing number of elements to be instigated in real-time, and several signs, meanings and materials were altered, either to accommodate the desires of the group or address issues that came up in performance.[30]

In this way, the first version acted as a starting point, from which Union Division collectively developed a group practice, with each rehearsal leading to a new iteration of the score. The developmental process of rehearsal, discussion and observation, followed by later reflection and iteration, was aided by recording each rehearsal, allowing for detailed analysis. Through this process, in addition to discussions with listeners, colleagues, academics and critics, I was able to better understand the attributes and ontologies of the piece.

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[30] E.g. The 'Trade ensembles' mechanism was added following the suggestion of one player and the sign to create a sub-ensemble was altered (the initial sign, a fist, was seen as aggressive by some).

With the development of new materials and mechanisms came a conceptual leap that led quickly to significant expansion and development. What had been conceived of as a single piece could, in fact, be fruitfully delineated into: 1) a backbone practice, the mechanisms and hand gestures – the broader structural ideas and method of communication; and 2) the groupings of materials – the more detailed musical information being communicated between players.

Crucially, if these two aspects were separated to some degree, it meant that the method could remain constant, while the materials could be substituted. To explore this, I created another distinct set of materials to be used in conjunction with the same mechanisms, which later became *Starlings* (the initial set of materials became *Union of Egoists*).

Eventually, six *Micromotives* pieces were developed as part of this portfolio, each designed and grouped to explore specific ideas, and/or lead to certain sonic results or interaction types. Looking at the scores for *Starlings* and *Left Leaning*, for instance, one can see how two very different performances would very likely be produced, while both using the same backbone practice. *Starlings* favours more spacious, sound-focussed, slow-moving and supportive results, with materials such as 'Give each other lots of space', 'Long & slow moving sounds' and 'Peaceful'. *Left Leaning,* on the other hand, is made up exclusively of notated rhythms, often with suggestions for melodic contour, and so is likely to lead to more coordinated, pulse-based and/or groove-based interactions.

### 3.6.4 Discussion and analysis of *Micromotives*

Throughout the process of analysis several themes emerged. There is considerable overlap in the following sub-headings, and they are not intended to be exclusive categories, but are useful in terms of broadly grouping my experience and points of discussion.

### 3.6.4.1 Performer freedom

The sense of freedom that the players described can be attributed to the critical shifts in making improvisation the default scenario and the removal of any sense of obligation.

In *Micromotives*, there is no predetermination in structure and players always retain choices of when and what to play. Mechanisms and materials simply allow individuals to try and instigate more coordinated structural events or interaction types, that might go beyond the usual scope of large group improvisation, and there is no obligation for any of them to be incorporated – as described by electronics and bass player PA Tremblay, these compositional materials and mechanisms are not impositions, but rather 'enablers'.

The system is one of *invitation* as opposed to *direction*, in which instigations are limited to suggestion only and cannot be enforced. Any attempts to coordinate the group can be ignored or subverted by others, and if a player does agree to join an event there is no obligation for them to remain with it. Although it took some amount of re-enforcement for players to understand this on more than a surface level, and feel able to exert their individuality in this way without fear of social repercussion, most performers gradually became more comfortable with counteracting the suggestions of others, treating materials and structural ideas flexibly, and defaulting to improvisation.

In discussion, several members of Union Division stated that they felt as free to follow their instincts in real-time as when practising free improvisation, retaining control of their contributions, but with added possibilities via the given common language of hand signals. Tremblay suggested the term 'Free+' for this way of working, and most players concurred that this is an appropriate understanding of the system's functionality.

But although players might feel similar levels of freedom in *Micromotives* as in fully improvised scenarios, most share a belief that they do not amount to the same thing. As a result of the given materials and mechanisms, but also by virtue of the fact that there is something to be referred to at all, performers observe playing differently than they would in purely improvisational settings. As bassist Otto Willberg describes, "it's to do with having all these things going on and everyone around playing in a different way than they would otherwise [in free improv]...[it's] confusing to step in and out - [you're] not sure what to listen to, look at, do. It is different to free improvising".

The 'things going on around' that Willberg refers to are the various layers of concurrent activity that often occur in the form of up to three or four independent sub-groups, interacting in different ways and/or referring to discrete materials. This is a very different situation to most large group free improvisation, where there is generally an assumption that everyone in the group is working together to achieve balance, cohesion and shape as a whole. In *Micromotives*, working together for a common aim is not a given, as sub-groups may be established to override or contradict one another, or be simply unaware of the intentions and actions of others.

As rehearsals continued, pre-determined elements and more directional actions became decreasingly viewed as obstacles to freedom: the more players understood their agency and felt the lack of obligation to follow perceived orders, the happier they were to work with them. Individuals could be as dictatorial as they wanted, understanding that nothing was imposable and that their ideas might well be thwarted. A good example of this was the introduction of the 'X number of players only' mechanism, which indicates that, whoever is playing, the ensemble should reduce to, for example, a duo. I envisaged this mechanism would be used organically, i.e. that two people would audibly nominate themselves while others would recede. But it was quickly suggested that individuals might nominate others to form the duo. I initially saw this as going against the ethos of suggestion, and moving into an area of direction much more normally associated with conduction and soundpainting. But

the others disagreed, reasoning that as long as the potential nominees didn't feel obliged to go with the direction, and they were to see it as an encouragement, as opposed to imposition, there were no ideological conflicts. As alto saxophone player Chris Williams described, "I'm encouraging you to take in certain information but ultimately feel free to do whatever you like, and let's see how that push and pull works, within the individual, the sub-groups, and the collective".

### 3.6.4.2 Information flow and power dynamics

Although Union Division is undoubtedly a large group, very large in the context of free improvisation, the sub-ensemble methodology allows players to interact in a way more consistent with small group collective improvisation, thereby somewhat counteracting the reduction in space, freedom and responsibility that Fell (quoted in Stenström, 2009) observes in players within larger groups (see section 1.3). Instead, operating within smaller units allows players to gauge their creative contributions more clearly, while the overall functionality of the practice enables individuals to intuit their roles with some ease at every stage, going some way to breaking down the complexities of improvisation in a larger group. Performers always know, for example, if they are part of a sub-ensemble, referring to a specific material, following or counteracting a direction, instigating collective action, playing freely, or silently observing.

However, the vast array of possibilities inherent in smaller group free improvisation mean that a system like *Micromotives* can feel superfluous, as was corroborated in trying the system with only four players. In a group of this size, there seemed no *need* for the system, with one player suggesting that we 'just play' and another saying that "with this size, I'm more inclined just to improvise and not rely on signs". Within larger groups, on the other hand, players suggested that they would hardly play at all

were it not for some sort of systematic regulation, with some saying they simply wouldn't be involved with a large improvising ensemble otherwise.

Having tried *Micromotives* with various sizes, I have found that seven is the minimum number of players, below which it seems unnecessarily regulatory, and that with nine players, the system starts to clearly justify itself, with sub-ensembles allowing for clarity in roles and hand signals deemed useful and necessary for communication and coordination. It has worked well with up to fifteen players, the maximum so far attempted, but warrants heightened consideration in terms of space and player formation in these numbers, with potential for collective playing to become problematic over more significant physical distances.

Corresponding to my criteria, the system of hand signals eliminated any need for a conductor or fixed leader, giving each player the means to address the whole ensemble, or a subset of players as they desired. The methodology gave individuals high levels of creative control, enabling various types of information to be transmitted directly between group members, inaudibly and in real-time, with directorial powers able to move fluidly around the group in comparable modes to those found in smaller ensemble collective improvisation. The hand signals allowed ensemble members to make suggestions, and to take on, ignore, counteract and observe the ideas of others, and to try and instigate coordinated, mass events – elements that can occur through sound and body language alone in smaller group free improvisation but are virtually impossible in larger ensembles.

The visual aspects inherent in the hand signals make this comparable to, as trumpeter Sam Eastmond described it, "thinking-out-loud improv", both within the ensemble and to an audience. These clear physical gestures acted to significantly expand the scope for coordination and instigate change, but without the need for players to change approach audibly or increase their volume, as they might in free improvisation. This had musical consequences, leading to more abruptness overall.

One corollary to this visual aspect was that sight-lines became critical – all players had to be able to see one another, necessitating a semi-circular or circular formation, which proved difficult in some performance situations and effectively provided an approximate upper limit to numbers. The necessary spacing also affected some interactions between players, as those performing together from opposite sides of the room might be required to rely as much on their eyes as their ears.

Another consideration was the time required to communicate more detailed ideas, acting to somewhat negate the element of real-time contingency that was a significant part of my research criteria. On occasion, by the time the desired information had been indicated, the proposition in question had lost its relevance or desirability. Of course, this system can never be as fast and reactive as the interactions involved in free improvisation, but it can come close, and I would argue that the ability to convey increased levels and multiple types of information offsets some of the issues of delay.

Following each concert to date, there have been a number of audience members who have commented on the theatrical element of the performance, expressing interest in the kinds of overt social interactions that are clearly on display, and often describing a temptation, potentially a very distracting one, of attempting to de-code the system.

As a further contrast to free improvisation, the *Micromotives* system makes not only the proposition, but also the *acceptance* of ideas explicit and visible to all – players were able to clearly convey their desires and intentions in real-time in a way that meant others were often able to judge their responses in advance. Propositions remained exclusively invitational and it was important to emphasise that such invitations should, as much as possible, involve the initiator – i.e. 'let's do x together', not 'you do x'. As trombonist Tullis Rennie suggested, there is an "underlying principle of proposition and consent in a moment".

### 3.6.4.3 Analogous social systems

A number of audience members have questioned why some players 'are allowed' to use the signals, whilst others are not, which of course is not the case. The potential for equality in power is key to the functionality of the system but, as with the *Grid Pieces,* this didn't necessarily transpire in practice, with certain players showing more confidence to lead and subvert whilst others were happier to be more passive and follow suggestions. Some were drawn to the limelight while others were naturally more supportive, with these tendencies often shifting regularly during performance. This reflects the changeable power imbalances that can occur in free improvisation, and indeed in any interactive group dynamic or political system.[31]

The system focusses on the freedoms and powers of the individual within a large group, with players additionally able to come together to achieve specific aims. A useful parallel for this social model is Max Stirner's theoretical political system the 'Union of Egoists'. The union is a form of anarchy whereby individuals conglomerate as desired to achieve specific goals, and where these associations are continually renewed by each individual involved. It is presented in contra-distinction to a state-based solution whereby morality and authority are dispensed from the top down. In *Micromotives,* when players establish sub-groups, they are operating along Stirner's lines, entering into temporary agreements with other 'egoists' to achieve certain outcomes. In Stirner's system, whenever individuals involved feel that the agreement no longer serves their purposes, they must abandon the union before it becomes a kind of systematic authority. Although *Micromotives* does mirror this, it also encourages players to think on a collective/macro/state level – to consider how best to proceed as a whole group – and gives individuals the means to attempt to instigate these ideas as a temporary source of directorial control. However, the lack of

[31] See section 1.1.3 for a brief discussion of power dynamics in free improvisation.

obligation for others to follow any such 'global' directions retains the powers of each individual, allowing them to undermine any potential authoritarianism of the 'state'.

The way that rehearsals were conducted is also politically analogous, with Union Division meetings most often consisting more of discussion than playing. This can be likened to Iris Marion Young's concept of 'communicative democracy', which she describes as "argument…interspersed with or alongside other communicative forms" (quoted in Adlington, 2019) – in this instance, collective performance. Earlier on in the development process, although directed and influenced by group discussions, I retained singular power to make any changes to the system, ethos or score. But later debates were held in a much more obviously democratic way, with some decisions being made by way of a majority vote, on one instance going explicitly against my point of view. This change was never something discussed, rather the way that the ethos evolved meant that players felt empowered to instigate a vote, and that it would have felt antithetical for me to retain any kind of autocratic rights. At this point, the system methodology *itself* had moved beyond my individual control, into a democratic sphere based on majority consensus.

On a micro level, the *Micromotives* system allows players to think individualistically, following their independent instincts. They can set up groups to achieve certain desired outcomes, join other events as they wish, and cease activity or association at any time. On a macro-level, these individual decisions across the ensemble give the overall music certain characteristics: rapidly shifting textures; sudden changes of approach; various types of synchronisation; semblances of heterophony and polyrhythms. Although each player will have a radically different experience of their roles within different renditions, overall impressions of the practice as a whole remain notably consistent.

This way of working is perhaps analogous to descriptions of 'emergence', where series of relatively simple natural processes, or decisions, on a micro-level, lead to complex, yet broadly consistent, systems on a larger scale. There are many examples of this phenomenon in nature, such as the formation of 'cathedrals' by termites (Frauendorf, 2007). In terms of human behaviour, Thomas Schelling's (2006) book *Micromotives and Macrobehaviour* describes, amongst other examples, how a minor and seemingly insignificant tendency for individuals to favour living next to people of shared ethnicities, quickly and predictably leads to the large scale segregation of communities.

### 3.6.4.4 Stepping in and out of the flow

As Willberg infers when he mentions "stepping in and out" in the above quotation (see 3.6.4.1), the presence of materials in *Micromotives*, and the knowledge that others might be attempting to instigate various types of coordination, means that it is impossible to remain fully in what is often referred to as the 'flow' or 'flow state' (Pressing, 2000; Turino, 2009; Racy, 2009; Prévost, 1995). Instead, *Micromotives* invites performers to partially and periodically step out of the flow, in order to coordinate specific activity, refer to predetermined materials, and/or observe potential instructions.

Due to the fact that *Micromotives* maintains free improvisation as a default modus operandi whilst enabling 'literary or material elements' (Cook, 2018) to be introduced as and when they are desired, there are substantial areas where players are able to become immersed in the 'flow' and instinctive physicality of improvisation. However, this is not always possible or even necessarily desirable.

Through a series of discussions with the players, it became clear that when performing *Micromotives*, most find themselves moving between two physical and/or cognitive perspectives and operating systems. At some points they are able to work in

ways consistent with those of free improvisation, remaining largely in the flow whilst maintaining an awareness of additional options that they, or another member of the group, might want to instigate – so-called 'Free+'; at other times, they feel that they are playing authored compositions to be constructed en masse, in real-time, using improvisational means – a kind of collective, spontaneous composition. Although the system asks performers to move between individual and global concerns and to be, at different times, improvisers, interpreters and composers, it is important to note that players remain able to prioritise any of these positions. Indeed, several have demonstrated this by paying little attention to given materials or the suggestions of other ensemble members, focussing exclusively on improvisation throughout the performance.

### 3.6.4.5 Authorship and non-notational compositional responsibilities

In a situation where so many compositional decisions have been redistributed, then, which specific powers remain with the composer? If we think of the role of the composer as controlling musical outcomes by means other than through their own performance, it becomes clear, as Cardew, Cook, Small and many others have pointed out, that curatorial decisions must gain significant importance. As previously mentioned, in the largely improvised scenario of *Micromotives*, my choice of players is hugely significant, not only in influencing the instrumentation and overall aesthetic of a performance – an ensemble of two drum kits, alto and tenor saxophones, two trumpets, double bass, electric guitar and rhodes has an immediate and entirely different set of sounds, cultural associations and expectations to that of cello, bassoon, snare drum, viola, marimba, soprano, electronics, clarinet and harp – but also in putting together musical approaches, languages, backgrounds and personality types that will work together.

This balancing is critical for the system's success – it would cease to function if every player was unassertive and compliant, and would be overloaded in the opposite

eventuality. If players share a background in jazz, then the eventual soundworld might favour pulse, motivic development, pitch and virtuosity; if practices are predominantly rooted in contemporary western classical traditions, the result might focus on timbre, gesture and 'extended' techniques. I actively chose players to represent a variety of backgrounds and musical aesthetics, with most rooted in jazz, free improvisation or experimental traditions and with some incorporating a mixture of these. Most demonstrated versatility, respect and openness, with abilities to lead as well as listen and follow; a handful were considered particularly dominant or passive. Choices of performance environment, time of day, and audience can also function as curatorial decisions, with potential to profoundly impact performers and the sounds they produce.

Another important factor to consider was the number of rehearsals scheduled and the discussions, performance ethos and approaches contained within them. With such a reliance on improvisation, there was a danger that engaging with certain groupings of materials and/or mechanisms more than once or twice, let alone *rehearsing* specific aspects of them, would affect the way performers interacted with them. Flautist Rosanna Ter-Berg expressed a certain amount of restriction in performance, feeling unable to use materials in the same way more than once. In this way, as Tom Challenger suggested in the discussion of *A Net Flow of* Air, materials and structures could quickly start to feel closed down. The rehearsal of *Micromotives* also led to some perceived consolidations of the identities of individual pieces, so that certain interpretations or affective approaches became more embedded: as trombonist Tullis Rennie stated, "we are increasingly playing the pieces with more sense of themselves – playing piece 1 like piece 1". This phenomenon provided a particular challenge in the balancing of my criteria. On one side, rehearsal could act to strengthen the discrete compositional integrities of individual pieces; on the other, the required sense of contingency and possibility could become notably limited. I attempted to balance the two, limiting rehearsals as much as possible, whilst trying to

provide enough time and explanation so that players felt comfortable enough to use the more complex mechanisms with flexibility and confidence. I focussed on reinforcing the performative ethos in rehearsal, whilst encouraging players to continually engage with materials in different ways, and choosing to present some materials for the first time on the bandstand.

With such a collaborative creative process, questions of authorship are inevitably raised. Although I might be able to claim that the above decisions are compositional, to what degree is *Micromotives* 'authored' and to what degree does it exist through collaboration? Alan Durham (2002) suggests that for "works that owe their existence to an author, but whose form is determined...by forces beyond the author's control", the instigator could claim to have primarily authored the work. Corroborating this perspective somewhat, there was a consensus within the performers of Union Division that I had created 'compositions' – a clearly defined performance practice and groupings of specific materials – and that I could also take compositional credit for curating the group, promoting a specific performance ethos, and being the "nucleus of all this activity", as one player put it.

Any lack of clarity in this regard can become more pronounced when it comes to releasing recordings, at which point it becomes important to decide how the percentages of compositional credits are distributed. There is no need to consider specific figures for the purpose of this thesis, but it is important to acknowledge that, although my creative responsibilities go substantially beyond those of the other performers of Union Division, their contributions are of a degree of magnitude that, as Durham goes on to suggest, they could be viewed as *co-authors.*[32]

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[32] Durham (2002) states that "In cases with multiple claimants [in this case myself and the players], it may be appropriate to identify as the author of the work the person who is a proximate cause of the work's existence and whose reward of copyright is most consistent with the constitutional goal of advancing the arts. If it takes [substantial work from the players] to generate a [full version of the work], it would not be unreasonable or inconsistent with the constitutional goal of copyright to treat [each player] as...a "coauthor" of the composition".

### 3.6.4.6 Accessibility to various backgrounds

Several materials, such as 'Focus on sound' (*Starlings)* were clearly open-ended enough to invite a number or interpretations whilst others, such as the standard notation of *Union of Egoists*, contained highly specified rhythmic and pitch information, and suggested a certain accuracy in rendering – a *correct* interpretation. But through much discussion, an ethos developed that encouraged more personal responses to even the most prescribed and/or associative of materials. In line with aspects of Andy Hamilton's (2000) 'aesthetic of imperfection', the ethos implied an inherent sense of incompleteness – players were invited to freely interpret all the notation of *Micromotives,* and to 'complete' materials in real-time as they saw fit.

Although the system wasn't designed to be fully inclusive, it does, in reality, alienate more than anticipated, as evidenced by one early departure from the project.[33] It also asks players to step in and out of the improvisational flow, and works best overall for players who are willing and able to change course quickly, to interact in a wide variety of ways, and engage with a variety of material types including elements of pitch, rhythm and pulse. However, as shown in the current personnel of Union Division, the materials, mechanisms and functionality of *Micromotives* have proven flexible enough to be accessible to a variety of performative lineages, including jazz, free improvisation, experimental and contemporary classical traditions.

### 3.6.4.7 Compositional integrity and ontologies

In its current form, *Micromotives* sits somewhere between a collective performance practice and a set of pieces. In broad terms, the mechanisms constitute a way of working: a shared language of functions and hand signals that allow any member of the group to address various groupings of players and direct them to specific activities. This practice forms the backbone of the whole of *Micromotives* and is the operating

[33] Albeit during the first iteration of the project, prior to the ethos developing.

environment into which specific materials can be placed. Individual pieces are then composed of carefully assembled and exclusive sets of materials.

The overarching collective practice produces a distinct and recognisable performativity across different renditions and personnel groupings. This is immediately clear in live performance, visible in the physical gestures and signs that move around the group and, although specific meanings remain largely opaque, it is obvious to onlookers that directorial powers are distributed, and that certain activities are able to be instigated and coordinated between players. I would suggest that, to some degree, it is possible to observe that players are in predominantly improvisational modes at times, and referring to predetermined elements at others. If listening to the audio alone, without the visual aspect, the mechanisms still act to give the overall music several striking features: sudden contrasts and changes of direction, global coordinated activities (e.g. finishing), alternating/concurrent sub-groups of players etc. These features produce a resultant music that has something of a sound of its own and that does sound in some way 'directed', i.e. not possible through improvisation alone.

As extensions of the practice, the pieces are broadly identifiable by their constituent materials, and players have stated that they are directed into specific fields of activity and modes of playing in each. Several materials are clearly recognisable, and more audible when synchronised between multiple performers; for example, the melodic materials of *Union of Egoists,* the rhythmic materials of *Left Leaning*, the 'dominoes' in *Hidden Hand*, and the overall affect and spaciousness of *Starlings*. Other materials further distinguish pieces from one another, encouraging at various points the incorporation of pulse, groove and common harmonic/melodic spaces that are often avoided in freely improvised music. These characteristics remain largely identifiable, even with very different groupings of players. Comparing versions of *Union of Egoists*, as played by a nonet in the first Union Division rehearsal (15/01/18),

and by a quite different nonet (04/09/18), with six of the nine players changed, several of the same materials and performative functions are clearly recognisable in each.

It makes sense to separate practice and pieces in the analysis of *Micromotives*, but in reality the two things are, to a large degree, mutually dependent, with the choice of material and method of its incorporation working together to strengthen an overall compositional integrity and distinguish it from free improvisation. To this end, the use of coordinated melodic ideas and rhythms is particularly effective, as cellist Brice Catherin noted, "melodies in this context are extremely radical". Of course, pulse-based materials, synchronicity, sudden group shifts and sub-ensemble activity commonly occur in free improvisation, especially in small groups, but the *Micromotives* system makes these elements more audible and synchronised, with the possibility to coordinate them across a large ensemble in a dynamic and decentralised way. Comparing a free improvisation against a performances of *Micromotives* by the same line up on the same day (21/05/19) showed that the improvisation tended towards more gradual changes, with a largely undulating waveform and a sparse opening and ending, whilst the take of *Hung Parliament* had many more sharp contrasts and sudden changes in dynamic that were clearly coordinated across the group (see Figure 8). The pieces that included melodic and/or rhythmic materials were perhaps the most easily distinguishable from free improvisation, whilst those relying more on text, such as *Starlings*, could be more easily mistaken for being fully improvised.

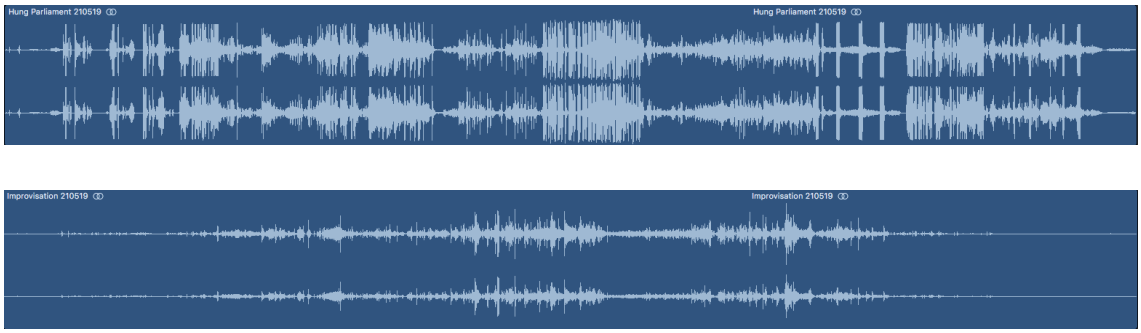


Figure 8. Waveform comparison of *Hung Parliament* (top) and free improvisation (bottom)

*Kilter* is unique among the six pieces in its lack of extra materials, functioning through the mechanisms alone, yet, perhaps unexpectedly, performances of this piece have so far always been clearly distinguishable from free improvisation. One explanation for this phenomenon might be that players are drawn towards clearer, more striking structural events when there are no added materials.

On closer inspection of *Micromotives,* further modes of understanding emerge. As well as being seen as a collection of authored pieces, a large ensemble practice for spontaneous collective composition, and free improvisation with added enablers (Free+), it has also been defined as an anti-hierarchical political analogy, and a pedagogical tool. Arguably, it is best understood not as one of the above, but as a fluid combination of all of them, and indeed in discussion with Union Division players, it has been described in each of these ways.

When Georgina Born (2010) states that "ontology is also in us" she suggests that ontologies need to be understood both in terms of the object of analysis and also of our personal understanding of it. Indeed, concerning *Micromotives*, the type of ontology that comes to the fore seems to depend on the individual background, ideology, experience and current mindset of the person describing it, or on the predominant subject of a group discussion, with one player summarising, "It's not just a group of free improvisers who are frustrated by the limitations of large groups, it's a broader base of departure points". Another described it being "as comfortable and free as in free improv with all these tools that are not available when it's purely free", i.e. 'Free+', whilst later saying we were "playing written pieces with freedom that was making sense", i.e. authored compositions.

During group discussion, the overarching ontological framework, into which all others were subsumed, was that of 'ethos'. It was overwhelmingly agreed that whatever information was contained in the score, the system became defined once the

players understood the operational mentality that they were expected to adopt when using it: one that prioritises individual freedoms, independent decision-making and collective creativity, where powers are equally shared and directorial and hierarchical structures are easily undermined. As one player stated, "so much of it is what you're saying in the rehearsal room", adding that "there's a danger of someone being more dictatorial with it".

Indeed, although directorial powers are equally available to all players in *Micromotives*, the system's visual similarities to more widespread versions of conduction may give it an appearance of authoritarianism. What might be more difficult to perceive is the culture that has developed within the group, that not only allows individuals to reject the ideas of others, but crucially to do so without fear of social ill-feeling or repercussion. It makes sense that, in the first rehearsal, players might have felt a level of obligation to follow directions, and felt a potential for social awkwardness – at this stage the ethos had yet to crystallise, and was barely discussed. This is not to say that a strong understanding of ethos means that players are always able to withhold judgment on the musical decisions of other group members, and it has been the case on occasion that certain players have perceived the contributions of others as incongruous or frustrating. But the discussion of these issues has provided an opportunity to foster an environment of trust and respect, alongside an acceptance that various players will not necessarily share aesthetic sensibilities.

After nearly forty years of 'new musicology', and with practices posing conceptual challenges to romantic notions of composer-performer hierarchies since the first half of the last century, the kind of ontological pluralism described above shouldn't encounter too much resistance. If we recognise Philip Bohlman's (1999) claim that "multifarious musics [have] complex metaphysical meanings", then it seems logical that, as Cook (1999) suggests, "the best course is to see [work and performance] as having a relationship of dialogue with one another…Adopting a performative perspective…is indispensable in today's climate of analytical, theoretical and

musicological pluralism…Performativity, in short, is the foundation of pluralism". Cook (2018) invites us to view music as a continuum of practice, "bypassing traditional binaries such as text vs performance and composition vs improvisation"; it seems, in fact, that such an approach is necessary to achieve a more complete understanding of *Micromotives*.

Cook also argues that the traditional musicological emphasis on 'reproducibility' in the analysis of works is also misplaced, giving credence to an argument that *Micromotives*' potential resistance to reproduction need not negate its status as a set of distinct compositions with individual integrities. Instead, Cook (2018) places this traditional standpoint on its head, arguing that instead of defining music by its score, we can look for the 'text' in performance, thereby providing "a broader, more flexible, and…more musical conception of text".[34] These arguments highlight the ways in which it might be more accurate to discuss and conceptualise various types of music and music-making as interactive networks of performative processes and various agents, e.g. players, notation, space and instruments. This seems to be a particularly appropriate model for *Micromotives*.

However, the absence of obligation for performers in *Micromotives*, if taken to its potential extreme, does pose significant ontological questions. In contrast to improvisation's multifariously understood and largely unstated rules of engagement, compositions, like games, have *explicit* rules & functionality, which must be followed in order to justifiably claim that you are playing them. *Micromotives* does have clear rules and functionality, but one of these specifies that it is theoretically possible for players to execute an entire performance without referring to any mechanisms or materials, solely improvising. In this case, it seems a stretch to say that a performance of the piece has actually occurred.

I argue that there is a clear rationale behind a claim that it has. The performers all understand the potential functionality of the piece – that there are

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[34] See the discussion of 'entextualisation' in the above analysis of the *Grid Pieces* (3.5.5.1).

predetermined elements that they, or others, may try to instigate – and this understanding fundamentally changes the nature of their engagement and interaction. Going through the process of rehearsal, practising different combinations of signs and learning their meanings, all serve to give each piece, and the practice as a whole, intangible but nevertheless influential forms and meanings. Whatever the eventualities of a given performance, the knowledge at the outset that the group is playing a specific piece, and the placement of the relevant groupings of materials and pieces of paper on music stands, immediately positions actions within a certain space – it provides a 'framework of activities' (Benson, 2013). Furthermore, even if they are not used in performance, provided that players have at least looked at the predetermined materials, these will act to provide a soundworld and/or affect that impacts freer contributions. Although players may feel a level of individual freedom close to that of free improvisation, they concur that the process is "very different" (Otto Willberg).

It is important to consider the philosophical implications of a lack of performer obligation, but in reality, a situation where no pre-determined elements are referred to is all but impossible. By choosing specific players, and ensuring they know the particulars of the system, it is almost certain that at least one person will instigate at least one element. We can reasonably presume that if performers had no interest in the potentiality of the system as a compositional approach, that they would choose not to take part, especially given the lack of financial incentive. Some players have stated that not using the materials or mechanisms would be a "wasted opportunity", or "not in the spirit of it" (Sam Eastmond).

# 4 Conclusions:

In light of the discussion and analysis of the portfolio presented above, I will now consider the extent to which this body of work responds to my initial research questions. As stated in chapter 1, the questions were as follows:

1. In which ways might it be possible to create distinct compositions that also allow improvisers to use their individual languages and approaches unfettered, and to interact in ways that are consistent with those of small-group free improvisation?
2. To what degree can such compositions be engineered to be distinguishable from one another, and from wholly improvised music, and to what degree might they be able to retain a sense of themselves across multiple performances and ensembles?
3. How can these questions be successfully applied to larger groups of improvisers?

I will look at the first two questions in turn over the following sections, referring to the earlier pieces of the portfolio, before presenting my conclusions regarding *Micromotives* as an amalgamated response to all three questions in section 4.3.

## 4.1 Creating performance situations comparable to free improvisation

Through the development of the portfolio pieces, it became clear that, in order to simulate the contingency and networked interactivity of free improvisation within compositional frameworks, creative hierarchies needed to be momentary and invitational, based in suggestion rather than imposition. Removing performer obligation in this way would allow players to retain autonomy over their sonic and interactive contributions at all times, enabling them to incorporate their individual voices organically and, at times, approach a state resembling improvisational 'flow'. It was crucial to engineer an environment that maintained the potential for an even distribution of directorial powers, both between composer and performers and between the players themselves.

Following these principles had consequences for both compositional structuring and player interaction and engagement. Where rigidity was maintained in structural sequencing and/or the assignment of roles, it was increasingly important to encourage performer control in other areas, such as sound content. But ultimately it was found that accessing the sense of 'nowness' in free improvisation was dependent on timelines being highly flexible or, ideally, omitted. Having multiple-option timelines gave some sense of contingency and power to players in the moment (see section 3.4.1 on *A Net Flow of Air*), but it was found that the complete removal of any kind of predetermined timeline enabled a much closer approximation of the constantly shifting possibilities of free improvisation.

Additionally, although this was less clear in some pieces, it was important that the materials and notation were presented not as rigid sets of instructions but, in line with Thomas's (2007) description of Wolff's approach (see section 2.1), as dialogical partners to be negotiated with. The use of open-ended text materials and 'notation' designed specifically to tap into personal practices encouraged performers to view given materials as suggestions or springboards, capable of accommodating a range of personal voices and approaches.[35] In short, materials seemed to be most useful to improvisers, and closest to enabling the kind of freedoms found in free improvisation, when they were less concerned with sound and more with process, focussing on the *how* over the *what*.

In each instance it was important to clarify, often verbally, that players should engage with scores in ways appropriate to their practices. This went some way to counteracting the common instinct to allow the score to dominate more contingent forms of interaction and development, although it must be acknowledged that performers found this variably practicable, depending on their background (see section 3.4.4 for a useful comparison of performer backgrounds).

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[35] The term 'notation' is used inclusively to encompass elements such as the 'backing track' in *Golden Sugar*.

Although it is impossible, and perhaps not even desirable, to eliminate hierarchical functionalities in any music performance setting, it was critical to maintain a *potential* for directorial powers to be distributed equally, no matter how transiently. In the formative pieces of the portfolio, this aspect was variably clear, and in some instances I prioritised my structural and sonic predeterminations to such an extent that the creative contributions of the players in real-time was severely limited (see section 3.3.1 on *how not to dance*). However, in almost every instance it was important that players determined when they should progress to the next section in real-time, with all players equally empowered to direct this.

## 4.2 Developing concepts of compositional integrity that incorporate performer voice

Unlike compositions created within deeply rooted and widely understood historic musical paradigms such as certain subsets of the Western classical tradition (see for instance the discussion on the performance of Feldman's indeterminate scores in section 2.1), attempts to balance the highly developed personal voices and practices of improvisers with those of composers are necessarily novel in each instance and can easily lead to misunderstandings at various points in the network. Through the analysis of this portfolio I have demonstrated the importance of using appropriate notation and aligning compositional design with performer need. I have also shown how more traditional models of compositional integrity, rooted in the organisation of sounds in time, can be problematic for many improvisers, and deeply so in the context of my intention to create performance scenarios as close to free improvisation as possible.

In order to allow for such levels of performer freedom, it was necessary to move significantly away from a 'reproducibility paradigm', taking an almost oppositional

stance with *Micromotives* (as discussed in section 4.3). However, several of the portfolio pieces took a more nuanced position on the continuum, allowing for varying types and levels of performer freedom whilst relying on a variety of attributes – more or less rooted in concepts of recognisability and reproducibility – for compositional integrity. Elements that were seen to favour compositional voice included the predetermination of instrumentation, structure, pitch-based/rhythmic materials, dynamics, transition types and instrumental approaches; whilst incorporating specific processes, interactions and models of performativity was found to provide a more accessible space for performer voice. Various combinations of these allowed individual pieces to retain a sense of themselves across multiple performance settings, producing sonic results that were clearly unattainable through free improvisation alone.

To further compound compositional integrities, it was paramount that the nature of partnerships between composer and performers was clear from the outset, that each agent understood their role(s), and that the personnel involved had the appropriate skills and cultural awareness. Most performers responded positively to heightened clarity regarding which areas of the composition were flexible or rigid and, contrary to my initial concerns regarding compositional authoritarianism, it was often the case that improvisers found it helpful to have clear structures and guidance, providing a secure context within which they could work more creatively. However, although some improvisers were happy to work within strict guidelines, others found it harder or undesirable to align their practice with compositional materials or other kinds of pre-determination. These positions of course sit somewhere on a multi-dimensional spectrum, within which it can be difficult to place people, but it is logical to suggest that by rooting compositional integrity in those elements that are more reliant on performer voice it is possible to be more inclusive to a variety of improvisational languages and approaches.

## 4.3 Aligning improvisational freedoms with compositional integrity in large ensembles

Through a process of reflection and iteration accompanying the generation of the pieces that comprise this portfolio, I was able to enhance my understanding of the elements that my research questions set out to balance. This led to several subtle but significant changes in my criteria that I was then able to address in full with *Micromotives*. Most notably, the modified criteria stated that there should be no performer obligation and that improvisation should be the default scenario (as discussed in chapters 1.1.2, 1.2 and 1.4.1).

Combining collective developments – made over months of rehearsal and discussion with the members of Union Division – with personal analysis and iteration, I incorporated these critical shifts into *Micromotives*, eventually producing a compositional framework that gave each piece a sense of integrity whilst allowing for levels of creative performer freedom comparable to those found in free improvisation. Through a shared language of hand signals, large numbers of players were able to self-organise fluidly and transfer detailed information between themselves directly and inaudibly. Directorial powers were available to all players at all times whilst a defined and reinforced performance ethos meant that individuals always retained the choice to follow, ignore or counteract the suggestions of others.

Removing any kind of timeline and sense of obligation, and with improvisation as the default scenario, players could incorporate given predetermined elements as and when they desired. These materials could then be viewed as potential extensions to a collective improvisational practice rather than obstacles to be surmounted. This allowed most players to effectively utilise their practices and voices within the given structures, with the system largely proving itself flexible enough to be bent to individual wills and understandings.

Perhaps surprisingly, the lack of obligation for players to follow instructions meant that individual real-time suggestions could be more ostensibly dictatorial

without any increased concern over the curtailment of the freedoms of others. Players were now able to suggest structural shifts involving the whole ensemble, or even single someone out to feature themselves, without instating any kind of fixed hierarchy. As players were always able to negate instructions, any dictatorial tendencies could be easily ignored and, crucially, this could be done without the risk of causing offence. In order to develop this kind of working culture within the ensemble, it was important to reinforce a clearly defined ethos of invitation and suggestion, over direction and imposition, at every opportunity, with this ethos providing a safe space for group activity and becoming an intrinsic part of the piece. In fully internalising the facets of this collective performance practice, players developed an understanding that:

- they could engage with the score as much or as little as desired;
- materials could be interpreted personally;
- they were under no obligation to follow the suggestions of other ensemble members, and correspondingly;
- attempting to impose their creative ideas on others not only went against premises of invitation and suggestion, but was also unworkable within the system.

Unfettered by time parameters or set personnel groupings, and with the additional ability to create sub-ensembles, players now felt that they were able to work within smaller units and improvise in a way that was akin to collective free improvisation. They were able to intuit their roles and dictate their contributions in a hierarchically dynamic environment, but with extra possibilities or 'enablers'. However, most players agreed that performing *Micromotives* and freely improvising remained very different processes, not least due to being encouraged in the latter to move between cognitive states, with players asked to act as improvisor, interpreter and composer at various times and potentially to step in and out of the improvisational flow in order to achieve this.

Corroboration from the players that the level of personal freedom experienced in *Micromotives* was comparable to that of small group free improvisation was certainly vindicating, particularly as this indicated that the presence of pre-determined elements – my compositional intervention and voice – had been 'non-invasive'.[36] Unlike the *Grid Pieces, Micromotives* countered some of the standardised tropes of large group improvisation and provided obvious points of synchronicity without significantly modifying improvisational functionality, with several players acknowledging that the introduced structures were, in fact, welcome additions in the context of large group improvisation.

With *Micromotives*, I was able to satisfy the majority of my criteria relating to both performer freedom and compositional integrity, and provide an environment in which players unfamiliar to each other could work quickly and effectively together in large numbers without the need for extensive rehearsal.

The functionality of *Micromotives* produced an environment that came close to that of small group free improvisation, while each piece, and certainly the collection as a whole, maintained distinct sonic, performative, and visual characters. Pieces were largely able to retain audible identities across multiple performance settings and with different groupings of players by creating distinct 'event spaces', encouraging players to move towards certain sonic, performative and interactive areas. Alongside being thought of as a practice, a set of authored pieces, a mode of collaborative composition, free improvisation with extra possibilities (Free+), or a politically charged attempt to create a more direct and evenly-weighted power negotiation between performers and composer in the moment, *Micromotives* can perhaps best be defined within the context of its performance ethos. By focussing on individualism, fluidity and anarchic

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[36] Simon Fell (quoted in Stenström, 2009) defines 'non-invasive' structures as those that allow musicians to feel "unencumbered" and able to "improvise sensitively, creatively and effectively, using their musical sensitivities alone to guide them".

voluntary association, whilst also encouraging collaboration and invitation, this ethos created an environment close to that of free improvisation whilst encouraging quite different sonic outcomes.

In order to create a performance situation that was accessible to as wide a range of improvisers as possible – i.e. one that would be able to accommodate a variety of performance approaches, ideologies and personal voices – I was forced to move away from more traditional conceptions of compositional integrity revolving around reproducibility, portability and the organisation of sounds in time. Instead, I have suggested a model that allows compositions to retain a sense of themselves though aspects of performativity, functionality and sociality alongside more widely acknowledged areas concerning the grouping of materials and curation of ensemble, performance space and overall performance situation. This approach was the route by which I was able to remove all performer obligation, a critical shift that enabled players to interact, both with the score and each other, in ways that felt appropriate to each individual in a specific moment.

## 4.4 Final thoughts and further investigations

In composing for improvisers, even within quite narrowly defined areas of practice, there is clearly no approach that will work for everyone all of the time. Corresponding to their myriad backgrounds, individual composers and improvisers have personalised aesthetic preferences and varying understandings of their approaches and ideologies. I have aimed throughout this thesis not only to demonstrate some of the potentially thorny issues that can be encountered when contrasting positions attempt to collaborate, but also to offer a detailed analysis of several such examples, and to proffer some compositional solutions. I have identified several elements of free improvisation that constitute defining characteristics for many, relating to dialogue, contingency and information flow, and have shown both how these these can become increasingly complex in larger ensembles and how they might have been

compromised in various pre-existing compositional models. Through analysis of the compositions presented in this portfolio, I have attempted to enhance the understanding of such improvisational freedoms as they relate to a variety of compositional models and sought iteratively to develop an approach for large ensemble that maintained a level of compositional integrity without diminishing the field of real-time possibilities for individual performers.

It is important to acknowledge that *Micromotives* is one of many potential solutions that might respond to the conundrum outlined in my aims, and one that conforms to my current biases, aesthetic, experience and community. It remains in development at the time of writing and I am curious to understand the limits of its capabilities. In particular, I am keen to further investigate methods by which individual pieces might be made increasingly distinguishable from one another, and to explore the soundworlds that would result from working with radically different ensembles, and with musicians from more rigidly defined backgrounds. The system could also be refined for pedagogical use, with the potential to become a constructive learning tool for less experienced improvisers. Pertinently, it would be illuminating to study the extent to which the performative ethos might be maintained without my direct involvement. I am hopeful that I, or indeed others, might have the opportunity to examine some of these areas in the near future.

## Appendices

Appendix 1. *Orienteer* structure plan and biases

Appendix 2. First version of *Orienteer* rehearsed (V2)

Appendix 3. Comparative recording breakdowns of Orienteer by Ensemble Fractus and GIO

Appendix 4. *Relay* full final score, structure plan and biases

Appendix 5. Recording analysis/breakdown of '*Relay*' (corresponding to App. 10 xiv)

Appendix 6. Sub-ensemble study draft

Appendix 7. Sub-ensemble study V2 (version of *Micromotives* used in first rehearsal)

Appendix 8. Scores of submitted works (see accompanying repository folder)

i) *how not to dance*

ii) *A Net Flow of Air*

iii) *Chained Melodies*

iv) *Listen, Distil*

v) *Golden Sugar* (including 'backing track')

vi) *Grid Pieces*

vii) *Micromotives*

Appendix 9. Audio recordings of submitted works (see accompanying repository folder)

i) *how not to dance* performed by Aisha Orazbayeva and Joseph Houston

ii) *A Net Flow of Air* performed by Tom Challenger

iii) *Chained Melodies* performed by DriftEnsemble

iv) *Listen, Distil* performed by Via Nova

v) *Golden Sugar* performed by James Maddren & Will Glaser

vi) *Orienteer* (*Grid Pieces*) performed by Ensemble Fractus

vii) *Hidden Hand* (*Micromotives*) performed by Union Division

viii) *Starlings* (*Micromotives*) performed by Union Division

Appendix 10. Supporting audio and video (see accompanying repository folder)

i) *how not to dance* performed by Henry Tozer & Flora Curzon V1

ii) *how not to dance* performed by Henry Tozer & Flora Curzon V2

iii) *A Net Flow of Air* performed by Joshua Hyde

iv) *A Net Flow of Air* performed by Joshua Hyde [video]

v) *A Net Flow of Air* (alternate take) performed by Tom Challenger

vi) *Chained Melodies* performed by DriftEnsemble [video]

vii) *Listen, Distil* (alternate take) performed by Via Nova

viii) *Listen, Distil* (alternate take 2) performed by Via Nova

ix) *Golden Sugar* performed by Serge Vuille & Colin Frank

x) *Golden Sugar* performed by James Maddren & Will Glaser [video]

xi) *Golden Sugar* with backing audio performed by James Maddren & Will Glaser

xii) *Golden Sugar* (alternate take) performed by James Maddren & Will Glaser

xiii) *Orienteer* (*Grid Pieces*) performed by Glasgow Improvisers Orchestra

xiv) *Relay* (*Grid Pieces*) performed by CUEE

xv) *Centrifuge* (*Grid Pieces*) performed by Ensemble Fractus

xvi) *Grid Pieces* (3 movements quick take) performed by Ensemble Fractus

xvii) *Kilter* (*Micromotives*) performed by Union Division

xviii) *Starlings* (*Micromotives*) (alternate take) performed by Union Division

xix) *Union of Egoists* (*Micromotives*) performed by Union Division

xx) *Hidden Hand* (*Micromotives*) (alternate take) performed by Union Division

xxi) *Left Leaning* (*Micromotives*) performed by Union Division

xxii) *Hung Parliament* (*Micromotives*) performed by Union Division

xxiii) *Kilter* (*Micromotives*) performed by Union Division [video]

xxiv) *Union of Egoists* (*Micromotives*) performed by Union Division [video]

Appendix 11. Specific references to audio in the text (see accompanying repository folder)

i) *Orienteer* 3:38 Ensemble Fractus (blue box)

ii) *Orienteer* 3:45 GIO (blue box)

iii) *Orienteer* 7:24 GIO (silence)

iv) *Grid Pieces* (amalgamated) 3:11 Ensemble Fractus (solos)

v) *Orienteer* 8:08 GIO (solos)

vi) *Orienteer* 9:42 Ensemble Fractus (solos)

vii) *Orienteer* 0:53 Ensemble Fractus (gradual transition)

viii) *Orienteer* 5:16 Ensemble Fractus (hard transition)

ix) *Centrifuge* 7:28/8:08 (unison G)

x) *Centrifuge* 11:08 (pulsed repetitions in violins)

xi) *Centrifuge* 1:10 (strong independent marimba gesture)

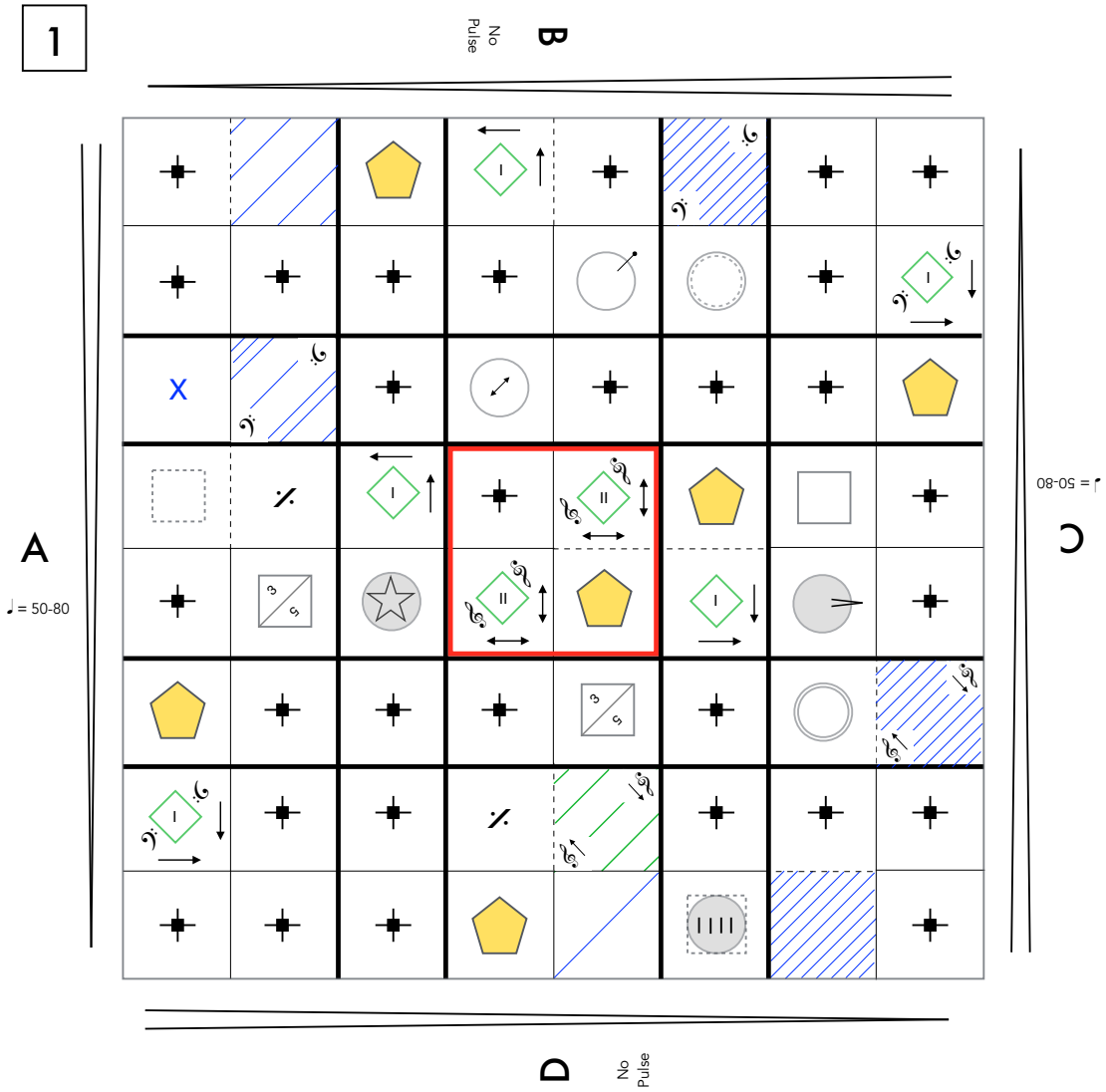
## Appendix 1

Structure and material biases for first four sections of *Orienteer* from the *Grid Pieces*

| Orienteer | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| NOISE | *f* single noise for each player<br>*p* sparse noise<br>*f* dense noise x 2<br>*mp/mf* sustained noise | *ff* sparse noise<br>*ff* dense noise | *pp* single noise for each player<br>*pp* dense noise x 2<br>*p* low noise | *mp/mf* sustained noise |
| PITCH | *p* I low<br>*mp* I retrograde low<br>*mp* I retrograde | *ff* I low<br>*ff* I retrograde low<br>*mp* sparse pitch | mf I retrograde x 2 | *ff* I retrograde<br>*mp* I retrograde x 2<br>*mf* II (P & R options) x 2<br>*f* high pitch |
| INTERACTIONS | *mp* Initiate & fade | *mf* initiate & fade<br>continue as before<br>*mf* copy from previous x 2<br>*f* play when a chosen other plays<br>*f* track one other | *ff* initiate & fade<br>*p* play when a chosen other plays<br>*p* track one other<br>*mp* copy and transpose/move<br>*mp* ignore and feature | *p* initiate & fade<br>continue as before<br>*mp/f* copy from previous x 2<br>*mp* copy and transpose/move<br>*mp* ignore and feature |
| RHTYHM/ TIME/ PULSE | *mf* Broken groove<br>*mp* Repeated sound/broken rhythmic feel | *mp* 5/3<br>*mp* strong rhythmic feel | *mp* 5/3<br>*ff* Repeated sound/broken rhythmic feel | *pp* Broken groove<br>*f* 5/3 x 2<br>*f* strong rhythmic feel |
| RESTS | 17 | 18 | 16 | 9 |
| FREE | *mp* x 2<br>*mf* x 1 | | *ff* x 2<br>*mp* x 1 | *f* x 1<br>*pp* x 1 |

## Appendix 2

Version of *Orienteer* (*Grid Pieces*) used for first rehearsal with Ensemble Fractus



## Appendix 3

Comparative breakdowns of recordings of *Orienteer* (*Grid Pieces*) by Ensemble Fractus and GIO. Note that beyond section 6 each player can follow their own route via the 'rotate and repeat' mechanism, so numbering is not the same across the group.

**Ensemble Fractus**, The University of Hull, 12/05/17

(electric guitar, electric bass, rhodes, piano, percussion, flute, violin, tenor saxophone, 2 trumpets)

| | | |
|---|---|---|
| 0:00 | 1 | Melodic material 1 in rhodes, bass & gtr.; broken rhythmic feel in tpt. |
| 0:53 | 2 | Rhodes continues idea with sax. tracking. |
| 1:38 | 3 | Tracking between vln. & pno. |
| 2:22 | 4 | 3/5 figure in pno.; rhythmic feel in vln. and tpt. 2. |
| 3:03 | 5 | 3/5 figure in rhodes, gtr. copying; staccato rhythmic sub-ensemble; sparse quiet noise in perc. Group crescendo into: |
| 3:38 | | **Blue Box** |
| 4:27 | 6 | Strong rhythmic feel in perc.; dense noise. |
| 5:16 | | Pno. figure recalled from section 4, fl. and perc. together (continuing dense noise?); 3/5 & rhythmic feels in tpts.; gtr. initiate/fade. |
| 5:59 | | Pno. figure cont. transposed/extrapolated; sax. and vln. free; noise content in bass; rhythmic feel in gtr. |
| 7:14 | | Gradual change; tpt. duet (1 playing white notes retrograde, 2 tracking). |
| 8:24 | | Vln. & pno. rhythmic ideas; vbr. melodic material 1. |
| 9:07 | | Gtr. dense noise; pno. melodic material 1 (without white notes). |
| 9:43 | | Vln. solo rhythmic. |

**Glasgow Improvisers Orchestra,** Centre for Contemporary Arts, Glasgow, 25/07/17

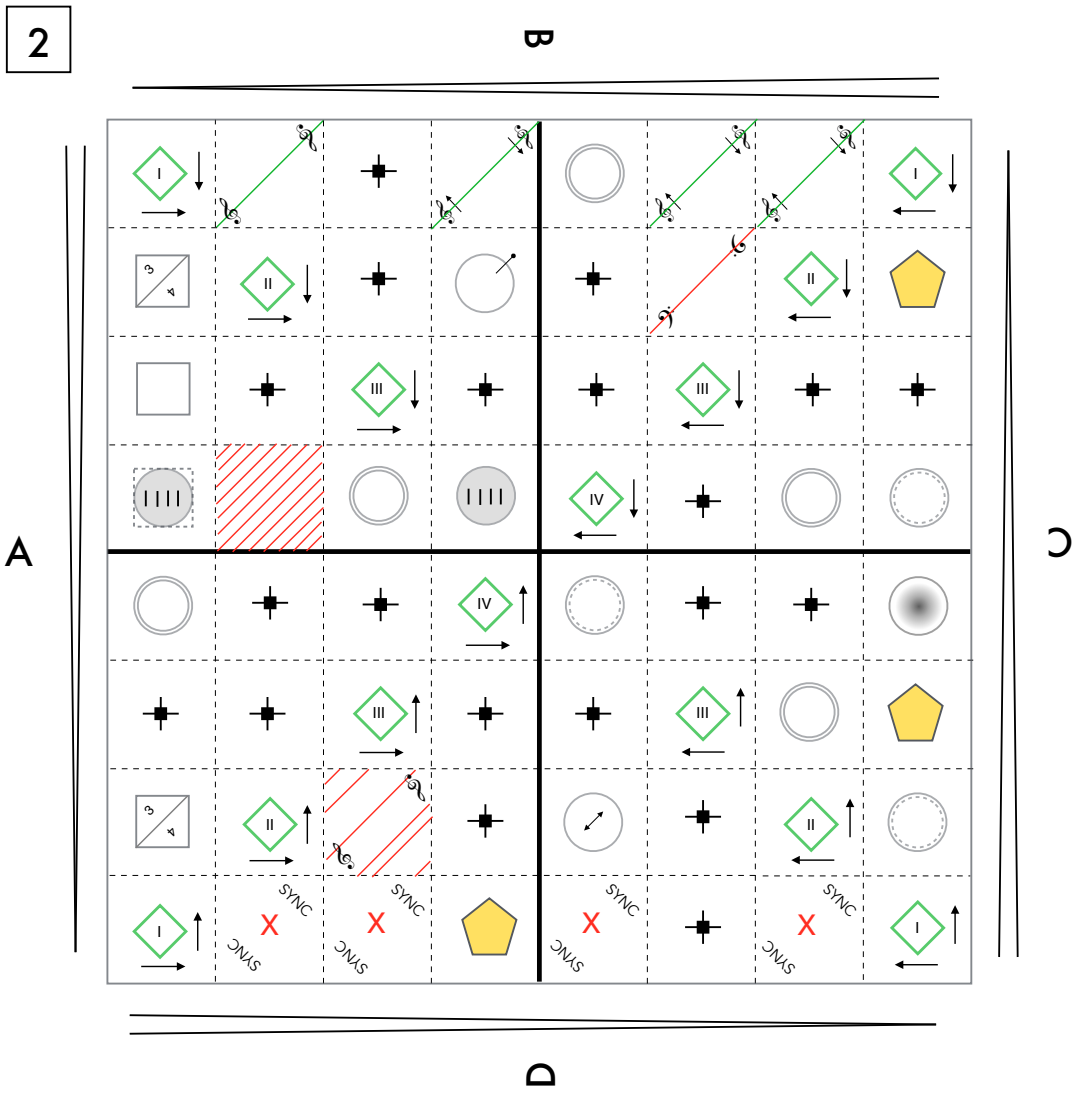
(2 electric guitars, 2 cellos, double bass, soprano sax, alto sax, tenor sax, melodica)

| | | |
|---|---|---|
| 0:00 | 1 | Melodic material I in ten. and sop. saxes; noise in gtr. |
| 0:26 | 2 | Gradual change; generally quieter; bass medium high pitch. |
| 1:00 | 3 | Sudden change; white notes of melodic material 1 in melodica; sop. sax & bass free; repeated broken rhythmic feel in gtr. |
| 1:56 | 4 | Strong rhythmic feel in ten. sax, alto and sop. tracking & transposing; quiet rhythmic feel in cello; melodica free. |
| 2:53 | 5 | Gtr. 1 loud rhythmic feel (broken?); quiet rhythmic feel in sop. sax.; sparse pitch in cello; group crescendo into: |
| 3:45 | | **Blue Box** |
| 4:45 | 6 | Saxes and melodica tracking; noise content in bass. |
| 5:27 | | Quiet rhythmic ideas and tracking in cello, sax. and melodica; poss. initiate/fade in cello. |

| | |
|---|---|
| 6:01 | Rhythmic repetitive pattern in bass continued from previous section; high dense cello and sop. sax.; al. sax. melodic material 1. |
| 6:58 | Ten. sax. free; cellos dense noise. |
| 7:24 | Synchronised silence. |
| 7:38 | Bass tracking cello. |
| 8:03 | Solo 5/3 in ten. sax. |
| 8:34 | Melodic material I in cello (white notes) and bass; noise/free in gtr(s?). |

## Appendix 4

Grid for *Relay* (*Grid Pieces*) showing biases of each orientation



## Appendix 4 (cont.)

Structure and material biases for first four sections of *Relay* from the *Grid Pieces.* The second half of the piece is the same in reverse.

| Relay | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| NOISE | | *mf* dense noise<br>*f* sparse noise<br>*mf* medium density noise | *p* sparse noise<br>*p* medium density noise | *p* dense noise |
| PITCH | *p/mf/f* sparse (v) high pitch x 4 | *pp/ff* sparse (v) high pitch x 2 | *pp* sparse v high pitch | *ff* sparse v high pitch |
| MELODY | *ppp/fff* M1 x 8 | *pp/ff* M2 x 8 | *p/f* M3 x 8 | *mp/mf* M4 x 4 |
| GENERATIVE | *mf* repeated sound/broken rhythm<br>*mf* initiate & fade x 2<br>*p-ff* noise for each player x 4 | *mf* repeated sound/broken rhythm<br>*pp* noise for each player | *pp* noise for each player | *pp/mf* repeated sound/broken rhythm x 3<br>*ff* initiate & fade<br>*ff* noise for each player |
| RESPONSIVE | *mf* track<br>*mf/f* play when a chosen other plays x 2 | *mf/f* track x 2<br>*pp* play when a chosen other plays<br>*mf* copy from previous section | *p* track | *mp/mf/f* track x 3<br>*ff* play when a chosen other plays<br>*f* copy from previous section |
| RHTYHM/ TIME/ PULSE | *f* strong rhythmic feel<br>*p/ff* 3/4 x 2 | *pp/ff* 3/4 x 2 | *pp* strong rhythmic feel | |
| RESTS | 4 | 9 | 16 | 11 |
| FREE | *p* x 1<br>*mf* x 1<br>*f* x 1 | *ff* x 1 | *pp* x 1 | *pp* x 1 |

## Appendix 5

Broad predictions and recording breakdown/analysis of *Relay* from the *Grid Pieces*.

### Predictions

- Section 1 - Dense texture; melodic material largely obscured; sub-groups coming through: synchronised noises; a long, high chord; strong rhythmic ideas, possibly synchronised.
- Section 2 - Slightly less dense; more noise content; possible very loud pitch; possible dominant rhythmic feel.
- Section 3 - Drop in dynamic and thinner texture; melody heard.
- Section 4 - Little louder and denser, more synchronised tracking and playing. Less melodic material. Potential for very loud single note. Repeated sounds, and interaction (tracking and contrasting).
- Sections 5-8: As above but reversed (4-1).

### Breakdown of recording

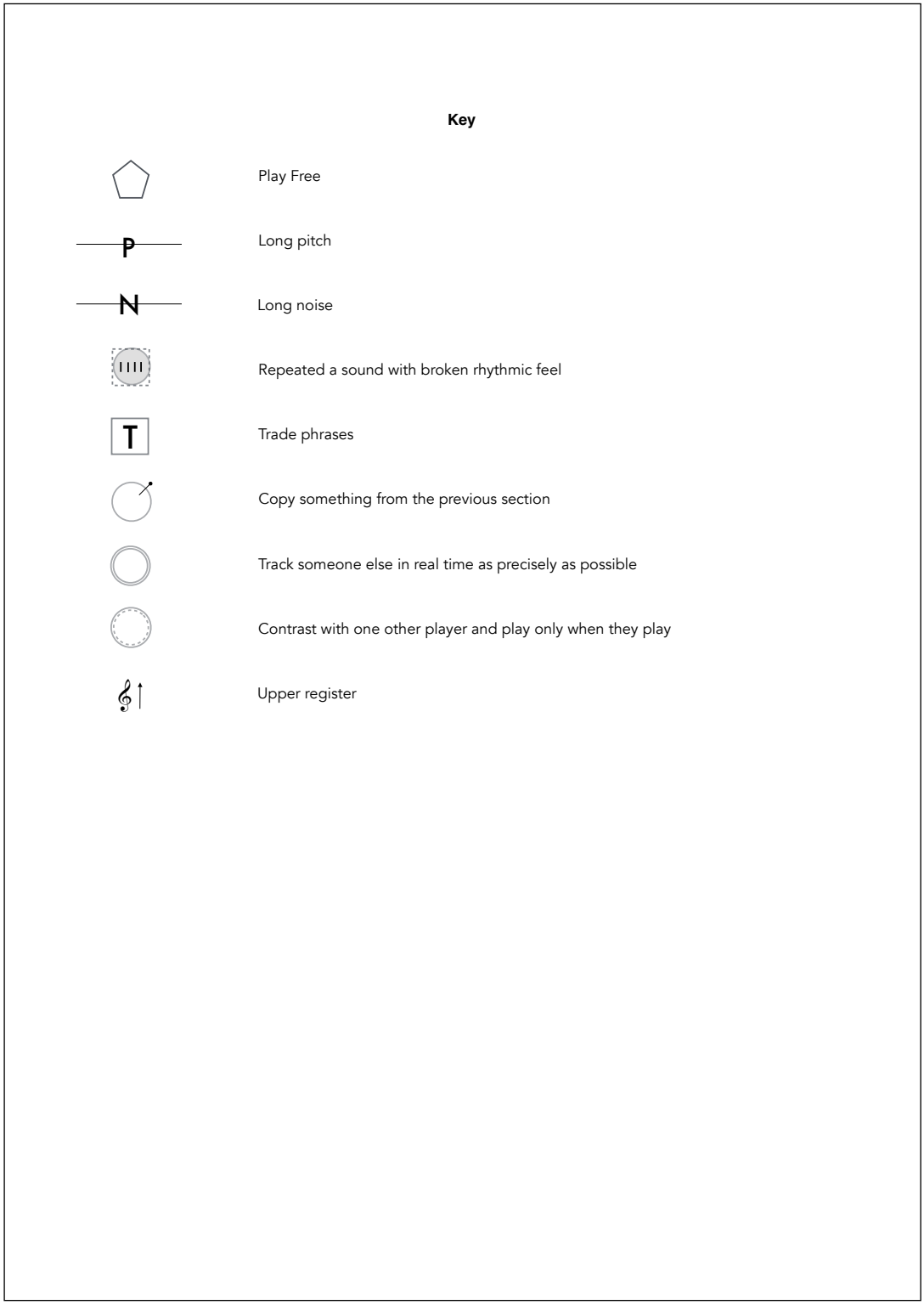
City University Experimental Ensemble (CUEE), City, University of London, 16/11/17. Take 1

3 pianists on 2 pianos, vibraphone, percussion/voice, hi hat, keyboard, electric guitar, electric bass, clarinet, bodhrán, 3 electronics/laptop players, acoustic guitar, voice/body percussion, 2 cymbals players, 3 single drum players, double bass.

| | | |
|---|---|---|
| 0:00 | 1 | Quite dense; some sparse pitches. |
| 0:50 | 2 | *mp* melody II in piano; *p* high pitched material in guitar; *f* rhythmic figures in snare. |
| 1:38 | 3 | thinner texture; *mp* melody III in piano; *p* strong rhythmic feel in percussion; *p* medium density noise. |
| 2:22 | 4 | Overall sparser. Melody IV in clarinet; low piano (?) repeated (rhythmic) sounds. Several tracks/copied elements between instruments. Occasional *f* pitch in piano. |
| 3:59 | 5 | Half way point sudden change; generally louder; loud repeated rhythmic sound in piano and percussion (tracking in percussion?); *pp* held pitch. |
| 4:59 | 6 | Suddenly drop in dynamic, thinner texture; piano tracking vibraphone; *f* sparse pitch in bass & clarinet; high noise in guitar; track in guitar 2. |
| 6:21 | 7 | melody II in piano (not retrograde as score instructs); more noise; rhythmic feel in percussion. |
| 7:29 | 8 | Generally louder and denser; several loud hits (initiate/fade?), sustained pitches in piano & flute; sustained noise in several instruments; some free playing; several more isolated pitches. |

## Appendix 6

Sub-ensemble study draft (initial version of *Micromotives*)



# Appendix 6 (cont.)

**Performance Notes**

**Structure and structural mechanisms:**

1. Tutti *f* play bar 1. No count in but someone should gesture the downbeat to start. Players should attempt to synchronise with one another.
2. Percussion/noise based sounds play through the entire rhythm attempting to synchronise but without physically showing the pulse to one another. At the same time other instruments should highlight short sections of the melody in sync with the percussion as they desire. Each instrument can contribute several melodic fragments over the course of the entire melody.
3. Return to melody 1, which forms the backbone of this section as a loop. From this point all players choose whether to be active or tacet for the current section. Players choose at the cue point and remain in active or tacet mode for the whole section until the next cue, when they can make the decision again. It is clearer for cue-ers if tacet players show that they are tacet by holding instruments in rest position or sim.
4. From this point, at any point, any player can cue to move on to the next section. The person cueing has 3 options as to where to go next as an ensemble: 1. Repeat the melodic section in current use but swapping players (currently active players become tacet and vice versa. If all players are currently active the cue-er should be aware this will result in silence). 2. Move in numerical order onto the next melodic material, or 3. Focus exclusively on either solo, duo or trio materials. Players should use their aesthetic judgement to determine the best of these three options.
5. Once material 4 has been played (either once or twice with swapped players the second time), the next cue will be for a coda section, made up of solo, duo and trio materials combined. On the cue for this section, players should continue to work with melody 4 until they move to solo materials or establish a duo or trio, leading to a gradual transition to the coda. The coda finishes on cue with a dead stop.

**Example structure:**

| | |
|---|---|
| (Set) | Bar 1 tutti |
| | Full rhythm with highlighted melodic fragments |
| | Melody 1 |
| (Open strucutre) | Melody 1 with swapped players |
| | Melody 2 |
| | Solo materials |
| | Melody 3 |
| | Trio materials |
| | Melody 4 |
| | Melody 4 with swapped players |
| (Set) | Coda: Trio, duo and solo materials |
| | Dead stop |

**Default modus operandi:**

For 'active' players, the default position is to refer to whichever melody is the backbone of the section you are in. Players can either play through in the conventional way, attempting to synchronise with other melody players, or can focus on elements of the melody or drop out, keeping a rough track of where the ensemble have got to so they can join in again if desired. The ensemble should try to have at least one person playing the melody most of the time although this won't always be possible.

**Sub-ensembles:**

# Appendix 6 (cont.)

After the set introduction (bar 1 tutti and full rhythm/melody), any active player can jump out of the default melodic modus operandi at any point and try to set up a sub-ensemble using the cues below. They can finish the sub at any time (by using a conventional conducting gesture) up to a section change cue, at which point the sub must end and all players go back to the default position for the new section. The only exception to this is if players choose to do a solo sub, in which case they can choose to continue over a section change. If players wish to establish more than one sub within a single section they should put in a notable gap between.
For sections that focus on sub materials active players can only join in if they instigate or join a sub (either solo, duo or trio depending on what the cue-er has decided). NB. in advance of a section change that focuses on sub materials, at least one sub of that type should be established so that it can start on the cue point. Ideally, this should be instigated by a tacet player with other tacet players and the section cue-er should wait until they see that this is ready. If this is not possible active players can respond to this section change as an invitation from the cue-er and should gesture to the cue-er that they want to join his/her sub.

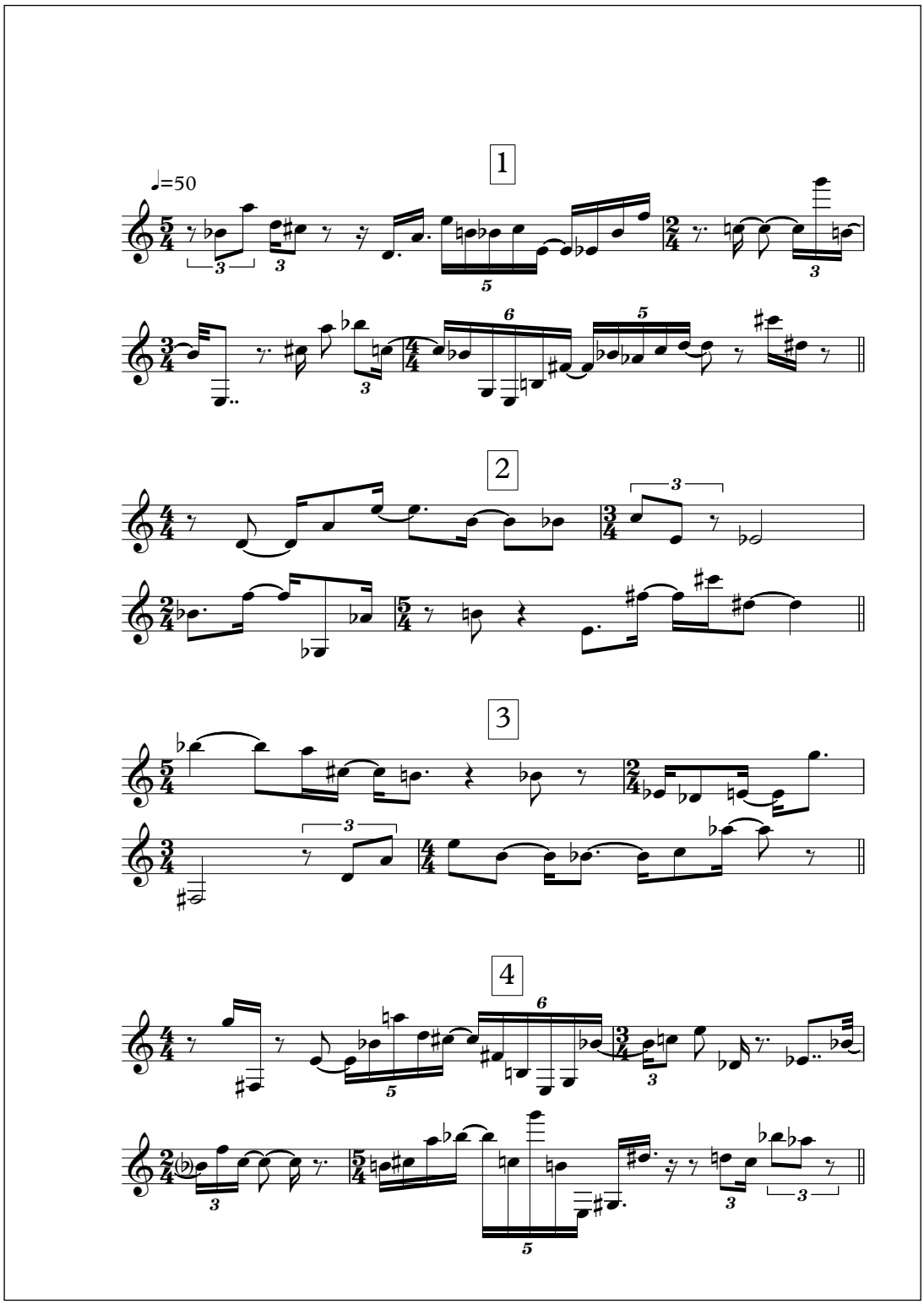
**Cue types:**

**Section change: Stand up**. Cross arms for instrument swap, gesture onwards/forwards to move to next melody, hold a fist with one hand and 1, 2 or 3 fingers with the other to indicate a focus on solo, duo or trio materials.

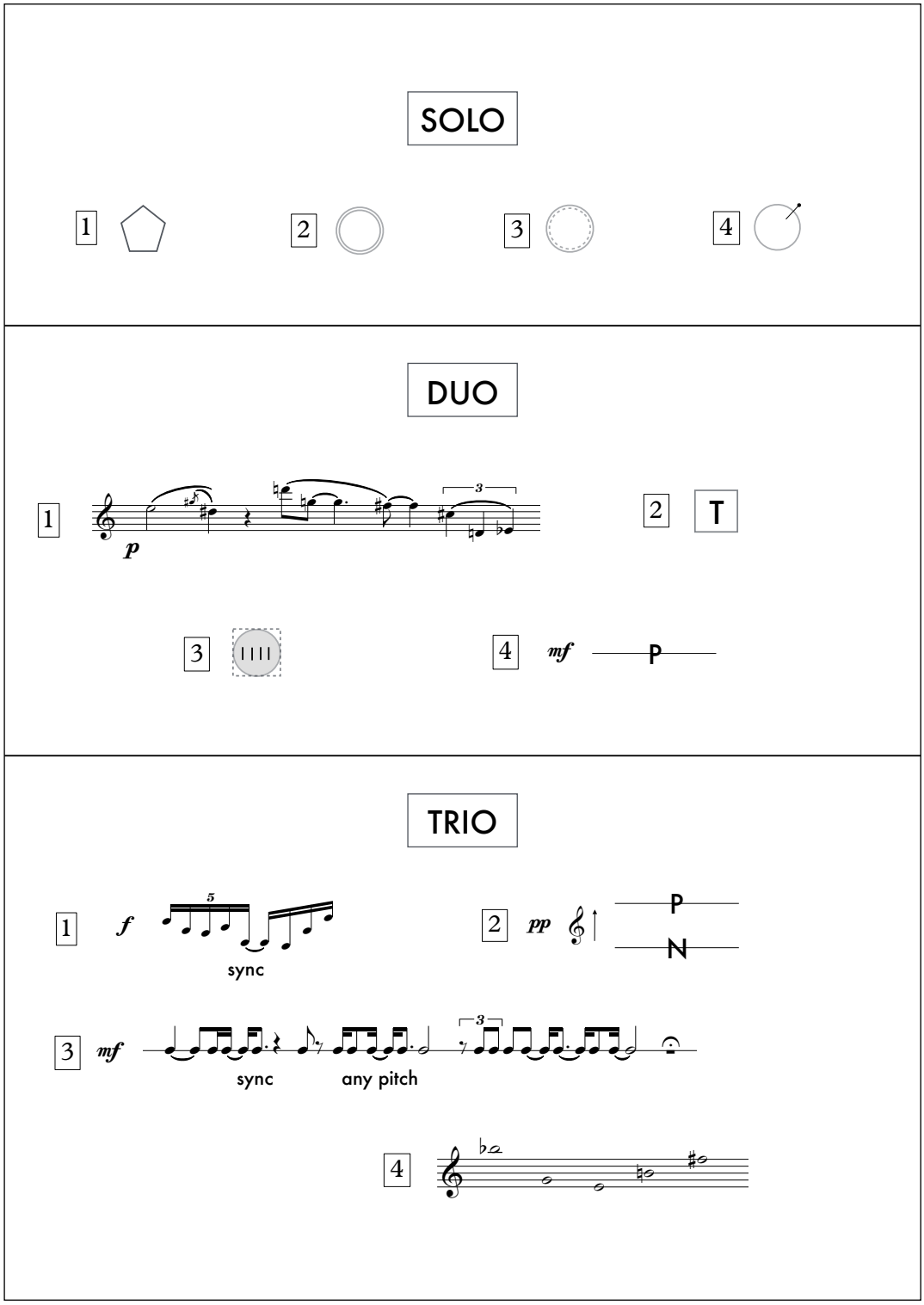
**Establishing a sub-ensemble:** Solo: No need to tell anyone, just start. Duo/Trio. **Seated.** Hold a fist with one hand and 2 or 3 fingers with the other to show that you want to establish a duo or trio. Other players put a hand up with eye contact to show they want to join. Once the instigator sees an accomplice they should show they have seen in some way, then indicate with one hand (no fist) which number of material they want to do, 1-4, then gesture a start point.

To summarise, standing up is only for section changes for the entire ensemble. Fists relate to sub-ensemble materials, single hand numbers relate to material numbers within a sub-ensemble category

**Appendix 6 (cont.)**

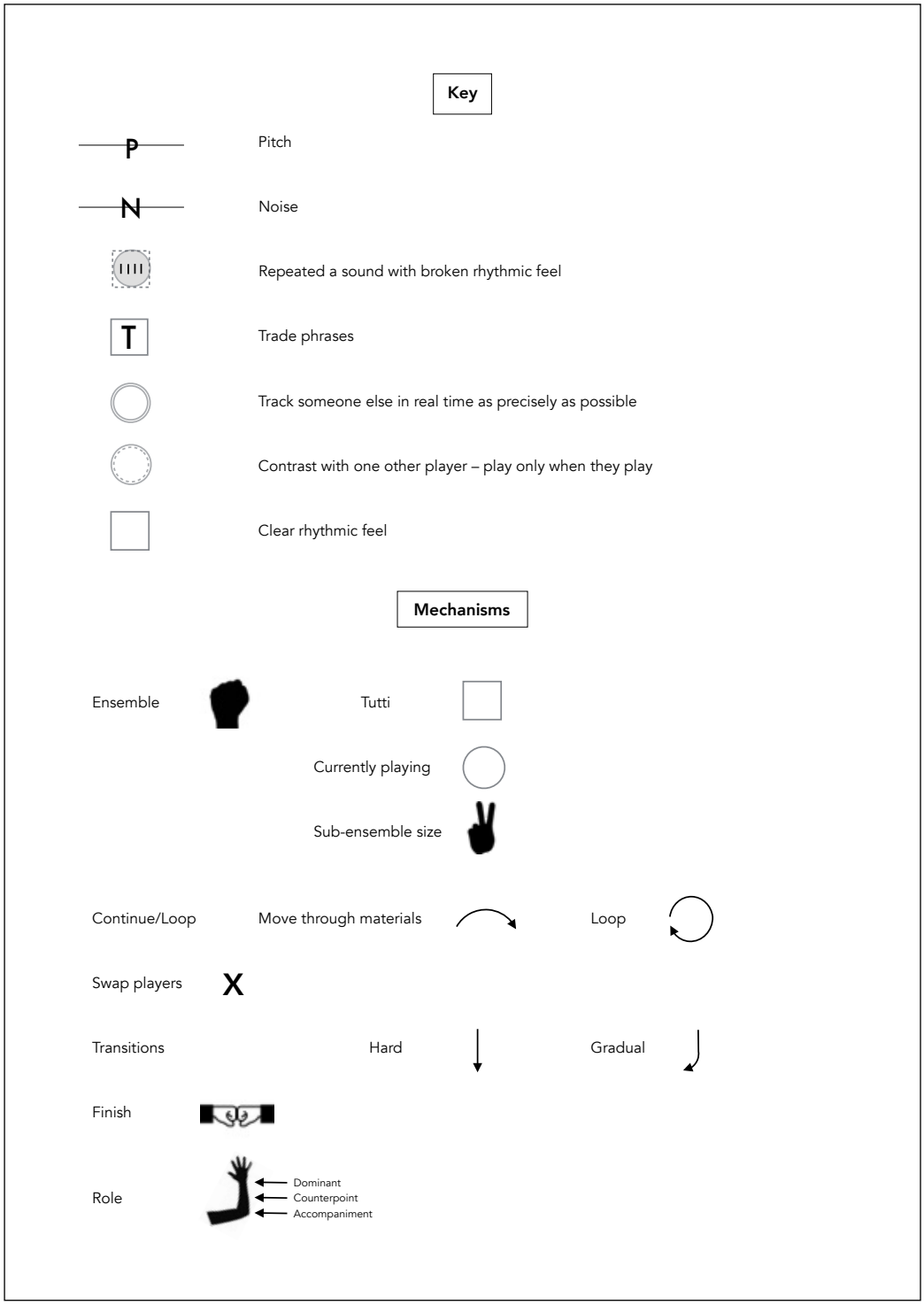


**Appendix 6 (cont.)**

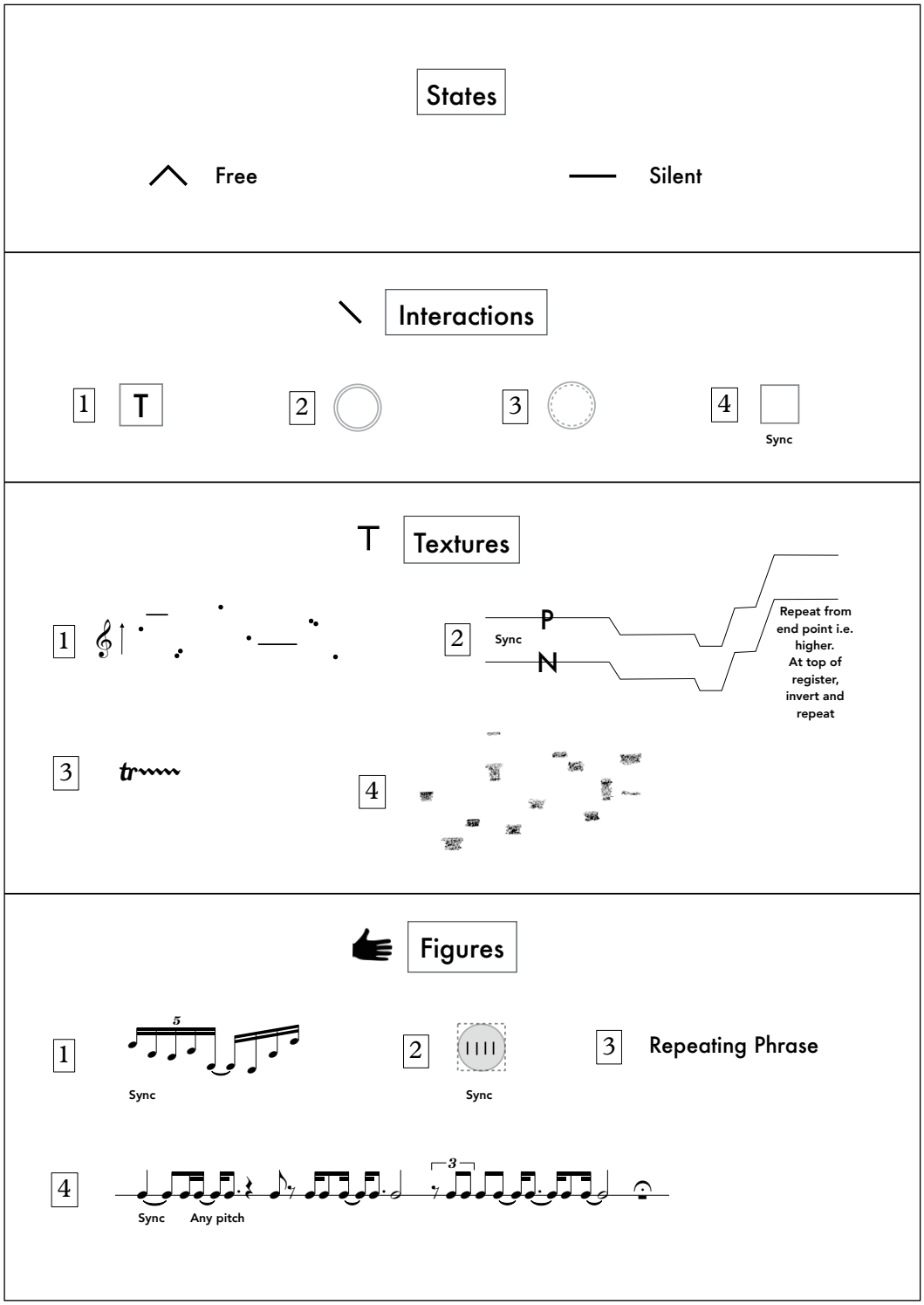


## Appendix 7

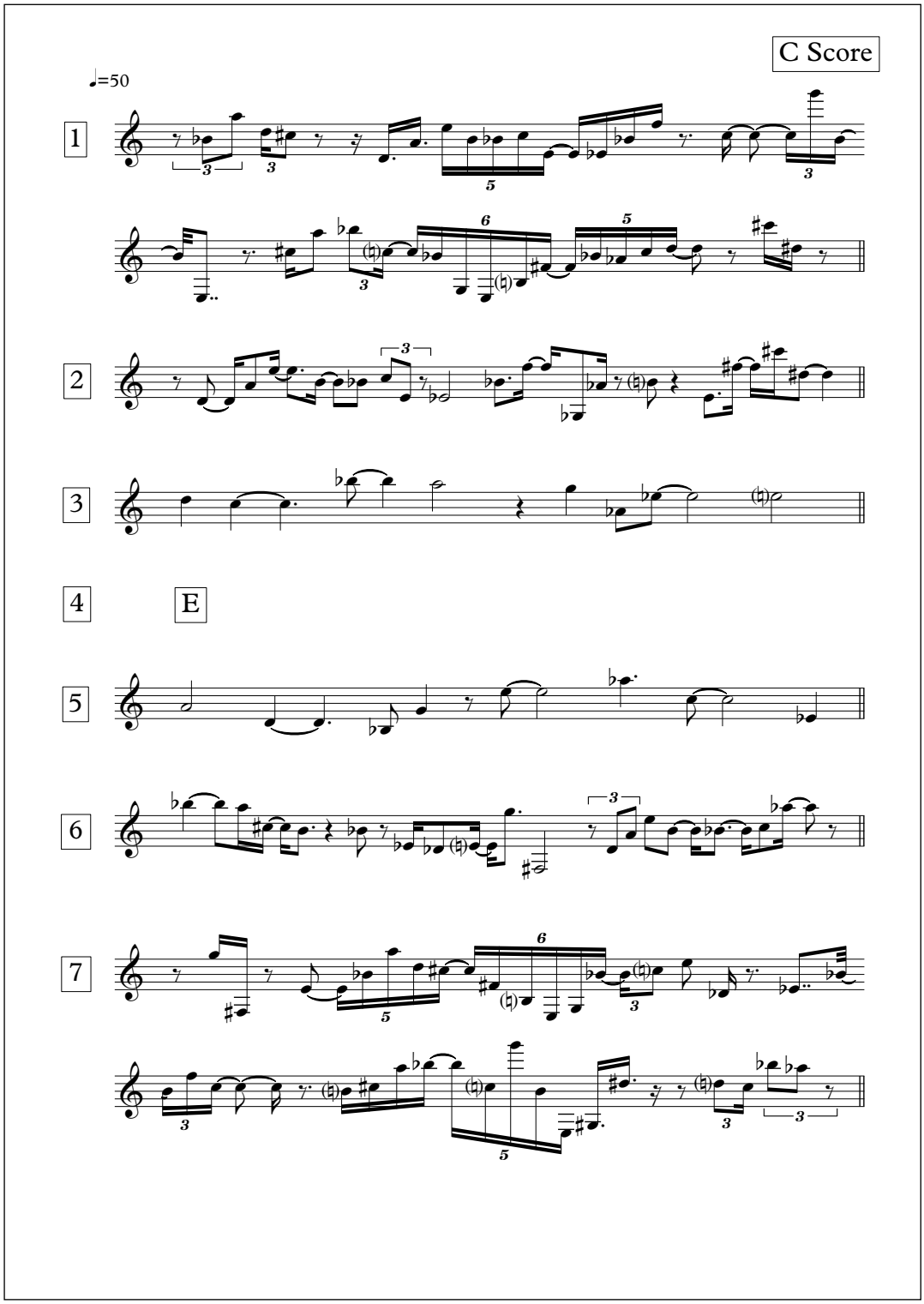
Sub-ensemble study V2 (version of *Micromotives* used in first rehearsal 15/01/18)



## Appendix 7 (cont.)



**Appendix 7 (cont.)**



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