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# Improvised Practice and Tools for the Unknown

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# Declaration

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# Abstract

In this thesis I critically investigate notations for saxophone I have produced (2018–2020), that contribute to the preparatory processes and outcomes which accompany a solo, improvised practice. The aim of this focus is to contribute productively towards and create further awareness of the practical milieu I participate within, whilst actively maintaining and providing new trajectories for my artistic practice.

Recognising Jazz and Improvised Music as the musical context I seek to build upon, I introduce various theoretical viewpoints, in particular Tim Ingold's notion of Correspondence[1] and Shaun Gallagher's conceptual clarification of The Body Image and Schema[2], in order that a fuller understanding of some of the implications of this thesis are understood. Primarily, I argue for the importance of engaging with the 'unknown,' by which embodied processes co-exist and correspond with my tools of engagement, to facilitate artistic work without specific 'end-goals' and clearly delineated componentry.

The analysis concerns itself with the introduction of five main works for saxophone, alongside the necessary consideration of my practice surrounding this research. *Labtayt Sulci, Tin Paths, Shadow(s), For Two Hands* and *T-R* all investigate different approaches to notation, improvisation and instrumentalism, in an attempt to reveal processual traits that accompany the work. I then filter the findings of the analysis through fields related to the practical and theoretical contexts I outlined in Chapter 1, focussing in particular upon the function of both *Body Image* and *Body Schema* in my improvised practice.

[1] Tim Ingold, *The Life of Lines* (Abingdon, Oxon: Routledge, 2015), 154-155.

[2] Shaun Gallagher, "Body Image and Body Schema: A Conceptual Clarification." *The Journal of Mind and Behaviour* 7, no. 2 (Autumn 1986), 541-554.

# Abbreviations

Abbreviations are used throughout this thesis. They are listed here alphabetically:

*F.T.H. = For Two Hands*

*L.S. = Labtayt Sulci*

*T.P. = Tin Paths*

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# Introduction

This thesis critically investigates the creation and use of notations for improvising saxophonist. By searching for sounds and approaches which might remain elusive if not for the particular set of component-relations presented here, a spotlight is placed upon processes that support a practice without specific ‘end’ goals. This is achieved by revealing ‘unknown’ outcomes (see Ch. 0.2) which provide sustenance for its continuation. As such, this thesis doesn’t seek to provide a pool of determined materials for use as part of an improvisatory syntax. Instead, it presents a constellation of methods, activities and outcomes that explore unknown trajectories within the processes of an improvised practice, its culturally embedded definitions, and terms of engagement.

This thesis traces variously linked themes and research questions highlighted by the use of these notations in my improvised practice. Firstly, I investigate the use of different physical approaches towards the saxophone, and their effect on solo improvisatory processes. Secondly, I focus on how the notations, which are created primarily for preparation (see Ch. 1.2.3), impact upon other points in my wider practice, such as group improvisation. I will show how their embedded concepts emerge at various junctures and to varying degrees, demonstrating the ongoing re-conceptualisation of components and their relationships.

Performative outcomes provide a lens onto the activity in-between the main subjects of my research, such as composition and improvisation, body and instrument, the skilled and unskilled, and preparation and performance. I will show how these areas are themselves adaptive to the environment; the resultant dynamic terrain *enabling* aspects of my practice.

I address research questions (see Ch. 0.2) that help determine the extent to which the notations contribute to my aesthetic terrain and aims. To this end, I will present an account of three major notated works, in addition to two transitionary pieces and general activity (recorded and/or performed) that bear relevance. Each one provides sonic analyses and personal reflections that contribute towards broader conclusions.

I start with *Labtayt Sulci* (*L.S.* from now on, 2018–19) which methodically reorganises various parameters of my saxophone technique. The piece acts as a practical and theoretical springboard for future work, highlighting non-hierarchical relations between its parts. Two transitionary pieces, *Tin Paths and Shadows* are then considered for their contribution to this research.

Next, *For Two Hands* (*F.T.H.* from now on, 2020) investigates semi-determinate finger placements and non-proportional notation, highlighting the roles of the body and improvised behaviour in shaping durational outcomes. It consolidates some of the central themes that are subsequently explored: (1) my practice as an

aesthetically crafted assemblage; (2) the goal of maintaining a set of processes that focus upon non-goal orientated activity; (3) *F.T.H*.'s status as a Dynamic Surface.

Finally, *'T-R'* (2020) explores the major reconfiguring of the body towards the saxophone, providing an opportunity for analysis in both solo and group settings that draws not only on sonic outcomes, but also its direction of physical approach towards the saxophone.

This work, as Practice as Research rests at an intersection between various practical and theoretical antecedents. Gaining an understanding of and attempting to describe various aspects of my practice forms a major aim of this thesis, to retain the simple possibility of encouraging future improvised activity. Crucially, as this type of knowledge promotes 'unknown' outcomes, so we find that an improvised practice such as this can have problems when applied to Robin Nelson's notion of "knowing-in-doing,"[3] for example (See Ch. 1.1).

Providing an alternative viewpoint of *unknowing-in-doing*, I draw from various theoretical antecedents that have accompanied the timeline of this research. Starting from a point of identifying non-hierarchical relations between improvisation and the earlier notated materials I present here, I move to conceptualise the main components (or actors) of this work as an assemblage, as defined by Manuel

[3] Robin Nelson, *Practice as Research In The Arts: Principles, Protocols, Pedagogies, Resistances* (Hampshire: Palgrave Macmillan, 2013), 9.

DeLanda.[4] Here, I also introduce actors that are unique to this work, the Carrier and Enactment, which account for the historicity and process in my practice. Making a distinction between social and aesthetically crafted assemblages, I incorporate Tim Ingold's notion of Correspondence[5] to describe the activity that takes place in-between the main components, or actors. The aesthetic nature of this work then leads to me clarifying the roles of intention and attention in this practice, with relation to Shaun Gallagher's clarification of The Body Image and Body Schema.[6] This research does not represent a practical departure from Improvised Music and Jazz traditions. Rather, it advocates an *extension* to my engagement with established practices and idiomatic approaches in these fields.

By working with the materials intrinsic to this project I demonstrate the way embodied, or "motoric"[7] behaviours emerge with various characteristics. These are the result of learned techniques, actions and aesthetic choices at play with themselves, alongside their coupling with various aspects of the environment.

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[4] Manuel DeLanda. *A New Philosophy of Society: Assemblage Theory and Social Complexity.* (London: Bloomsbury, 2006), 8 - 25.

[5] Tim Ingold, *The Life of Lines* (Abingdon, Oxon: Routledge, 2015), 154-155.

[6] Shaun Gallagher, "Body Image and Body Schema: A Conceptual Clarification." *The Journal of Mind and Behaviour* 7, no. 2 (Autumn 1986): 541

[7] Shaun Gallagher and Somogy Varga, "Meshed Architecture of Performance as a Model of Situated Cognition." *Frontiers in Psychology* 11, no. 2140 (August 2020): 5, https://doi.org/10.3389/fpsyg.2020.02140.

Gallagher,[8] Varela, Thompson and Rosch[9] and others describe this coupling as being fundamental to 'embodied cognition'.

The centrality of fluidity, complexity and correspondence in-between aspects of the physical (tactile), instrumental, improvised, notated and curated help form the primary thrust of this research. As such, I propose that the liminal processes this practice-assemblage forwards, serves as a fertile platform for creative engagement with improvised musics.

## 0.1 Tools for a Practice: Notations for 'Improvising Saxophonist'

My research investigates notations devised for solo saxophone, which aim to revitalise my engagement with improvisation and attempt to develop and harness approaches I would not have arrived at without their use. The notations presented here form a major component of my ongoing activities as an 'improvising saxophonist', which, for better or worse, describes the work I do in a wide variety of styles and ensemble contexts. However, the activities I involve myself with stretch far beyond simply improvising and playing the saxophone, which include devising composed materials (both notated and un-notated), the curatorial, the investigative and the pedagogic. Although many in my field (see Ch. 1.2.1) will hold their own

[8] Shaun Gallagher, *How the Body Shapes the Mind.* (Oxford: Oxford University Press, 2005), 38.

[9] Francisco J. Varela, Evan Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge, Massachusetts: MIT, 1991), 149.

views, I am quite content at this stage to accept this designation ('improvising saxophonist'), primarily because of the scope of possibility it affords.

Though my general activity and practice rests within what is commonly described as 'free improvisation' or 'improvised music', it is important at this stage to draw attention to my relationship to Jazz. Like many practitioners in improvised music, my background is informed by, and to a large extent guided by the history and practices within the broad umbrella of Jazz. Therefore, this research does not represent a departure from this context, but rather, is additive to the embodied traits of an ever-evolving practice. In fact, if it were not for this context, I doubt that this research would have taken place in the first place!

## 0.2 Locating the Unknown: Outline of Research

My primary aim is to provide a clear account of the creation, development and maintenance of processes that attempt to locate unknown or 'spontaneous' musical outcomes, to fuel the continuance of my improvised practice. To clarify, I do not subscribe to an idea that there lies the possibility for genuinely spontaneous, improvised performance. After all, my sense of spontaneity is always mediated by the saxophone's material configuration. However, I do believe that the utopian *idea* of 'pure' spontaneity, even if un-actualisable or unattainable, is an important stimulus for myself and many others in the field of improvisation. As such, I necessarily highlight the liminal nature of this research, which foregrounds the

relationships that emerge at different points in-between the known and the unknown.

As this writing unfolds, the ‘unknown’ emerges as a primary focus of my practice, whereby approaches and outcomes not previously envisaged are integrated into and fuel further work, which may be improvised, notated or conceptual; in preparation, performance or both. Later, (see Ch. 3.5), I posit that the ‘unknown’ is not a collection of spontaneous, or non-conscious behaviours that periodically unravel. Rather, it is *a space for rehearsed and non-rehearsed behaviours to coalesce and mediate each other.* Instead of simply ‘waiting’ for the surprise of a musical turn, I use this research to actively locate the conditions that give rise to outcomes which ensure the continuance of a creative endeavour. Examples of the way the ‘unknown’ directs the trajectory of this research can be found on an instrumental level (see Ch. 2.1–2.4), in addition to the processual and conceptual (see Ch. 3.1–3.5).

The notations that form the focus of this study methodically reconfigure aspects of my ‘learned’, or ‘known’ saxophone technique. I focus upon preparation as the primary site for investigation, which with performance contributes to the actor that I term enactment (see ch. 1.3.1). In my improvised practice, preparation is a processual component that accompanies the creative cycle, for which it enables, eradicates, maintains, consolidates and *extends* concepts, habits and aesthetic design. Preparation conditions both physical and cognitive apparatus, within both individual and ensemble contexts (See Ch. 2.1–3.4).

As improvisation – a vital component of the notations – is introduced, the possibility of unknown outcomes increases, the result of correspondence between notation and improviser. This subsequent activity feeds back into my general practice, which then acts as a stimulus for new material and theoretical engagement. The outline of the research is therefore best understood as a positive feedback loop with a kind of in-built hysteresis.

The initial research questions that guided the embryonic stages of this research included:

- Do the notations, which actively engage with improvisation, contribute productively to my wider improvised practice?
- Do the notations encourage the location of new approaches to my improvised practice and if so, how do they co-exist (or not) with the embodied behaviours and conventions that characterise my practical *milieu*? Do they stop a reversion back to idiomatic habit?

Other questions emerged that highlighted some implications of the early aspects of this research:

- Do materials (initially designed for preparation) in fact help contribute to expanded notions of the entanglement of preparation and performance in an improvised practice?

- Allowing for the possibility of an expanded zone of preparation and performance, how do the notations emerge – if at all – in solo and group activity?

Filtering my practice through the theoretical terrain covered in Ch. 1.3 has enabled me to approach these questions productively. As the notations themselves laid the foundations for a working methodology, so the consideration of aspects of Assemblage Theory and Correspondence contributed to an enhanced understanding of the overall practice shape. Though these models are rooted in the social and anthropological, I have adapted these ideas to serve the purposes of this artistic research. The remainder of my theoretical engagement is channelled through Gallagher's distinction between the body image and body schema, which provided me with a strong view as to *how* the practice has advanced at different points.

## 0.3 Contextual Appeal: New Contributions

The work is subject to the embodied regeneration that accompanies artistic practice: that various approaches are combined and embedded, then perhaps left behind is a given. This work therefore provides a much-needed contribution to the writings and practices that surround what is known as *Practice-as-Research*,

specifically with regards to a practice that holds improvisation at its core. As a particular type of knowledge making exercise, process emerges as a primary focus instead of a finished 'work'. To highlight this, I group the process-cycle of preparation and performance together as a singular actor within my work: Enactment.

Although mainly centred around my solo practice, this project may nevertheless provide practitioners in my field with further understanding as to the function of their creative work in various practical environments. Crucially, this thesis does not propose a methodology that provides a departure from embodied knowledge as a means to an end. Rather, I argue for a case-by-case, additive approach to situated-creativity, focussing upon the maintenance of – an albeit 'leaky' – reservoir of knowledge, via the continual location of instrumental and processual strategies that in attempting actions, encourage unknown outcomes.

This is demonstrated by adapting Shaun Gallagher's clarification of the Body Image and Body Schema, alongside the roles that attention and intention play in maintaining the possibilities immanent within a set of non/pre-goal[10] orientated activities, which is both attemptive and speculative, holding the possibility for both goal oriented and unknown outcomes. As such, we also see the role that reflective awareness plays in this process.

[10] See Glossary, pp. 190.

Aside from repositioning my creative focus away from goal-orientated activity, this research presents notations that reconceptualise the coupling of instrument and body, various terminologies that may be used in various professional or pedagogical assignments, alongside an extensive body of recorded work.

## 0.4 Background: Jazz and Process

As an improvising saxophonist, I have facilitated the meeting of various types of notated materials with improvisation. Hitherto, I have composed in a variety of ways for ensembles to attain a certain level of uniqueness in performance, that generally rests within the field of Jazz.

'Jazz', is a nebulous term, at once indicative of a creative lineage, but, at the same time also characterised by various ideas – both constructive and reductive – as to what its sonic lines and borders of activity might be.[11] As a broad spectrum of activity, one that is contingent, yet with a shared historical understanding of recorded and live performance, Jazz has a culturally embedded focus on individual and group preparation.[12] As such, it seems apt to simply describe 'Jazz' as a mode of 'doing'. As alliances both form and are unformed and stylistic concerns follow

[11] "SA 8: The What is Jazz? Issue," Sound American, accessed June 29, 2021, http://archive.soundamerican.org/sa_archive/sa8/sa8-the-interviews-part-one.html.

[12] Eric Porter, "Dizzy Atmosphere: The Challenge of Bebop," *American Music,* Vol. 7, no.4 (Winter, 1999): 442.

different trajectories, the research here is by no-means disconnected from this maelstrom.

The background to this research is what contributes to its being, or what Anna Hinckley describes as its "this-ness."[13] My practice displays this through embedded performative and musical characteristics, whilst simultaneously highlighting – via their omission – those which have been lost over time. As an active and reactive pool of processes, I engage with various levels of maintenance, for example, not only of instrumental technique, but also of creative engagement and contextual awareness.

## 0.5 Modes of Making, Collecting and Harnessing

The creative methodology that accompanied the earlier stages of this research was relatively straight forward: a notation would be prepared, developed and subjected to various types of investigation to gain an understanding of its implications. As outcomes were documented through audio recordings and filming, the recorded results were then subjected to further creative reflection and analysis.

To assess how the notations might influence performance, it became necessary to draw upon documentation of my wider practice. The recordings and films were made during a turbulent period of music making, one where the coronavirus

[13] Anna Hickey-Moody, "Becoming–Dinosaur: Collective Process and Movement Aesthetics." In *Deleuze and Performance*, ed. Laura Cull (Edinburgh: Edinburgh University Press, 2009), 173.

pandemic largely intervened upon most group activity. When performance was possible, its relative paucity provided an enhanced sense of reflective awareness and clarity, where the 'background noise' from pre-pandemic day-to-day operations, was largely absent.

The nature of performance during the pandemic, generally reliant upon internet-based streaming, instead of in-person musical events, enabled the collection of visual and recorded materials that provided a useful companion to my individual studio enquiry. The documented work includes solo to group recordings, where I act as both sidemen and in a curatorial capacity. I have also drawn upon recordings of freely improvised music that were made for the purpose of releasing music commercially (*'Paxt'*[14]*, 'Beetle and Bail'*[15] *and 'Imasche'*[16]), which are also included in this submission.

## 0.6 Definitions and Descriptors

There will be an emphasis on providing explanations of terms and definitions that I use throughout. My research has led to results that require descriptors that better represent the bodies, objects, processes and relations therein. To place this work within the confines of received problematic descriptors seems inhibitive to the

[14] Tomas Challenger, "*Paxt*", recorded December 2018, Sche-ima Records, 2020, Compact Disc.

[15] Tomas Challenger, *"Beetle and Bail",* recorded July 2020, Sche-ima Records, 2021, Compact Disc.

[16] Tomas Challenger, Alexander Hawkins and Mark Sanders, *"Imasche",* recorded December 2020, Sche-ima Records, 2021, Compact Disc.

location of ‘new’ ways of doing.

For example, as the research has progressed, the notations have displayed capacities that deviate from standard relationships of visual proportion and temporality. As such, I sometimes refer to them as ‘Dynamic Surfaces’ and/or ‘Notations’. Although I understand the naming and renaming of processes and objects might be somewhat confusing, I feel that the plasticity of definitions is an important component of the research: my definitions constantly evolve according to the differing specifics of the musical contexts from which they acquire meanings. To help the readers understanding of the terms I employ, a glossary is provided (see page 190).

## 0.7 Tools, Materials and the ‘In-Between’ of Components

As an improviser, I have hitherto placed myself amongst many material and inter-subjective variables, which this research continues. Outcomes within this thesis (see Ch. 2) go on to highlight the relationships *in-between*[17] (see Ch. 1.3.4, emphasis mine) the tools and materials I utilise, such as improvisation and composition, preparation and performance, and body and instrument.

Exploring initially fixed, but fluid designations is an important function of this research. This methodology has sustained itself from my previous experience

[17] Ingold, *The Life of Lines*, 147.

playing Jazz, particularly the gradual re-shaping of pre-composed forms through improvised means. However, as with any outcome, we need to consider the environmental factors at play. Other musicians, as part of a musical performance, may all input and affect the environment in a variety of ways: their instrument, history and aesthetic alignments, for example.

To apply this last paragraph more broadly to this research, the saxophone, comprised of metal, rubber and wood – to borrow from Evan Parker – "couples"[18] *in action* with the human body, which too has its own physical properties: the muscular, fluid and resonant. My body injects various kinds of stimuli (pressure of air flow, digital movement) that elicits a response from the saxophone. However, the moment-to-moment form of this enacted coupling, *also rests upon the introduction of other actors*, such as improvisation and composition. As these other actors push and pull the relations between body and saxophone, they also exert breakings: de-coupling mutually bound processes. In this instance, improvisation and notation contribute to the environment that sustains their changing relations.

This writing focuses upon five main actors, or components, that I have deemed to be crucial to this practice-assemblage. **Improvisation, notation, instrument, enactment and carrying** are all investigated by their placement and

[18] Evan Parker, "Amplified Gesture", Film by Phil Hopkins (London: Opium (Arts) Ltd., 2009), can be accessed: https://youtu.be/0e60eKflPfo, 22.53.

parametrisation in a variety of contexts, which partially contribute to the sustenance of unknown and non-goal orientated outcomes.

## 0.8 Image/Schema in an Improvised Practice

Throughout this thesis, my aesthetic goals position themselves to locate the unknown. After highlighting how various aspects of my research contribute to the unravelling of this endeavour, I move to provide a much more detailed account of how the tools of engagement I employ can be understood when brought together with Gallagher's clarification of the Body Image/Schema.

Although my conception of the unknown might seem to rest within what he refers to as the Body Schema, i.e., movements or actions of which we might not be aware[19], I will show that my aims are not solely enabled by actors such as notation and improvisation, for example. Instead, the Image and Schema work *together* with the various conceptual and physical tools/materials that this thesis both investigates and presents as being intrinsic to my practice.

By doing so, I hope to present the necessity of *unknowing* in addition to *knowing* within an improvised practice, in order that the creative reality that this thesis explores is accurately represented. As such, the epistemological ring fencing that

[19] Gallagher, *How the Body Shapes the Mind*, 24.

accompanies various positions reviewed in Ch. 1.1 are offered an opening so that practices such as mine might be better understood and engaged with.

Before an analysis of the notations that I have presented, I will provide an account of both practical and theoretical positions that serve to outline the context within which this research situates itself.

# Chapter 1: Contextual Overview

In this chapter I outline a set of practical and theoretical contexts that have accompanied the research presented here. That a large body of work relevant to the forthcoming chapter is readily available, is not disputed. As such, I wish to trace a route through these relevant fields in order that I can outline the conceptual space within which my practice inhabits.

Chapter 1.1 introduces this thesis within a general framework of *Practice as Research*, with regards to the writing of Robin Nelson[20], Barbara Bolt, Estelle Barrett[21] and Henk Borgdorff.[22] Firstly, I outline various points with regards to the liminal nature of this work and various instances of 'knowing'. Next, I discuss revealing and communicating elements of my practice, in addition to appraising the nature of research in my improvised practice.

Chapter 1.2 begins with an appraisal of my practical context, elucidating various approaches to Jazz and Improvised Music. Secondly, I will examine areas of the commonly held debate surrounding composition with regards to improvisation,

[20] Nelson, *Practice as Research in the Arts*, 8-9.

[21] Estelle Barrett, "Introduction," In *Practice as Research: Approaches to Creative Arts Enquiry*, ed. Estelle Barrett and Barbara Bolt, (London, New York: Bloomsbury Visual Arts, 2007), 1 - 13.

[22] Henk Borgdorff, *The Conflict of The Faculties: Perspectives on Artistic Research and Academia* (Amsterdam: Amsterdam University Press, 2012), 129..

highlighting how this thesis does not recuse itself from this ongoing discussion. Thirdly, I outline the centrality of preparation to improvisation and finally, I illustrate the context I inhabit with regards to my instrument, solo and group improvisation. The principal aim is to contextualise my activity with regards to the musical world(s) that I emerged from, inhabit and interact with.

Chapter 1.3 provides theoretical frameworks that have been of use to the practical research I have undertaken, as well as those that have helped me to form conclusions. This thesis proposes a case for an investigation of the space between the 'known' and 'genuine' spontaneity, which I refer to as the *unknown*. Using various theoretical elements drawn from philosophy, anthropology and phenomenology, I intend to focus upon the processual elements of my practice in order to explicate 'non-goal-orientated' outcomes. To this end, I respectively draw upon (1) elements of Assemblage Theory as outlined by Manuel DeLanda,[23] (2) Tim Ingold's notion of Correspondence[24] and (3) distinctions between The Body Image and Body Schema, as outlined by Shaun Gallagher,[25] to provide a framework that explicates and enables the creative endeavours which accompany this work.

As such, the theoretical component of this thesis is necessarily cross-disciplinary in its approach, to account for its variously linked themes. For example, philosophy and anthropology have enabled the conceptual clarity of my aesthetic and creative

[23] DeLanda, *A New Philosophy of Society,* 8 - 25.

[24] Ingold, *The Life of Lines*, 154.

[25] Gallagher, *How the Body Shapes the Mind*, 37.

aims, whilst phenomenology has elucidated the nature of embodied knowledge and skill-revealing in my creative practice. As the positions I use in this thesis share a mutual concern for subject, object and condition and their entanglement with their given environment, their use has helped form a methodology that is adaptable to the different levels of investigation needed to engage with the above research questions (see Ch. 0.2).

The thinking behind the ontology of an improviser is far from without precedent and here I seek to simply add my viewpoint and practice-view. Much in the same way that improvisers contribute knowledge to their respective fields through performance, pedagogy, and/or recording, the sum of these contributions offer a basis upon which others may seek their own artistic trajectories: this writing depends upon my practical milieu as it was and is today.

# 1.1 Practice as Research: Research Milieu

### 1.1.1 The Unknown

In order to contribute 'new knowledge' to the artistic and academic communities that might find interest here, it seems appropriate to discuss whether the aim of this work, that which attempts to access *unknown* approaches and outcomes in solo improvisation, is either an extension of, or at odds with various positions of what Practice-as-Research constitutes. Macdonald et al. state that the field of "Free Improvisation […] questions prevalent assumptions in research literature."[26] This work, by no-means separated from this terrain, contributes to such questioning.

Nelson[27] posits that Practice as Research (PaR from now on) is the submission of a body of work that evidences a practice that is "a key method of (multi-mode) enquiry", which demonstrates "knowledge which is a matter of doing rather than abstractly conceived",[28] or rather, a "knowing-in-doing", while Estelle Barrett posits that "knowledge is derived from doing and from the senses."[29] Barbara Bolt says much the same: "[…] the new can seem to emerge in the involvement with

[26] Graeme B. Wilson and Raymond A. R. MacDonald, "Musical Choices During Group Free Improvisation: A Qualitative Psychological Investigation." *Psychology of Music* 44, no. 5 (2016): 1030, DOI: 10.1177/0305735615606527

[27] Nelson, *Practice as Research in the Arts*, 8-9.

[28] Ibid.

[29] Barrett, "Introduction," 1.

materials, methods, tools and ideas of practice."[30]

Central to this work is the crafting of a preparatory process which enables outcomes that are at once bodily bound, but also responsive to and *affective* upon condition (process) and the tools that I employ, such as notation and instrument. As such, the main thrust of the submitted portfolio concerns itself with solo saxophone (see ch. 2.1–2.4), which later widens its scope to consider my practice in other contexts (see ch. 2.4.3–3.5). In an effort to build upon an improvisatory approach, with its tacit and embodied[31] features, I hope to reveal new pathways that are signposted by attempts to locate unknown, immanent qualities. We might paraphrase Nelson to instead suggest an *un-knowing-in-doing*, analogous with Henk Borgdorff's summarisation of artistic research:

> "…artworks are the generators of that which we do not yet know. They thereby invite us to think. Artistic research is the articulation of this unfinished thinking."[32]

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[30] Barbara Bolt, *Art Beyond Representation: The Performance Power of the Image* (London and New York: I.B. Tauris, 2004), **quoted in** Estelle Barrett, "Foulcalt's 'What is An Author': Towards a Critical Discourse of Practice as Research," In *Practice as Research: Approaches to Creative Arts Enquiry*, ed. Estelle Barrett and Barbara Bolt (London, New York: Bloomsbury Visual Arts, 2007), 143.

[31] Vincent Meelberg, "*Musical Improvisation as the Performance of Embodied Knowledge: Embodied Narrativity in Musical Performance,"* University of the Arts Helsinki, accessed July 10, 2021, https://nivel.teak.fi/carpa/musical-improvisation-as-the-performance-of-embodied-knowledge-embodied-narrativity-in-musical-performance/.

[32] Henk Borgdorff, *The Conflict of The Faculties: Perspectives on Artistic Research and Academia* (Amsterdam: Amsterdam University Press, 2012), 194.

### 1.1.2 Revealing Knowledge

Locating the theoretical heart of ideas, materials and methods central to this work has required an ongoing set of two main outlets: practice and writing. They have acted in tandem, revealing underlying qualities, whilst remaining suggestive of further practical and literary enquiry. This is not to say however that this research is somehow partitioned from my general artistic practice which preceded it. Rather, my practice has served as an important contextual grounding which underpins the majority, if not all of the work included here.

An 'improvising jazz musician', primarily develops their sense of knowing within *experienced activity*. For example, my creative practice that forms the context for this work includes rehearsal, individual practice, and performance, as well as composing, listening and group/individual reflection. Therefore, social, material and historical codes underpin the embedding of theory (the episteme[33]) inside a practice. Knowledge, key to the functionality and output of improvisation, is amassed in variety of ways. Alongside the study of various instrumental, improvisatory and compositional approaches via direct methods such as transcription, formal training and practical undertakings, knowledge is also developed through the collection of fellow practitioners' experiences and stories. We can draw comparisons with Tim Ingold's position that in order to understand human experience, we should not just draw upon philosophy and other theoretical

[33] Kathleen Coessens, Darla Crispin, and Anne Douglas, *The Artistic Turn: A Manifesto* (Leuven: Leuven University Press, 2009), 82.

means, but also act upon the need to “attend to the world itself” and “learn directly what it has to tell us”, whilst listening “to the wisdom of inhabitants, whether they be humans or other kinds […].”[34] Thus, the articulation of the ‘theory’, or *episteme* of Jazz Improvisation or improvised music is heavily reliant upon both practical and social foundations.

An improviser’s primary activities, such as maintenance of a highly nuanced practice, live performance and recording, combine to provide problematic ground upon which one might try to summarise where the thresholds of knowledge and research might lie. To this end, I introduce specific terminology such as Enactment and The Carrier (see. Ch. 1.3.1) to account for the difficulty of explicating how exactly preparation and performance relate in my practice. Though preparation might be seen as the natural terrain for research and development, my practice shows how this isn’t so clearly defined (see Ch. 1.2.3). With this ‘problem’ a fundamental part of my work, Coessens et al. also highlight this within artistic research: “The territory of research in art is veiled, and difficult to unveil.”[35]

The construction of a practice is highly personal, where two instrumentalists with similar aesthetic traits might have arrived at that point via radically different routes. Explicating this journey is similarly personal. They go on:

[34] Tim Ingold, *Correspondences* (Abingdon, Cambridge: Polity Press, 2021), 8-9.

[35] Coessens, Crispin and Douglas, *The Artistic Turn*, p.76.

> "…any knowledge that is uncovered may remain the province of the artist themselves, who are potentially the only ones who can reveal and communicate the insights of their own creative paths to the outer world."[36]

Approaches to music making and improvisation in *PaR* sometimes emphasise the practice-bound, or tacit[37] nature of knowledge involved. In her recent thesis, improviser, music therapist and trombonist Sarah Brand outlines a set of concerns similar to mine:

> "The ways in which I have developed my skills […] are highly complex and expressing these skills in a codified form is an arduous task. Additionally, the performance of these specialist skills is part of an embodied knowledge that can be equally difficult to explain."[38]

A difficulty of explicating the tacit and embodied aspects of my work rests with what Shaun Gallagher refers to as 'Motor Programs'[39], flexible patterns which can be "learned [and] elaborated through experience and practice."[40] For example,

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[36] Coessens, Crispin and Douglas, *The Artistic Turn*, p.76.

[37] Nicholas Cook, *Beyond the Score: Music as Performance* (Oxford: Oxford University Press, 2013), 87.

[38] Sarah Brand, "An Investigation of the Impact of Ensemble Interrelationship on Performances of Improvised Music Through Practice Research," (PhD Diss., Canterbury Christ Church University, 2019), 80.

[39] Gallagher, *How the Body Shapes the Mind*, 47.

[40] Ibid.

actions, such as the movement of a hand, are part of a complex, reflexive system, tied to years of conditioned movement. To give a real-world example, describing the use of the index finger to control a brake lever on a bicycle as ‘braking’, however conceptually lucid, neglects the specifics of the environmental conditions (the terrain, gradient or obstacle), mechanical conditions (the brake’s modulation and state of repair) and reasoning (intention, safety) central to this dynamic action.

How do we communicate the workings of processes that are so personal and complex? Within my shared experiences alongside other improvisers, there is, through various forms of understanding and activity, the implication of a common knowledge base, which can lead to little discussion of events to come (see. Ch. 2.4.3).

My experiences point to a similarity with my previous real-world example of braking on a bicycle. As the action – braking – implies a complex system that includes environment, metal, rubber, cognitive input, nerves, bone, muscle and ligaments, for those who ‘know’, the movement in itself would be descriptive enough of the assemblage of components and actors that no further discussion would need to take place. However, for those that don’t know, this complex chain of componentry, conditions and events would continue to hide their inner relationships. Although both ‘knower’ and ‘unknower’ might achieve the same outcome – the reduction of velocity – the route to the outcome may be vastly different, with the ‘knower’ able to invoke conscious, or non-conscious control to advance safely, or more effectively. However, heightened elaboration upon the systems of control might hinder the

knower's comprehension, or direct decision making, and could conversely lead to a greater loss of control and effectiveness. Thus, I believe the challenge to explicate the knowledge I and others develop rests with the depth of detail and level of abstraction employed in writing.

A related challenge practitioners face is being able to creatively harness "action understanding" [41] or tacit and embodied knowledge *within their own practice*. Within a 'multi-mode' enquiry, writing and other "inquiry-practices"[42] such as those used in this research, highlight conceptual trends to oneself, so that understandings may be embedded and further embodied. The notations investigated (see Ch. 2) all benefited from this wide remit, especially with regards to their theoretical underpinning, which highlighted the processual nature of my practice. In furthering an understanding of the tacit, however, it should be noted that a central aim here is not to simply make this knowledge explicit. Rather, findings go on to contribute to the conditions that give rise to further tacit and embodied features, to maintain an open-ended practice.

Like the flexible patterns of 'Motor Programs', preparation embeds conceptual awareness so that it can be taken into all aspects of the creative process, or what I

[41] Vijay Iyer, "Improvisation, Action Understanding, and Music Cognition with and without Bodies." In *The Oxford Handbook of Critical Improvisation Studies, Volume 1*, ed. George E. Lewis and Benjamin Piekut (Oxford: Oxford University Press, 2014), 14.

[42] Graeme Sullivan, "Making Space: The Purpose and Place of Practice-led Research," In *Practice-led Research, Research-led Practice in the Creative Arts*, ed. Hazel Smith and Roger T. Dean (Edinburgh: Edinburgh University Press, 2009), 62.

term enactment. This umbrella term demonstrates the need for reflective pragmatism, where knowledge may be located through short- and long-term reflection, recording, writing and analysis. Practice and research methodologies work in tandem to reveal various aspects of knowledge.

### 1.1.3 What Is Research?

Whilst Nelson shares the view of Schippers[43] that not all music making is research, I would like to propose that all music making related to an individual's practice has the potential, in terms of *PaR,* to be relevant to the field of enquiry. For example, in this research, many instances of activity have led to valuable research outcomes that weren't necessarily intended to do so, such as concerts and recordings organised by others (see Ch. 2.4.3). Similarly, some instances of writing, documentation and literary investigation have yielded little. Crucially however, every one of these actions have demonstrated the potential to reveal themselves as 'research' at some point and so, I would like to offer caution towards Nelson and Schippers' viewpoint and offer a perhaps naively optimistic alternative: all activity has the possibility of being research. In acknowledging this, various works and experiences are included that, although not initially intended as research, in fact provide important contextual and practice-based observations. The nature of the research I present is analogous to how Baz Kershaw et al. describe how:

[43] Nelson, *Practice as Research in the Arts,* 8.

> "…practice as research in the performing arts pursues hybrid enquiries combining creative doing with reflexive being, thus fashioning freshly critical interactions between current epistemologies and ontologies."[44]

The fluid, 'hybrid', complex and sometimes confusing aspects of this research have not only fuelled its creative continuation, but also the location of knowledge within. As we will see, pre-existent notions of the nature of improvisation, composition and performativity are regularly confronted with problematic outcomes. As Borgdorff comments, when paraphrasing Hans-Jörg Rheinberger[45]:

> "…as long as artworks and their concepts remain vague, they generate a productive tension: in reaching out for the unknown, they become the tools of research."[46]

By acknowledging the slight dissonance of Nelson's *knowing-in-doing* with regards to an improvised practice, and by turn this research, we also make space for the possibility of unknowing-in-doing. Its consideration is necessitated by the epistemological variety that accompanies my own and others' different approaches to improvisation presented in the next section (see Ch. 1.2).

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[44] Baz Kershaw, with Lee Miller/Joanne 'Bob' Whalley and Rosemary Lee/Nikki Pollard, "Practice as Research: Transdisciplinary Innovation in Action," In *Research Methods in Theatre and Performance*, ed. Baz Kershaw and Helen Nicholson (Edinburgh: Edinburgh University Press, 2011), 64.

[45] Rheinberger, Hans-Jörg, *An Epistemology of the Concrete: Twentieth-Century Histories of Life* (Durham and London: Duke University Press, 2010), 156. **Paraphrased in** Borgdorff, *The Conflict of The Faculties: Perspectives on Artistic Research and Academia,* 194.

[46] Borgdorff, *The Conflict of The Faculties: Perspectives on Artistic Research and Academia,* 194.

‘Knowing’ – by itself – declines to describe the processes that accompany the many parts of, and in some instances, outcomes of my practice. To this end, the practice that accompanies this writing highlights notions of unknowing-in-doing, and by doing so, provide a critical counter narrative to epistemologically ‘ring-fenced’ accounts, such as ‘knowing-in-doing’.

# 1.2 Practical Overview

## 1.2.1 Jazz and Improvised Music

This research extends the historicity of my practice. My recorded and practical output, developed over a decade-and-a-half has been wide ranging, both in terms of process and its aesthetic aims. I have pursued projects that are either totally improvised, inclusive of pre-conceived instructions, collaborative and/or stylistically driven. This research has not been conceived to depart from pre-existing elements of my practice, rather, it has evolved in an additive manner. As Cecil Taylor put it, "Why would you want to discard that which you came from? [...] Who are you without your beginnings?"[47]

My practice primarily concerns itself with improvisation, with which I negotiate different idiomatic terrain, such as Jazz and Improvised Music. Although approaches to these fields are wide ranging, necessitated by variety in personnel, repertoire and performance context, Improvisation is central to their various histories, acting as a common thread between the two. Wadada Leo Smith posits that improvisation is:

> "...created at the moment it is performed, whether it is developing a given theme or is improvisation on a given rhythm or sound (structures) or, in

[47] Cecil Taylor, interview by Phil Freeman, *The Wire: Issue 386,* (April, 2016), 35.

the purest form, when the improviser creates without any of these conditions."[48]

Improvisation is defined by the moment it takes place (see Ch. 1.3.1). However, further definitions point towards the particularities of one's own engagement with improvisation. John Corbett suggests that "a compromise between order and disorder, improvisation is a negotiation between codes and their pleasurable dismantling."[49] Edwin Prevost focuses upon improvisation from the point of view of the practitioner, where it is characterised by "the application of 'problem-solving' techniques within performance", alongside "the dialogical interrelations between musicians."[50]

As these examples deconstruct stylistic paradigms and highlight process, Smith's assertion affords the possibility of improvisation as being *pan-idiomatic*, as opposed to Derek Bailey's focus upon a 'non-idiomatic'[51] approach to improvisation. Smith does this by allowing for the inclusion of pre-conceived 'structures' that might enter 'performance'. George Lewis says:

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[48] Wadada Leo Smith, *Notes (8 Pieces) Source a New World Music: Creative Music* (Chicago: Corbett vs. Dempsey, 2015), 1.

[49] John Corbett, "Ephemera Underscored: Writing Around Free Improvisation," In *Jazz Among the Discourses,* ed. Krin Gabbard (North Carolina: Duke University Press, 1995), 237.

[50] Edwin Prevost, *No Sound is Innocent: AMM and the practice of self-invention. Meta-Musical Narratives. Essays* (Harlow: Copula. 1995), 172.

[51] Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1992), xii.

> "In the musical domain, improvisation is neither a style of music nor a body of musical techniques. Structure, meaning, and context in musical improvisation arise from the domain-specific analysis, generation, manipulation, and transformation of sonic symbols. Jazz, a largely improvisative musical form, has long been explicitly and fundamentally concerned with these and other structural issues."[52]

Jazz is fundamental to the conceptual underpinning of my practice. It allows for a wide musical berth, one that has led to the development many approaches and outcomes. Iyer describes accepting the term 'Jazz' as "a certain African-American cultural model with hugely varied manifestations."[53]

Jazz has been perpetually at odds with itself with regards to perceived musical 'codes' that some believe to underpin it,[54] revealing a milieu that exists in constant flux. However, what Jazz embodies is subject to a wide-ranging debate. Wynton Marsalis' view that one should approach an artform by celebrating, as a tradition, key protagonists and their "painful experience of discipline"[55] is contrasted by Julius

[52] George E. Lewis, "Music after 1950: Afrological and Eurological Perspectives," *Black Music Research Journal* 22 (2002): 94, https://doi.org/10.2307/1519950

[53] Vijay Iyer, "Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West African and African-American Musics," (PhD Diss. University of California, Berkeley, 1998), 9.

[54] "SA 8: The What is Jazz? Issue," Sound American, accessed June 29, 2021.

[55] Wynton Marsalis, "What Jazz Is - and Isn't", accessed May 02, 2021. https://wyntonmarsalis.org/news/entry/music-what-jazz-is-and-isnt.

Hemphill, for example, who states that “tradition in African-American music is as wide as all outdoors.”[56]

Though these debates endure, it should be noted that the music continues to be made and heard. Messy, yet incredibly important ideological exchanges, both in music and words instead form the conditions under which new works are made and understood.

The music in this portfolio, if desired, could be bracketed into sub-labels such as ‘Free Jazz’ or ‘Free Improvisation’. Although the next paragraphs challenge this proposition, this research necessitates engagement with debates of musical identity. Simon Fell describes the difference between the two as a “fracturing of both continuity and traditional instrumental hierarchies,”[57] where the historicity of the praxis that accompanies the former is to some extent broken. Arthurs, in his ethnographical survey of Improvised Music in Berlin avoids the use of the term ‘Free Jazz’, due to its commercial origins.[58] As such, we see evidence that the use of these terms is entirely dependent upon the experience of individual musicians.

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[56] Suzanne McElfresh,. "Julius Hemphill." BOMB magazine, Winter: 1994, 46-49, **quoted in** Marty Erlich, "Julius Hemphill: The Boyé Multi-National Crusade for Harmony.” Liner Notes. (New World Records, 2020), 8.

[57] Simon Fell, "A more attractive ‘way of getting things done’. Freedom, collaboration and compositional paradox in British improvised and experimental music 1965-75." (PhD. Diss., University of Huddersfield, 2017), 79. http://eprints.hud.ac.uk/id/eprint/34533/.

[58] Tom Arthurs, "The Secret Gardeners: An Ethnography of Improvised Music in Berlin (2012-13)," (PhD Diss., The University of Edinburgh, 2015), 17.

To provide more uncertainty, Improvised Music, as distinct from Free Jazz is described by Brand as “not observing fixed rules of harmony, rhythm, pulse, form or tonality”,[59] aligning with what Smith describes as improvisation in its “purest form”. By also seeking clarification of the term, Arthurs states that “Improvised Music has its own genre-specific conventions, structures and expectations.”[60] The regular conflation of the term with ‘Free Improvisation’ marks out the problematics of the use of the word ‘free’. Bailey’s solution – a “Non-Idiomatic”[61] – approach is contested by scholars in different ways. David Borgo suggests that Non-Idiomatic Improvisation “runs the risk of denying culturally-shared sensibilities and understandings”,[62] whereas Lewis posits that “ […] “non-idiomatic” improvisation and free improvisation prove to be one and the same […].”[63]

However, Bailey’s exclusion of the word ‘free’ intimates that performers are not entirely free of all ‘constraints’ (or enablers), such as those of embodied patterns, personnel, instrument and context. John Butcher says much the same:

[59] Brand, "An Investigation of the Impact of Ensemble Interrelationship on Performances of Improvised Music Through Practice Research, 16.

[60] Arthurs, "The Secret Gardeners: An Ethnography of Improvised Music in Berlin (2012-13)", ‘Abstract.’

[61] Bailey, *Improvisation: Its Nature and Practice in Music*, xii.

[62] David Borgo, "The Complex Dynamics of Improvisation." In *Springer Handbook of Systematic Musicology*, ed. Rolf Bader (Berlin: Springer, 2018), 1024.

[63] George E. Lewis, "Gittin' to Know Y'all: Improvised Music, Interculturalism and the Racial Imagination." *Critical Studies in Improvisation/ Études critiques en improvisation* 1, no. 1 (2004): 22, https://doi.org/10.21083/csieci.v1i1.6

> "The freedom that comes with improvisation is actually the freedom to recognise and respect the uniqueness of each individual playing situation. Doing this entails making specific and restricting choices, intimately connected to thoughts about whom you are playing with (and what you do and don't know about them), the acoustic of the environment and your own personal history."[64]

However, if 'Improvised Music' or 'Non-Idiomatic improvisation' exclude a variety of musical devices, yet still exist with 'structures and expectations', I assert that there is still little agreement.

Given most of these viewpoints emanate from highly respected practitioners, I would like to propose that they are practice-views that prove to be of most use to *themselves*. Instead of focussing upon them as distinct processes, they are approaches that may be relevant (or not) to a creative endeavour. That disagreements in these areas still occur have lent 'Jazz' and 'Improvised Music' their primary attraction to me: where a sense of potential is retained, but what actually happens is under constant surveillance and development. The fact that the terms and their surrounding cultures are nebulous provide a fertile, if not always welcoming, space which I inhabit.

[64] John Butcher, "Freedom and Sound – This Time It's Personal." Point of Departure, Accessed April 20, 2020. https://www.pointofdeparture.org/PoD35/PoD35Butcher.html.

Does the music that accompanies this writing act as ‘Jazz’ or ‘Improvised Music’? In a sense, I have presented a false binary which this thesis intends to unravel. The definition of the work I do is *dependent upon the immediate context I might be operating within*. Therefore, rather than displaying fixity, definitions are unfixed and provisional.

### 1.2.2 Composition and Improvisation

Improvisers interact with composition in different ways. For some, improvisation within a composed form takes place on a micro level, such as the manipulation of indeterminacies, such as amplitude, or instrumental timbre.[65] For others (like myself), improvisation acts on a macro level, in the sense that accompanying compositional frameworks “co-produce(s) meaning in interaction with the performer.”[66] However, the extent to which improvisation or composition is present within a performance is largely due to stylistic convention and codes of operation.

Roscoe Mitchell says, “Improvisation, to me, is a speeded-up version of composition [...] composition in real time”,[67] whereas La Monte Young is a little

[65] John Cage, "Indeterminacy," In *Silence: Lectures and Writings* (London: Marion Boyars, 2009), 36.

[66] Christopher Williams, “Tactile Paths: On and Through Notation for Improvisers.” PhD Diss. University of Leiden, Holland, 2016. http://www.tactilepaths.net/omega/.

[67] Daniel Spicer, Roscoe Mitchell, and George E. Lewis, “CTM 2018: Artist Talk with Roscoe Mitchell & George E. Lewis,” YouTube Video, 2018, Interview, 00:07:00. https://youtu.be/o-k2bOgo780?t=420

more succinct: “Improvisation is composition.”[68] We can understand Mitchell and Young’s statements by viewing improvisation as a means of composition with its own methodological quirks, in this instance, the rejection of the possibility for revision.

As these examples indicate, improvisation – for some – acts as a form of composition, blurring the distinctions between the two. Although in my practice, these distinctions remain necessarily problematic, others see a clear dividing line. Bailey notes “the contradiction inherent in attempts to organise or to combine composition and ‘free’ improvisation”,[69] whilst Edwin Prevost says of the compositional mode, “[…] musicians relate to each other via the score”,[70] as opposed to an improvised meeting which is mediated by the participants and surroundings only. The commitment to improvisation shared by both necessitates a sharp distinction, so as to enable their aesthetic aims.

Again, to arrive at a satisfactory conclusion in this area seems a far-fetched proposition. Derek Bailey himself said about improvisers: “Do you know any two people who agree about anything?”[71] Although some provide hard definitions as a means of describing certain methodological, creative and commercial positions,

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[68] Morton Feldman, and La Monte Young, "A Conversation on Composition and Improvisation,” *Res: Anthropology and aesthetics* 13 (Spring 1987): 162.

[69] Bailey, *Improvisation: Its Nature and Practice in Music,* 141.

[70] Prevost, *No Sound is Innocent*, 72.

[71] David Toop, *Into the Maelstrom: Music, Improvisation and the Dream of Freedom* (New York, London: Bloomsbury Academic, 2016), 14.

others look to forward a sense of fluidity between composition and improvisation. Mike Heffley points towards the idea of "Freedom to Form (which) best describes the most fruitful and common "freedom" enjoyed by players and material in this age-old dialectic",[72] whilst Improviser and Pianist Alexander Hawkins highlights the non-fixity within their relationship, suggesting the disciplines act upon a spectrum, or continuum, as opposed to improvisation simply being a form of composition:

> "[…] they seem to belong on a continuum. Of course, you have more pre-determined and less pre-determined 'things' […]." [73]

Interestingly, he points to the additional subjective distinction between the two: "[…] what people say they [sometimes] do, isn't what they actually do."[74]

Although it isn't possible to provide a full account in this work, there are numerous examples of individuals and groups that enable 'free improvisation' to engage and participate with written materials, such as The Art Ensemble of Chicago and other members of the AACM,[75] Sun Ra, Cecil Taylor, Ornette Coleman, George Lewis,

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[72] Mike Heffley, *Northern Sun, Southern Moon: Europes Reinvention of Jazz* (New Haven and London: Yale University Press, 2019), 292.

[73] Andy Hamilton, "Alexander Hawkins: Q&A," YouTube Video, 2019, Interview, 12.36. https://youtu.be/3mtYuXPaB-0?t=743. Transcribed by the Author.

[74] Ibid., 12.41. https://youtu.be/3mtYuXPaB-0?t=761.

[75] George E. Lewis, *A Power Stronger Than Itself: The AACM and American Experimental Music* (Chicago, London: The University of Chicago Press, 2008), 69.

The Instant Composers Pool[76] Gruppo di Improvvisazione Nuova Consonanza, Alexander von Schlippenbach, Barry Guy and John Zorn. Improviser Steve Lacy, fearing that a totally improvised approach might lead to "a correct way of improvising"[77] introduced his concept of 'Poly-Free' that housed the possibility for various pre-determined musical elements, where "freedom might be anywhere, in a given piece."[78] By introducing this term, Lacy circumnavigates problems of categorisation, where composed forms can be freely integrated with free-improvisation, and group dynamics, further enabling his practice as he saw fit.

Anthony Braxton's vast oeuvre is similarly based on the synthesis of both composed and improvised forms, which decline to reject "anything, be it jazz, classical, or even his own history."[79] His works utilise improvisation as a means of navigation through compositional materials that seek "new problems and challenges for participation."[80] Like Lacy's Poly-Free model, Braxton's approach is inclusive of a variety of materials, a reflection of an individual aesthetic that can be married in activity with others, alongside the construction of a practice that continually revitalises itself. Their individual approaches also highlight an important

[76] Floris Schuiling, *The Instant Composers Pool and Improvisation Beyond Jazz* (New York: Routledge, 2019), 3.

[77] John Corbett, *A Listeners Guide to Free improvisation.* (Chicago, London: University of Chicago Press, 2016), 129.

[78] Steve Lacy, *Findings: My Experience with the Soprano Saxophone* (Paris: Outre Mesure, 1994), 73.

[79] Taylor Ho Bynum, "On Anthony Braxton", Accessed 19/11/2018, http://archive.soundamerican.org/sa_archive/sa16/sa16-taylor-ho-bynum-on-anthony-braxton.html.

[80] Ibid.

aspect of my practice-terrain, where the inclusion of materials, improvised, composed or otherwise, has been commonplace.

Why then, in this thesis do I refer to *L.S.*, *F.T.H.* and *T-R* as notations, and not compositions, as Braxton does with his oeuvre? Though their surfaces were laboriously organised and crafted, they were created with the intention of sustaining and fuelling an improvised practice, instead of the presentation of a stand-alone work intended for performance. Their conceptual starting point – that they should be joined with an improviser – retains the possibility of them contributing to a composition forming activity, as with improvisation. As such, I refer to them as notations, their titles a remnant of composerly ambition.

### 1.2.3 Preparation in Improvisation

Preparation forms a major component of the work I undertake and as such, should be considered here. As composition and improvisation can be seen to operate across a spectrum, so we might begin to view preparation and performance in a similar light. An improvised event with all of its possible outcomes, as Evan Parker says, "provides the opportunity to learn something else that the instrument can do."[81]

This statement is useful to understand why I improvise in preparation. As I stated in Ch. 0.2, not only do I take into consideration preparation in terms of its capacity to

[81] Parker, *Amplified Gesture* (Dir. Hopkins), 24:20.

condition, but also its role in *extending and developing* an active pool of concepts and habituations, over time (see Ch.3.1). My ongoing collaborations with Organist Kit Downes provide evidence of this. Preparation for our performances consists primarily of improvised materials. Whereas Downes uses improvisation to explore the timbral qualities of the specific organ encountered, I use improvisation to gauge aspects of intonation, amplitude, proximity and acoustic that mediate our combined activities.

Improvisation in preparation is evidenced in numerous instances of our work, particularly the inclusion of a 'soundcheck' (subsequently named 'Restart') on our first album, *'Wedding Music'*.[82] Its immediate focus upon durational longevity laid the ground for other improvised activity on the remainder of the Album. Realigning Parker's earlier statement, here, improvisation in preparation enabled "an opportunity to learn something else" about the *specifics of the immediate time and space*, in addition to the instruments employed.

This research investigates the role of preparation with regards to the development of specific materials and approaches to improvised performance. Preparation can function in various ways, from the structured to the improvised, as Cecil Taylor and Parker, respectively point towards:

[82] Challenger, Tomas and Kit Downes. "Wedding Music." Recorded July 2012. Loop Records, 2013, Compact Disc.

> "Well, I love to practice, simply because that's preparation, part of the process of planning […] there's nothing "free" about any of this."[83]

> "Things are discovered in practice that are not so easy to stumble on in performance."[84]

Dominic Lash[85] points towards Derek Bailey's habitual development of "resources" and instrumental techniques, to be harnessed for improvisation, a construction of a knowledge base that rests on a different temporal plane to improvisation. Evan Parker, in outlining the background to a commissioned piece *"De Motu"* (1992), states:

> "The piece "De Motu (for Buschi Niebergall)" will be an improvisation composed uniquely and expressly during its performance […]. It will reflect the intense period of preparation that preceded it."[86]

In composing a piece for himself to 'improvise' in performance, Parker focuses upon preparation as a part of a process which shapes a given performance: that

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[83] Jason Gross, "Cecil Taylor: Interview by Jason Gross," accessed 18/04/20. https://www.furious.com/perfect/ceciltaylor.html.

[84] Evan Parker, "Practise/Practice/Praxis," In *Oscillate*, ed. Robert Stillman (UK: Compost and Height, 2017), 17.

[85] Dominic Lash, "Derek Bailey's Practice/Practise." *Perspectives of New Music* 49, no.1 (Winter, 2011): 165.

[86] Evan Parker, "'De Motu' for Buschi Niebergall." May, 1992, available at: http://www.efi.group.shef.ac.uk/fulltext/demotu.html.

which always “has a fixed form. A form which, inter alia, reflects the procedure used to produce it.”[87] Thus, preparation in this instance becomes a type of composition, as does performance:

> “[…] the improvisor seems to be working with memories of past improvisations which were themselves, at least in part, imagined at the time they were made but which may also have made use of material that had been learned by rote and techniques which have become automatic.”[88]

Conversely, performance begins to act as a form of preparation in itself. Parker says as much in his notes about the way he prepared to improvise to realise this composition: “Most of this preparation followed lines of enquiry that had been begun years before […].”[89]

Although the examples here show the use of materials as a way to hone and frame an improvisatory practice, Corey Mwamba contends that Improvisers display *alacrity*, that which hones “speed of response and reflexes,”[90] where they “prepare to be ready to create within a context, using the tools and objects at their disposal

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[87] Evan Parker, “’De Motu’ for Buschi Niebergall.” May, 1992, available at: http://www.efi.group.shef.ac.uk/fulltext/demotu.html.

[88] Ibid.

[89] Ibid.

[90] Corey Mwamba, “Alacrity: ready for the improviser’s art,” published May 18, 2019, https://www.coreymwamba.co.uk/rambles/1558169698.

at the time."[91] Here, Mwamba highlights the *processual* nature of improvising, where listening, responsiveness and reflexivity act as operational techniques to be developed and worked through.

### 1.2.4 Group/Solo Activity and The Instrument

My turn to solo improvisation was instigated by a desire to further the possibilities of my instrument and improvising self by maintaining an environment of focus and attention. The subject of solo saxophone also provided a productive and enlightening setting for the various stages of this research. More generally, solo performances of improvised saxophone music began to take root in the mid-late 1960s, the first full album of such being Anthony Braxton's *'For Alto'*. Before this landmark recording, there were few notable examples of recorded solo saxophone performances, for instance Gene Cedric's *Saxophone Doodle*, Coleman Hawkins' *Hawks' Variations*, and Eric Dolphy's 1962 rendition of *Tenderly*.[92]

Steve Lacy investigated the realm of solo improvisation in order to focus the relationship with instrument as a primary tool with which to proceed: "The instrument - that's the matter - the stuff - your subject."[93] Braxton's *For Alto* investigates and uses the saxophone in order to develop a creative system, that

[91] Corey Mwamba, "Alacrity: ready for the improviser's art".

[92] Bill Shoemaker, "Solo Saxophone Flights," accessed 07/03/19. https://jazztimes.com/archives/solo-saxophone-flights/

[93] Bailey, *Improvisation: Its Nature and Practice in Music,* 99.

operates by "separating elements as a basis for establishing a sound logic."[94] The elements are what forms a set of 'language types'[95] that are compositionally ordered, in order to facilitate solo work that:

> "[…] allowed me to be in an open improvisational space, while being firmly planted within definite working constructs."[96]

Thus, an investigation of instrument and structure highlights his aesthetic and practical priorities. Solo improvisation necessitated a set of reflective, conceptual and compositional interventions, in order to avoid the re-occurrence of an early experience of solo performance:

> "[…] after ten minutes I'd run through all my ideas and started to repeat myself. I felt like, "Oh my God, and there's still fifty minutes to go!"[97]

Many improvisers, including myself, engage with many personnel formations. Over time, I have developed various personal relationships that have enabled aspects of my improvisatory practice. However, with regards to solo improvisation, Bailey laments the subsequent loss of "the unpredictable element usually provided by

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[94] Graham Lock, *Forces in Motion: Anthony Braxton and the Meta Reality of Creative Music. Interviews and Tour Notes.* (London, New York: Quartet Books, 1998), 50-51.

[95] Nate Wooley, "Anthony Braxton's Language Music," accessed 28/07/2021. http://archive.soundamerican.org/sa_archive/sa16/sa16-language-music.html

[96] Shoemaker, "Solo Saxophone Flights."

[97] Lock, *Forces in Motion*, 27.

other players."[98] Instead, reliance on malleable materials developed and embodied over a career becomes critical, to attain that which is "endlessly variable."[99] However, the exhaustion of this knowledge reservoir leads to what he points out as "the main danger in solo improvisation […]."[100]

In solo improvisation, Parker describes a difficulty in "distinguish[ing] yourself and your intentions from the instrument's intentions."[101] This relationship between body and instrument supersedes the relationship with other musicians. Clarinettist Tom Jackson relays the centrality of the instrument to improvisation, rather than just a tool to communicate human intention. Circumnavigating a conventional approach to the clarinet, he "work[s] to uncover the clarinet's archive of materiality."[102] Here the suggestion is that the instrument, in activity with player is not only an archive of embodied actions, but also a body of material potential. This adds to trumpeter Peter Evans' view that the instrument is "many things at once: a composition, a body of texts, a history, a noise-maker, an amplifier of ideas and a real extension of the human body."[103] As such, he views:

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[98] Bailey, *Improvisation: Its Nature and Practice in Music,* 106.

[99] Ibid.

[100] Ibid.

[101] David Borgo, "The Ghost in the Music, or the Perspective of an Improvising Ant," in *The Oxford Handbook of Critical Improvisation Studies, Volume 1*, ed., George E. Lewis and Benjamin Piekut (Oxford: Oxford University Press, 2014), 5. DOI: 10.1093/oxfordhb/9780195370935.013.005

[102] Tom Jackson, "The musical instrument as archive in free improvisation," accessed 04/05/21. https://echo.orpheusinstituut.be/article/the-musical-instrument-as-archive-in-free-improvisation.

[103] Peter Evans, "Caveman/Cyborg," in *Arcana IV: Musicians on Music*, ed., John Zorn (New York: Hips Road, 2009), 116.

> " […] the activity of "playing" as a place where various strands are drawn together on a bumpy and horizontal plane, in messy collision and penetration."[104]

This research presents the instrument as a site of investigation for the various elements that an improvising musician might consider, such as the physical aspects of instrumentalism. Areas of Aaron Cassidy's compositional output concerns itself with the parametrisation of an instrumental technique, also known as de-coupling.[105] His approach utilises the organisation of separate actions, such as those of the fingers alongside those of the oral cavity, to create a 'single instrument polyphony.'[106] Various combinations of "Physical action types encourage(s) unusual, unexpected and unpredictable materials to emerge."[107] Richard Barrett similarly creates compositional material that considers "the mechanics of playing and the physical relationship between player and instrument,"[108] splitting the instrument into its various components (hands, feet, respiratory tract). As we will see, the pieces presented later in the analysis act in a similar vein to these approaches, not only

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[104] Peter Evans, "Caveman/Cyborg," 116.

[105] Diego Castro Magas, "Parametric polyphony in recent guitar music," in *Divergence Press: Performance & Improvisation*, Issue 5. January, 2017. DOI: 10.5920/divp.2016.05

[106] Aaron Cassidy, "Interconnectivity and Abstraction: Metallic Dust as a Testing Ground for Monophonic and Structural Polyphonies," In *Polyphony and Complexity,* ed. Claus-Steffen Mahnkopf, Frank Cox and Wolfram Schurig (Hofheim: Wolke Verlag, 2002), 150.

[107] Aaron Cassidy, "Constraint Schemata, Multi-axis Movement Modelling, and Unified, Multi-parametric Notation for Strings and Voices," *Search: Journal for New Music and Culture,* Issue 10 (Fall 2013), 1. Accessed 08/12/18. http://www.searchnewmusic.org/cassidy.pdf

[108] Richard Barrett, *Music of Possibility* (Oxon: Vision Edition, 2019), 25.

considering how the physical components of my playing self might be divided up, but also the instrumental and notated surfaces themselves.

Parker describes a sense of 'multi-mindedness'[109] and intersubjective negotiation that accompanies group activity as "an essential part of how improvisation was (is) to be distinguished from composition."[110] Whilst mindful of this observation, by exploring certain instrumental characteristics and notational tools focussed upon a type of multi-layered music (or metaphorically 'multi-minded'), I hope to show that it is possible to invigorate a solo, improvised practice.

[109] Parker, *Practise/Practice/Praxis,* 17.

[110] Ibid.

## 1.3 Theoretical Overview

This chapter provides an overview of the theoretical paradigms that accompany the practice presented here. Building upon the practical milieu I have just outlined, I use theoretical ground to outline my practice's moment-to-moment shape and nature.

Firstly, we will consider how the work I present in this thesis can be thought of as an assemblage of actors, which can be used as a way of being able to isolate components for them to be used creatively, making a distinction between artistic and social assemblages. Outlining the terrain associated with Assemblage Theory, I introduce the role of an actor I have deemed specific to this work: the Carrier, which is neither reducible to either improvisation or composition.

Secondly, the unfolding of the practice is foreshadowed on various fronts, with reference to various concepts linked to Tim Ingold's notion of 'Correspondence'. We will gain further understanding of the afore mentioned Carrier, which can be utilised in the conceptual outlining of and enactment of the notations.

Finally, Shaun Gallagher's distinction between the body image and the body schema will be outlined to show how this practice suggests a liminal type of creativity. In addition to the rehearsal of 'known' actions, it also encourages various strategies that forward a set of non, or pre-goal orientated, unknown outcomes. They encourage the maintenance and replenishment of, an albeit, leaky reservoir of

knowledge and habituation: one that is filled with the perpetual turnover of conscious and motoric, embodied behaviours. It is shaped concurrently by the actors that fuel it and in turn, it shapes them.

The emergence of a theoretical terrain for this research can be attributed to the conceptual differences amongst relevant practitioners, as outlined in the previous chapter (e.g., Parker, Taylor, Braxton, Lacy, Mitchell et al). Additionally, this theoretical engagement has encouraged aspects of my practice to move forward experimentally, contributing further to the theoretical image of what I have done and continue to do as an improviser. As the image evolves, the analysis and conclusions will demonstrate the usefulness of this approach.

### 1.3.1 Assemblages

Assemblage thinking, or Assemblage Theory helps to reveal a more detailed image of the inner workings of my practice, albeit with the insertion of necessary artistic distinctions. Thinking through Assemblage Theory highlights a set of actors that, whilst not stable, provide a suitable enough architecture of a practice that can be developed.

Although drawn from the different, but not unrelated sphere of Actor Network Theory, I frequently use Bruno Latour's definition of an actor: *"anything that does*

*modify a state of affairs by making a difference is an actor […] "*[111] (emphasis mine). There has also been work done that demonstrates assemblage theory's usefulness in describing various acts, especially with regards to improvisation and experimentation by Born[112] and Corbett[113] amongst others.

Building on Deleuze and Guattari's beginnings in this area,[114] Manuel DeLanda states that an assemblage displays emergent properties *not present* (emphasis mine) in its parts. An assemblage is formed of actors that "retain a relative autonomy, so that they can be detached from one whole and plugged into another one entering into new interactions."[115] As such, they are "wholes whose properties emerge from the interactions between parts."[116] He goes on to say that:

> "Allowing the possibility of complex interactions between component parts is crucial to define mechanisms of emergence, but this possibility disappears if the parts are fused together into a seamless web."[117]

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[111] Bruno Latour, Reassembling the Social: An Introduction to Actor Network Theory (Oxford: Oxford University Press, 2005), 71.

[112] Georgina Born, "Music and the materialization of identities," Journal of Material Culture 16, no. 4 (December, 2011): 377. DOI: 10.1177/1359183511424196. 06/04/2022 22:01:00

[113] John Corbett, Extended Play: Sounding Off From John Cage to Dr. Funkenstein (Durham/London: Duke University Press, 1994), 76.

[114] See, Paulo de Assis, Logic of Experimentation: Rethinking Music Performance through Artistic Research, (Leuven: Leuven University Press, 2018), 73-74.

[115] Manuel DeLanda, "Deleuzian Social Ontology and Assemblage Theory," In Deleuze and the Social, by Martin Fuglsang and Bent Meier Sørensen (Edinburgh: Edinburgh University Press, 2006), 250.

[116] DeLanda, *A New Philosophy of Society,* 5.

[117] Ibid., 10.

Many improvised meetings can be thought of as an assemblage. For example, in my practice, my work with other improvisers is characterised by various configurations of personnel. As musicians join in one configuration, they may also disband into others, where each (to some extent) will retain their own musical identities and instrumental preferences. However, as any given assemblage of musician's proceeds, so the outcomes will vary according to the conditions of, and relations formed within a performance.

The Assemblage I utilise joins the human, the non-human and condition. Thus, as Scherzinger points out, we see "…the dislocation of the human subject as the central ontological referent."[118] Each actor 'makes a difference', crucially displaying the necessary autonomy to function separately in other contexts, or assemblages. Unlike what Deleuze and Guattari refer to as *territorial, statist, capitalist* assemblages, which are inherently political and coded, my practice could be partially viewed as a *nomadic* assemblage which are, according to Thomas Nail[119]:

> "…arranged in such a way that the conditions, elements, and agencies of the assemblage are able to change and enter into new combinations

[118] Martin Scherzinger, "The Executing Machine: Deleuze, Boulez, and the Politics of Desire," in *The Dark Precursor: Deleuze and Artistic Research, Vol. 1*, ed. Paulo de Assis and Paolo Giudici (Leuven: Leuven University Press, 2017), 40.

[119] Thomas Nail, "What Is an Assemblage?" SubStance 46, no. 1 (2017): 32. DOI:10.3368/SS.46.1.21.

> without arbitrary limit or so-called “natural” or “hierarchical” uses and meanings.”[120]

In my practice, I have highlighted five different actors (below) that are integral to its function. Their inclusion has led to a heightened understanding of the research undertaken, providing a necessary conceptual focus.

1) *The instrument* is conceptualised to encompass the union, in time, of the saxophone and human body (see later clarification in Ch. 3.4). This distinction accounts for the way the saxophone changes its physical shape (through the depression of keys and various embouchure shapes) because of bodily mediation, and vice versa. The ‘instrument’ therefore necessitates this qualification to account for this reciprocity.

By investigating examples of instrumental parametrisation, I show how this distinction evolves throughout this writing to account for instances where improvisation and notated instructions merge the mechanical and physical. Outcomes emerge that are the result of movements and relationships between the body, the material, or both together.

2) *Improvisation* is the *act of musical forming at the leading temporal edge of creative activity*. Its inclusion as an actor is designed to differentiate improvisation

[120] Nail, “What Is an Assemblage?”, 32.

from composition (see Ch. 1.2.2), and to aid the investigation of methodological distinctions, especially with regards to the Carrier and Enactment (see below).

Used here, *Improvisation* differs to my use of the more generalised descriptor of an 'Improvised Practice', which refers to a practice approach that places focus upon improvisation as the primary source of engagement, alongside various other material and contextual factors that contribute to its make-up.

3) *Enactment* is both the sum of, and subsequent development of processes associated with the cycles of preparation and performance. At the heart of this conceptual marker lies the possibility for preparation to act as performance, and vice versa.

At certain practical junctures, there will be a heightened input from materials and sources which form a 'period' of enactment, largely the result of Notation and The Carrier (see below). However, to accommodate embodied habituations developed over a larger timeframe, the perceived boundaries of a 'period' of enactment are necessarily blurred, to account for observable elements that don't form the main practical focus of that time. Therefore, instead of preparation and performance operating as separate actors in a clear linear formation, the notion of enactment forwards their mutual dependence and interchangeability over periods of practice.

4) *Notations* are used in this practice-assemblage to contribute to various points of Enactment. Instead of designating them as compositions, as action environments

they interact with improvisation, the carrier, improvisation and enactment, the resultant activity leading to outcomes that represent their *time-period*.

5) *The Carrier* (see Ch. 1.3.3) distinguishes between improvisation and other work undertaken, for example the development of notations, aesthetic curation/engagement or preparation-in-enactment. The main reason for this distinction exists to accommodate for the expanded temporal frame of the Carrier. Instead of being limited to the frontier of enacted time, as with Improvisation, the Carrier incorporates various modes of curated reflection, revision, and development. Its inclusion therefore accounts for the various layers of historicity that accompany my (and others') practices.

To make sure DeLanda's outline of *Assemblage Theory* is of use in practice, artistic distinctions are needed to maintain a creative trajectory. We may, if so desired, analyse this assemblage all the way down to the atomic level. To understand all aspects of this work in order to move it forward, would seem to privilege a level of statistical and behavioural understanding that could potentially impede creative reality. To operate at the 'most useful level of abstraction', I will rest with the five actors that the work has revealed.

### 1.3.2 Attempting

Improviser Joe Morris[121] suggests an improviser may observe their own practice in terms of three areas: 'What', 'Why' and 'How'. The 'What' includes "Musical Technique and material, musical styles, platforms", the 'Why' includes the "governing aesthetic values you choose to use" and the 'How' includes:

> " […] the manner in which you present these things in terms of execution, presentation, culture - and how this pertains to preparation of scores or directions to musicians, [and] rendering of performance."[122]

As a reflective tool, this provides a variety of areas that inform the approach of an improviser as they proceed. He goes on to state that an "approach in free music can be defined as how one chooses to operate."[123]

Although I can sympathise with his parlance - we, after all, share a similar 'job' description - I believe that 'choice' alone is not a defining approach of free improvisation. 'Choice' suggests the negotiation of a determined material reservoir and a simple pre-conceived insertion of 'creative' gestures. Although I don't deny

[121] Joe Morris, *Perpetual Frontier: The Properties of Free Music.* Stony Creek (CT: Riti Publishing, 2012), 40.

[122] Ibid.

[123] Ibid.

this takes place, I maintain that ‘choice’ alone is just one level of possible engagement, with which other levels may correspond.

To circumnavigate a creeping sense of determinism, instead, *‘attempting’* a choice might seem to better describe something which is marked by the very possibility of not knowing what might always happen. This neither excludes nor includes the potential for the use of pre-conceived strategies within improvisation, but rather opens up the possibility of them illuminating trajectories that might not have been previously considered. Enacting something which is not fixed, or absolute - not making, but attempting - highlights the fluidity central to a practice’s ‘state’.

By ‘attempting’, we open ourselves up to the possibility of an output not corresponding to the intentions of an input, circumnavigating the assurance of *making a choice* to instead embracing the speculation of *attempting a choice*.

### 1.3.3 The Carrier

The role the Carrier plays in this practice assemblage necessitates a distinction between the ‘I’ who improvises, and the ‘I’ that approaches and enacts the notated surfaces that I have developed. The former, improvisation, is inclusive of the rational, irrational, the decisive and the embodied at the frontier of enacted time. It contrasts with the latter, where curatorial and practice-led decisions take place in an expanded temporal frame. The Carrier ‘carries’ the possibilities immanent within

both, presenting them in varying configurations that lead to various musical outcomes.

To help conceptualise the Carrier and its function, I use Ingold's notion of 'doing-in-undergoing'[124] which describes processes that are not enacted because of pre-determined structure, shape, or design. Central to 'doing-in-undergoing' is that 'doing' "does not translate from an image in the mind to an object in the world."[125] Rather, it is in-determinate or open-ended, its shape "emerg(ing) […] from the doing itself."[126] 'To do' is:

> "[…] to move stuff across a threshold, to prepare it, or to make it ready for a new life. It is quite literally to *carry out*, where 'to carry', in its primary sense, is to 'bear from one place to another."[127]

The use of the Carrier, with its various layers of historicity, aesthetic, and embodied habituation, is both a catalyst for, and attendant to curatorial affect. It functions as the link between the different components of my practice, its place in this practice-assemblage allowing elements to correspond, entering into dialectical relations whilst maintaining the flow of activity needed to proceed. As its function is outlined and clarified, as has been done with improvisation and notation, so it has been considered in the conceptual makeup of the notations: *T-R* for example.

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[124] Ingold, *The Life of Lines,* 125.

[125] Ibid.*,* 145.

[126] Ibid.

[127] Ibid., 128.

### 1.3.4 Correspondence

As I have outlined the structure of the assemblage and provided definitions for the roles of its main actors, I would like to focus upon the movement that exists in-between them. Viewing my practice as a nomadic assemblage, which Nail describes as "not directed toward a final end",[128] a necessary emphasis is placed upon inter-component activity, which in the absence of a stated 'goal' becomes the main site for the emergence of its prominent characteristics. To further emphasise this point, Deleuze and Guattari[129] state that the "in-between has taken on all the consistency and enjoys both an autonomy and a direction of its own."[130]

To build upon this, Ingold's notion of Correspondence provides us with a model that focuses an image of how the main actors might contribute to the practice. Ingold states:

> "Interaction is between; correspondence in-between."[131]

Correspondence elucidates the relations that exist in-between a meshwork of points. It is made up of three components: The replacement of (1) intention by attention, (2) the subject by the verb and (3) human agency by the afore mentioned

[128] Nail, "What Is an Assemblage?", 32.

[129] Gilles Deleuze and Felix Guattari, *A Thousand Plateaus,* Trans. Brian Massumi (London, New York: Bloomsbury Academic, 2013), 443.

[130] Ibid.

[131] Ingold, *The Life of Lines,* 154.

doing-in-undergoing.[132] Correspondence shines a light onto the evolution of the becoming of or of a particular set of temporalities associated with a practice like mine. This focus is also seen to some extent in the notions of *intra-action* and performativity of Karen Barad, for example, where "subject and object don't pre-exist as such, but emerge through intra-actions."[133]

By applying the idea of Correspondence to the relations formed between improvisation and notation, we can better understand their mutual impact. As both are carried into enactment, so their correspondence is affected by their initially fixed classifications undergoing change. As a segment of activity is completed, so the resultant meanings of the notation, are carried into further activity.

As such, Correspondence can be used to describe the in-between of an ever-expanding terrain of what an idea, category or practice might be. Crucially, events that take place in enactment which are not understood or perceived on a functional level, are now offered the opportunity to form a substantial part of the practice. In using the term 'correspondence', we allow for the possibility of an attemptive approach, one that seeks unknown outcomes.

However, attention,[134] one of the key components of 'correspondence' is not without its problems. To be attentive to artistic process would suggest that a

[132] Ingold, *The Life of Lines,* 144.

[133] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007), 89.

[134] Ingold, *The Life of Lines*, 155.

generative system of material production would need to exist *a-priori*. For example, the saxophone as an inert body is dependent upon the coupling with the human body (see Ch. 3.4). As the body inputs generative actions (such as breathing, finger movement), so the instrument loses its inertia, becoming an active participant. However, crucially I approach the saxophone with the intention to instigate an episode of a relationship, *not vice-versa*.

The hunch that led to this work – that notation might enable the discovery of new musical processes and outcomes – is fuelled by intention. As such, the contradiction that has formed with Ingold's statement is acknowledged and it becomes necessary to insert yet another distinction: my practice is imbued with intention which lays the ground for attention to take root. As enactment proceeds, so the latter leads the former, only for this relationship to cycle into new beginnings.

### 1.3.5 Intention, Attention

An improviser employs various learned and reactive gestures at any given point in performance, some imbued with intentionality ("*I need to solve 'x' musical problem"*) and others with attentionality (*"What am I doing?!", "What did I do?!", "What was that?!"*). Where intentionality fuels the desire to embark on work, attentionality is evident through the reflective apparatus I utilise to monitor the behaviour of my instrument, improvised input, and environment.

To provide further understanding, I draw upon Shaun Gallagher's distinction between the 'Body Image' and the 'Body Schema'. Noting the conceptual and terminological issues that surround this distinction,[135] he nonetheless provides us with definitions of both that help us understand the practice that follows. The Body Image is formed by:

> "…a complex set of intentional states and dispositions – perceptions, beliefs, and attitudes – in which the intentional object is one's own body."[136]

One's self-awareness, or "body percept"[137] is shaped simultaneously by both conscious and non-conscious attitudes, and intersubjectivity. As Gallagher notes:

> "…the body image is not inert or simply an ideational product of cognitive acts; it plays an active role in shaping our perceptions."[138]

The Body Schema in contrast, involves "a set of tacit performances – preconscious, subpersonal processes that play a dynamic role in governing posture and movement."[139] Gallagher proposes that most instances of movement are the result of *"close to automatic* performances of the body schema," though the Body Image

[135] Gallagher, *How the Body Shapes the Mind*, 19.

[136] Ibid., 25.

[137] Ibid.

[138] Ibid., 26.

[139] Ibid.

may also act closely with the Body Schema by enacting a bodily awareness that will inform the latter.[140]

Gallagher acknowledges the role of intentionality within both Body Image and Schema. Though the former is evident to see (for example, *"I intend to execute x action"*), the assemblage of parts that contribute to the Body Schema should also be viewed in the same light. When I have played, or do play bebop, or other styles of Jazz, for example, I do so with an ever increasing (I hope) sense of agility and flexibility within any given context. For example, to articulate a harmonic cadence utilising improvisation requires me to not only identify target notes (image) that functionally describe its design, but to employ a set of embodied strategies (schema), such as passing notes, that enable a secure resolution. The deployment of the latter is informed by various modes of musical conditioning, from transcription to harmonic and technical preparation.

To achieve an image such as this, the schema is complicit, performing the necessary motoric actions that contributes to the intended outcome. Gallagher supports this by saying, "motor action is not completely automatic; it is often part of a voluntary, intentional project."[141]

If intention leads us to goal orientated activity, what of attention? As intention is embroiled with bodily functions, so attention, as Gallagher sees it, is more

[140] Gallagher, *How the Body Shapes the Mind*, 26.

[141] Ibid.

concerned with issues of the environmental (physical and social positioning) and normative (social and cultural codes). By corresponding with ongoing processes then, attention would seem to be non-goal orientated, due to its reactive nature. However, presenting attention and intention in this way risks neglecting the real-life complexity of correspondence, especially in this work. The notations I have produced lay out the conditions to attend to ongoing improvisative, physical and cognitive processes through various means. As such, they control the operational threshold of activity, not to realise a piece of complex music, but to instead embed my practice within a liminal zone that works to further my creative aims. Gallagher and Varga[142] posit that performance includes a broad range of cognitive processes, from "explicit conscious control to implicit pre-reflective consciousness", with *control* (emphasis my own) being intrinsic to both.

Attention, as a form of control, is distributed across my practice, mediating artefacts of intended and motoric actions, which may be enfolded back into further notions of Image and Schema. In this work, intention and attention combine not because of choice but because of *attempts* to sustain this practice-assemblage's unfolding.

### 1.3.6 Summary

In these inter-related sub-chapters, I have presented various practical and theoretical antecedents that go some way in outlining the conceptual space my

[142] Gallagher and Varga, "Meshed Architectue of Performance as a Model of Situated Cognition," 4.

practice inhabits. I have suggested that definitions of activity used by practitioners are better understood as useful representations of their own work. Rather than applying globally, their definitions co-exist with others' on a spectrum of activity, that changes through time. Furthermore, the use of various theoretical paradigms has led to new definitions (Enactment, Carrying) that are crucial to my particular practice assemblage that I investigate here.

Preparation is focussed upon as a vital part of my improvised practice, as a space to develop both material and processual habituations. However, (and as we see in Ch. 2.3.3, Fig. 31) it should not be viewed separately to performance. The introduction of *enactment* allows for the two notions to become entangled as and when they need to be, especially with regards to the negotiation of notations that feature in the analysis.

The main components of the assemblage – Improvisation, Notation, Instrument, Enactment and Carrying – work towards a practice that is premised on an effort to reveal instrumental approaches that are relevant and contribute to my creative activity: enacting an investigation into the unknown, or what Bailey describes as "Searching for that which is endlessly variable".[143]

Finally, we see the intention to attend as being crucial to sustaining the aims of this work, focussing not on end goals, but the unfolding of activity. The theoretical

[143] Bailey, *Improvisation: Its Nature and Practice in Music,* 106.

paradigms I have used are not just a tool to understand the workings of my practice, but catalysts for further activity. The next chapters will present an overview and analyses of the notations (and supporting practice) that have emerged with and benefitted from this theoretical engagement.

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# Chapter 2: Notations for Solo Saxophone

In this chapter, I examine three main notations, *Labtayt Sulci* (2018–19), *For Two Hands* (2020) and *T-R* (2020). I also briefly take into account other work and activities that influenced their development. I will provide (1) an account of the way the notations build upon each other, (2) an account of how they were approached in preparation and (3) an analysis of various features particular to each piece.

They were designed to challenge my relationship to my instrument and solo improvisation, focussing primarily on preparation, a major component of what I earlier outlined as enactment (see Ch. 1.3.1). Early questions as to who the notations were for (myself, or others too) were given short shrift by the onset of the Covid-19 pandemic, where the project necessarily focussed upon the impact these notations had upon my solo work. As such, I present overviews, experiences, analysis and passing conclusions as a type of autoethnography.

The notations have a unique set of visual characteristics that denote instructions for various physical parameters that are to be explored in the preparation. As the notations are introduced chronologically, we see how practical investigation and theoretical engagement lead to conceptual alterations in future work, for example, durational and organisation strategies. Though non-goal orientated, the enactment of each notation reveals unique characteristics that are process-based, sonic and physical.

Starting with an account of *L.S.*, I will show how it unpicks various components of instrumental technique and embodied, improvised traits. Alongside analysis of *L.S.'s* structural trends and effect on 'live' performance, I will consider its relationship with pitch. The analysis also highlights the moment-to-moment complexity of this work, showing how various instrumental parameters mediate and impact upon each other.

Next, I investigate transitory works that consolidate some of the implications arising from the outcomes of *L.S*. *'Shadow(s)'* (2019), concerns itself with the joint roles and functions of composition and improvisation, pitch and notation. *'Tin Paths'* (2019), focuses upon a conceptual prototype where fingerings for pitch are mediated by levels of 'breaking' suggested by the score. As such, a tactile approach to sound production and improvised gesture is introduced, heightening the relationship between physical action and improvised trajectory.

Next, this focus is retained in the conceptual fibre of *F.T.H.* Here, I present a 'zonal' approach to the notation, where six demarcated zones on the saxophone's surface act as an alternative to determined pitch instruction, to be *carried* by the improviser in enactment. Durational markers are omitted, highlighting an approach to notation (a Dynamic Surface) where durational characteristics are determined by the *correspondence* between the five actors in this assemblage.

We finally encounter *T-R,* which presents an alternative physical approach to the joining of the body and saxophone. Seizing upon its physically observable traits, I will draw from two video recordings that highlight instances of *T-R* emerging in group activity.

## 2.1 *Labtayt Sulci*

### 2.1.1 Overview:

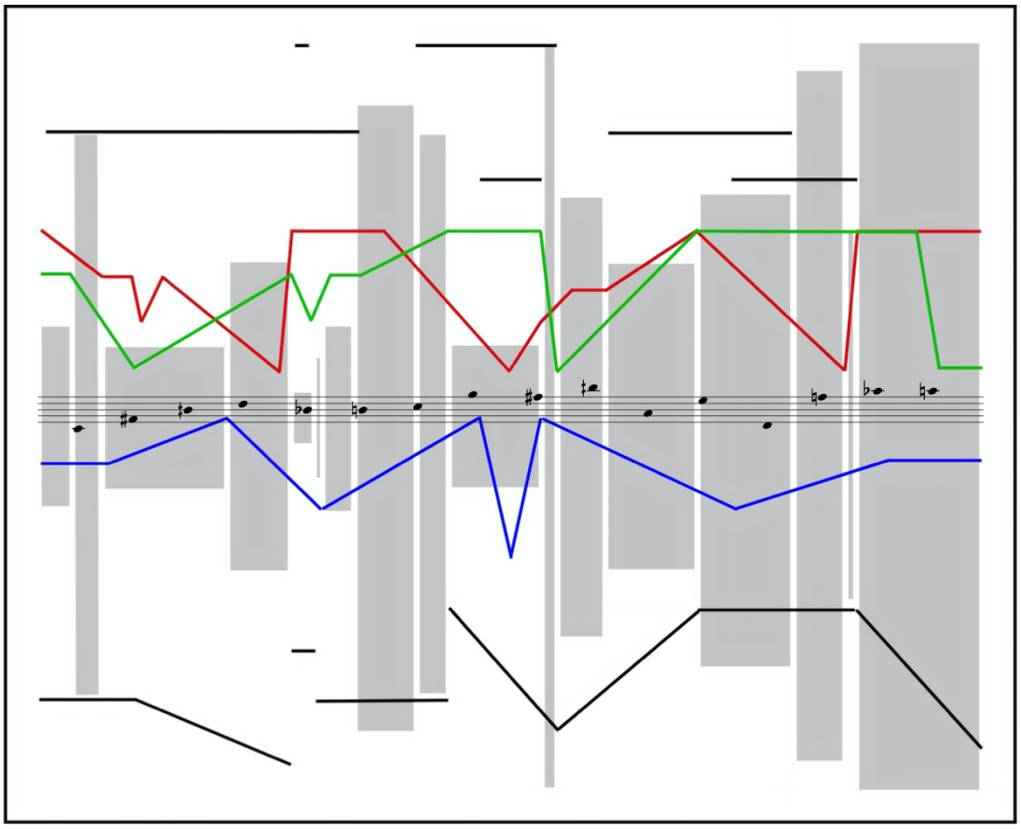


Fig. 1

*Labtayt Sulci*, *p.1*

*Labtayt Sulci*[144] is a graphic scheme for improviser, designed to shape approaches towards the cycle of preparatory process and performance: enactment. Each page of the score contains seven transparent modules that can be organised however

[144] See Supplementary Materials ii (Scores), pp. 223.

desired.[145] Each module contains a direction for a separate instrumental parameter: amplitude, frequency, voice, front-oral cavity, rear-oral cavity, finger movement, and pitch. As the notation directs and mediates the modulation of improvised materials, various combinations of modules enable different routes through the piece. *L.S.* was devised to contribute to the preparation and conditioning an improviser might undergo, to increase possibilities for sonic and material generation within improvised performance.

The score organises and encourages the 'disentangling' of learned instrumental tendencies, exploring the relationship between direction and action. For the improviser, it provides an approach to techniques that having once been part of a singular whole, now find themselves "parametrically de-coupled",[146] mediating each other. Gradually, its instructions are to be left behind in order for the conditioning that has taken place to emerge in performance. *L.S.* does not aim to introduce set structures that can be translated into improvised contexts, rather, it encourages a particular approach to an instrument that can correspond with existing, embodied habits. With no conventional thematic materials to observe, the analysis addresses the question of 'how do the notations emerge – if at all – in solo and group activity?' I began development on *L.S.* in November 2018. It was finished with a final version in May 2019. For this submission, I have included a complete reading of the score.[147]

[145] See Supplementary Materials ii (Scores) pp. 230-237.

[146] Diego Castro Magas, "Parametric polyphony in recent guitar music," 2017.

[147] See Supplementary Materials i; Files 1 – 3.

## The Score

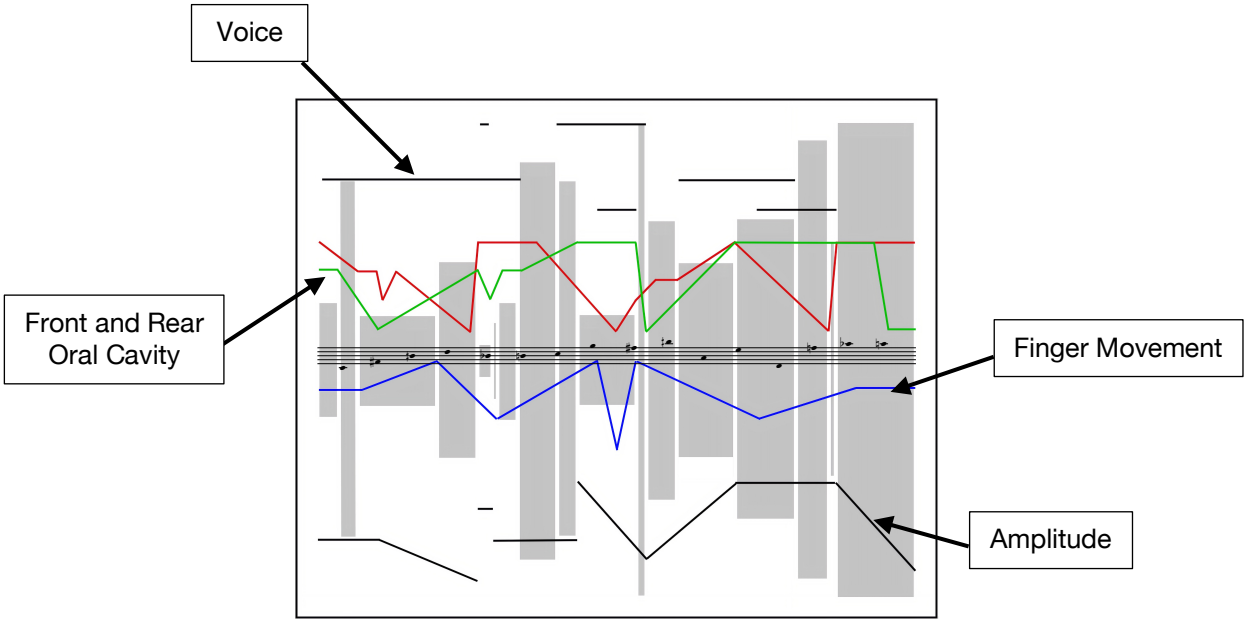



Fig. 2

*Labtayt Sulci,* Main Instrumental Parameters

*L.S.* brings together improvisation alongside individually notated parameters (see Fig. 2). The simplicity of linear direction provides room for the improviser to provide embellishment and establish a sense of elasticity within their directions. The level of instruction employed on each page is an attempt to avoid the scheme becoming either redundant or overbearing.

Each module, or 'stave' indicates an ascending scale of 'modulation', or rates of change (see Fig. 3). A module can be used in tandem with others or neglected: pitch instructions may be used in favour of durational proportions or, alternatively

the nuanced activity possible in the oral cavity represented by instructions for the throat/mouth/jaw.

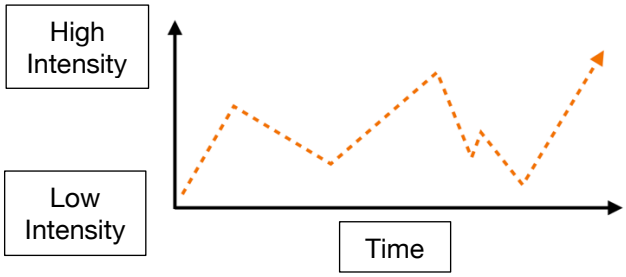



Fig. 3

Modulation Scale

Two versions of the score were used in the research stages: one without a pitch scheme[148] and the final version which includes one. Although the first version[149] is generally without pitch information, purple dots denote the use of indeterminate multiphonic fingering patterns on the F staff, absent from the revised pitch scheme that accompanies version two.

The grey frequency filter module (see Fig. 4) that accompanies the second version indicates the structural balance of each page, whilst approximating a durational structure. It is envisaged that one page should last ca. 5 minutes.

[148] See Appendix 1.1 – 1.3, pp. 205 – 207.

[149] See Appendix 1.1 – 1.3, pp. 205 – 207.

## Instructions

Each module and its staff demonstrate the relative activity and prominence of an instrumental parameter (see fig. 2). Each page should last ca. 5 minutes, with instructions appearing proportionally on a L-R timeline:

- The **V** staff (Black, Top) indicates when the voice is to be employed, alongside its intensity.
- The **T** staff (Green) provides instructions for the Front Oral Cavity - the tongue, jaw, lips and teeth; and Rear Oral Cavity (Red) - the back of the tongue and throat.
- The **F** staff (Blue) instructs the rate of finger movement, increasing and decreasing according to the notation. This can interfere with or modulate ongoing pitch characteristics.
- The **A** staff (Black) indicates amplitude.

Frequency content (see fig. 4) is encouraged by three elements:

- A ‘Pitch Environment’, expressed in traditional notation, can be used in any order, and read in any clef. ‘X’ note heads indicate free choice of pitch. This is designed to act as a starting point, or instigator of activity in this area.
- Large grey boxes provide a ‘Frequency Filter’ read left to right, denoting the number of pitches available. The smaller the box in height, the smaller the frequency space available to the performer.

- The performer's own pitch sensibilities.

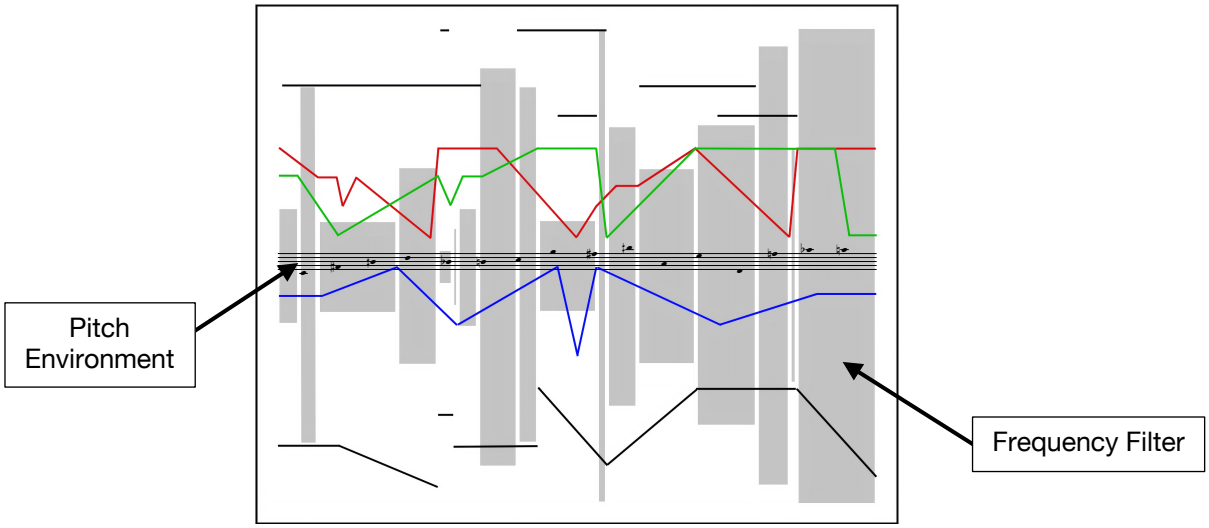



Fig. 4

Pitch Environment and Frequency Filter

### 2.1.2 *Labtayt Sulci:* Activity in Preparation

This section provides an overview of engaging with the notation. I draw upon evidence gathered through recordings, performance, and reflection, discussing my findings as I progress.

*L.S.* was (and continues to be) complex to play, where unlearning 'learned' actions provided a significant and at times counterintuitive undertaking. Before focussing on instrumental parameters, I first attempted to improvise freely for five-minute durations, the approximate length of each page. Initially, timings were between 04'00" and 06'00", however, the introduction of instructions led to readings that were more accurate, between 04'30" and 05'30".

Variety in the modular construction was key to developing an understanding of the potential of relationships between parameters. Firstly, I focussed upon the opening of page one from v.1 of the score. Drawing upon the recordings made of various modular orderings, here I outline the results obtained so that we can appraise this approach.[150]

[150] The first version of the score was used for this part of the analysis: it therefore does not include pitch information.

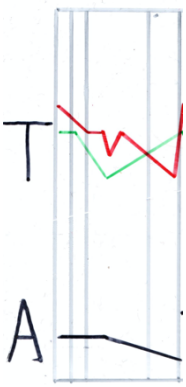



Fig. 5

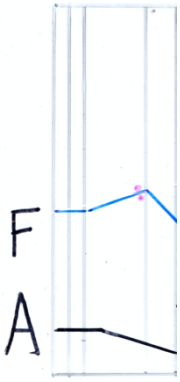



Fig. 6

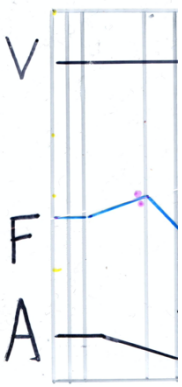



Fig. 7


Fig. 8

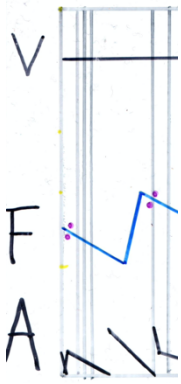



Fig. 9

**T & A (Fig. 5[151])**: Although the 'A' staff is in evidence, the T staff causes divergence (ca. '00.40). The tongue (red staff) is initially detected, decreasing as the recording progresses. Moving in contrary motion to the 'A' staff, the green 'T' staff can be heard, producing an aggressive and irregular vibrato, with numerous overtones. Because my fingers are inactive, I chose to play a C# - where the saxophone is most 'open', with fingers raised; a choice of a different note would lead to different sonic results, due to the overtone structure from that part of the instrument.

**F & A (Fig 6[152])**: Longer than the previous example, we begin to see that every rendition is variable in duration. The 'purple dots' can be heard slightly earlier than stipulated - from 00'30". I start to speed up my fingers (to a fast rate, as instructed) through to 00'49". The audible use of circular breathing highlights my attempt to express the notation as it appears on the page: without gaps.

[151] See Supplementary Materials i; File 4.

[152] See Supplementary Materials i; File 5.

**V, F & A (Fig. 7[153])**: This rendition introduces the 'V' (voice) staff. Although possible to hear before the saxophone enters, its presence is difficult to recognise, until I settle on concert E, at 00'10". The 'V' staff alters the timbre of the saxophone, distorting the sound and creating increasingly complex overtone structures. The loose adherence towards the 'A' staff in the latter stages also leads to a shaky, unstable quality. Despite attempts to keep the pitch stable, movement is detected between the 'V' and 'F' staffs at 00'48".

**V, T, F & A (Fig 8[154]):** More instructions lead to a much more sonically active environment. The 'T' staff leads to punctuation throughout. The use of slap/accented tonguing with modulations in the jaw and throat not only lead to a sense of rhythm emerging from the technical challenges, but also a melodic sensibility in the high overtones. Additionally, artefacts of finger movement are observed because of accents.

**Page 2 F, A & Page 1 V (Fig. 9[155]):** The 'A' staff is not strictly adhered to. Instead, Page 1's 'V' staff is re-framed. Where file 6 demonstrates blending with the other staffs, the change brought by the introduction of alternate 'F' + 'A' staffs make the voice more prominent. There is greater timbral variety due to the relationship between voice and saxophone: the closer the voice gets to the saxophone in terms of pitch leads to 'beating' between the two pitch frequencies. Also evident in this

[153] See Supplementary Materials i; File 6.

[154] See Supplementary Materials i; File 7.

[155] See Supplementary Materials i; File 8.

section are further uncontrolled sounds, such as evidence of saliva when the 'A' staff is low in intensity which contribute to the overall texture.

**Additional Notes:**

An early observation was the initial dominance of the T staff over other parameters, as seen in the reading of p.2 T & A.[156] Subsequent experiences showed its dominance could be negated by new strategies, such as certain oral placement that prevented the tongue from operating normally.

Using the arrangement of the score p. 2 F & A,[157] the choices I make with regards to pitch/melodic content in combination with the 'F' staff are the result of my embodied pitch strategies and instinctive use of vibrato, highlighting highly stylised features.

Parametric independence is in evidence during the opening of p. 2 V, T, F & A.[158] The 'T' staff, which has a major effect upon frequency outcomes, inputs unrelatedly to the 'F' staff, which increases in intensity in the second half of the extract. Independent movement is also evident on p. 2 V, T (Red) & p. 1 T (Green), F, A.[159] Without the 'V' staff, the 'A' staff encourages further sonic 'artefacts' to be heard. In

[156] See Supplementary Materials i; File 9.

[157] See Supplementary Materials i; File 10.

[158] See Supplementary Materials i; File 11.

[159] See Supplementary Materials i; File 12.

this instance, ‘key clicks’ are made audible due to the rate of change in the ‘T’ staff, although ‘notes’ aren’t heard.

**Introduction of Pitch/Frequency Scheme, Revision of Score**

The introduction of a modular frequency scheme was designed provide a neutral identity, with which I might combine with embodied pitch strategies. Various attempts to introduce a scheme accompanied the construction of the score. Initially, boxed interval guides[160] were used to provide the improviser with a starting point for pitch relations. However, the focus on a 12-note system meant that the use of quarter, or eighth tone fingerings were discouraged. An attempt to utilise the notated parameters as pitch contours proved to be similarly inhibitive, with outcomes displaying predictable linearity.

The final scheme re-uses intervallic ideas from the original scheme. The L-R boxes act as a frequency ‘filter’. Width denotes the compositional proportions and relative duration, whilst height outlines the approximate frequency range that should be utilised. The notated pitch environment may be ordered in any way, as opposed to reading solely from left to right (see Fig. 4).

[160] See Appendix 1.2 – 1.3, pp. 206-207.

## 2.1.3 *Labtayt Sulci* Analysis: Results and Trends

This section documents how the notation takes effect in preparation and how it is translates to the performance environment. To this end, I provide visual representations of spectra, pitch and meter derived from recordings made. They demonstrate how the notation encourages recognisable structural and instrumental traits, alongside overall schematic divergence at different stages of enactment.

### Structure

*(For this section I refer to the recordings of Labtayt Sulci (In Preparation), Pages 1–3[161])*

Using meter analysis, the structural proportions are observable in Fig. 10. Making a comparison with the 'A' staff, we can see correlation with the notation. As a result, the preparatory environment, inclusive of improvised and structured materials, is injected with structural variation and mobility that can be taken forward into performance.

[161] See Supplementary Materials i; Files 1–3.

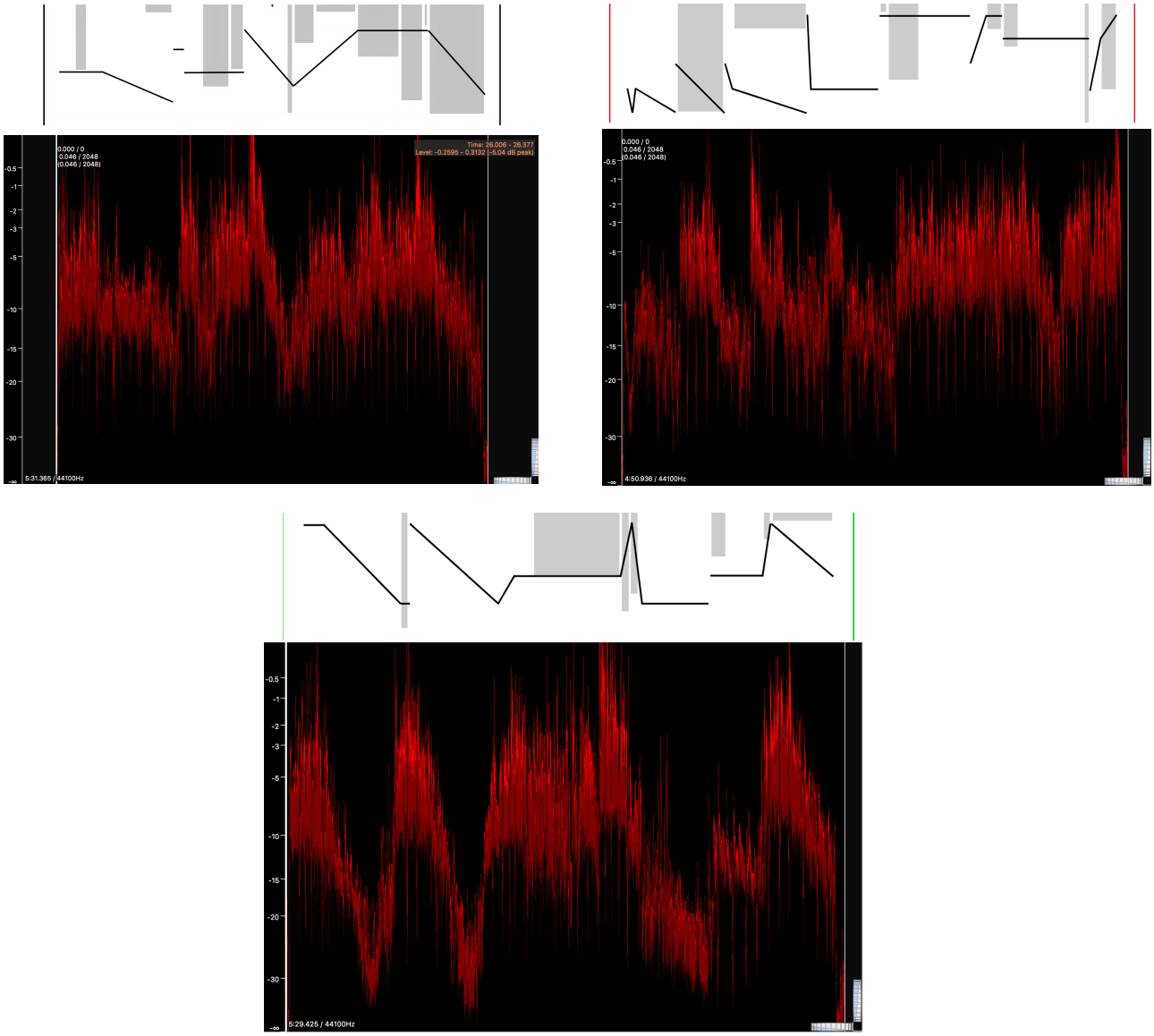


Fig. 10

Meter Analysis
Clockwise, p.’s 1 - 3

## Frequency/Pitch

To create a visualisation of the way the pitch environment effects outcomes, I used the pYin plugin within Sonic Visualiser.[163] The results share qualities seen within the notation: the greater the frequency range of pitches played, the greater the vertical spread of observable points in the diagram (see Fig. 11).

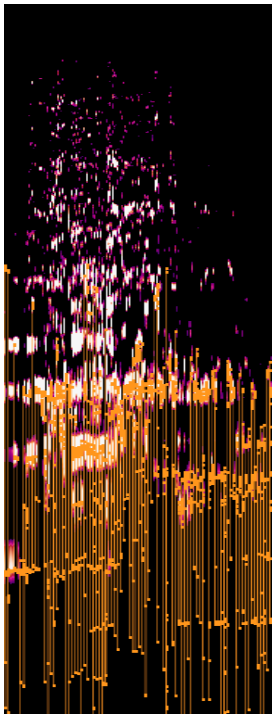


Fig. 11

Pitch Spread

[163] Chris Cannam et al., "Sonic Visualiser: An Open Source Application for Viewing, Analysing, and Annotating Music Audio Files." (Firenze, Italy: *Proceedings of the ACM Multimedia 2010 International Conference,* October, 2010) Accessed 13/06/2019. www.sonicvisualiser.org.

Pitch is represented by frequency (Hz) running vertically and time horizontally. The complexity of the recorded sound means that the software sometimes has difficulty in providing a totally accurate representation because of sonic artefacts such as key noise, tongue, breath and saliva - all of which have their own frequency characteristics. These can be observed by the noticeable spikes at the top and bottom of the diagram (see Fig. 12), out of the pitch range of the saxophone. In extreme cases, I have taken care to remove frequency representations that impairs understanding. I have also added a layer of visualisation from a spectrogram that visually reinforces the aim of this analysis, by highlighting the detected fundamental frequencies and their overtones.

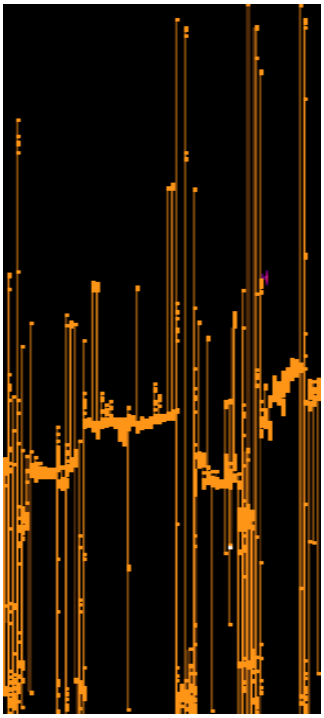


Fig. 12

Artefact Spikes

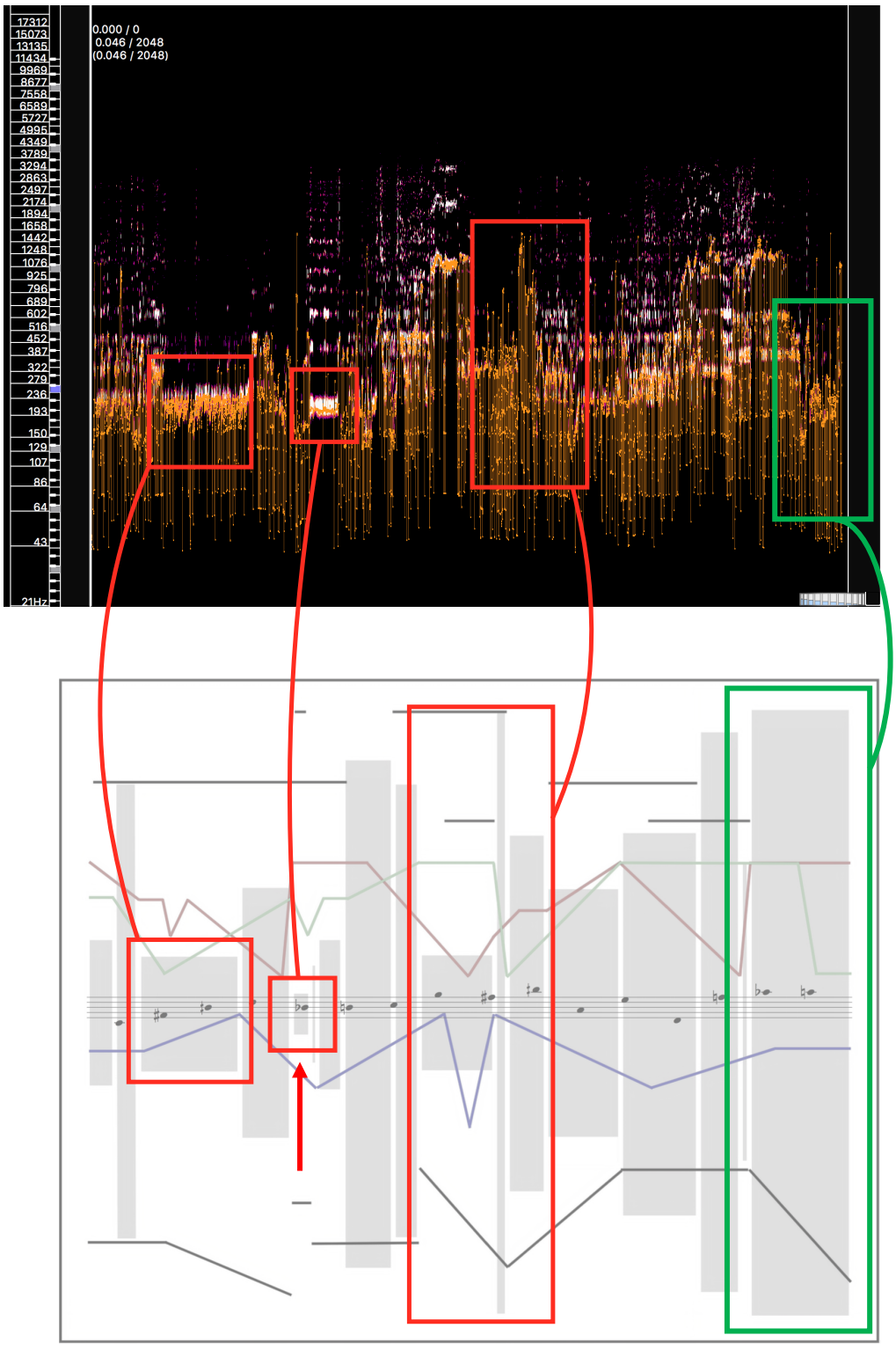



Fig. 13

Pitch Analysis p. 1, Performance/Score Correlation (Red) & Deviance (Green)

Above (see Fig. 13), the correlation between frequency analysis and the notation is indicated by red boxes linked to the corresponding section of the score. A varied frequency spectrum is explored throughout, with clear variation between all three pages. The analysis shows that when the filter stipulates a smaller frequency range, the performance corresponds (see Fig. 13, red boxes). At times, deviation from the notation is evident. Sections are shortened and lengthened (see Fig. 13, middle boxes), whilst interpretation of the filter opening is sometimes inaccurate, displaying narrow pitch use when the frequency filter stipulates this should be a large spread (see Fig. 13, green).

My use of the pitch environment staff suggests that I generally select pitches from left to right, for example in Fig. 13 (red arrow) where pitch choice is visually in line with the filter spread in the notation at that time. The frequency analysis shows the middle box frequencies to be ≈ 207.6 Hz – a concert Ab3 (Bb for Tenor Saxophone – the same as the score at this point.

## In Performance

*L.S.*, embedded in preparation, is taken forward into solo performance[164] where it is possible to observe the impact of the scheme, even though its structural integrity is absent. Of the qualities that remain, parametric behaviour is observable in different configurations as demonstrated by table 1, whilst the performance is structured in

[164] See Supplementary Materials i; File 13.

pitch phases that point to the influence of the proportional divisions included in the notation (see Fig. 14). Elements of other pieces included later in this thesis also appear, for example at ca. 08'05"[165] when techniques seen later in *Tin Paths, F.T.H* and *T-R* emerge: the use of non-conventional fingerings and muted slap tonguing.

| Parameter Type | 0'10" – 1'09" | 4'39" – 6'05" | 11'25" – 12'20" |
|---|---|---|---|
| Voice | | X | X |
| Oral (Red) | X | X | X |
| Oral (Green) | X | X | X |
| Fingers | | X | X |
| Amplitude | X | X | |
| | | | |
| Single Note | X | | |
| Double/Split Notes | X | X | X |
| Circular Breathing | X | X | X |

Table 1

Examples of Parametric Behaviour
Cockpit Theatre 29/07/19

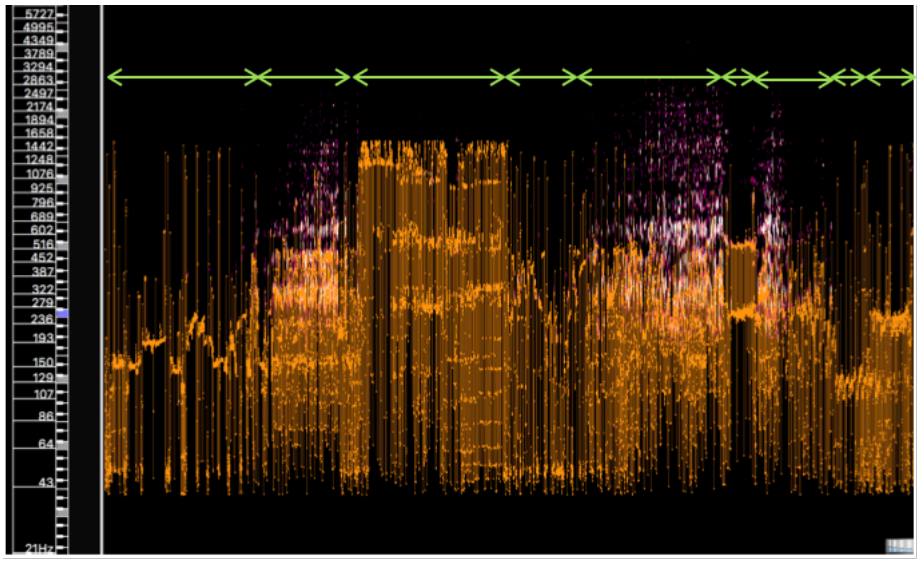



Fig. 14

Outline of Frequency Zones, performance in the
Cockpit theatre, 29/07/19

[165] See Supplementary Materials i; File 14.

# 2.2 Conceptual Consolidation and Experimentation: Other Notations

The response to *L.S.* was the production of further notations that built upon and developed some of its outcomes. *Tin Paths* and *Shadow(s)* utilise the parametrisation of my instrumental technique, the use of preparatory schemes and the relationship between improvisation and composition. Whilst some of *L.S.*'s characteristics are simplified (most notably the use of multiple notated parameters)*.*, they experiment with approaches toward notation, duration and pitch.

## 2.2.1 *Tin Paths*

*Tin Paths*[166] explores the 'fuzzy' relationship of improvised and composed materials in enactment, first highlighted by *L.S*. It does this by offering a set of different pitch instructions and durational stipulations to a scheme that encourages and necessitates the use of improvisation.

*Tin Paths* also develops an emergent concept from *L.S.*: The idea of 'breaking' a conventional saxophone technique to reveal new pitch and timbral qualities.

[166] See Supplementary materials i (Audio/Video); Files 15-18. Also, see Supplementary Materials ii (Scores), pp. 238.

However, *Tin Paths* stands apart from *L.S.* and other components of this portfolio by determining its sound environment: one that is quiet and claustrophobic.

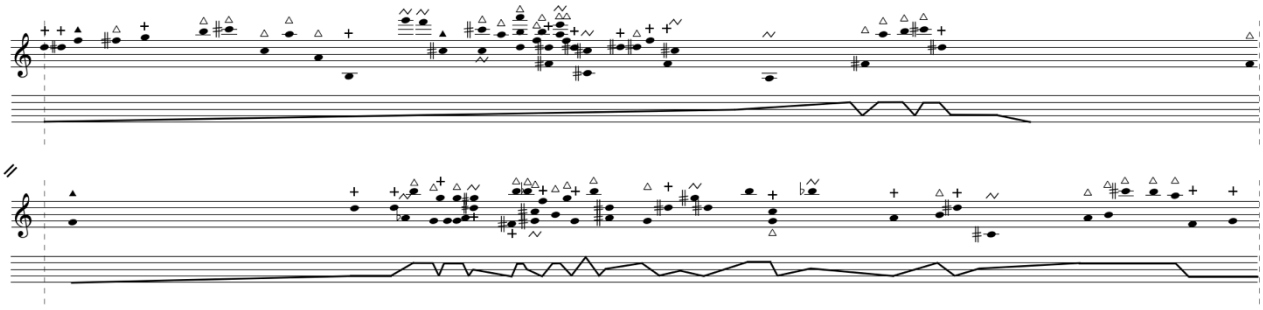


Fig. 15

*Tin Paths* (2019)
Score Extract (Page 3)

## Overview

The scheme, constructed on a conventional musical stave, encourages improvisation around notated ‘islands’, the aim being for both elements to mediate each other. The complete score is in four sections and each line of notated material should last ca. ‘0.30 seconds, with the total duration ca. 11’00” minutes. Proportionally placed pitches are accompanied by a variety of symbols that denote various modifications to fingerings (see Table 2 below). In addition to this, a ‘throat’ parameter (see Fig. 16) further alters and destabilises outputs, encouraging the need to respond to artefacts, the qualities of which might not be necessarily understood.

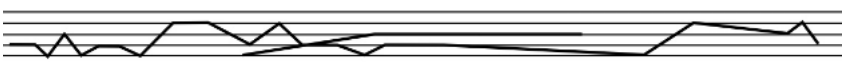


Fig. 16

*Tin Paths* Throat Parameter, Example

| | |
|---|---|
| △ | Note should be ‘broken’ with any combination of the Left Hand side keys. |
| ✚ | Note should be ‘broken’ with any combination of subtracting button fingers. |
| ∿ | Note should be ‘broken’ with any combination of both Left Hand and Right Hand side keys. |
| ○ | Play the written note. |
| ▲ | Note should be broken with any type of breaking. |

Table 2

*Tin Paths* Fingering Alterations

The intention of this work is to encourage different ‘routes’ through the notation, where repeated readings reveal the necessary variety that can be taken forward into a wider improvised practice. In addition, although the work was formulated for preparation, its duration and structure highlight the possibility for it to be used in performance, too.

To attain a degree of accuracy in preparation, it was necessary to initially work through the durational and pitch schemes separately. Additionally, improvisation was omitted in order to gain a greater understanding of the notation.

The investigation did lead to sonic outcomes that were previously not part of my playing, due to patterns of fingering suggested by the notation. However, attempting to combine some of these approaches within a durational and sonic aesthetic led to a sense of the ‘explorative’ being sidelined in favour of an accurate reading.

That is not to say that there wasn't evidence of the notation taking effect at times. The throat parameter was evident at 00'24" in Part One,[167] where we can observe notes 'splitting'. At this point, we can see correspondence between the notation and improviser taking shape, the effects of which necessitate further response.

## Summary: Conceptual Formation

Working through *Tin Paths* provided focus on areas of my research that were problematic, highlighting areas that would need to be addressed in subsequent work. However, it introduced proto-concepts that would form large components of future activity.

The duration scheme limited new instrumental approaches, because I approached preparation with a hierarchical mindset: duration acted as a 'container' that other materials must fit in. In fitting them in, their potential was compromised, simply because the time necessary for developing certain elements was not provided. The durational scheme served to limit the potential of the fingering instructions and so, future notations generally (with a couple of exceptions) dispense with this, in favour of a bodily, action-led approach to duration.

The low overall volume also loses the potential of instrumental behaviour achieved by a greater dynamic range. As such, the sonic aesthetic acts as a container for the

[167] See Supplementary Materials i; File 19.

artefacts that are revealed and although in no way undesirable, subsequent work would do well to offer a fuller dynamic range, to explore a full possibility register. The simplification of the parametric scheme was a favourable addition, where more creative thought and/or action took place in the absence of other instrumental parameters.

The notated islands formed interesting interventions, that were by no means creatively inhibitive. Although they provided a vivid way of combining improvised and composed materials, how they might move between different stages of enactment remains to be seen.

However, the levels of instability and sonic complexity provided by the pitch operations did provide impetus for future activity, encouraging improvised responses. ‘Breaking’ – where the instrument becomes unpredictable due to the way it is played – is subsequently explored in future pieces, most notably *F.T.H.*, and *T-R*.

*Tin Paths* outlines the relationship between composition and improvisation in a dynamic way, highlighting it to be practice-led, as opposed to being defined *a-priori*. Although the notation had the capacity to affect improvised gesture, my practice continued to shape cyclical processes as to how and when interventions took place.

## 2.2.2 *Shadow(s)*

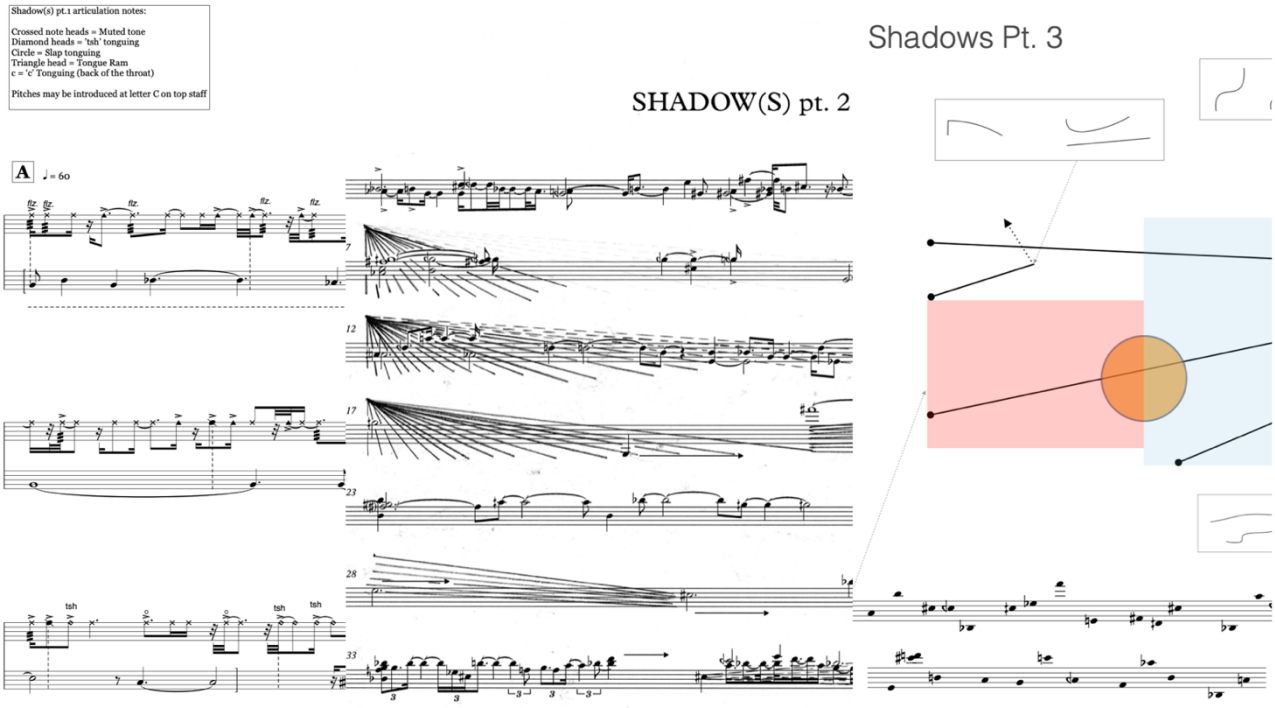



Fig. 17

*Shadow(s)* (2019), Parts 1, 2 &3,
Collage

### Overview

*Shadow(s)*[168] represents another important step between *L.S.* and two later notations, *F.T.H* and *T-R*. It has three parts, each with a different approach to notation that continues to simplify the use of parametric materials, such as the voice

[168] See Supplementary Materials ii (Scores) pp. 248.

in part one and the use of hands in part two. Conventional pitch is included in all three parts. In *Shadow(s)* parts one and two, pitch acts as a layer which improvisation should flow through, as a means to generate further embellishment.

Part one retains the idea of notated 'islands' as seen in *Tin Paths,* with two main improvised sections. The writing for voice becomes increasingly complex, further disorienting the deterministic notational materials. Pitch requirements are more specific, with the addition of quarter tone fingerings and different types of oral articulations.

Part two presents a different set of notated priorities. Whereas pitch is notated conventionally, hand drawn markings instruct the hands to engage percussively on the saxophone. The aim here is to highlight the play between the two parameters, pitch and 'percussion'. In a physical sense, accurate interpretation of the instructions would require four hands. To circumnavigate this, it is necessary for the improviser to make a choice or attempt, improvised or otherwise, which (and when) materials are played.

Part three marks a departure from the previous sections, utilising a visual scheme which dispenses with traditional notation and favouring an action 'environment', instead. Improvised activity fills a duration of seven minutes, which draws from pitch materials and parametric directions from the throat and tongue, which are placed on a rough L-R timeline.

Throughout *Shadow(s)*, there is a heightened focus upon percussive interventions, whether through the use of fingers (part 2), or with the mouth (parts 1 - 3). Until this point, neither *L.S.* nor *Tin Paths* had explored this area, instead dealing with articulation in terms of intensity.

The passing of materials over one and another, such as pitch crossing and interacting with rhythmic instruction (part 2), or various parametric layers crossing improvisation formed a visual metaphor: that of notated objects casting a shadow over ongoing activity. This metaphor also guided a nascent interpretive methodology.

Although some of the parts had highly prescriptive writing (part 1), it should be noted that within this collection there is also a lot of notated space, within which improvised materials, layers or parameters may be inputted. Improvising through the notation led improvisation itself to be a default state, in which the encounter of notated materials led to outcomes which affected its form.

## Personal Feelings – *Shadow(s)* in Practice[169]

Like *Tin Paths, Shadow(s)* proved to be useful on a variety of ways, such as the location of various instrumental procedures in activity. However, I felt *Shadow(s)* didn't provide the overall productivity of *L.S*., primarily because the complexity of notated pitches led to a level of abstraction that questioned their inclusion - evident

[169] See Supplementary Materials i; Files 20-22.

in the opening passages of part one.[170] After the relative openness of *Tin Path's* pitch scheme, *Shadow(s)'* detail seemed to restrict other instrumental behaviours from emerging, due to the focus needed to execute the various modes of notation.

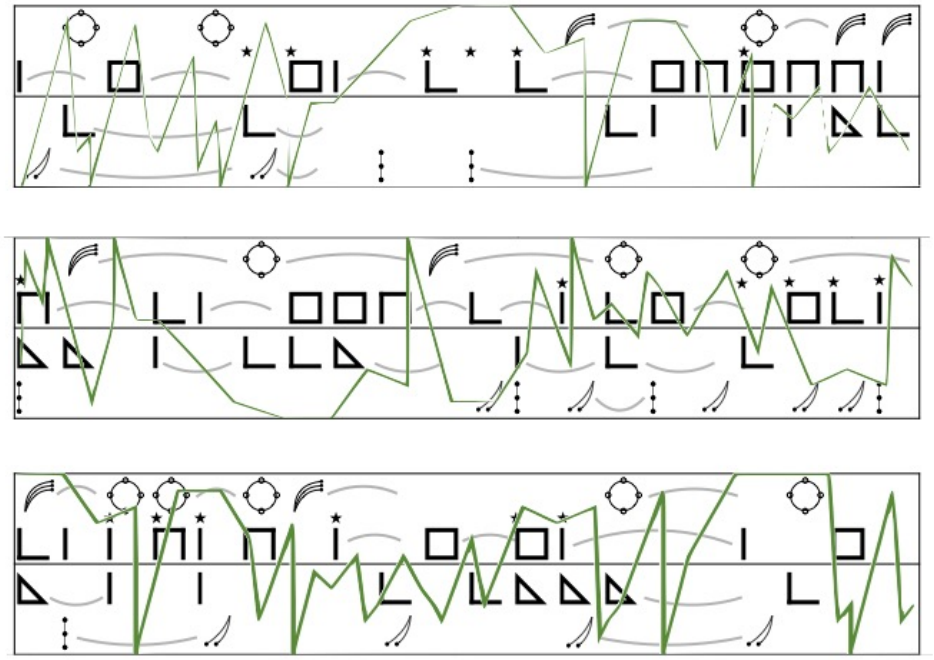
Similarly, the decision to retain overall duration schemes highlighted a similar observation of *Tin Paths*: The development of materials should direct the overall temporality and character of enactment. It highlighted the need for a type of notation that would serve the goals of this research, something which elements of *L.S.* and *Tin Paths* did by encouraging complexity in action as opposed to pre-determined pitch/rhythmic instructions.

In a positive sense, it reinforced an approach to *interpreting* the notated materials at play where improvisation, as a multi-faceted activity, serves as a primary actor at all points of an enactment, flowing around and corresponding with other materials and processes at play.

[170] See Supplementary materials i; File 20.

## 2.3 *For Two Hands* (F.T.H, 2020)

### 2.3.1 Overview



1

Fig. 18

For Two Hands (2020),
Part 3 (5b), Extract

The pieces presented so far have outlined the centrality of physical actions over the dominance of pitch structures by parametrising instrumental processes *(L.S.)* and making instructions with multiple possibilities *(Tin Paths)*. *F.T.H.*[171] builds upon this, presenting a Dynamic Surface/notation with which to interact. Where actions were previously guided by proportional schemes, in *F.T.H.* rhythmic and durational

[171] See Supplementary Materials ii (Scores), pp. 263.

characteristics are led by notation, improvised actions and decisions the performer may want to input at various stages of enactment.

It explores two main components: Ergonomic Notation, which divides the saxophone into six distinct ‘zones’; and the Pressure-Thread, which encourages ‘pressure’ forming techniques, such as increased jaw tension and/or air velocity. The sections include various amounts of notated materials, which gradually decrease throughout.

The deployment of different combinations of depressed keys leads to a variety of overtones, multiphonics, timbres and pitches. The Pressure-Thread (see Fig. 21) highlights these various combinations, both enabling *and* preventing the sonic potential of certain combinations. Though the structural makeup of the saxophone and conceptual specifics of the notation leads to certain pitch fundamentals being heard throughout, the extent to which emergent structural properties become evident will be explored.

Whereas the transferal of *L.S.* into performance, as opposed to preparation, was left to the improviser, *F.T.H.* attempts to embed a ‘musical methodology' into the piece itself, by its gradual omission of notated materials. The aim is to offer a way of embedding notational guidelines in addition to encouraging characteristics particular to a given reading.

Investigation of the dynamic notation fuels evolving approaches. *F.T.H.*'s potential meanings change as the outcomes of directions take on several forms. Concurrently, the actions of an improviser are affected in real-time as they navigate the surface. To offer a visual analogy, the score can be thought of as an elastic surface, changing shape as pressure is applied to its various coordinates and intervals.

## Form (Notational, in Performance)

The notated form is in four parts. Physical directions were derived from themes used for a previous compositional experiment; however, some directions were placed freely, developed in a studio setting. The outcome of the notation is dependent on cognitive and physical actions to construct a reading. In the absence of a durational guide, the form here is designed to be emergent, dependent on the intra-actions (to borrow from Karen Barad[172]) of its components.

## Notational specifics

The notation divides the Saxophone into six zones, each delineated by a corresponding notational symbol (see Fig. 19):

[172] Karen Barad, *Meeting the Universe Halfway*, 89.

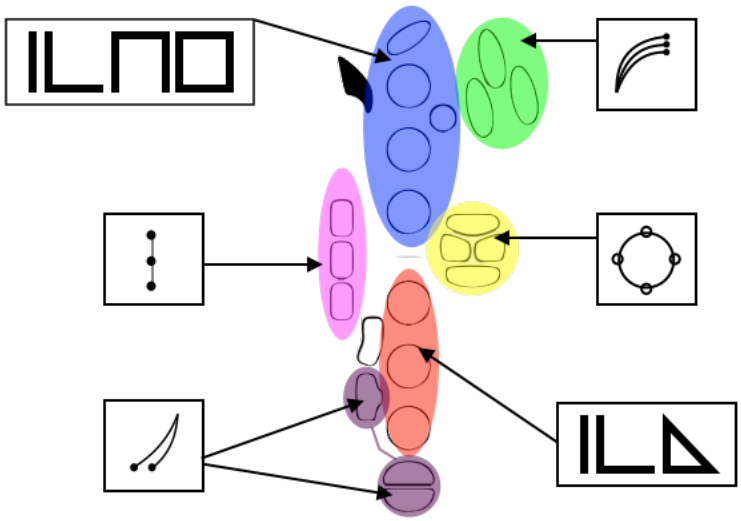


Fig. 19

*F.T.H.*, Fingering Scheme

Blue: L.H. fingers (1, 2, 3, 3+); Green: L.H. side keys; Yellow: L.H. little finger keys;
Pink: R.H. side keys; Red: R.H. finger keys (1, 2, 3); Purple: R.H. little finger keys.

Each of the symbols ‘ILNO’ and ‘ILA’ denote the number of fingers to be depressed. Each follow the same rule: one line represents one depressed finger; two sides, two fingers and three sides, three fingers. An exception is the square, which represents the need to press the first, third and fourth keys in the blue zone. Although this does not necessarily amount to four depressed fingers, the slightly larger shape is indicative of the larger ergonomic spread needed for this combination.

When a fingering is to be held down, a traditional slur sign is marked. The use of the octave key is delineated using a star (see Fig. 20):

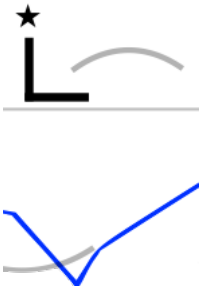


Fig. 20

*F.T.H.,* Slur, Star.

The Pressure-Thread is a guide for interpretation, where pressure can be applied from any or more than one of the components available to the saxophonist. This can be through the use of pressure from the jaw, cheeks, throat, or diaphragm, all of which - by exerting influence on air flow - can change characteristics such as amplitude, frequency (tuning) and timbre:

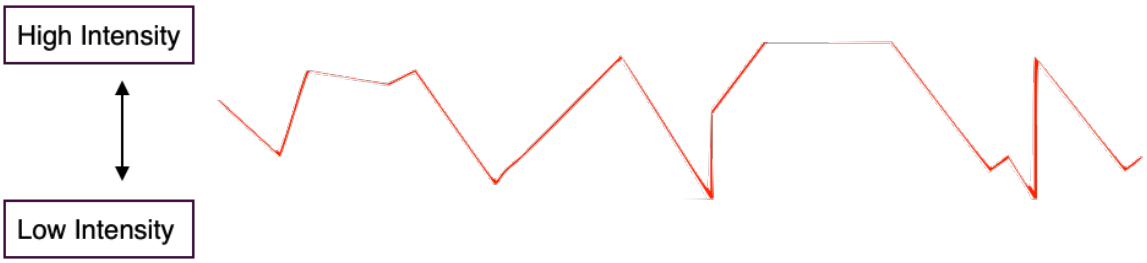



Fig. 21

*F.T.H.,* Pressure-Thread Intensities

## 2.3.2 *F.T.H:* Activity in Preparation

*(A complete reading has been presented as the primary audio submission[173] in addition to other materials presented to aid this analysis)*

Preparation for this piece re-thinks how and when combinations of fingers are depressed to create a sound. Instead of reverting to known combinations*, F.T.H.'s* environment encourages resultant pitches and/or textures that are harder to predict. Thus, as a Dynamic Surface, the notation encourages correspondence with other actors, relatively augmenting its subsequent visual instruction.

So that this quality remains, multiple readings that construct a goal of a 'known' negotiation of the notation would seem to miss its potential. Rather, every reading should explore potential combinations, decided upon in the moment.

### Notation and Materials

As with *Tin Paths*, the direction of a set of potential variables provided a thorough examination of improvised and instrumental input. Attempting a certain route through the score, fraught with chance ("*what might it sound like?"*), was compounded by the necessity to negotiate the next stages of the notation. With so much thought going on, the pacing of this notation[174] was generally slow.

[173] See Supplementary Materials i; File 23.
[174] See Supplementary Materials i; File 24.

Maintaining an ‘accurate’ reading was also difficult. Although this is not detrimental to this research, it highlighted the linked roles of concentration and automatic[175] behaviour. As the notation provides high levels of complexity, it encourages the possibility of ‘inaccurate’ readings. As such, like embodied features emerge in improvisation, so *F.T.H.* encourages similar behaviour.

Output is governed by what is included on the page, as much as is what is omitted. Though the potential for different combinations of fingerings is vast, variation increases as the Pressure-Thread is introduced alongside the use of different improvised parameters, such as the voice and articulation. Improvised input therefore actively shapes outcomes that accompany enactment.

## Duration

Duration is led by improvised and interpretative bodily movement and mediated by the notation. As the amount of direction reduces in the later stages, areas of ‘blank’ score, to be filled by improvisation (such as part 4), are durationally led by the improviser.

However, the historicity, aesthetic concerns and physical condition of improvised gesture encourage responses to the notation that reveals embodied ‘tempi’.

[175] Shaun Gallagher, "Body Image and Body Schema: A Conceptual Clarification,” 550.

## Organisation in the scheme

Two points should be considered. Firstly, rather than plotting a ‘known’ path through *F.T.H.*’s scheme, it was necessary to display a level of discipline to ensure variation. This introduced another layer of complexity (heightened awareness, for example) that needs to be considered.

Secondly, a comparison between engagement with *L.S.* and *F.T.H.* furthered the distinction between the Carrier and Improvisation. The former, which contains ‘curatorial’ characteristics, is evident when one constructs an arrangement of modules for *L.S*. Therefore, as one combines modules before they correspond with improvisation, the distinction between the two processes, is clear to see. However, in *F.T.H.* the relationship between the two is much more complex, the curatorship of materials happening almost in tandem with improvisation.

Ascertaining which actor leads certain decisions is very difficult to document. Instead of presenting a view of the main actors as ‘fixed’ entities with rigidly defined roles, this analysis presents them as being dynamic and inter-changeable with each other. Embodied actions correspond with conscious, reflective decision making, also informed by notation and previous activity. Thus, analysis may provide the ground for further speculation in this regard.

### 2.3.3 *F.T.H.* Analysis: Results and Trends

Due to the differences outlined between *L.S.* and *F.T.H.*, following the same analytical methodology here, although not entirely without merit, is problematic. This is primarily due to the roles of the Carrier/Improvisation determining the choice of finger placements in activity. As such, following the methodology employed for *L.S.* would necessitate the marking of a route through the notation, at odds with the aims of *F.T.H*. To rehearse the placements *a priori* would effectively turn the scheme into a determinate work. Additionally, the parametrisation in this piece has just two layers (finger positions and Pressure-Thread), instead of the seven found in *L.S.* The variation that results from changing sets of parameters is simply not available here to analyse.

To make the analysis productive, it has been necessary to locate the areas where *variation* does take place, to address the aims I set out. As the focus of this work as a dynamic notation dispenses with determined structural patterns, it is necessary to focus upon defined points within enactment, such as beginnings and endings, to set out comparative observations.

For the analysis, I draw from recordings primarily made between April and June 2020, with the inclusion of two later recordings (one of which is filmed). Firstly, I document the process of familiarising oneself with the notation. Using video and text, I will provide:

- An overview of pitch possibilities that arise because of different finger combinations
- Evidence of how the Pressure-Thread impacts upon enactment
- An observation of an emergent need to locate 'resistance'

Secondly, I provide an overview of overall durations and split times between instructions in the opening segment of the work. Within these time points, I will consider some of the pitch characteristics that have emerged.

Thirdly, I document the characteristics of complete performances, focussing upon the closing stages which draw upon the improvisers increased input. I also briefly examine the emergence of this work in selected activities that took place at the same time as this research.

## An Approach to Pitch Using Pressure and Resistance

For this section, I have created a video[176] which demonstrates how I have worked through the scheme. In the video, I focus upon the first five events of the piece, methodically breaking down each symbol and investigating the possibilities therein (see Fig. 22):

[176] See Supplementary Materials i; File 61. "*For Two Hands:* Demonstration."

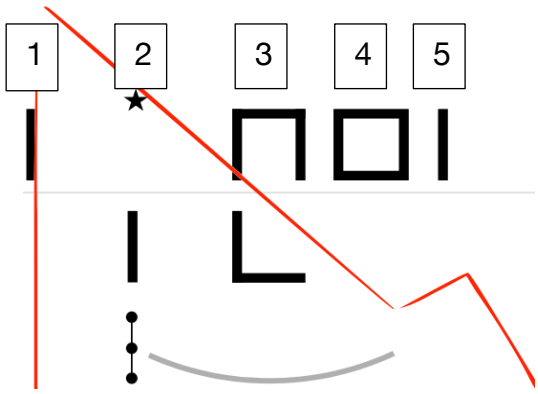



Fig. 22

*F.T.H.,* 5 Symbols Breakdown, Opening

The video demonstrates the possibilities that arise from working through the different iterations of finger placement (see Fig. 23):

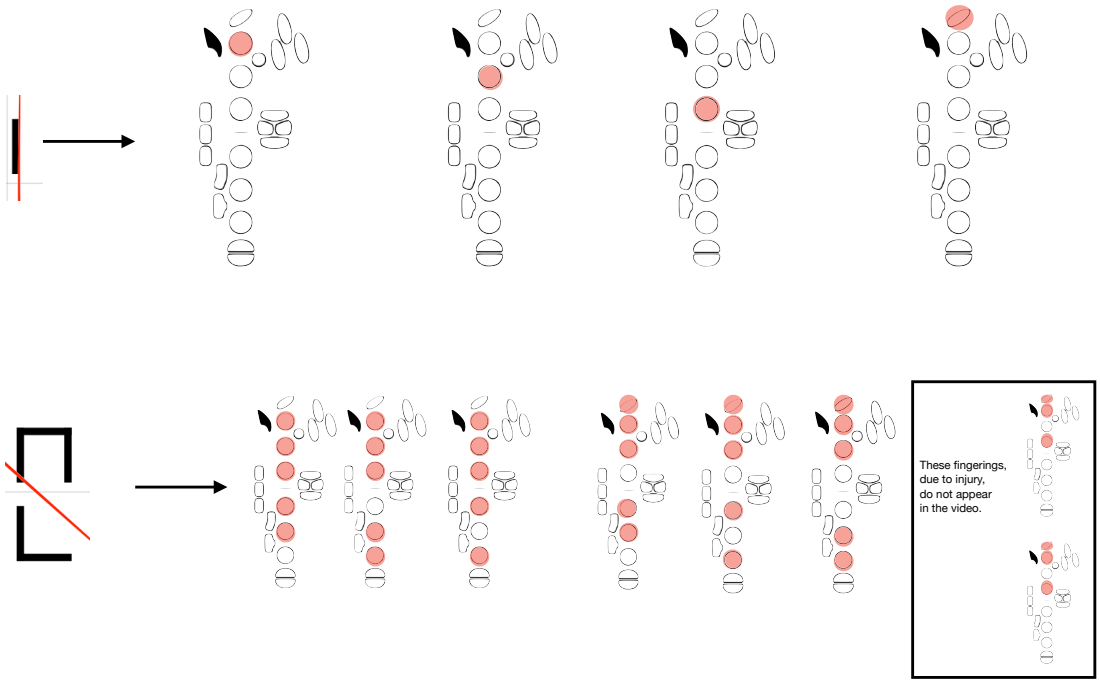



Fig. 23

*F.T.H.,* Iterations of Finger Placement

With no modulation from the Pressure-Thread, fingerings such as the ‘I’ instruction, offer little deviance from normal pitch characteristics associated with that area of the saxophone. As the video suggests at 01’38”, many fingerings lead to a ‘normal’, pure toned textural base. However, some fingerings offer instability and complexity that emerge through the observance of multiphonics (seen at 07’24”, for example).

## The Pressure-Thread

The Pressure-Thread acts as an important component, modulating existing materials. Although a notated direction, its inclusion encouraged me to ask questions about the nature of instrumental approach: *“What is pressure in this particular environment?”* Pressure, as I outline at 08’31”, can be thought of in many ways.

I found myself primarily thinking along physical lines, where pressure could be the modulation of jaw, embouchure, diaphragm, fingers, or any combination of all four. In more abstract terms, pressure began to signify a higher intensity of physical weight applied onto and into the saxophone (see Fig. 24):

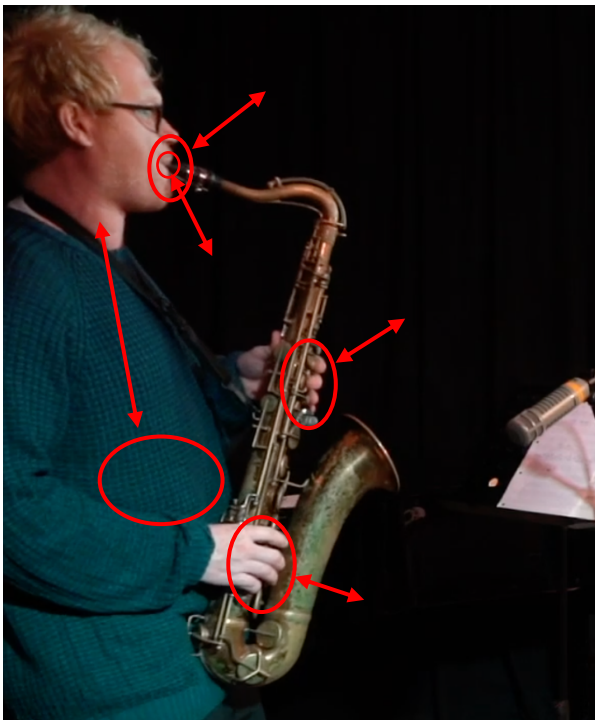


Fig. 24

*F.T.H.,* Pressure Modulation Points

As the video demonstrates, the loosening of the jaw in tandem with the throat (low pressure) leads to the flattening of pitch. In contrast, a heightened sense of pressure reveals various overtones and split tones that may be investigated. It is possible to offer a broad pitch spectrum for one fingering, as we can see at 13'17". Even though each notational symbol has various pitch characteristics, they can be modulated further by the Pressure-Thread.

From one instruction or section to another, what constitutes high pressure in one instance may be low in another. Like conventional notation, a marking for '*piano'* in one setting might mean something very different in another, depending on the aesthetic concerns of performer and situation. This, I contend, is what makes *F.T.H*.'s notation fundamentally dynamic, on *horizontal* and *vertical* axes. The

meanings of its directions are premised upon that which has preceded them, the results of improvisation and notation corresponding. Thus, I refer to *F.T.H.* as a Dynamic Surface, where its non-proportional presentation leads to outcomes that display durational, pitch and physical variation.

## Resistance

*F.T.H.* is designed to expand the practice of an improviser. A full rehearsal and subsequent knowledge of all permutations would present the notation as a menu of materials, rather than a site for discovery. Thus, the aim is not to exhaust, but rather investigate the potential of the notation.

I found that a middle-grounded approach to learning the notation left me with many creative threads to investigate. One of those was the location of 'resistance' from certain fingerings. As fingerings changed, I *felt* for the resistances that might offer a sound, or gesture of intrigue: something to retain my interest! Under normal conditions, the location of resistance usually indicates an instability about to come, such as a squeak, or loss of timbral control. Rather than adjusting to negate this potential outcome, adjustment is avoided so as to reveal productive areas of instability.

This foregrounds one of the central themes of the practice presented in this thesis, that fundamental to the ongoing search for new sounds and approaches, one attempts a gesture into the 'unknown' by engaging with an instrument with *tactility*.

Therefore, in creating something musically new, we do so by not only envisaging sonic outcomes, but also by *feeling* the surfaces we engage with.

## Duration

Using the same segment of notation, I will demonstrate how the notation contributes to durational characteristics. As a Dynamic Surface, *F.T.H.* promotes variance between readings, as evidenced by a screenshot of each being inputted into the Reaper Audio Workstation for editing purposes (see Fig. 25):

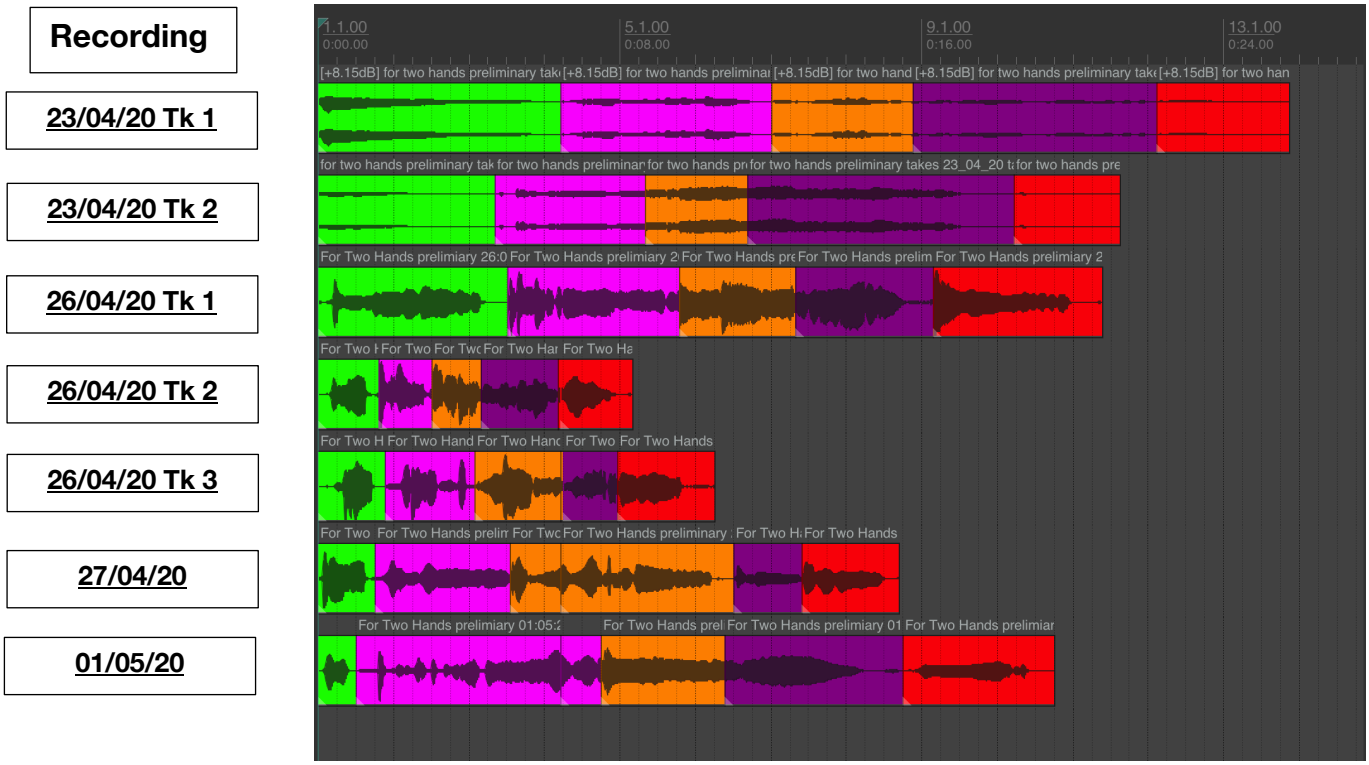



Fig. 25

*F.T.H.,* Opening Passage, Duration Comparison A

The recordings[177] document the onset of the preparatory process which demonstrates an interesting trend. At this stage I had placed an arbitrary aim to speed up my progress through the notation, however, later recordings in this series roll back on this. Indeed, on the recording made on the 11/02/21, the total duration for Page 1 was ca. 05'35", compared to ca. 03'08" on 01/05/20.

Returning to the analysis of the opening five figures, some fingerings have more durational variance than others, as evidenced by this graph (see Fig. 26):

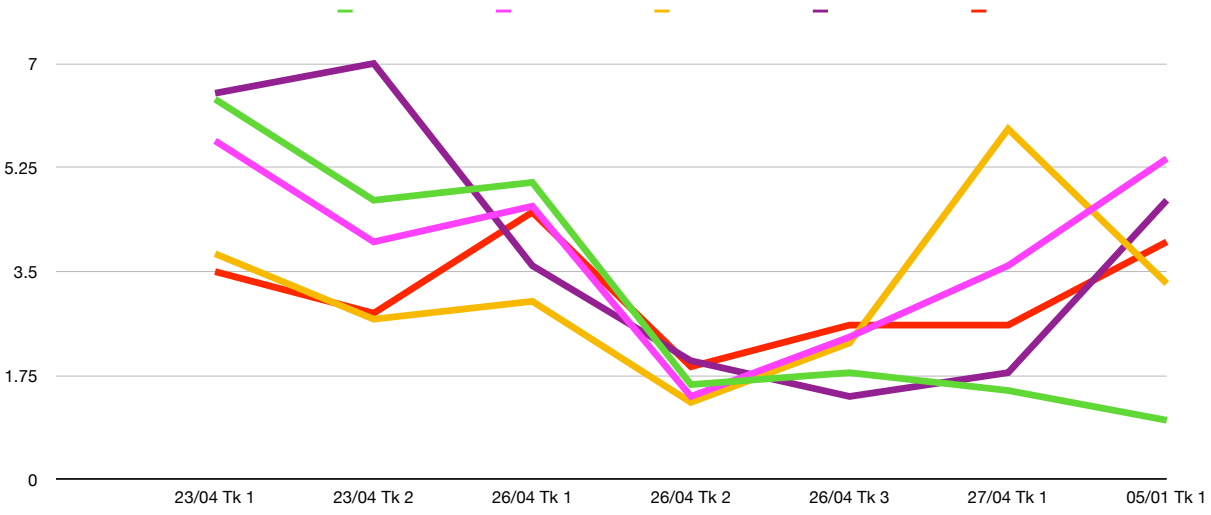



Fig. 26

*F.T.H.,* Opening Passage, Duration Comparison B

We see that on the 26/04/20, by speeding up the rate of change a notable uniformity emerged between the timings of each fingering, contrasting with the other examples, which show a greater time difference. By making a conscious

[177] See Supplementary Materials i; Files 24–30.

attempt at shaping the durational aesthetic, the embodied temporality of previous (and future) attempts were momentarily over-ridden.

To locate resistance at the first symbol is difficult, because of the conventional openness of the bore (fingerings for ca. B, C, or C#). Note that in the demonstration video, I also grimace (ca. 10'10") at the quality of sound produced with high pressure: even though the Pressure-Thread is designed to modulate the materials given, my aesthetic leanings continue to influence the process. Over the span of recordings, I spend less and less time on this instruction, the first figure of the piece (see fig. 25).

In enactment, aesthetic decisions are made in correspondence with improvised and physical input. Whereas the purple segment shows variety, the green segment shows a *trend*. This, along with the previous example, showcases how the role of the Carrier, both curatorial and reflective, couples with the other actors to lead to an observable change in results, in this case a gradual decreasing of the time spent on a fingering, because of the lack of 'resistance' this one direction leads to.

To accompany this point, we should also consider the cognitive and physical efforts involved in shaping note-to-note durational characteristics. Certain physical arrangements may require more cognitive-processing due to their unfamiliarity, leading to slightly longer intervals. This is especially observable in the first four recordings, as the durations gradually get shorter and shorter.

Although this analysis forms an observation that is situated at a particular moment of practice, it is not entirely representative of my total experience working with this notation. As time has progressed, my aesthetic and embodied self has continued to grow and adapt to an ever-changing environment, as evidenced by improvised and recorded performances undertaken in 2020, where approaches encouraged by *F.T.H* that are present later in the year, are missing from the earlier. How a notation unfolds in one period of activity will contain its own lines of development and narrative: it is historically situated, with its own outcomes.

## Pitch Variance

*F.T.H.* also encourages a wide range of pitch outcomes. Its in-built modularity maintains the possibility for the preparatory domain to remain open to change, so as to avoid goal-orientated outcomes. Although each fingering has multiple possibilities, it is perhaps the Pressure-Thread which offers the widest scope for development.

Spectral pitch analysis provides us with clear evidence that there is pitch variance in each recording. Here we can see the immediate variance between two samples taken from the same day (see Figs. 27 & 28):

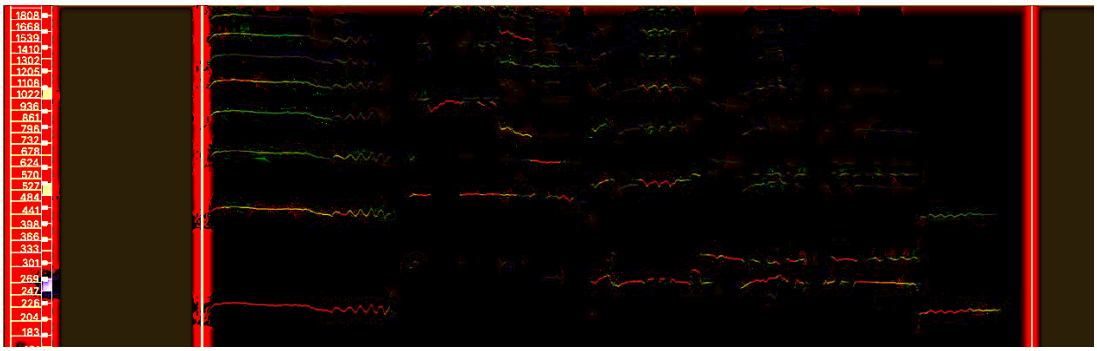


Fig. 27

*F.T.H.,* Page 1 Opening Passage, 23/04/20 Tk 1, Pitch Variance

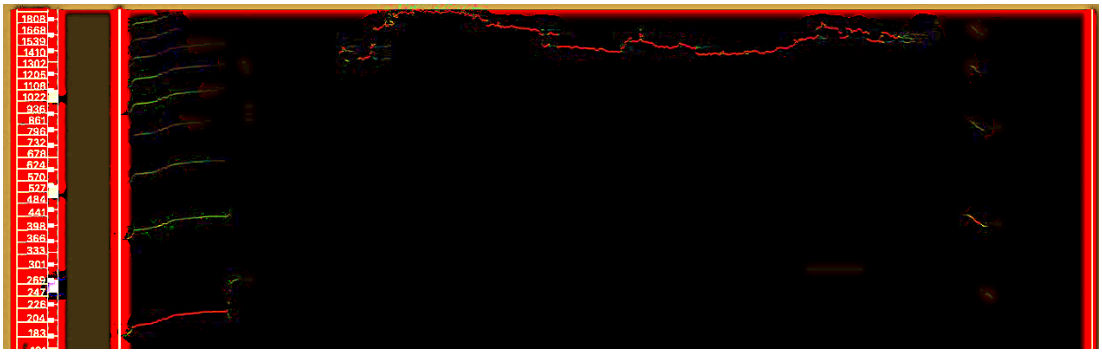


Fig. 28

*F.T.H.,* Page 1 Opening Passage, 23/04/20 Tk 2, Pitch Variance

Though **Fig. 28** shows pitch movement that briefly correlates with the notation at this point (see Fig. 22), the Pressure-Thread causes a high amount of variance, with the second, third and fourth directions containing higher frequencies, in contrast to **Fig. 27.** However, the opening statement (first instruction) shows the location of pitch to be similar (+/- concert A, 220 Hz), pointing to why I gradually spend less time on that part of the notation.

Fig. 28 also demonstrates an interesting characteristic of the instrumental parameters functioning together. Although Fig. 27 shows finger movements leading

to the resultant pitches, in Fig. 28, the oral cavity encourages much higher pitch which, because of its intensity and register, overrides the notated directions for finger movement.

Throughout, moving pitches heard on top of a fundamental can be observed, examples of which pocket the preparatory recordings that have been provided. However, it is particularly evident in the opening minutes the complete recording from 11/02/21[178] in addition to this previous visual representation of pitch:

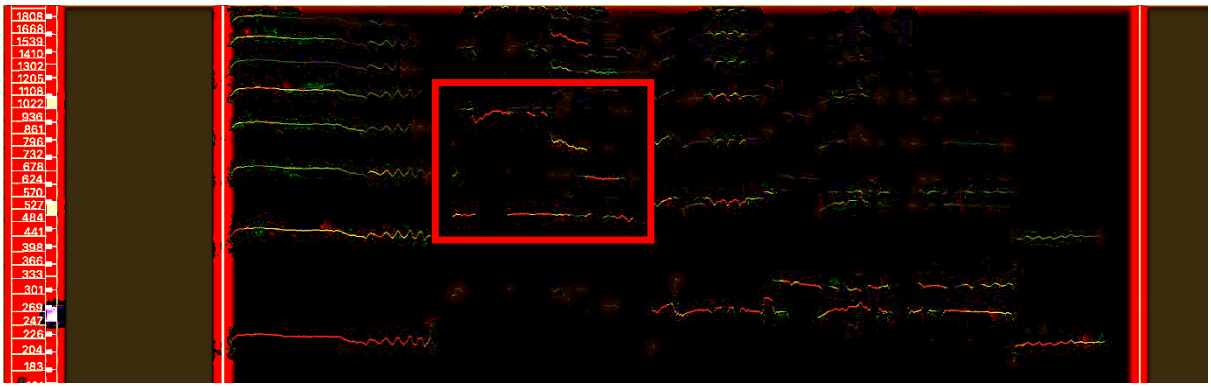



Fig. 29

*F.T.H.,* Page 1 Opening Passage, 23/04/20 Tk 1,
Moving Pitch on Fundamental

[178] See Supplementary Materials i; File 23.

## Account of Complete Readings

*F.T.H.* directs the transition from the use of notated materials to improvisation. To observe this in practice, I will present an account of four complete readings, two taken from June 2020 and two from February 2021. I draw upon the closing stages of the recordings, focussing upon various qualities that differentiate them.

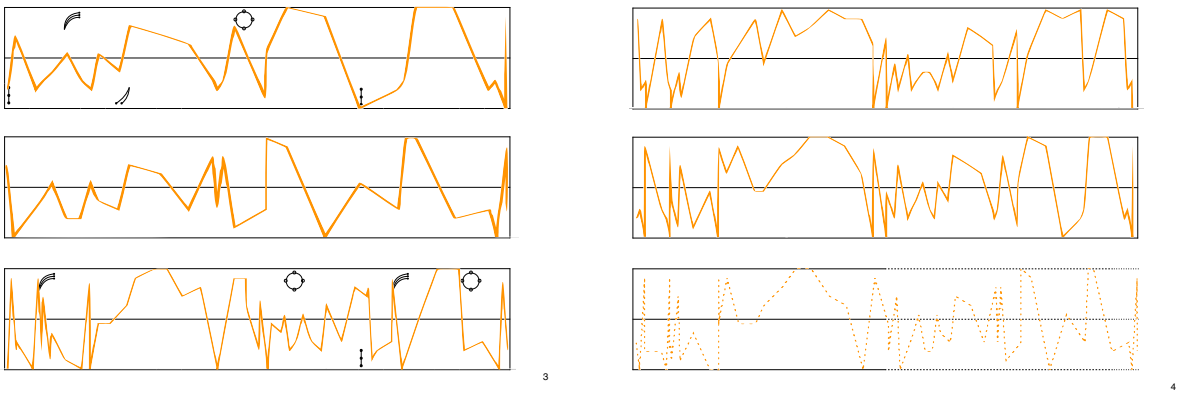


Fig. 30

*F.T.H.,* Part 4 (4) Extract

Outcomes pointed towards different aesthetic criteria at play. In the latter stages of the scheme, the recordings from June 2020[179] feature the use of tongue-generated articulation, the use of the voice and the use of generally faster finger movements than heard earlier in the scheme. This leads to more abrasive sonic and gestural qualities than those found at in earlier recordings.

This contrasts with the versions recorded in February 2021,[180] which feature much

[179] See Supplementary Materials i; Files 31 & 32.

[180] See Supplementary Materials i; Files 23 & 33.

more homogenous transitions from the earlier to the latter stages. Although the use of an extreme pitch range and fluid finger movements remain, in general there is not as much use of the tongue or voice. The texture makes for a smoother terrain upon which the Pressure-Thread is explored.

Interpretation of the last page produced durations of ca. 05'36", 01'54", 02'02" and 02'56", again, demonstrating the ability of the notation to contribute towards varied outcomes. However, although a complete reading has no absolute time limit, all of the four recordings here last between 35 and 37 minutes. That none of the total durations last for longer points highlights an important characteristic of *F.T.H.*: it is very tiring to play! Combinations of sustained durations and a wide pitch range led to the latter stages being challenging. For example, one can observe an audible fatigue in my embouchure at ca. 35'00" on the recording from 17/06/20.[181]

This overall durational consistency suggested that the notation contained a kind of 'embodied temporality'. This is to say that I, with my particular physical and aesthetic thresholds, actively mediated the notation, as it did the same in opposite. As such, instead of working towards a determined 'goal', as with *L.S.*, *Tin Paths* and *Shadow(s)*, the durational outcomes documented here were the result of the practice assemblage's parts corresponding with each other.

It is possible however, that the durational characteristics could radically change in the future. Although the notation presented here is fixed, this does not preclude

[181] See Supplementary Materials i; File 32.

itself from revision. Of more relevance perhaps is the physical and aesthetic condition I find myself in. As I noted earlier, fatigue played a large part in how long the recordings lasted. Therefore, if my physical condition improved, it would seem that I might be able to extend the amount of time taken on a reading.

## Emergence of the work in other Activities - Methodology

Activity away from the notation highlights the processes it encourages. Whereas the directions for *L.S.* encouraged a transition away from the notation in performance, *F.T.H.* instead transitions itself into other, concurrent activities. To embark upon its scheme serves to maintain a collection of processes that helps to unveil new, unknown outcomes. Therefore, a key methodological difference with *L.S.* emerges (see Fig. 31):

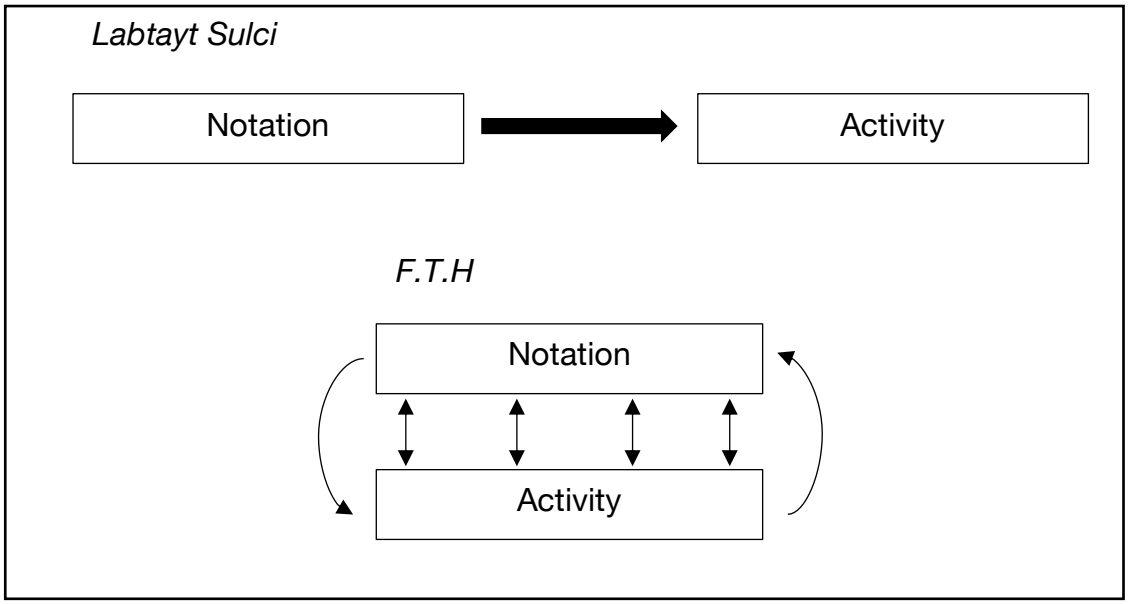



Fig. 31

*F.T.H.,* Methodological Differences to *L.S.*

*F.T.H*. was largely conceived and engaged with in the first UK lockdown of the Covid-19 pandemic. Because of this, it was initially difficult to gauge the impact this notation would have on instances of performance. However, its influence can be felt on recordings curated and produced by pianist Kit Downes at that time. *'Vewes'* (2018)[182] is a pitch based piano composition of my own that served as a loose framework for a collage of remotely recorded improvisations. We see evidence of *F.T.H.* through my use of the Pressure-Thread, which encourages the movement of pitches above a fundamental, for example ca. 00'47".

As the lockdown eased, I eventually compiled an album of solo improvisations taken from two consecutive days of recording in Marsden Mechanics Hall, Huddersfield (*'Beetle and Bail'*[183]). The recordings are a much clearer document of how the previous work done for *F.T.H.* impacted upon my solo, improvised practice. Although there is an abundance of different techniques and approaches not necessarily heard in the solo recordings of *F.T.H.*, the use of non-conventional fingerings and their subsequent modulation by a pressure parameter can be heard throughout, particularly in *'Swege'* at ca. 03'25".[184]

[182] Downes, Kit, Tomas Challenger, Lucy Railton and Petter Eldh. "Vewes." Soundcloud Audio, 2020. https://soundcloud.com/kitdownesmusic/vewes1. See Supplementary Materials i; File 34.

[183] Challenger, Tomas. "Beetle and Bail." Recorded July 2020. Sche-ima Records 004, 2021, Compact Disc.

[184] See Supplementary Materials i; File 35.

**Summary**

In this stage of analysis, I have shown that the notational scheme encourages a wide potential for pitch characteristics and instrumental resistance, encouraging a tactile approach to negotiating the scheme. The physicality of instruction and aesthetic curation (the Carrier) both lead and are led by the notation, leading to various durational outcomes. The variation in this area highlights the conception of this notation as a Dynamic Surface.

*F.T.H.* also reveals the carrying in a different light, where 'aesthetic' trends are observable. Some of its wider implications (the Pressure-Thread, for example) were also apparent in various performances that took place concurrently, highlighting methodological differences to *L.S*.

There are outcomes that might also benefit from reflection, however. Although there isn't a requirement that that the notation should be performed from beginning to end, it should be pointed out that a complete reading led to levels of fatigue that meant continuation was difficult. A possible response to this would be to simply continue work upon the area of stamina (where the fruit of such labour is evident in the solo works of Evan Parker, Anthony Braxton and Roscoe Mitchell, for example), or structure preparation like a performance, with rest intervals etc. Perhaps unsurprisingly, I found the stamina this piece requires acted as a useful conditioning tool in itself.

However, that my physical and aesthetic condition is in continual flux would seem to suggest that the temporal qualities of *F.T.H.* are not fixed, but rather, they might develop and change as it is explored in the coming years.

# 2.4 *T-R* (2020)

## 2.4.1 Overview and Activity in Preparation

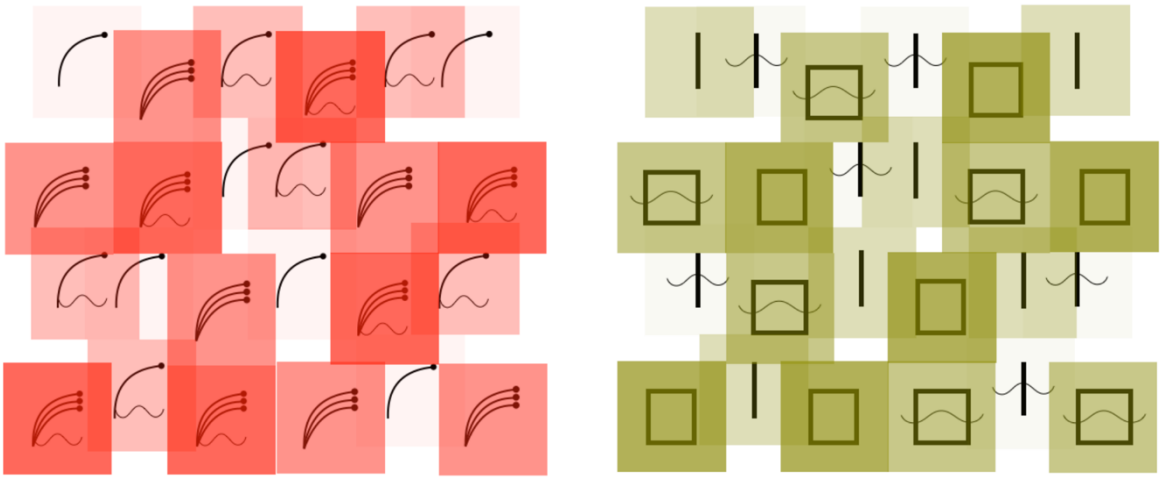


Fig. 32

*T-R* Score, Extract

As a Dynamic Surface, *T-R*[185] re-configures the body's positioning towards the instrument, with regards to holding and control, whilst continuing a 'zonal' approach towards notation, seen in *F.T.H* (see Fig. 19, Ch. 2.3.1).

The most noticeable development is the positioning of the hands upon the saxophone (see Fig. 33), de-coupling them from their positions as per instrumental design. In doing so, embodied, digital patterns are transposed to another area of the instrument, de-centering them, to provide the basis for a new approach.

[185] See Supplementary Materials ii (Scores), pp. 276.

This is brought into further focus by the visual de-coupling of the notation, where instructions for each appear in distinct partitions on the page, rather than a modified L-R 'stave' (as has been the case so far). The aim, like *F.T.H* is for the notation to foreground an approach that is both body-led and the result of real-time decision-making.

Fig. 33

*T-R*, Hand Positioning

## Surface Control/Breaking[186]

Previously, *L.S.* encouraged the parametrisation of various strands of my instrumental technique, leading to sounds that seemed, quite literally, broken. I trace the idea of 'breaking' to one of my formative experiences in free improvisation. in 2006, I was lucky enough to be invited to improvise with percussionist Charles Hayward, bassist John Edwards and saxophonist Lol Coxhill. On arrival, I was

[186] See Supplementary Materials i; File 62. "*T-R*: Overview Demonstration."

struck by Lol ‘rebuilding’ the crumbling neck of his soprano saxophone with bits of tissue and tape. Although his saxophone was far from functional (in the traditional sense), he went on to explore the subsequent agencies of the setting and ‘broken’ instrument in a way that has evidently stayed with me.

*T-R* extends this idea to the mechanics of the saxophone itself, where physical configurations that produce stable sounds are re-configured in a way that necessitates an improvised response. Although the main column of the saxophone is ‘broken’, or partitioned every time a key is depressed, as a mechanical entity it relies on pads, tone holes, pillars, springs and the main stack all being in a relatively stable alignment to produce a consistent sound. However, when these elements fall out of shape, the physical surface of the instrument suffers, and pads become slightly displaced from their tone holes. *T-R* is an exploration of the outcomes of this state. As such, the scheme directs certain levels of key depression, some of which determine the pad resting just far enough away from the tone hole that an effective ‘breaking’ of the horn takes place.

Additionally, the design of the saxophone means that mechanisms are not consistent across the instrument. Some fingerings achieve their pitch by leading mechanisms to lift pads off the instrument, whilst others depress pads. *T-R* has a uniform finger ‘pressure’ scheme, meaning different things for each hand.

For The left, pressure leads to:

- Ascending pitch characteristics
- Less pressure = breakage is more subtle, likely to cause unstable sounds
- More pressure = breakage is more pronounced, similar to conventional technique

For the right, pressure means:

- Generally descending pitch characteristics (with one exception – discussed below)
- Less pressure = breakage is more pronounced, similar to conventional technique
- More Pressure = breakage is more subtle, more likely to cause unstable sounds

The altissimo G key is an exception, as it lifts and depresses keys controlled by both hands: this key bridges both.

## Notational specifics/Directions

The notation can be read vertically, horizontally, diagonally and non-linearly in all directions. Examples of the routings I take through the notation in preparation are included in the appendix.[187]

In contrast to *F.T.H.*, the notation establishes the pressure parameter (Pressure-Thread) using overlapping shaded boxes. Where the shading is light, the pressure applied to the key is soft, increasing incrementally as the hue darkens. The overlapping shadings encourage a fluid sense of transition, and their visual arrangement may, if desired, represent levels of proportional direction (see Fig. 35). The notational symbols carried over from *F.T.H.* are slightly modified, the main addition being the curved line on some symbols, which encourages finger/hand movement to take place within the perceived boundaries of the pressure parameter (see Table 3). Directions for the octave key are absent.

| | |
|---|---|
|  | L.H. side key to be used; L.H. side key to be moved according to notated pressure. |
|  | Combination of L.H. side keys to be used; Combination of L.H. side keys to be moved according to notated pressure. |
|  | R.H. side key to be used; R.H. side key to be moved according to notated pressure . |
|  | Combination of R.H. side keys to be used; Combination of R.H. side keys to be moved according to notated pressure. |

Table 3

*T-R*, Notation Meanings

[187] See Appendices 5.1-5.4, pp.216 – 219.

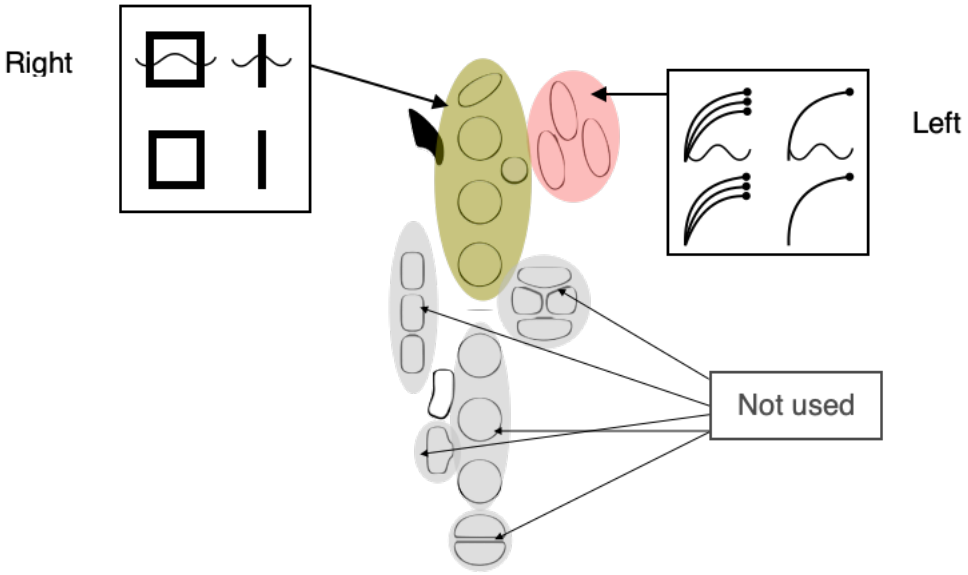



Figure 34

*T-R*, Notation and Use of Hands, Diagram

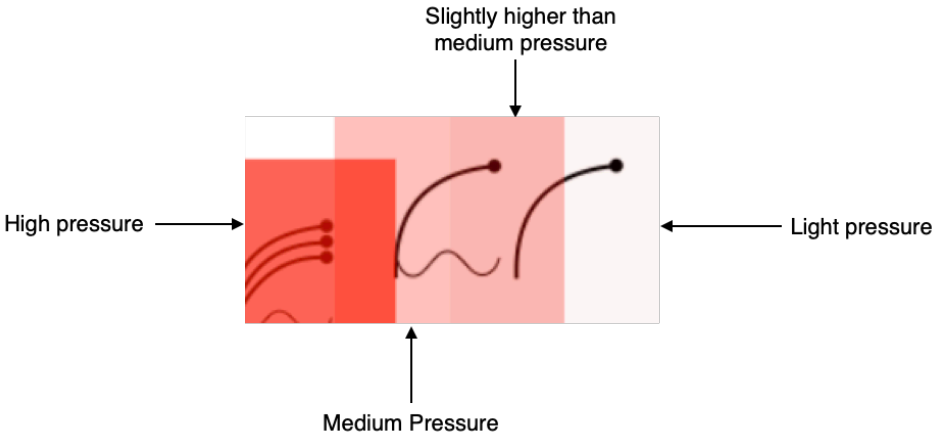



Figure 35

*T-R*, Pressure Shades.

## *T-R:* Activity in Preparation

Preparation with this notation[188] was shaped by the contrasting methodologies developed in *L.S.* and *F.T.H.,* which encouraged aspects of organisation, whether through the arrangement of modules or choices of finger placement. *T-R* brings together these two main differences, where routing may be planned both in advance of, and in activity.

## Routing

In the planning stage, I sketched a route onto the score that would be followed. This was done without any type of pre-planning, nor was it subjected to 'chance' procedures. However, this only formed one part of its routing: the moment-to-moment choice of finger placement being the other.

## Feeling Movement – Tactile Response

One of the stipulations of the notation, that there should be movement within perceived boundaries of pressure, might be seen as a way of developing a digit-based vibrato. In fact, working with the notation established its role in a different way. The instruction became a way of *feeling* or pre-empting for ways the instrument might act in certain formations. Rather than offering a way of levelling

[188] See Supplementary Materials ii (Scores), pp. 281-282.

out perceived sonic irregularities, it provided a way to search for new, or unknown outcomes. As such, preparation focussed upon being attentive to the instrumental surface, where correspondence with the saxophone not only required a type of listening, but also *feeling* for that which was suggestive and responsive.

## 2.4.2 *T-R* Analysis: Routings and Performance

This section of analysis documents the effect that different orderings of notated materials had upon preparation, focussing upon trends within various outcomes. Additionally, I present the way that this notation becomes observable within group improvisation.

For solo saxophone, the variation of the notated materials not only lead to certain durational characteristics, but also particular manifestations of pitch and instrumental approach. As such, I hope to demonstrate how 'breakings' forward a sense of operational unpredictability, that encourages further activity.

In this section, I will (1) highlight outcomes that emerge due to routing decisions, (2) consider pitch outcomes and (3) explore how the physicality of this notation is observed in group improvisation. The three sections highlight the various roles different actors play, from the mapping out of a preparatory schematic or route (the Carrier), to engagement with fellow improvisers.

This analysis draws from four recordings made in November and December 2020.[189] For each, a pre-determined route was sketched through the notation (See Figs. 36 & 37).

[189] See Supplementary Materials i; Files 36-39.

## Routings

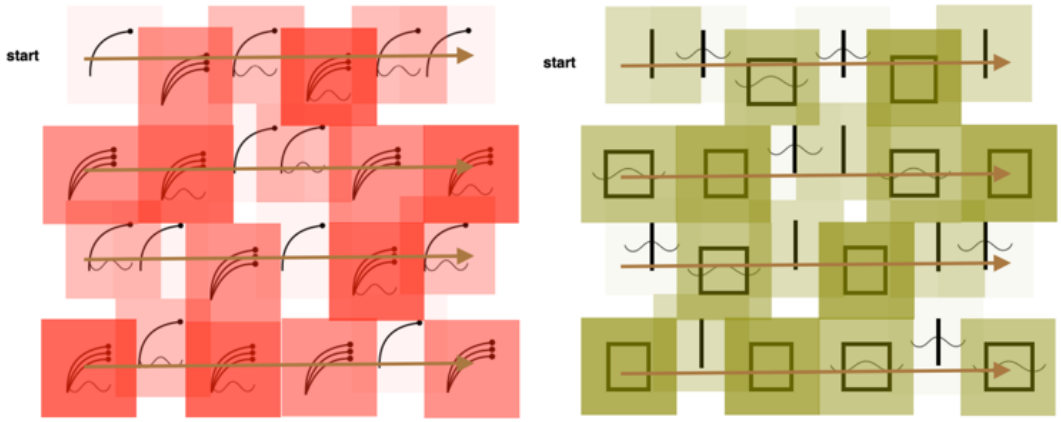



Fig. 36

*T-R,* Routing #0, 15/11/2020

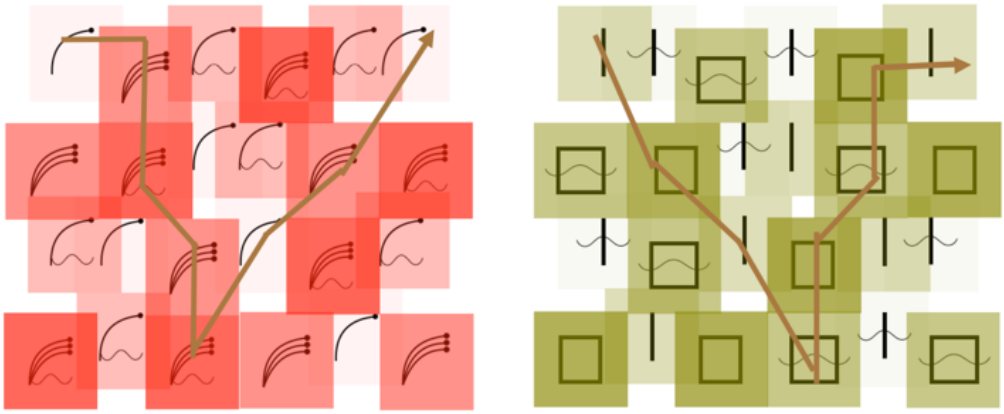


Fig. 37

*T-R*, Routing #1, 27/11/2020

The Carrier has been built into the notation using an approach that provides the possibility for actions to be conceived of both before and during enactment. Encouraging multiple routes through the notation highlighted outcomes that were productive, avoiding the uni-directional approach seen in *F.T.H.*, but holding onto some of the modularity found in *L.S.* Each of the four examples here show variety in

many areas. For example, when focusing upon simple waveforms, we can easily see their divergent outcomes, with regards to amplitude (see Fig. 38):

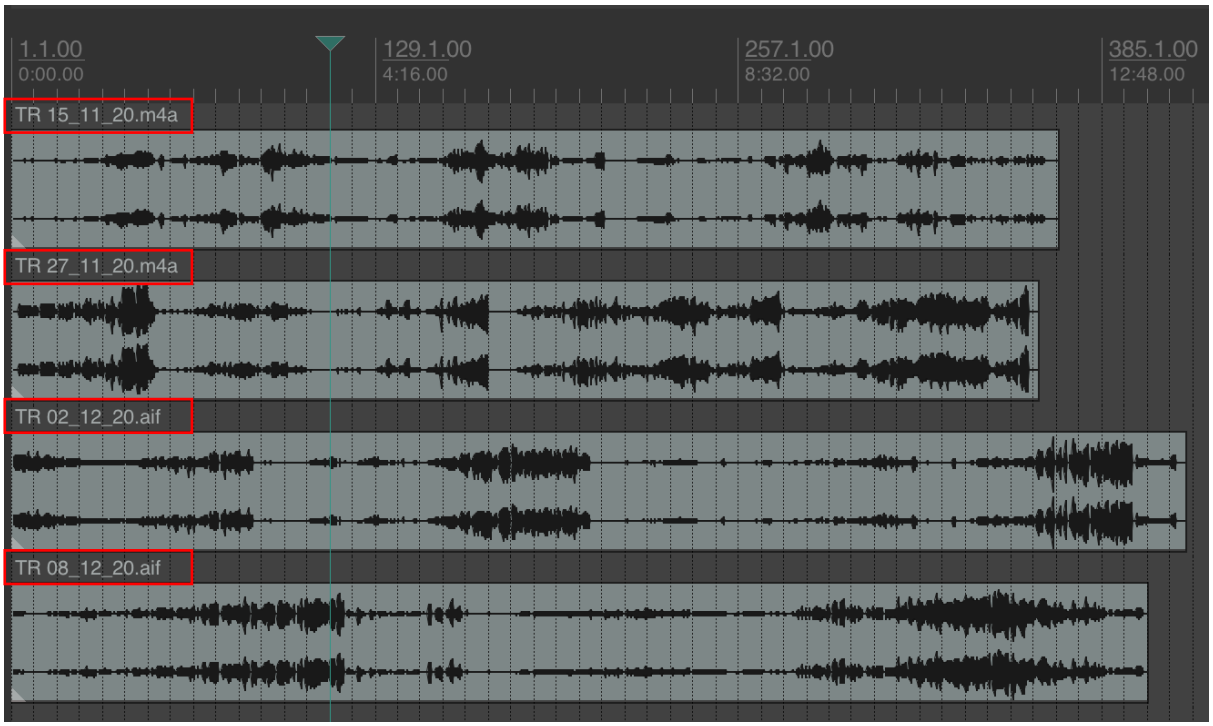



Fig. 38

*T-R*, Amplitude Comparison

All renditions are of a different length, within a ca. 01’29” time difference. Each had a different routing strategy and number of notational instructions:

| Date of Recording | Duration (mins/secs) | Instructions p.1 L.H. | Instructions p.1 R.H. | Instructions p.2 L.H. | Instructions p.2 R.H. | Total |
|---|---|---|---|---|---|---|
| 15/11/20 | 12’17” | 24 | 24 | 24 | 24 | 96 |
| 27/11/20 | 12’04” | 8 | 8 | 15 | 6 | 37 |
| 02/12/20 | 13’46” | 9 | 9 | 9 | 9 | 36 |
| 08/12/20 | 13’20” | 8 | 0 | 8 | 5 | 21 |

Table 4

*T-R*, Instruction Amounts

Interestingly, there is little correlation between the amount of instruction and the total duration of each recording. From this we might tentatively conclude that the notation forwards a set of durations that draw from my physical and aesthetic condition, first seen in *F.T.H*. Instructions are again mediated by improvised gesture to fulfil a goal-less trajectory. *T-R*, like *F.T.H.*, acts as a Dynamic Surface, its outcomes and visual determinations shaped by its enactment.

## Pitch

*T-R*'s pitch range is limited when compared with the normal range of the saxophone, because of its physical determinations. Whereas the tenor saxophone can play down to Ab2, the two hands being positioned on the upper part of the horn mean that the lowest note is now around Eb3, if lipped/throated down appropriately. Though this could be lower, depending upon the instrumentalist, this is an adequate marker for my own playing.

Therefore, *T-R* operates within a revised pitch boundary for the saxophone and acts as a defining characteristic of the notation, as would be the use of another instrument, for example. Using a spectrogram and a smoothed pitch tracker and taking an example from the first recording (*T-R,* Routing #0 15/11/20[190]) we can see this taking place[191] (see Fig. 39):

[190] See Supplementary Materials i; File 37.

[191] The points below the red line are due to ambient noises from within the room.

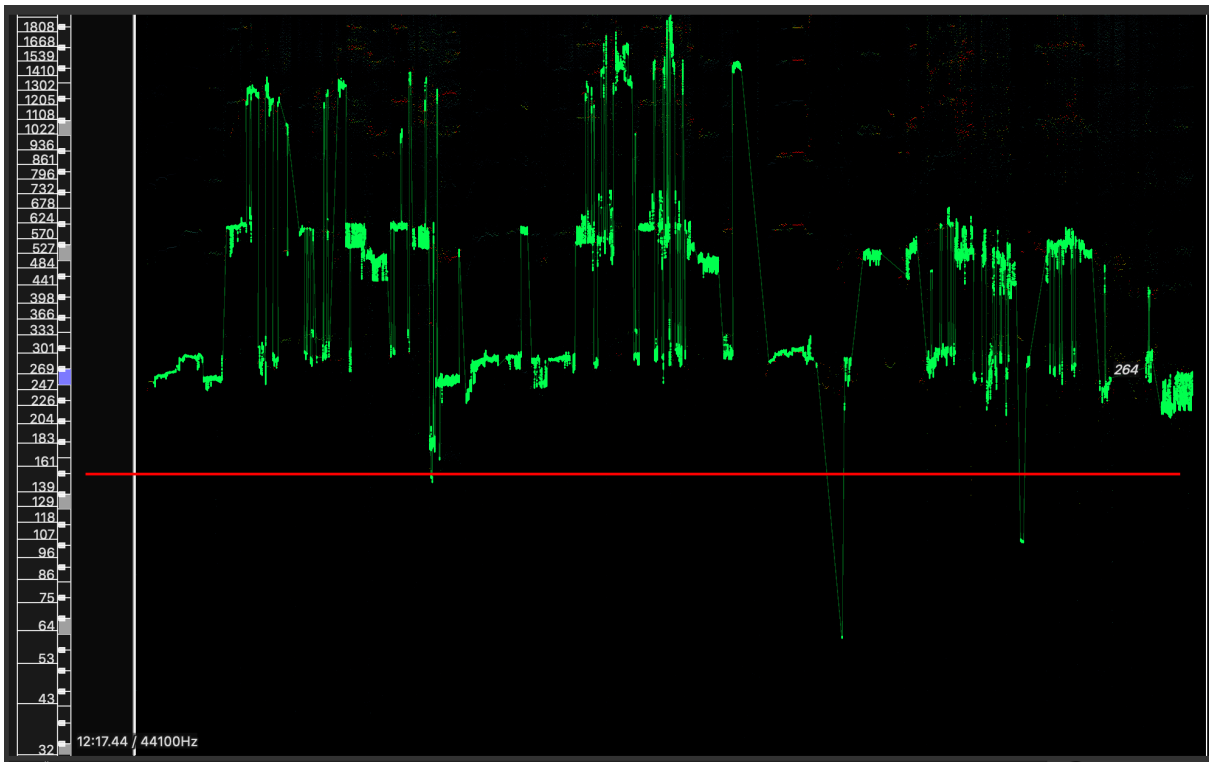



Fig. 39

*T-R*, Pitch Boundary

Like *F.T.H.*, determining the effect of the notation at specific points is difficult to achieve, because of the complexity of the action environment. Following a recording whilst referring to the score can be a difficult task. By again concentrating on beginnings and endings, we are nevertheless still able to make some observations. Taking the example of the first two recordings (15/11/20 & 27/11/20)[192] their openings are notated as such (see Fig. 40):

[192] See Supplementary Materials I; Files 37 & 38, respectively.

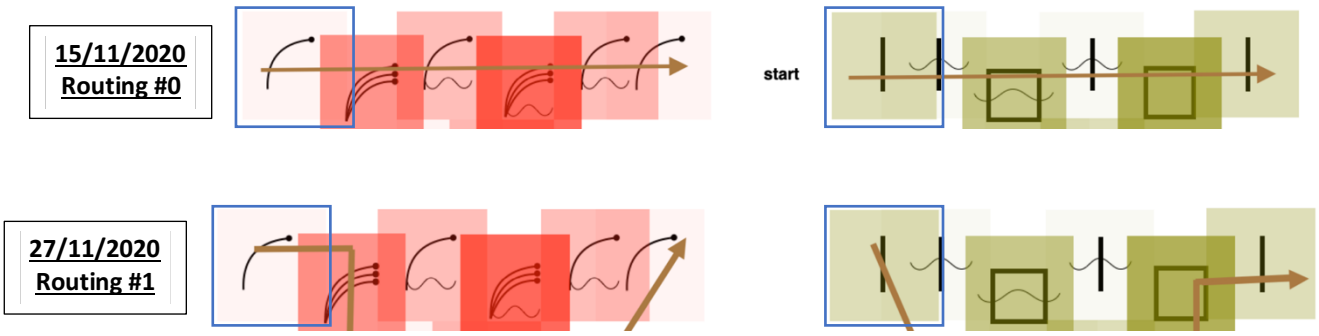



Fig. 40

*T-R*, First Two Openings, Comparison

The first instruction is for the left hand to lightly press on one of the side keys; for the right hand it is to press down, slightly harder than the left, on one key. Listening to two recordings of the same passage, we get two immediately divergent results (see Figs. 41 & 42):

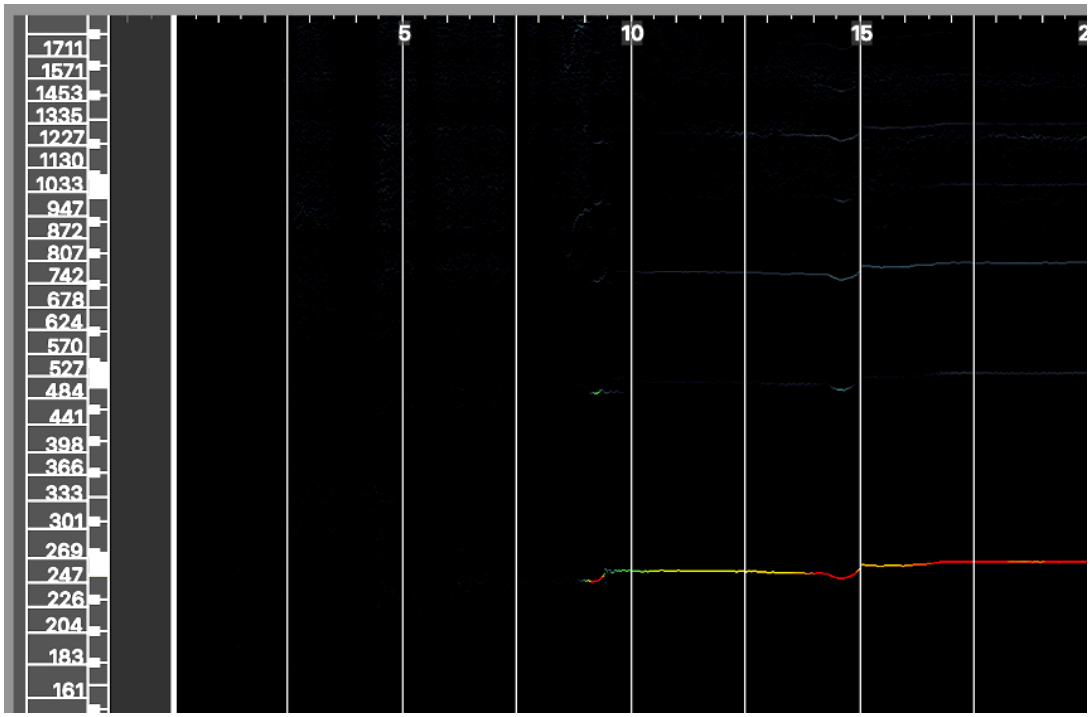



Fig. 41

*T-R*, 15/11/20, Opening

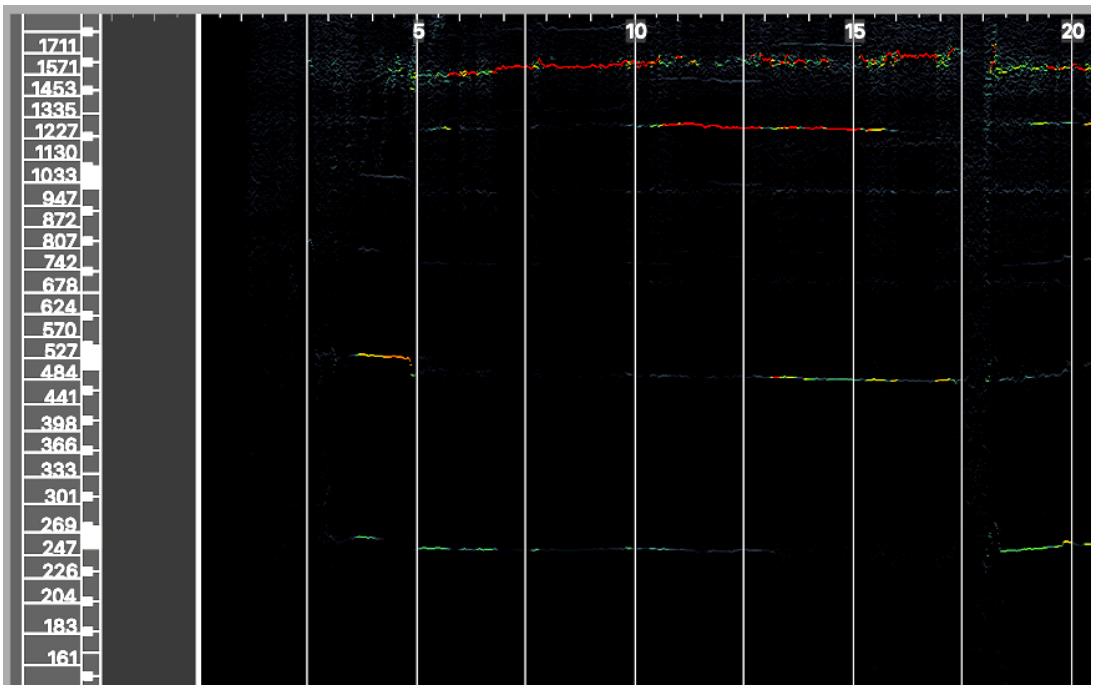



Fig. 42

*T-R*, 27/11/20, Opening

The first example demonstrates a concert C4, ascending microtonally as unplanned and non-controlled micro-movements in my hand take place. The second example is more complex, however. Although the L.H. fingering is the same (a semi-vented side D, with no octave key), the results differ, due to overblowing. For example, we are presented with high sounds (+/- E6 & +/- G6) that sound concurrently as a split tone.

With regards to pitch, *T-R* acts as a Dynamic Surface, where the same instructions lead to varied outcomes. Additionally, the Pressure-Thread associated with *F.T.H.* is observed, in this instance ‘pressure’ from the torso which has an impact on pitch outcomes. The notated Pressure-Thread is firmly situated in the digital realm (within the hands), however. Other pressure characteristics from other notations such as

*L.S.* and *F.T.H.* can be utilised as improvised materials, so as to locate the necessary pockets of resistance in order to continue.

## Trends

Again, trends emerged whilst reviewing the recordings. Various multi-phonics and split tones were present throughout, forming a major textural component of the notation. The location of resistance was key to negotiating this notated and improvised terrain, the subsequent artifacts forming the outcomes of this process.

*T-R*'s physical configuration had a large impact upon the overall use of pitch. The use of the three L.H. side keys present the hierarchies inherent within the design of the saxophone, in that their pitches (concert C – Eb) generally dominate the R.H., leaving a potentially small pool of pitches from which to draw from. We see this in activity (see Fig. 43) through the visual representation of 'pitch bands' upon an ascending frequency spectrum, the result of those fingerings being used with the octave key and different throat/jaw positions which enable overtones:

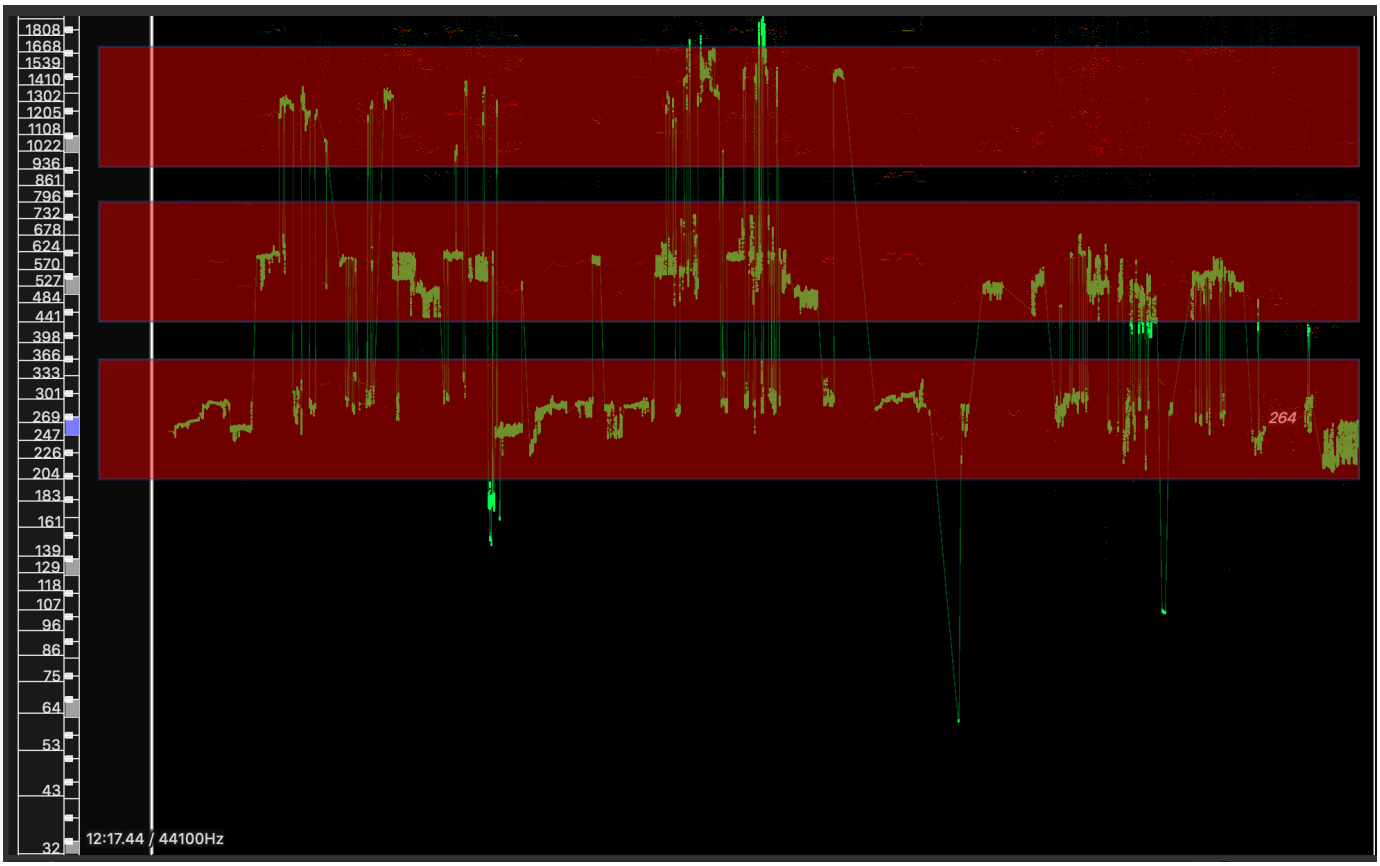



Fig. 43

*T-R*, Pitch Bands.
27/11/20, Opening

### 2.4.3 *T-R* in Group Activity

A central question in this research has been how the notations emerge in group activity? There are various reasons for asking this. The first is that group improvisation forms most of my day-to-day musical activities: if the notations contribute positively to this endeavour, it would seem their development has been worthwhile. Second, if the notation is to be observable in a much larger assemblage of performers and materials, we should be able to observe some of its main traits, whether physical or sonic.

The Covid-19 pandemic led to a curtailing of ensemble activity from March 2020. Retrospectively, the irregular activity that did happen presented itself as a fertile environment for research, free from the background 'noise' of everyday, pre-pandemic musical activity. As such, although the two recordings I refer to in this section weren't intended to form part of my research, they *emerged* as candidates that would help contribute to some of the overarching themes of this thesis.

Improvising alone is very different from improvising in a group, which, as outlined in the contextual overview, requires its own practical strategies (see Ch. 1.2.4). How this assemblage of parts entangles with, or merges itself into a new assemblage presents a lens onto the ongoing relationships between my notated works and the nature of enactment as both a solo and group-based process. Therefore, ensemble conditions provided a fertile space within which a retrospective 'stress-test' of the solo work I have undertaken could take place, so that we might observe whether

any structural and behavioural qualities could be transferred into another assemblage.

The two performances provide contrasting sets of conditions to make observations with. They took place within a month of each other and the solo recordings:

| Format | Trio 1 (20/11/20) | Trio 2 (14/12/20) |
|---|---|---|
| Instrument 1 | Saxophone | Saxophone |
| Instrument 2 | Double Bass (Olie Brice) | Piano (Alexander Hawkins) |
| Instrument 3 | Drums (Will Glaser) | Drums (Mark Sanders) |
| Curator | Olie Brice | Myself |
| Location | The Vortex Jazz Club | Trinity Laban Recording Studio |
| Audience | Yes (Online Stream, Technical crew) | No |
| Repertoire | Yes: four originals by Olie, alongside Eric Dolphy's *'Gazzelloni'* and Johnny Dyani's *'Wish You Sunshine'*. | No |
| Rehearsal | 30 minutes 'Zoom' conference; 45-minute sound check | No |
| Playing duration | ca. 57 mins | ca. 1 hour 53 mins |

Table 5

*T-R*, Ensemble Comparison

## Trio One[193]

The trio that Double Bassist Olie Brice convened for this concert had never previously played together, despite all having played together at other times. The concert was online 'streamed' event, with minimal preparation which was limited to a 30-minute Zoom conference call the night before the performance, as well as a brief run through of materials during a 45-minute soundcheck.

The outlines of the performance set by Olie were not unusual for me, nor for drummer Will Glaser. There was space for group improvisation and instances of unaccompanied improvisation (although I did not contribute in this way). Themes were used as starting points for improvisation, which would either return to the theme, or transition into a new set of materials.

Although the complexity of an ensemble environment makes it harder to observe the various traits of the notations so far, such as pitch information, the physical traits of *T-R* offer a path to observation, because of the way it re-configures standard saxophone technique. As pitch and durational specifics become enmeshed in the group dynamic, *T-R*'s physicality helps identify its emergence in group performance.

[193] Olie Brice, Tom Challenger and Will Glaser. "EFG London Jazz Festival Olie Brice Trio – Live Stream." Vortex Jazz Club. November 22, 2021. YouTube video, 03:14-58:10, https://youtu.be/mv9o2xLCRmQ?t=194.

## Enacting *T-R*,[194] Trio One

Traits of *T-R* can be observed in the performance. Taking the physical positioning of my body as the primary indicator of its use, *T-R* became evident in the complete performance at ca. 25'40" - 27'10",[195] nested in a group improvisation that segued out from a rendition of Brice's composition "Fire Hills". As with the previous results in solo activity, my general volume with this physical approach is reduced, especially when contrasted with the activity leading up to this point. When in position, physical movements are difficult to determine due to the camera and intermittent angle changes. However, gradual finger movements begin to occur in the R.H. at ca. 26'13", as well as in the L.H. at ca. 26'48". Split tones and multi-phonics are present, as they are in much of the solo recordings. However, although they take place at low volumes, the general ensemble direction at this point supports this activity.

What, or who instigated this 'phase' is unclear and there are key events that could point as to why we all moved in this general direction. One possibility is the introduction of arco bass followed by my subsequent move towards *T-R*. Whatever the reasons we may attribute, this was the context that *T-R* emerged in group activity.

[194] See Supplementary Materials i; File 63 "Enacting *T-R* (Olie Brice Trio)"

[195] See Supplementary Materials 1; File 64, "Olie Brice Trio at The Vortex Jazz Club: Complete"

Retrospectively, recording a post-performance account of my and others' experiences might elaborate as to why this event happened: this was just a 'gig' and not yet a designated research space. However, it did present itself as a neutral environment within which the ongoing activities I was pursuing were able to emerge without pre-planning.

## Trio Two

This trio consisted of myself, Alexander Hawkins (Piano) and Mark Sanders (Drums). There was no material or rehearsal for this recording, which yielded six improvisations and an album, *'Imasche'*.[196]

The six improvisations recorded on that day varied in length, between ca. 09'30" and 31'30". Instruments were approached in a variety of ways: Alex utilised various objects to momentarily 'prepare' the piano and Mark used a variety of cymbals and gongs,[197] as well as his own drum kit and various types of drumsticks. There weren't any directions given before-hand, nor were there any conscious visual directions given during performance.

This recording differed to the previous example, being curated by myself. As I was still firmly entrenched in activity surrounding the solo readings of *T-R.*, the likelihood that the notation might emerge in activity would seem to be heightened, especially

[196] Tom Challenger, Alex Hawkins and Mark Sanders, "Imasche," Sche-ima 005, 2021

[197] See Supplementary Materials i; File 40.

considering the outcome of the previous trio's performance. That said, there was still no pre-planning of where it might emerge, with no communication amongst the musicians about this beforehand. In fact, there was a comfortable ambiguity to discussions during the set up as to the possible outcomes of the recording, whether it be research, a release or something else. In a sense, this represents the non-goal orientated nature of this practice.

## Enacting *T-R*, Trio Two

This section focusses on the second improvisation (*TanN*[198]) recorded that day, the longest, at ca. 31'30" (see Fig. 44). The red lines delineate the parts of the performance where I was left by the others to play alone. *T-R* emerges in its physical formation for around ca. 4 minutes at 16'35" (red/green box). The other two sections of solo saxophone, do not include the physical characteristics of *T-R*.

[198] See Supplementary Materials i; File 41.

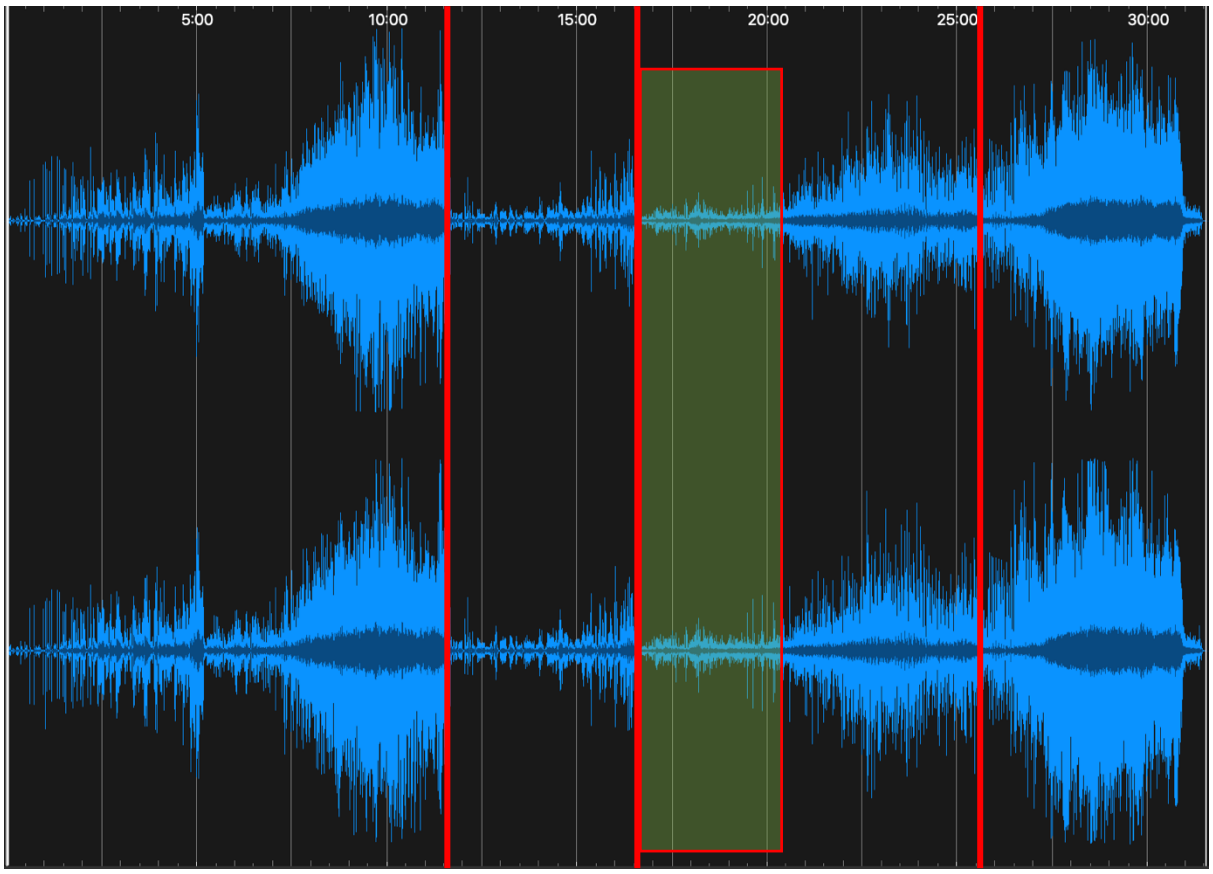



Fig. 44

*T-R*, Solo Within Group Improvisation

In a marked difference from the previous Trio, I begin to develop *T-R*'s physical stipulations. **In the edited video,**[199] I join the end of a drum and piano duo, at which point we hear some of *T-R*'s traits such as split tones/multi-phonics, low amplitude, gentle physical movement, and hand positioning as envisaged by the notation. However, characteristics that are not evident in the solo recordings are displayed at 01'38". My hand movements become more frenetic, leading to the saxophone being pushed from the stable contact points of my mouth and torso. As one hand makes an action, it pushes the saxophone against the other, forcing a slight alteration of

[199] See Supplementary Materials i; File 65 "Enacting *T-R* (Challenger, Hawkins and Sanders)"

venting and subsequent pitch outcome. This movement also impacts upon the way the saxophone rests in my mouth, causing change in timbre and frequency.

I also develop the function of the left hand, altering my approach to the key work that leads to a much more rhythmic outcome. We see evidence of this in the video at 00'45". Additionally, a similar event takes place at 05'28"[200] on the last recorded improvisation from that day (*GesS*[201]), revealing a clear example of how performance can act as a type of preparation in Enactment.

## Summary

The two performances highlight the preparatory work undergone, where the stipulations of *T-R* clearly emerge in performance. Though it is all but impossible to ascertain as to why the notation emerged when it did, there are correlative factors to be considered, for example the relative quietness of those sections.

The performances served to highlight how the notation has acted as an extension to the other embodied and cognitive aspects of my playing. Its concepts are correspondent with my improvising self, where physical developments took place in real time, leading to new approaches that were further developed in subsequent

[200] See Supplementary Materials i; File 42.

[201] See Supplementary Materials i; File 40.

improvisations.

Though variation in its notated form took place in preparation through the implementation of different routings, its emergence in group activity reflected different priorities, such as the maintenance of split tones, multi-phonics and non-tempered frequencies.

Therefore, I believe *T-R* has been of use to my improvised practice, in that it encourages activity in preparation that leads to new approaches and outcomes in solo and group activity. Although it was devised for solo activity, its emergence in group contexts demonstrates how it was able to be observed in activity.

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# Chapter 3: Appraisals and Conclusions

## 3.1 *Labtayt Sulci*

*L.S.* amplified various modes of activity associated with Jazz and Improvisation (outlined in the contextual review), most notably, highlighting preparation as a crucial part of the creative process and basis of musical identity. To understand *L.S.*, we need to consider its temporality not just as a 15-minute performance, but rather as a narrative forged over a larger period of time.

Firstly, to address one of the research queries, how, and to what extent did this notation emerge in various modes of performance? Secondly, as the relationship between improvisation and notation demonstrated fluidity, the need to find relevant theoretical paradigms to advance future work was highlighted.

The analysis shows that *L.S.* had an observable effect on solo performance, with qualities such as pitch phases and parametric independence observable (see Ch. 2.1.3). Preparation and performance within enactment demonstrated interchangeability, their relationship to one and another *changing over time.* As such, forwarding physical and sonic arrangements that are the result of process rather than rehearsed configurations, the possibility for unknown outcomes increased.

The methodology embedded within the notation encourages characteristics that contribute to both conscious and non-conscious activity. It acts in the same way methods of accumulating and assimilating material knowledge, such as transcription and interpretation, act for me and other improvisers: it is part of an active reservoir of knowledge that can be drawn upon at any time, which the performance at the Cockpit Theatre demonstrated (See Ch. 2.1.3).

The fluidity between components asks us to rethink fixed category. For example, as other parameters actively impact upon pitch (see Ch 2.1.3), we might therefore ask ourselves: at what point do they become part of the pitch environment? Relatedly, the dichotomy of composition and improvisation provides another instance of this problem. If, as Hawkins asserts (see Ch. 1.2.2), they are both positioned on a spectrum, at what point does one cease to hold its designation and become the other? Or as Rhodri Davies alludes: " […] where does one start and the other stop?"[202] Although I believe them to be fundamentally different processes, *the possibility for them to become 'other' should be retained*. Determining category over the course of enactment would seem to be prohibitive to potential outcomes.

[202] Rhodri Davies, "The practice of Musical Improvisation: Dialogues with Contemporary Musical Improvisers," ed. Bertrand Denzler & Jean-Luc Guionnet, (London, New York: Bloomsbury Academic, 2020), 104.

## 3.2 Transition: *Tin Paths* and *Shadow(s)*

Overly determinate and/or complex notated instruction highlighted the possibility that certain outcomes might be neglected. Applying some of my observations of *Tin Paths* to the writing of Tim Ingold enabled an understanding of how future notations might join with an improvisatory practice. To begin, he presents a global view of a 'skilled' practice as:

> "[…] a question not of imposing preconceived forms on inert matter but of intervening in the fields of force and currents of material wherein forms are generated."[203]

Here, Ingold offers a broad view of skill, which is applicable to the concerns of my practice. His view of creativity is at once wilful, but at the same time sensitive to the combined agency of the materials at play: it is engaged in a 'give and take' of sorts. Seen in the research presented here, improvised input and the reciprocal effects of the notation instigate a set of interventions for the work to advance and as such, determining the amount of time they would take place in might be seen to hinder their potential. Therefore, a major outcome from the findings of *Tin Paths* and *Shadow(s)*, was for the role of durational markers to be revised. Whilst I initially found them to be useful inclusions, a need emerged for the provision of durational

[203] Tim Ingold, "The Textility of Making," *Cambridge Journal of Economics* 34, no. 1 (09 July, 2010): 92.

flexibility within the notation, so that "currents of material"[204] would be able to take shape.

## 3.3 *For Two Hands*

In *F.T.H.*, sonic processes are formed by *tactile* responses to the notation. Ingold, differentiating between alchemist and scientist[205] provides a useful base from which to build to understand this further. Instead of understanding matter at the atomic or molecular level as a scientist does, an alchemist instead harnesses material, not by understanding "what it *is* but instead by what it *does"* [206] (emphasis mine):

> "The experienced practitioner's knowledge of the properties of materials, like that of the alchemist, is not simply projected onto them but grows out of a lifetime of intimate gestural and sensory engagement in a particular craft or trade."[207]

To make this statement applicable to my practice, we should recognise that 'materials' are not only musical but also the 'tools' that I employ: the saxophone and notation, for example. Therefore, I refer to and conceptualise 'material' as both physical (instrument, notation) and abstract (sound) entities, both of which require

[204] Ingold, "The Textility of Making," 92.

[205] Ibid., 94.

[206] Tim Ingold, *Making* (Abingdon, Oxon: Routledge, 2013), 29.

[207] Ibid.

'gestural' and 'sensory' engagement. Central to my conception is that musical materials have physical properties or character, such as the vibrations felt in the fingers and/or embouchure, and/or resistance in the diaphragm. Here we see a conflation of both tools and materials: materials as both abstract and physical entities. They can be viewed as such:

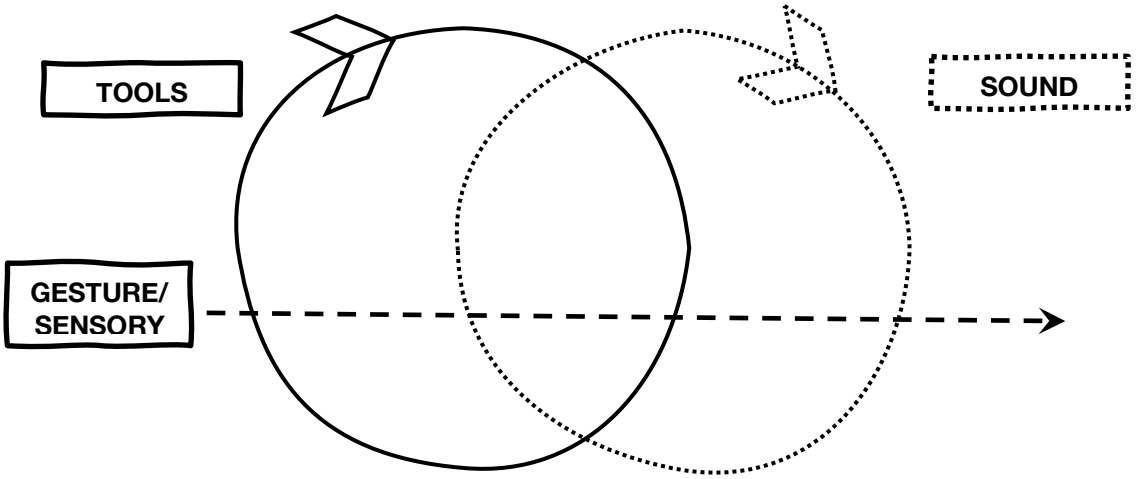


Fig. 45

Tools and Sound as Materials

Material, as Ingold sees it, is equivalent to what Deleuze and Guattari call 'matter-flow', which they describe as "[…] matter in movement, in flux, in variation", which "can only be followed."[208] As such, Ingold responds with a rule of engagement: "to follow the materials."[209] Used as a tentative metaphor for my conception of material, it is possible to see that on one hand following materials might entail responding to

[208] Deleuze and Guattari, *A Thousand Plateaus*, 476, **quoted in** Ingold, "The Textility of Making," 94.

[209] Tim Ingold, "Comment." *Overcoming the Modern Invention of Material Culture, special edition of Iberian Archaeology* 9/10, ed. Jorge and Thomas (2007): 314, **quoted in** Ingold, "The Textility of Making," 94.

musical materials just passed, and on the other, following the physical materials of the tools I utilise. As the physical materials hint at sonic outputs to come, so the movements and variations of duration and frequency can be observed and responded to (see Fig. 46):

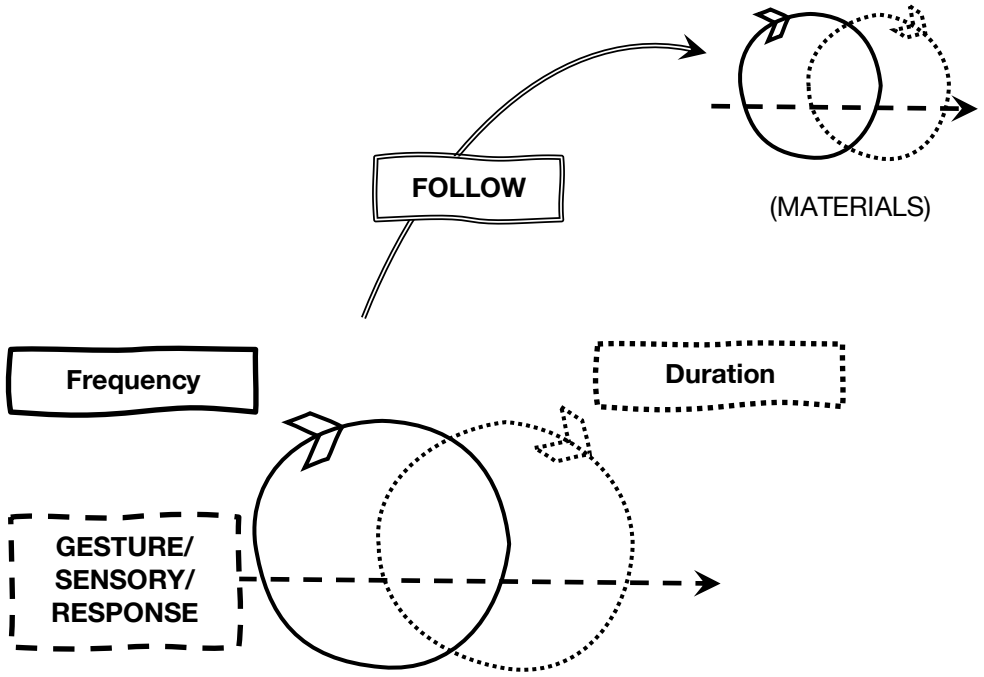


Fig. 46

Frequency and Duration following Materials

The methodological distinction I made earlier in *F.T.H.*'s analysis (see Ch 2.3.3, Fig. 31) also reflects Ingold's above passage, where process is highlighted as the primary mover in craft making. Therefore, form, the product of process, adapts as the conditions of process change over time. For the form to change over time, so the notated materials adapt relatively too, as my concept of Dynamic Surfaces addresses.

As a response to Ingold's call 'to follow the materials', subsequent durational and pitch characteristics began to be informed by the interactions that unfold between notation, instrument and my improvising self, marking a conceptual change from earlier, where these elements were determined by notation. Therefore, a necessary distinction needs to be made with Ingold's statement. In my practice, instructions both lead and are led by bodily movement, similar to Evan Parker's observation of instrument and improviser: "sometimes the body leads the imagination, sometimes the imagination […] leads the body"[210]. As such, although we might "follow the materials", *F.T.H.* also *leads the follower* (see Fig. 47).

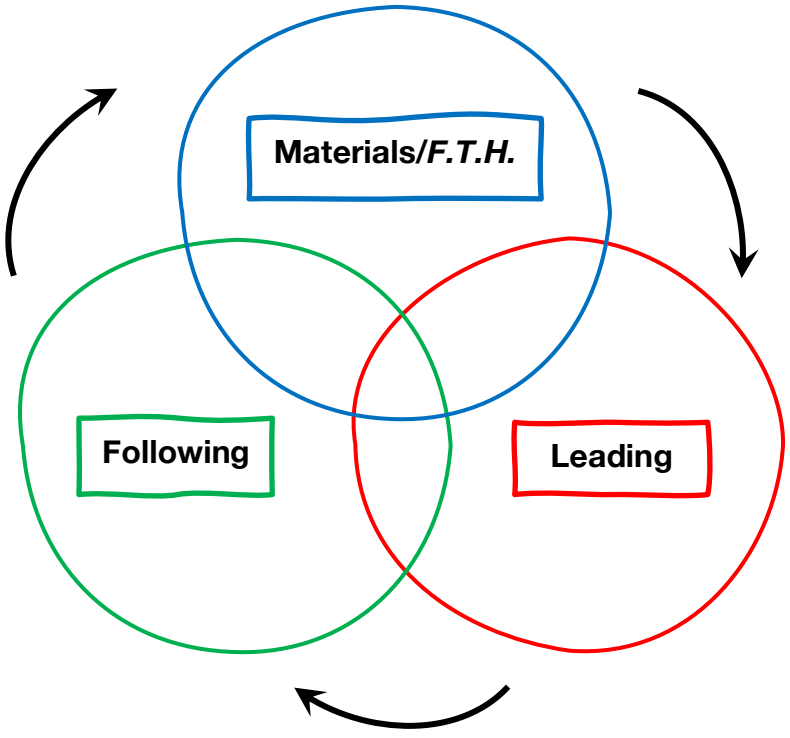


Fig. 47

Follow the Leader, Lead the Follower

[210] Parker, "De Motu."

The correspondence in-between different actors shape their momentary form, conceptually mirroring improvised performance: “A form which”, Parker says, “reflects the procedure used to produce it.”[211] Although recordings displayed recognisable qualities, such as pitch and duration, they also highlight a set of situated, or embodied qualities, which on one hand demonstrate trends in this practice-period, and on the other, suggest that they might not be immune to future development. The notation is reliant upon my short/long term physical and aesthetic condition and although I agree with Parker’s statement, an important clarification specific to this research must be made. Like improvisation, the form of *F.T.H.* reflects the *time period it was enacted*, in addition to the procedures utilised: it is attentive to its environment.

This work is undertaken without a conventional goal, unlike other goal orientated activities such as performing a determined piece of music, building a structure according to design, or taking part in a bicycle race, for example. These examples require an assemblage of elements that could, if desired, be analysed down to the atomic level. Though we could apply the same levels of analysis to the assemblage here, in terms of its aim, or its goal, there is little sense in doing so. The assemblage is aesthetically crafted to suit the needs of the work, where process serves to encourage discovery, awareness and experimentation. To summon Ingold’s discussion of Alchemy again, the work here is geared towards understanding the conditions of process (what it does), rather than what its outcomes would be. Its aim is intermediary, or liminal. It fuels the process ‘space’ within which non, or pre-

[211] Parker, “De Motu.”

goal orientated activity encourages unknown outcomes, that are then fed back into the practice-assemblage.

## 3.4 *T-R*

*T-R* confirms the methodological relevance of the schemes to my wider improvised practice. Rather than being part of a linear process in which preparation leads to a performance (*L.S.*), *T-R* acts concurrently with other activities. Here, preparation is outcome, and outcome is preparation. With relation to the theoretical overview, there are two remaining areas that should be addressed. The first is to address Ingold's notion of Correspondence with relation to my practice assemblage. The second is to qualify how exactly non-goal orientated work proceeds, for which I will draw upon Shaun Gallagher's distinction between the Body Image and Schema.

Correspondence has served to articulate the ever-changing nature of the main actors. For example, how the saxophone was conceptualised as an instrument when working with *L.S.*, was very different to when working with *T-R*. With the former, the instrument was something to be deconstructed into separate parameters that, by being reordered, led to sonic events not necessarily envisaged. The latter, on the other hand, acknowledges the importance of the body towards instrumental realisation: instrumental parameters rely upon the body for them to be actioned.

The notations have led to a host of outcomes in my wider practice that were not envisaged in the scheme, such as voice and saliva (see Ch 2.1.3) acting as sound forming devices and muscular fluctuations (see Ch. 2.3.3) leading to pitch instability. To account for this activity, we need to expand the concept of what the instrument is in my practice: *The instrument is the union, in time, of body and saxophone*. It is the relations of brass, springs, leather, wood, rubber, air, saliva, skin, teeth and muscle. Movement serves to articulate the *correspondence in-between*[212] parts of object (saxophone) and subject (body).

As I discussed in the theoretical review, intention is fundamental to this practice assemblage. This distinguishes my artistic practice from practices linked to the everyday world, such as parenting or teaching, which are characterised by the attention to living subjects. I, as part of an instrument forming assemblage, act with intention to attend to its outcomes, where I subsequently attempt and re-attempt to maintain the processes key to the practice advancing.

The complexity of this process loop serves to preserve the practice in its liminal state, where outcomes are simply observed for what they are: points on a timeline of a practice. As when Ingold says "[…] the production of life always exceeds the finalities of consumption,"[213] process therefore forms the main priority and focus of my practice: to uncover unknown, non, or pre-goal orientated outcomes.

[212] Ingold, *The Life of Lines*, 154

[213] Ibid. 155.

To consolidate the various theoretical points presented thus far, Gallagher's distinction between body image and schema offers a view of not what the practice is, but how it proceeds. As discussed in the theoretical overview, Gallagher notes that the body image (my intentional state) informs the body schema (preconscious, subpersonal processes). The schema iteratively focuses the Image, in this practice achieving this through processes such as reflection, documentation and experience. Crucially however, both are integral to the maintenance of a set of non, or pre-goal orientated activities, so that the practice may proceed. As I hinted at earlier (see Ch. 08), this is not just the result of notation and improvisation. Rather, we need to consider a more generalised environment that is also inclusive of instrument, cognitive activity and bodily habituation.

Although we are able to see a clear distinction between the main components (notation, improvisation etc) outside of enactment, within enactment we can draw from Gallagher, when he says: "When I am immersed in experience […] the limits of the body and environment are obscured."[214] This is most keenly felt with my re-conceptualisation of the instrument as being coupled with body in activity, which extends the schema:

> "The body schema functions in an integrated way with its environment, even to the extent that it frequently incorporates into itself certain objects…".[215]

[214] Gallagher, *How the Body Shapes the Mind*, 36.

[215] Ibid., 37.

As a complex web of actions and movements from myself which "are attuned to both stabilities and variations in environmental factors"[216] provide the shape of the Schema, so my Body Image, "a complex set of intentional states [...]" is developed through a gradually growing awareness of my practice. This "occurrent body percept"[217] means that even though I may take on board certain behavioural and/or conceptual qualities (as the notations and work here does), according to Gallagher, the schema "continues to function in a non-conscious way, maintaining balance and enabling movement".

This I believe validates the methodology I have instigated. Reflective awareness of various layers of activity leads to a set of understandings that are conceptualised into notations, revealing a possibility space within which conscious and non-conscious, physical and cognitive behaviours work to reveal the processes that are of relevance to this work. This points to distinctions of what skilled activity is, especially with regards to control. Christensen et al. say that "cognitive and automatic processes both make a major contribution to skilled action".[218] Whilst I do not disagree with this – there are many parts of my practice that require skill! – I wouldn't characterise the goal of my practice as being one of skill building. Rather, the aim is to reveal *skill-in-action*, that may be then reflectively developed or not.

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[216] Gallagher and Varga, "Meshed Architectue of Performance as a Model of Situated Cognition," 7.

[217] Gallagher, *How the Body Shapes the Mind,* 38.

[218] Wayne Christensen, John Sutton and Doris J.F. McIlwain, "Cognition in Skilled Action: Meshed Control and the Varieties of Skill Experience," *Mind & Language* 31, no. 1 (01 February, 2016): 38.

Instances of The Body Image and Body Schema are observable in the second trio. The image of how I couple myself with the saxophone, initially expressed though notation, is formed alongside other factors, such as my embouchure and methods of breathing. However, this image is challenged as gestures that *attempt-to-attend* are placed into enactment. For example, although embouchure forming is the result of years of study and 'perfection', the video clearly displays instances where I am 'feeling' around for a temporary sense of digital 'balance'. In the demonstration video I have prepared,[219] my fingers' clumsy movements demonstrate a lack of schematic basis, yet an image that is also un-realised: an example of skill-in-action being revealed. With the image being constructed in real-time, we find the schema being put under greater strain, revealing artifacts that are crucial to my artistic agenda. Tactility represents the outcomes of both image and schema: something that accounts for both known and unknown physical approaches.

## 3.5 Unknowing-in-doing

Having theoretically appraised my practical submissions in Chapters 3.1 – 3.4, I would now like to conclude this thesis with some broader conclusions that summarise the impact of this work.

Despite this work largely taking place at a time when it was not possible to engage

[219] See Supplementary Materials i; File 66. "Enacting *T-R* (Finger Movements)."

in practical activities as frequently as I had hoped, it has been a highly productive period. This is not only reflected in the recorded work that accompany parts of the analysis, but also the release of three albums, numerous performances, and contributions to academic symposia.

This period of research has expanded my approach to playing and notating for saxophone, where the continual addition of techniques and performance strategies are observable over the course of the research undertaken here and recordings released commercially. However, whether the notations fail to stop a reversion back to idiomatic habit (see Ch. 0.2) is rendered a somewhat null consideration, by the emergent implication that they are *additive to an artistic practice*. For this practice to proceed, the possibility of 'a reversion back to type' should be actively *maintained*.

The analysis of the musical and processual outcomes highlighted the methodological observations I have made (see Fig. 31) where the realisation of the notations' is dependent upon the *time period of enactment*. As traditional paradigms of preparation and performance are enmeshed, we see the need for further thinking about the location of knowledge within an improvised practice such as mine. Although within PaR literature there is an understandable focus upon *knowing-in-doing*,[220] I propose that 'knowledge' in this type of practice isn't so clearly defined.

[220] Nelson, *Practice as Research in the Arts*, p9

I used Gallagher's distinction and the plasticity between the Body Schema and Image to highlight this, whereby knowledge constantly traverses the thresholds of not-knowing and knowing. Intention and attention contribute to both Body Schema and Image, working together to access different points of this spectrum, of which unknowing is aligned with the aesthetic aims of this work. The unknown is not merely a collection of non-conscious behaviours, but rather a space for rehearsed and non-rehearsed actions to coalesce and mediate each other.

The unknown needs actively locating, which I do via the introduction of notated and processual materials into my practice. *Attempting* operates over *choosing*, and so *control* in a traditional sense is re-aligned. Control acts as the device, or tool that regulates contributions to a liminal practice, the rehearsal of which introduces the requisite unpredictability to sustain my aims.

In the earlier stages of this writing, I proposed an enhancement of *'unknowing-in-doing'* to provide a more representive account of the epistemological variety in an improvised practice, such as mine. Therefore, the idea of knowledge production, in terms of PaR might be seen as being partially at odds with my work, necessitating the distinction I have provided. The crucial point, again, of this work is that knowledge is not an outcome, but rather the tool I use to uncover the unknown.

## 3.6 Distinctions, Definitions and Descriptors

The work necessitated the need for distinctions to be made with the various theoretical areas it has engaged with, increasing their relevance to the improvised field. They have also led to an array of descriptors that I believe better describe the processes presented here (see glossary). Like my appraisal of various practice definitions (see Ch. 1.2), the descriptors are of use in highlighting my practice-view, within my field. The Carrier and Enactment, for example, highlight the messy dialogues that still persist with regards to influence, authorship, curatorship and engagement. However, they simply elucidate my viewpoint, which I fully expect (and hope) others to critique, in the same way I did earlier. This is not to express any discomfort with my practice surroundings, but rather to offer my contribution for its sustenance.

## 3.7 Temporality, Authorship and Practice Forming

As the analysis briefly discusses, both *F.T.H.* and *T-R* had specific durational qualities. That there would be such an element of consistency in an indeterminate field means we should consider why this was the case. The analysis and theoretical appraisal showed that physical and aesthetic conditioning were key to activity and so, I propose that an embodied temporality within the notations themselves is misleading. Rather, they harness and contribute to my conditioned self, reflecting the time period of enactment and its particular set of embodied qualities. Their

temporality is reflective of and sustained by the various components of my practice-assemblage.

Areas of authorship and curatorship are also offered a new viewpoint. Authorship is given an additional axis, that of *time*. Rather than a fixed individual or group accounting for a works production, like most of the components included here, this attribution *changes through time*. This is evident in the trio performances (see Ch. 2.4.3), where elements of *T-R* were evident at certain points within group improvisation, only to be subsumed and engulfed by other activity. As such, we are also able to observe an example of distributed curatorship.

With relation to my solo work, authorship of enactment is the result of *my* notated materials, *my* improvised input and *my* physical actions. However, if my notations were to be interpreted by another saxophonist, the question of authorship would be much more nuanced. With the absence of various traits that 'authorise' the work, we might look at the notations here as a type of cultural artefact (of my own) that may or may not be integrated into *others' authored practice*. Thus, like recordings, stories and performances that serve the same function, I hope that they may contribute to the general field of activity I outlined earlier for myself.

As authorship and curatorship form and reform, so do the main actors of this practice: instrument, notation, improvisation, enactment and carrying (see Ch. 1.3.1). This points to my reasoning at the onset for neglecting the term composition whilst retaining improvisation. As I have stated, improvisation is the act of forming at

times arrow. If I had designated *L.S.*, *F.T.H.* and *T-R* as compositions, the fact they dynamically form in enactment would fail to differentiate them adequately from improvisation. As notations, they instead join with improvisation to help contribute to an assemblage of *practice forming*. Although this point suits *my practice-view*, as I pointed out in chapter 1.2, for some, it will be necessarily problematic.

The main thrust of this thesis is presented in a non-political way. Though I have borrowed from philosophy, anthropology, social theory and the practical fields related to my activity, I have made sure to insert the necessary distinctions in order for their continued relevance. However, in these later stages of the writing, I would like to suggest that this work is inherently political, and so future work that explores similar ground might benefit from other forms of analysis that contribute to its unfolding.

This work presents the problematics of a personal endeavour within the structures and codes that form its habitat. From the viewpoint of an individual, definitions cease to belong to groups, instead acting as enablers for individual understanding and activity. From the viewpoint of a collective, category is no-longer fixed, but sensitive to the unfolding of practices and attendant to the temporary needs of codification, such as differing personnel groupings and performance contexts. However, although this work appraises the creative structures that help its forming, it does not call for an abrupt departure. Rather, it engages with them in both constructive and de-constructive ways to uncover past, present, and future possibilities.

As such, this largely solo-based research is lent political meaning by its commitment to the recognition of patterns, differences and the institutions that form its context: the outcomes of this research are ultimately responsive to those very structures.

As this thesis has developed these strands in solo work, so questions surrounding *collective* authorship and creative agency have arisen from the later stages of analysis. They might be leant further meaning by employing various devices, or *tools of the unknown* in group activity, alongside the continued investigation of the plasticity that accompanies the application of a sedimentary approach, such as the earlier use of the image/schema, to uncover ways of revealing group *skill-in-action*. Like the work presented here, I hope that an ongoing, distributed appraisal of binaries, difference and category – something that this research has shown to fuel my creative practice – will be of benefit to myself and others.

Presenting creative, musical processes of the unknown is fraught with various linguistic and semiotic challenges. Similarly, so is resisting the temptation to view my practice as an eyepiece with which to summarise the traits of a particular field. In this thesis I have attempted to demonstrate how my practice is positioned to take a step closer towards my own aesthetic goals, which dispense with clearly defined sonic outcomes in favour of a processual focus. The notations that I have provided – *the tools of the unknown* – have helped facilitate this endeavour. As such, I hope

that this work provides a lens on to my own particular negotiation of the terrain I have set out and will continue to explore.

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# Glossary

**Attempting:** An action which is embarked upon but is characterised by the possibility of not knowing what might happen.

**Carrying, The Carrier:** One of the five main actors in the practice-assemblage. Both catalyst for, and attendant to curatorial affect, where its place in the assemblage configures elements so that they may correspond with each other, encouraging dialectal relations. It is temporally distinct from both improvisation and composition, occupying a role that moves in-between both.

**De-Coupling:** The segmenting of instrumental technique or surface into distinct notated categories. See also *parametric de-coupling.*

**Dynamic Surfaces/Notation:** Notations with which an improviser may correspond with, where they can both lead and follow its directions. The notations' potential meanings change through time, where any direction may take on several forms, sonically and temporally, due to the actions of an improviser that are both conditioned and challenged in real-time. To offer a visual analogy, the proportional make up of notation can be thought of as an elastic surface, changing shape as pressure is applied at various coordinates and intervals.

**Enactment (Preparation, Performance):** The drawing together of the process that represents the circularity that exists between preparation and presentation.

**Ergonomic Notation:** Notation that instructs bodily movement, without a clearly defined sonic 'goal'.

**Modular Presentation:** A mode of presentation which characterises *Labtayt Sulci*, where de-coupled categories may be arranged in different configurations.

**Pre-Goal Orientated Activity:** Neither non-goal (inert), nor goal orientated (choice), pre-goal orientated activity is attemptive and speculative. As such, it holds the possibility for goal realisation and for unknown outcomes.

**Surface (Notational, Bodily, Instrumental):** Physical objects that are liable to change through an enactment, whether physical or perceptive.

**Tactility:** In attempting a reflective action, bodily movements and sonic outcomes are responded to with *tactility*, with an emphasis on 'felt' interventions.

**Unknowing:** An area of activity that allows rehearsed and non-rehearsed actions to coalesce and mediate each other, as opposed to just non-conscious behaviour. Unknowing, in this work, is the result of the correspondence in between notation, instrument, carrying, improvisation and enactment.

**Zonal Writing:** Where notation splits the instrumental surface into distinct physical areas - each with possibility for variance within.

# Bibliography


Arthurs, Tom. "The Secret Gardeners: An Ethnography of Improvised Music in Berlin (2012-13)." Ph.D. Diss,. The University of Edinburgh, 2015.

Bailey, Derek. *Improvisation: Its Nature and Practice in Music.* New York: Da Capo Press, 1992.

Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning.* Durham, London: Duke University Press, 2007.

Barrett, Estelle. 2007. "Foulcalt's 'What is An Author': Towards a Critical Discourse of Practice as Research." In *Practice as Research: Approaches to Creative Arts Enquiry*, edited by Estelle Barrett and Barbara Bolt, 135-146. London, New York: Bloomsbury Visual Arts.

Barrett, Estelle. "Introduction." In *Practice as Research: Approaches to Creative Arts Enquiry*, edited by Estelle Barrett and Barbara Bolt, 1-14. London, New York: Bloomsbury Visual Arts, 2007.

Barrett, Richard. *Music of Possibility.* Oxon: Vision Edition, 2019.

Borgo, David. "The Complex Dynamics of Improvisation." In *Springer Handbook of Systematic Musicology*, edited by Rolf Bader, 1017-1027. Berlin: Springer, 2018.

Borgo, David. "The Ghost in the Music, or the Perspective of an Improvising Ant." In *The Oxford Handbook of Critical Improvisation Studies, Volume 1*, edited by George E. Lewis and Benjamin Piekut, 1-24. Oxford: Oxford University Press, 2014. DOI: 10.1093/oxfordhb/9780195370935.013.005

Borgdorff, Henk. *The Conflict of The Faculties: Perspectives on Artistic Research and Academia.* Amsterdam: Amsterdam University Press, 2012.

Born, Georgina. "Music and the materialization of identities." *Journal of Material Culture* 16, no. 4 (December, 2011): 376-388. DOI: 10.1177/1359183511424196

Brand, Sarah. "An Investigation of the Impact of Ensemble Interrelationship on Performances of Improvised Music Through Practice Research." Ph.D. Diss. Canterbury Christ Church University, 2019.

Brice, Olie, Tom Challenger and Will Glaser. "EFG London Jazz Festival Olie Brice Trio – Live Stream." Vortex Jazz Club. November 22, 2021. YouTube video, 58:10, https://youtu.be/mv9o2xLCRmQ.

Butcher, John. 2011. "Freedom and Sound – This Time It's Personal." Point of Departure, Accessed April 20, 2020. https://www.pointofdeparture.org/PoD35/PoD35Butcher.html.

Cage, John. "Indeterminacy." In *Silence: Lectures and Writings*. London: Marion Boyars, 2009.

Cannam, Chris, Christian Landone and Mark Sandler. "Sonic Visualiser: An Open Source Application for Viewing, Analysing, and Annotating Music Audio Files." *Proceedings of the ACM Multimedia 2010 International Conference.* October, 2010. Firenze, Italy, 2010. Accessed 13/06/2019. www.sonicvisualiser.org

Cassidy, Aaron. "Constraint Schemata, Multi-axis Movement Modeling, and Unified, Multi-parametric Notation for Strings and Voices ." *Search: Journal for New Music and Culture,* 10 (Fall, 2013). Accessed 08/12/2018. http://www.searchnewmusic.org/index10.html.

Cassidy, Aaron. "Interconnectivity and Abstraction: Metallic Dust as a Testing Ground for Monophonic and Structural Polyphonies." In *Polyphony and Complexity*, edited by Claus-Steffen Mahnkopf, Frank Cox and Wolfram Schurig, 147-161. Hofheim: Wolke Verlag, 2002.

Castro Magas, Diego. "Parametric polyphony in recent guitar music." In *Divergence Press: Performance & Improvisation*, Issue 5. January, 2017. DOI: 10.5920/divp.2016.05

Challenger, Tomas. "Beetle and Bail." Recorded July 2020. Sche-ima Records 004, 2021, Compact Disc.

Challenger, Tomas. "Paxt." Recorded December 2018. Sche-ima Records 003, 2019, Compact Disc.

Challenger, Tomas, Alexander Hawkins, and Mark Sanders. “Imasche.” Recorded December 2020. Sche-ima Records 005, 2021, Compact Disc.

Challenger, Tomas, Kit Downes. “Wedding Music.” Recorded July 2012. Loop Records, 2013, Compact Disc.

Christensen, Wayne, John Sutton and Doris J.F. McIlwain. “Cognition in Skilled Action: Meshed Control and the Varieties of Skill Experience.” *Mind & Language* 31, no. 1 (01 February, 2016): 37-66.

Coessens, Kathleen, Darla Crispin, and Anne Douglas. *The Artistic Turn: A Manifesto.* Leuven: Leuven University Press, 2009.

Cook, Nicholas. *Beyond the Score: Music as Performance.* Oxford: Oxford University Press, 2013.

Corbett, John. *A Listeners Guide to Free improvisation.* Chicago, London: University of Chicago Press, 2016.

Corbett, John. “Ephemera Underscored: Writing Around Free Improvisation.” In *Jazz among the Discourses*, Edited by Krin Gabbard, 217-240. North Carolina: Duke University Press, 1995.

Corbett, John. *Extended Play: Sounding Off From John Cage to Dr. Funkenstein.* Durham/London: Duke University Press, 1994.

Davies, Rhodri, interview by Bertrand Denzler and Jean-Luc Guionnet. *The Practice of Musical Improvisation: Dialogues with Contemporary Musical Improvisers.*Edited by Bertrand Denzler and Jean-Luc Guionnet. London, New York: Bloomsbury Academic, 2020.

de Assis, Paulo. *Logic of Experimentation: Rethinking Music Performance through Artistic Research.* Leuven: Leuven University Press, 2018.

DeLanda, Manuel. *A New Philosophy of Society: Assemblage Theory and Social Complexity.* London: Bloomsbury, 2006.

DeLanda, Manuel. "Deleuzian Social Ontology and Assemblage Theory." In *Deleuze and the social*, by Martin Fuglsang and Bent Meier Sørensen, 250 - 266. Edinburgh: Edinburgh University Press, 2006.

Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus.* Translated by Brian Massumi. London, New York: Bloomsbury Academic, 2013.

Downes, Kit, Tomas Challenger, Lucy Railton and Petter Eldh. “Vewes.”

SoundCloud Audio, 03’51”, April 8th, 2020. https://soundcloud.com/kitdownesmusic/vewes.

Ehrlich, Marty. "Julius Hemphill: The Boyé Multi-National Crusade for Harmony.” Liner Notes. New World Records, 2020.

Evans, Peter. "Caveman/Cyborg." In *Arcana IV: Musicians on Music*, edited by John Zorn, 114-120. New York: Hips Road, 2009.

Feldman, Morton, and La Monte Young. "A Conversation on Composition and Improvisation (Bunita Marcus, Francesco Pellizzi, Marian Zazeela)." *Res: Anthropology and Aesthetics* 13 (Spring 1987): 152-173.

Fell, Simon. "A more attractive ‘way of getting things done’. Freedom, collaboration and compositional paradox in British improvised and experimental music 1965-75." PhD. Diss., University of Huddersfield, 2017. http://eprints.hud.ac.uk/id/eprint/34533/

Gallagher, Shaun. "Body Image and Body Schema: A Conceptual Clarification." *The Journal of Mind and Behaviour* 7, no. 2 (Autumn 1986): 541-554.

Gallagher, Shaun. *How the Body Shapes the Mind.* Oxford: Oxford University Press, 2005

Gallagher, Shaun, and Somogy Varga. "Meshed Architectue of Performance as a Model of Situated Cognition." *Frontiers in Psychology* 11, no. 2140 (August 2020): 1-9, https://doi.org/10.3389/fpsyg.2020.02140.

Gross, Jason. “Cecil Taylor: Interview by Jason Gross.” Accessed 18/04/20. https://www.furious.com/perfect/ceciltaylor.html.

Hamilton, Andy. “Alexander Hawkins: Q&A.” YouTube Video, 2019. Interview, 30:43. https://youtu.be/3mtYuXPaB-0

Heffley, Mike. *Northern Sun, Southern Moon: Europes Reinvention of Jazz.* New Haven and London: Yale University Press, 2019.

Hickey-Moody, Anna. "Becoming–Dinosaur: Collective Process and Movement Aesthetics." In *Deleuze and Performance*, edited by Laura Cull, 161-182. Edinburgh: Edinburgh University Press, 2009.

Ho Bynum, Taylor. “Taylor Ho Bynum on Anthony Braxton.” Accessed 19/11/2018. http://archive.soundamerican.org/sa_archive/sa16/sa16-taylor-ho-bynum-on-anthony-braxton.html.

Ingold, T. “Comment.” In *Overcoming the Modern Invention of Material Culture, special edition of Iberian Archaeology,* vol 9, no. 10 (2007): 313-317, Porto, ADECAP

Ingold, Tim. *Correspondences.* Abingdon, Cambridge: Polity Press, 2021.

Ingold, Tim. *Making.* Abingdon, Abingdon, Oxon: Routledge, 2013.

Ingold, Tim. *The Life of Lines.* Abingdon, Oxon: Routledge, 2015.

Ingold, Tim. "The Textility of Making." *Cambridge Journal of Economics* 34, no. 1 (09 July, 2010): 91-102.

Iyer, Vijay. "Improvisation, Action Understanding, and Music Cognition with and without Bodies." In *The Oxford Handbook of Critical Improvisation Studies, Volume 1.* Edited by George E. Lewis and Benjamin Piekut, 1-18. Oxford: Oxford University Press, 2014.
DOI: 10.1093/oxfordhb/9780195370935.013.014

Iyer, Vijay. "Microstructures of Feel, Macrostructures of Sound: Embodied Cognition in West African and African-American Musics." PhD Diss. University of California, Berkeley, 1998.

Jackson, Tom. “The musical instrument as archive in free improvisation.” Accessed 04/05/21. https://echo.orpheusinstituut.be/article/the-musical-instrument-as-archive-in-free-improvisation.

Kershaw, Baz, with Lee Miller/Joanne ‘Bob’ Whalley and Rosemary Lee/Nikki Pollard. "Practice as Research: Transdisciplinary Innovation in Action." In *Research Methods in Theatre and Performance.* Edited by Baz Kershaw and Helen Nicholson, 63-85. Edinburgh: Edinburgh University Press, 2011.

Lacy, Steve. *Findings: My Experience with the Soprano Saxophone.* Paris: Outre Mesure, 1994.

Lash, Dominic. "Derek Bailey’s Practice/Practise." *Perspectives of New Music* 49, no.1 (Winter, 2011): 143-171.

Latour, Bruno. *Reassembling the Social: An Introduction to Actor Network Theory.* Oxford: Oxford University Press, 2005.

Lewis, George E. *A Power Stronger Than Itself: The AACM and American Experimental Music.* Chicago, London: The University of Chicago Press, 2008.

Lewis, George E. "Gittin' to Know Y'all: Improvised Music, Interculturalism and the Racial Imagination." *Critical Studies in Improvisation/ Études critiques en improvisation* 1, no. 1 (2004): 1-33. https://doi.org/10.21083/csieci.v1i1.6

Lewis, George E. "Music after 1950: Afrological and Eurological Perspectives." *Black Music Research Journal* 22 (2002): 215-246. https://doi.org/10.2307/1519950

Lock, Graham. *Forces in Motion: Anthony Braxton and the Meta Reality of Creative Music. Interviews and Tour Notes.* London, New York: Quartet Books, 1998.

Marsalis, Wynton. “What Jazz Is - and Isn’t”. Accessed May 02, 2021. https://wyntonmarsalis.org/news/entry/music-what-jazz-is-and-isnt.

McElfresh, Suzanne. "Julius Hemphill." *BOMB* magazine, Winter: 1994.

Meelberg, Vincent. “Musical Improvisation as the Performance of Embodied Knowledge: Embodied Narrativity in Musical Performance.” University of the Arts Helsinki, accessed July 10, 2021. https://nivel.teak.fi/carpa/musical-improvisation-as-the-performance-of-embodied-knowledge-embodied-narrativity-in-musical-performance/.

Morris, Joe. *Perpetual Frontier: The Properties of Free Music.* Stony Creek, CT: Riti Publishing, 2012

Mwamba, Corey. “Alacrity: ready for the improviser’s art.” Published May 18, 2019. https://www.coreymwamba.co.uk/rambles/1558169698.

Nail, Thomas. “What Is an Assemblage?” SubStance 46, no. 1 (2017): 21–37. doi:10.3368/SS.46.1.21.

Nelson, Robin. *Practice as Research In The Arts: Principles, Protocols, Pedagogies, Resistances.* Hampshire: Palgrave Macmillan, 2013.

Parker, Evan, “Amplified Gesture”, Film by Phil Hopkins. London: Opium (Arts) Ltd., 2009. Can be accessed at https://youtu.be/0e60eKflPfo.

Parker, Evan. “De Motu” for Buschi Niebergall.” May, 1992. Available at: http://www.efi.group.shef.ac.uk/fulltext/demotu.html.

Parker, Evan. "Practise/Practice/Praxis." In *Oscillate*, edited by Robert Stillman. UK: Compost and Height, 2017.

Porter, Eric. “Dizzy Atmosphere: The Challenge of Bebop.” American Music, Vol. 7, no. 4 (Winter 1999): 422-466.

Prevost, Edwin. *No Sound is Innocent: AMM and the practice of self-invention. Meta-Musical Narratives. Essays.* Harlow: Copula. 1995.

Rheinberger, Hans-Jörg. *An Epistemology of the Concrete: Twentieth-Century Histories of Life.* Durham and London: Duke University Press. 1995.

Scherzinger, Martin. “The Executing Machine: Deleuze, Boulez, and the Politics of Desire.” In *The Dark Precursor: Deleuze and Artistic Research, Vol. 1*, edited by Paulo de Assis and Paolo Giudici. Leuven: Leuven University Press, 2017.

Schuiling, Floris. *The Instant Composers Pool and Improvisation Beyond Jazz.* New York: Routledge, 2019.

Shoemaker, Bill. “Solo Saxophone Flights.” Accessed 07/03/2019. https://jazztimes.com/archives/solo-saxophone-flights/.

Smith, Wadada Leo. *Notes (8 Pieces) Source a New World Music: Creative Music.* Chicago: Corbett vs. Dempsey, 2015.

Sound American. “SA 8: The What is Jazz? Issue.” Accessed June 29, 2021. http://archive.soundamerican.org/sa_archive/sa8/sa8-the-interviews-part-one.html.

Spicer, Daniel, Roscoe Mitchell, and George E. Lewis. “CTM 2018: Artist Talk with Roscoe Mitchell & George E. Lewis.” YouTube Video, 2018. Interview, 1:22:38. https://youtu.be/o-k2bOgo780.

Sullivan, Graeme. "Making Space: The Purpose and Place of Practice-led Research." In *Practice-led Research, Research-led Practice in the Creative Arts*, edited by Hazel Smith and Roger T. Dean, 41-65. Edinburgh: Edinburgh University Press, 2009.

Taylor, Cecil. Interview by Phil Freeman. *The Wire: Issue 386,* April, 2016.

Toop, David. *Into the Maelstrom: Music, Improvisation and the Dream of Freedom.* New York, London: Bloomsbury Academic, 2016.

Varela, Francisco J., Evan Thompson, and Eleanor Rosch. *The Embodied Mind: Cognitive Science and Human Experience.* Cambridge, Massachusetts: MIT, 1991

Williams, Christopher. “Tactile Paths: On and Through Notation for Improvisers.” PhD Diss. University of Leiden, Holland, 2016. http://www.tactilepaths.net/.

Wilson, Graeme B., and Raymond A. R. MacDonald. "Musical Choices During Group Free Improvisation: A Qualitative Psychological Investigation." *Psychology of Music* 44, no. 5 (2016): 1029–43, DOI: 10.1177/0305735615606527

Wooley, Nate. “Anthony Braxton's Language Music.” Accessed 28/07/2021. http://archive.soundamerican.org/sa_archive/sa16/sa16-language-music.html

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# Discography/Recording Credits

*Where recordings cited involved the input of others, they are listed chronologically here:*

**Paxt**

Tomas Challenger – Tenor Saxophone

Recorded 6th December 2018; St Bartholemew's Church, Sydenham, London

Mastering – Robert Stillman

Sche-ima Records 003. Released 2019

**Labtayt Sulci – In Performance**

Tomas Challenger – Tenor Saxophone

Recorded 29th July 2019; The Cockpit Theatre, Marylebone, London

Engineer: Steve Lowe

UNRELEASED

**Beetle and Bail**

Tomas Challenger – Tenor Saxophone

Recorded 29th and 30th July, 2020; Mechanics Hall, Marsden, Huddersfield.

Sche-ima Records 004. Released 2021

**Olie Brice Trio Live at The Vortex**

Olie Brice – Bass

Tomas Challenger – Tenor Saxophone

Will Glaser – Drums

Recorded/Filmed 20/11/2020; The Vortex Jazz Club, Dalston, London.

Sound Engineer – Ali Ward

Filming – Daniel Garel

**Imasche**

Tomas Challenger – Tenor Saxophone

Alexander Hawkins – Piano

Mark Sanders – Drums

Recorded 14th December 2020; Trinity Laban, King Charles Court, London.

Engineer – Barney Brosnan

Mastering – Alex Bonney

Sche-ima Records 005. Released 2021.

**Vewes**

Tomas Challenger – Tenor Saxophone + Composition

Kit Downes – Piano

Lucy Railton – Cello

Petter Eldh – Double Bass

Recorded April/May 2020

Mixed/Produced – Kit Downes

Mastered – Alex Bonney

https://soundcloud.com/kitdownesmusic/vewes1

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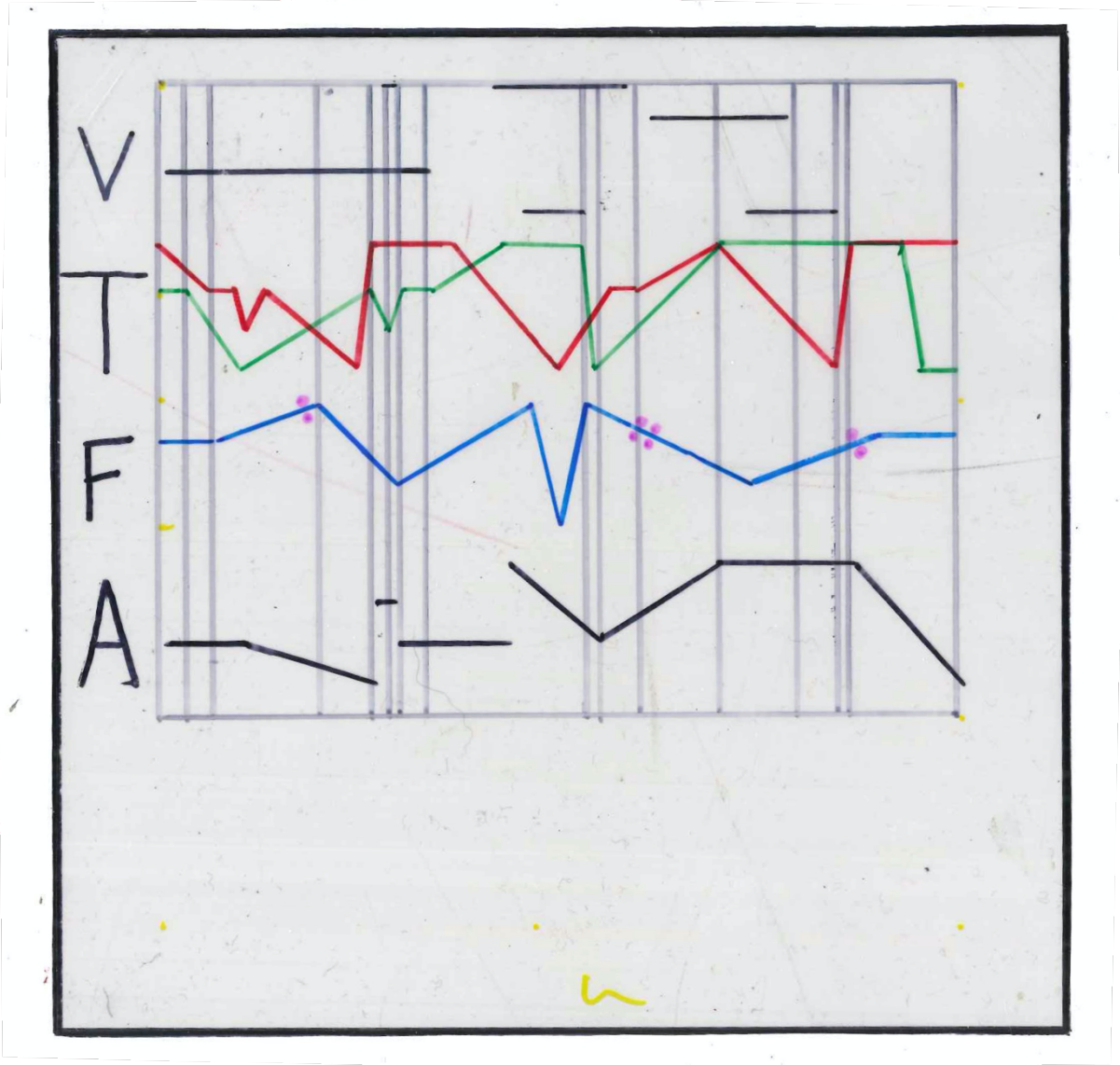
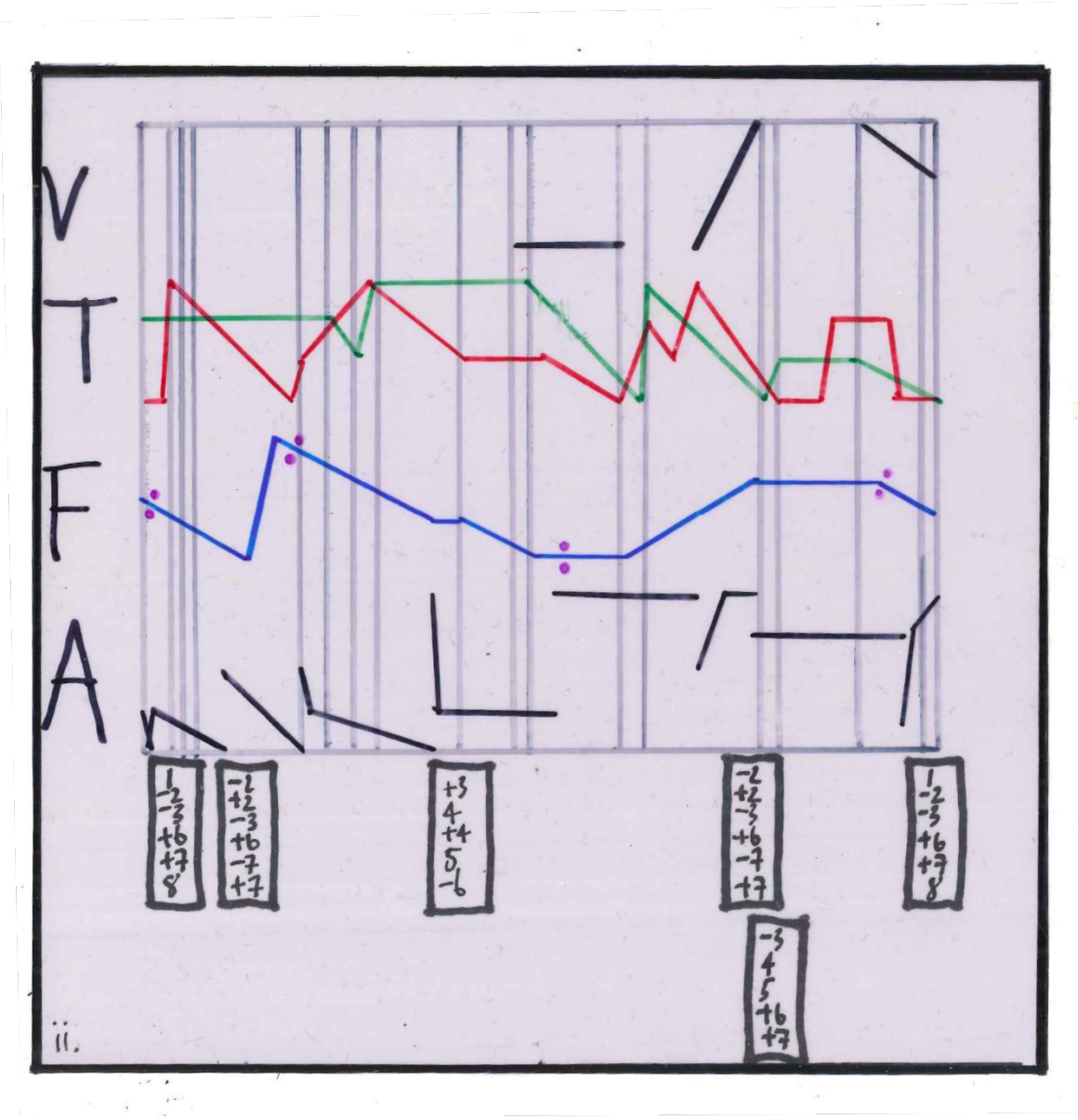
# Appendix

Contents Page



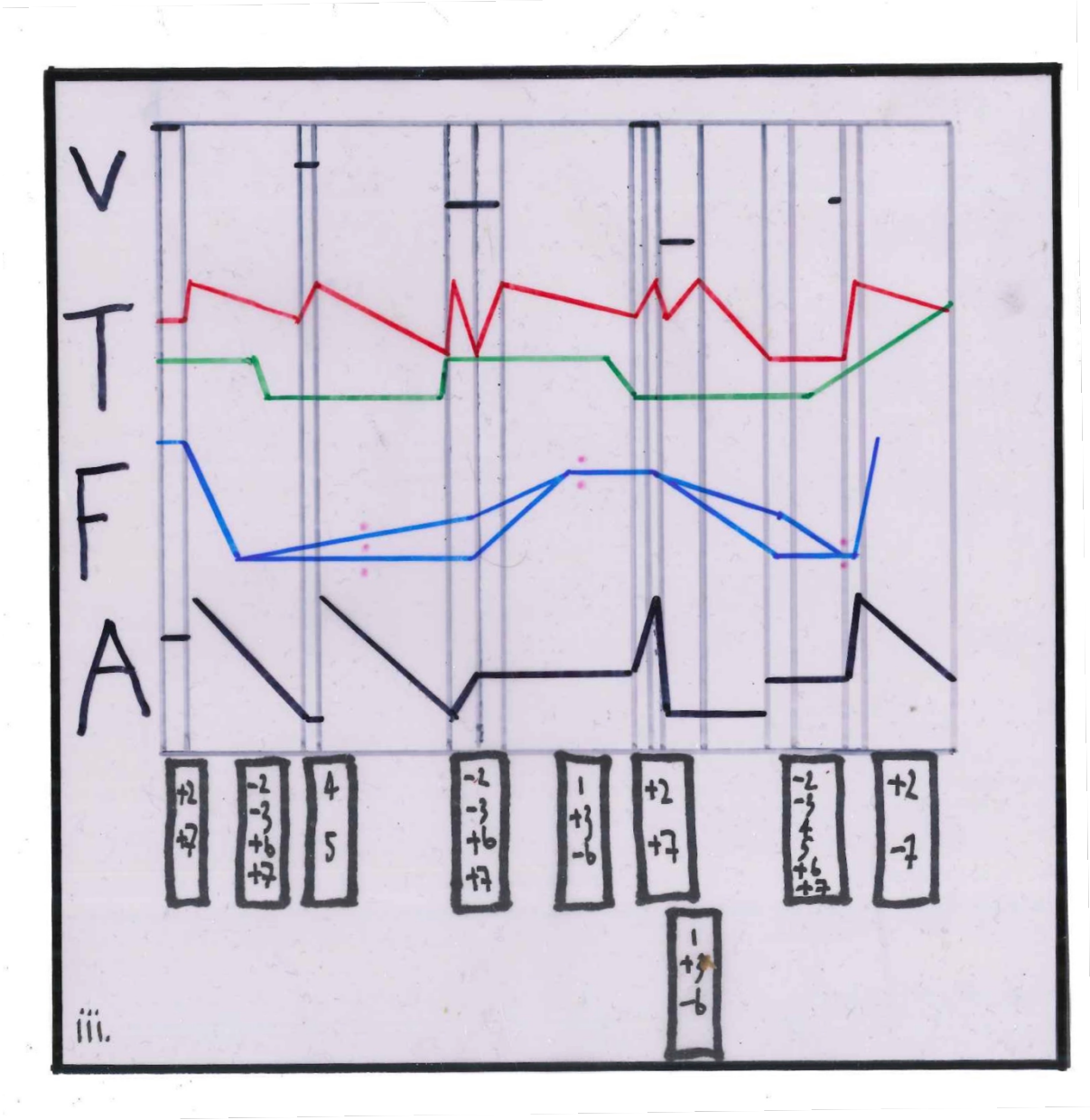

Appendix 1.1

*Labtayt Sulci*, Score (Version 1)
Page One
2018/19




Appendix 1.2

*Labtayt Sulci*, Score (Version 1)
Page Two (w/ Boxed Intervals)
2018/19



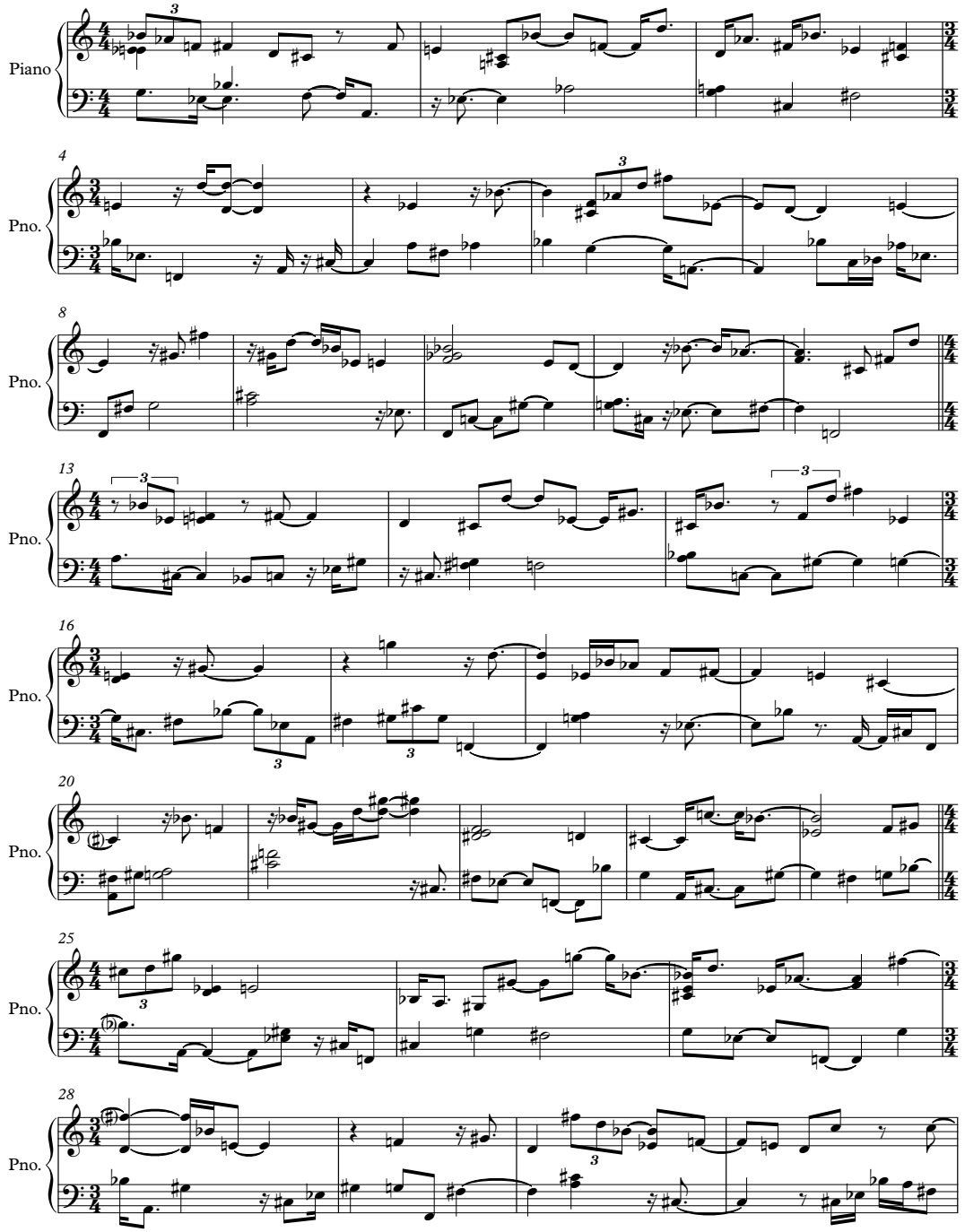

Appendix 1.3

*Labtayt Sulci*, Score (Version 1)
Page Three (w/ Boxed Intervals)
2018/19

| COMBINATION: | Evidence of V staff | Evidence of T staff | Evidence of F staff | Evidence of A staff | Evidence of uncontrolled sounds | Evidence of divergence from scheme | Evidence of parts acting independently |
|---|---|---|---|---|---|---|---|
| **Page 1 T, A** ***Track 1*** | Yes - although not intended. | Yes | N/A | No - T staff causes divergence from scheme - through squeaks, overtones. Necessity to adhere to scheme creates a more complex 'intensity zone' | Yes, T staff is dominant | Yes | No, most sounds due to dominance of the T staff |
| **Page 1 F, A** ***Track 2*** | N/A | N/A | Yes - finger movement (with regards to pitch) is audible | Yes, however divergence occurs due to choice of improvisatory material (from finger combinations) | Yes - the choice of improvisatory material (from finger combinations) leads to this | Yes, the T staff isn't played; but there is subtle use of techniques in this 'zone' (especially with bottom lip and throat) | Yes, the subtle overriding of the stipulations means that the fast key movements are heard against a sustained multiphonic 'drone' |
| **Page 1 V, F, A** ***Track 3*** | Yes T staff allows for greater clarity | N/A | Yes - finger movement (with regards to pitch) is audible | Yes | No - Sounds that are produced can be controlled and adhere to A scheme | No | Yes - F, V, and |
| **Page 1 V, T, F, A** ***Track 4*** | Yes - fragmented by presence of T (green) staff | Yes | Yes - however, in 'windows'; the instructions of the T staff means that there is tension between rate 'applied', and rate 'heard' | Debatable - T staff causes divergence from scheme - through squeaks, overtones. Necessity to adhere to scheme creates a more complex sonic 'zone' | Yes. Staff combinations create these, with T being particularly dominant | Yes | Yes, there are moments when the T (Green) staff overides, however all other staff's are audibly independent |
| **Page 2 F + A; Page 1 V** ***Track 5*** | Yes - voice - because of the low overall volume in parts - is prominent | Yes; unintentional use of tongue to start phrase; also to enable ppp playing | Yes; The quieter passages mark the F staff out as being a <u>new</u> sound underneath other parts | Yes; The quiet sections are marked, and the combinations don't lead to timbral instability as much as they do timbral modulations (beating) | The very quiet sections (0.43) contain sounds that are due to saliva - they are not easy to control | Although there are times when the tongue is used (at the beginning of some phrases), this is at best a minimal divergence from the scheme | Yes; especially the F and V staff |
| **Page 2 T, A** ***Track 6*** | Yes - contrary to the scheme set out | Yes | no | Debatable - T staff causes divergence because of the techniques employed | Yes, T staff is dominant | Yes | No, most sounds are emancipating from the dominance of the T staff |
| **Page 2 F, A** ***Track 7*** | N/A | Yes - Melodic content improvised leads to the use of vibrato (and an erroneous use of tongue at the very end) | Yes - finger movement (with regards to pitch) is audible | Debatable - F staff combinations causes divergence from scheme - through squeaks, overtones. | Yes - the choice of improvisatory material (from finger combinations) leads to this | Yes | Yes, although the example isn't totally clear, there is movement between A and F staffs. F staff movements happen with not much tonal consequence |
| **Page 2 V, T, F, A** ***Track 8*** | N/A | Yes | Yes - however, in 'windows'; the instructions of the T staff means that there is tension between rate 'applied', and rate 'heard' | Debatable - T staff causes divergence from scheme - through squeaks, overtones. Necessity to adhere to scheme creates a more complex sonic 'zone' | Yes, T staff is dominant | Yes | Yes. Clear and distinct movement between the F and T staffs |
| **Page 2 Red T; Page 1 Green T, F + A** ***Track 9*** | Yes; leads to distortions in the last part of the example | Yes | Yes - Dominates the T staff when A is at a lower level (1.42 onwards ish) | Yes - although the instability of some sounds mean that these override the scheme - I had to bring it back 'in' when this happened | Yes, due to T and F (less so) staff. The Green staff overrides the the stipulations mainly; hi pitched squeals/squeaks jump out | Yes, uncontrolled sounds mean the A staff is changed, along with T staff being modulated by F staff | Yes. Clear and distinct movement between the F and T staffs |

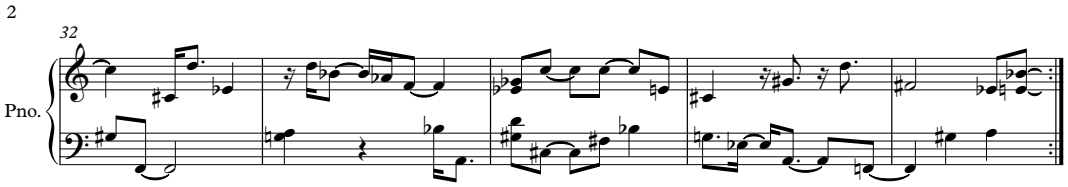
# Appendix 2

## *Labtayt Sulci*
## Table of Preparatory Observations
## 2018/19



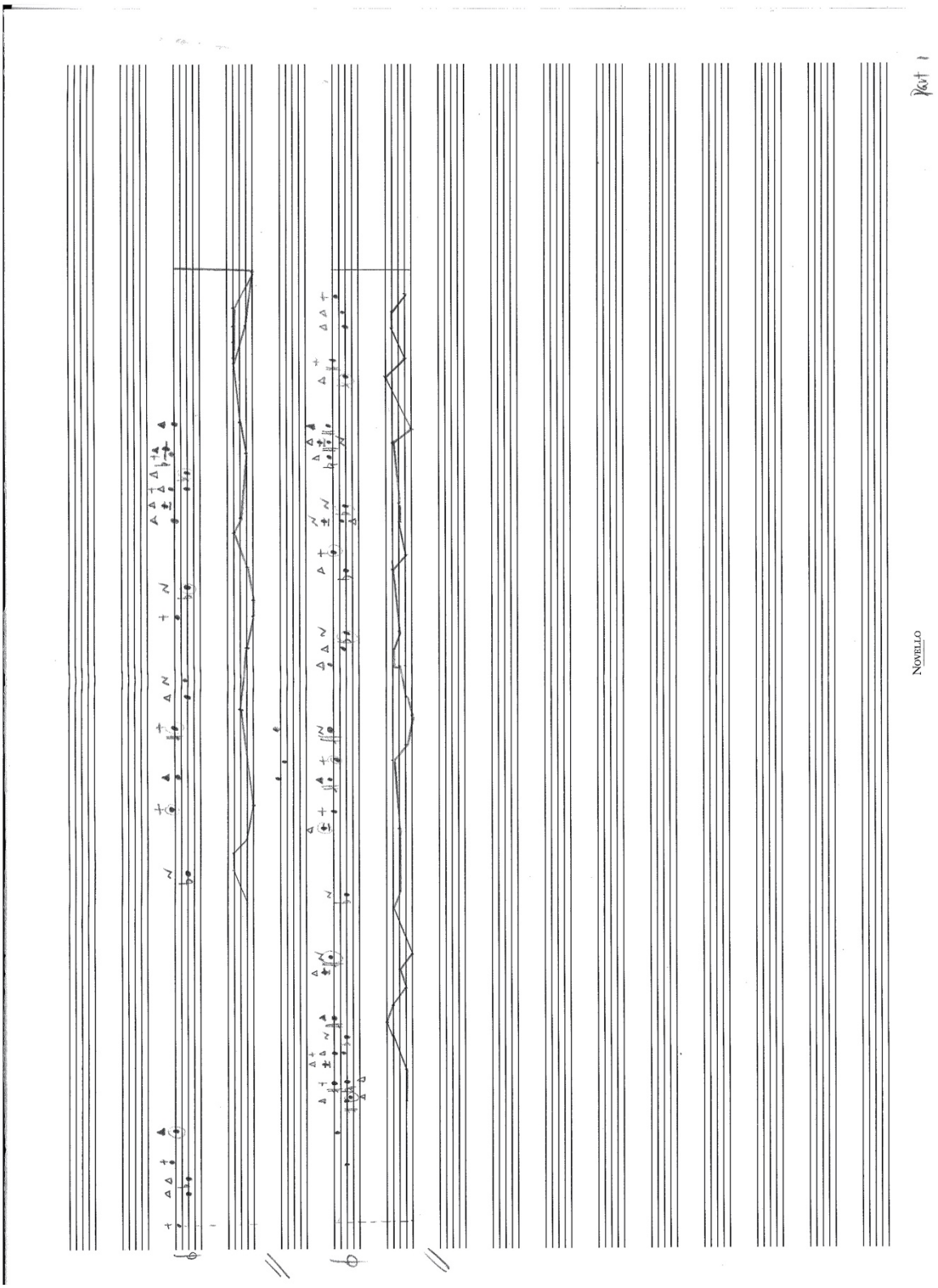

Appendix 3.1

*Vewes*, Page One
Tomas Challenger
2018



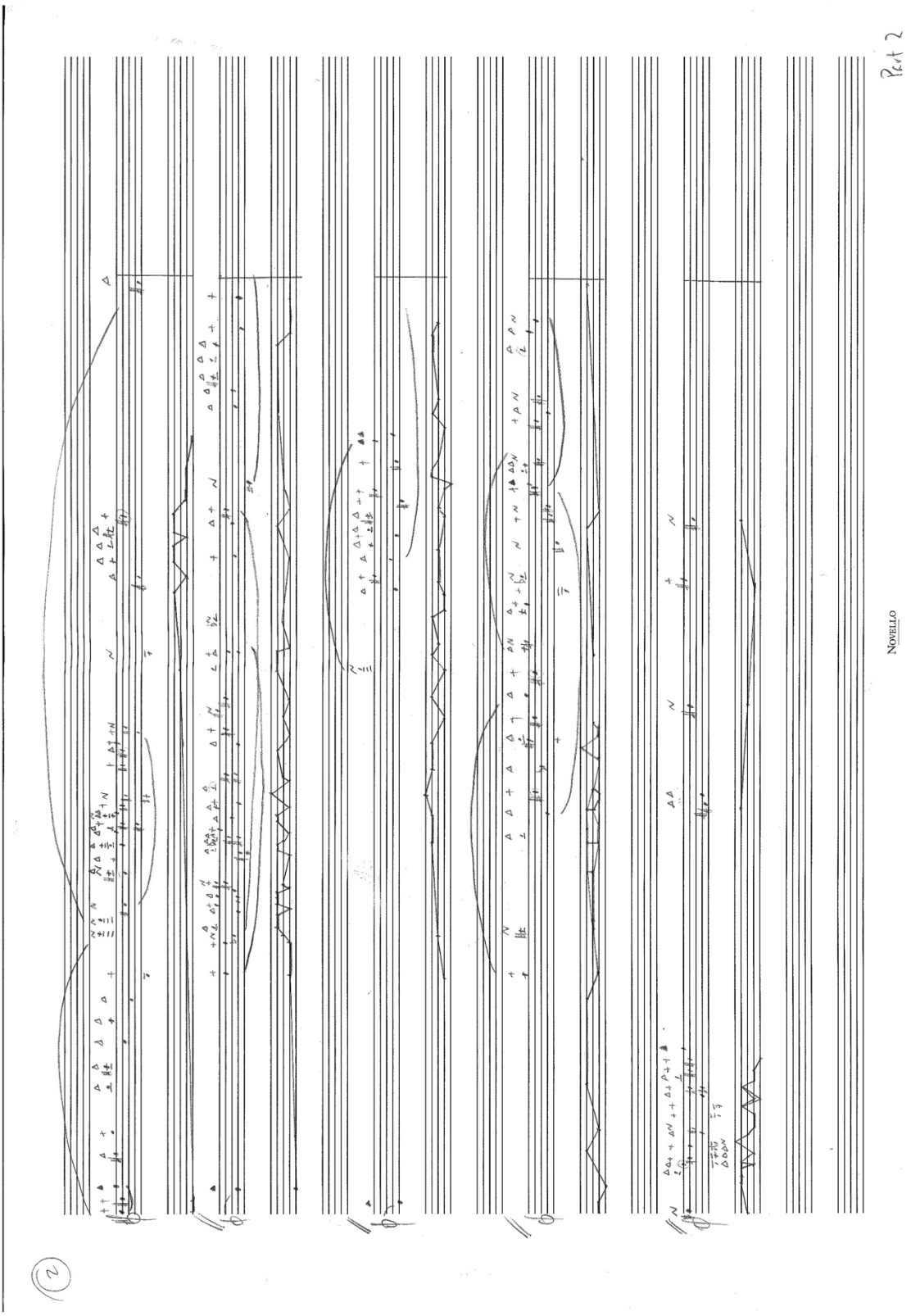

Appendix 3.2

*Vewes*, Page Two
Tomas Challenger
2018




Appendix 4.1

*Tin Paths,* Part One
Handwritten Score
Tomas Challenger
2019




Appendix 4.2

*Tin Paths,* Part Two
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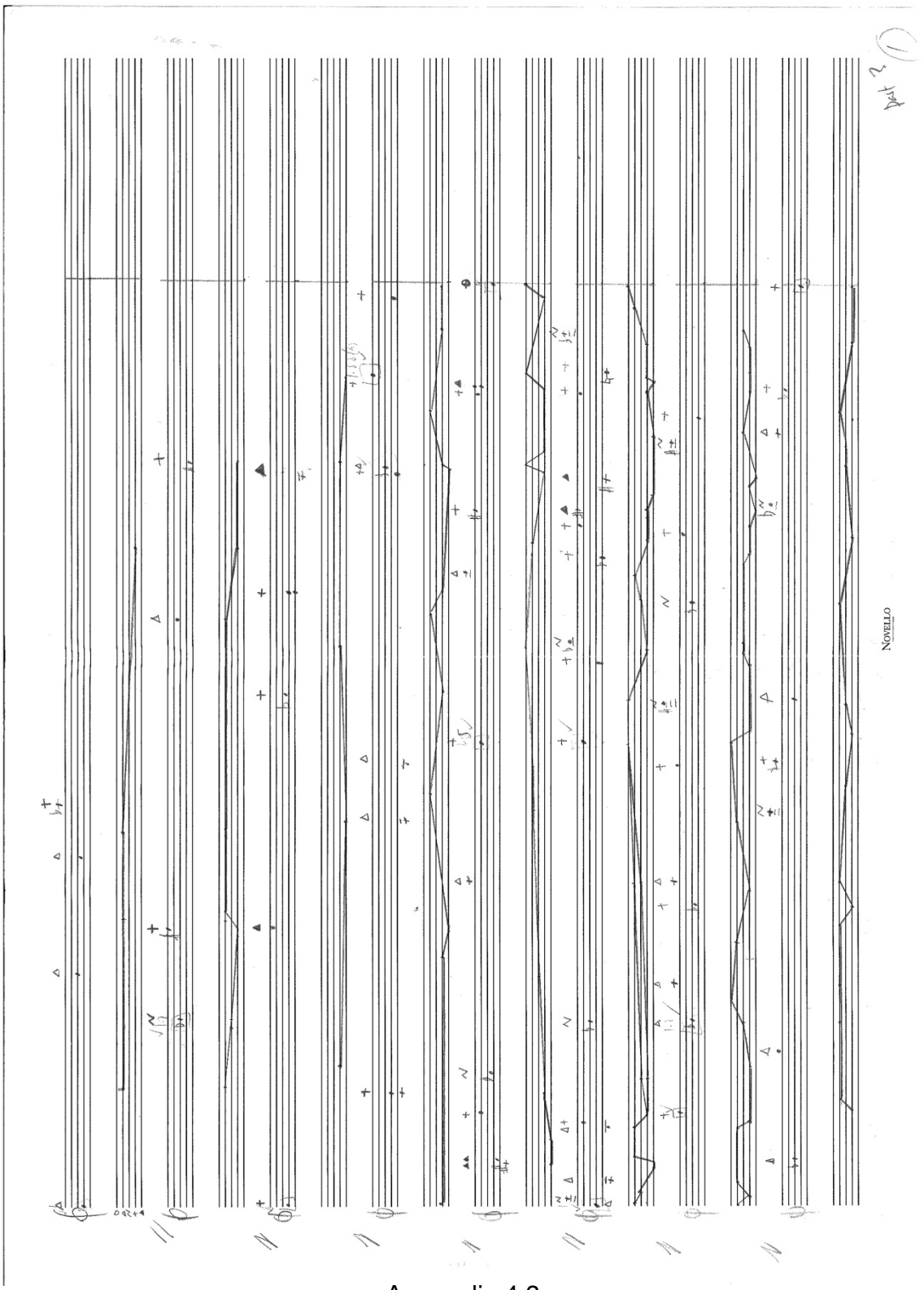
Tomas Challenger
2019




Appendix 4.3

*Tin Paths,* Part Three (1)
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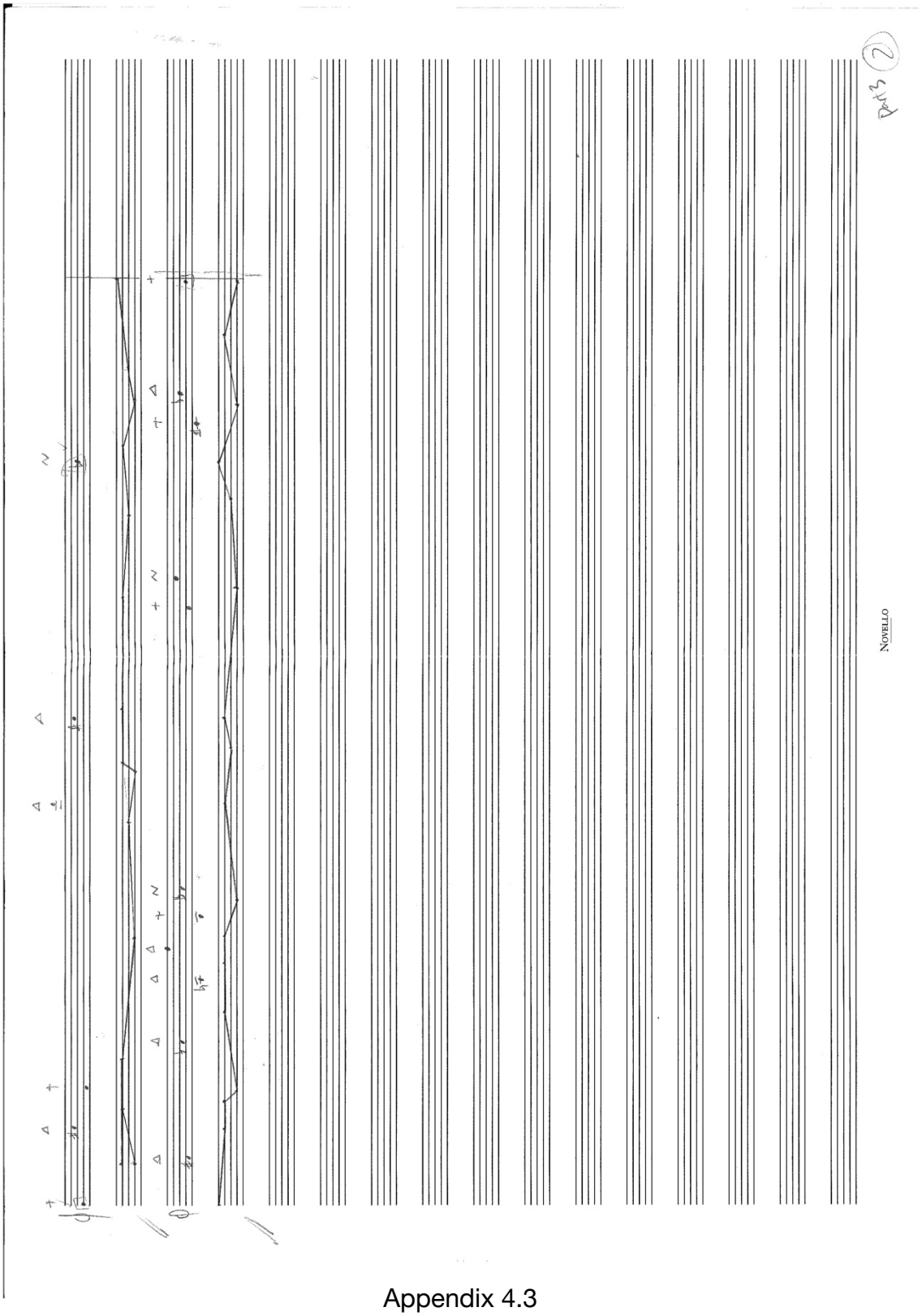
Tomas Challenger
2019

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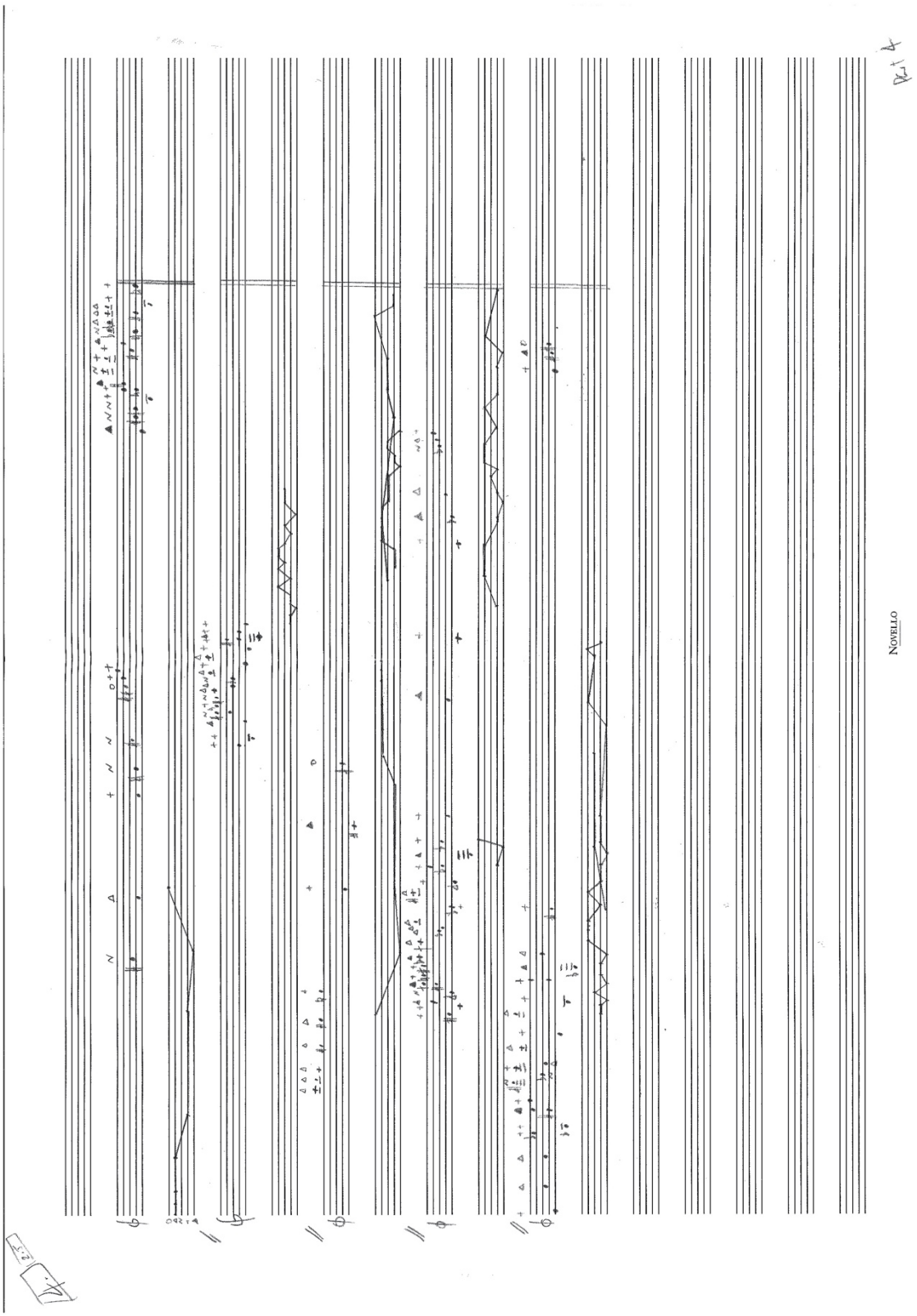
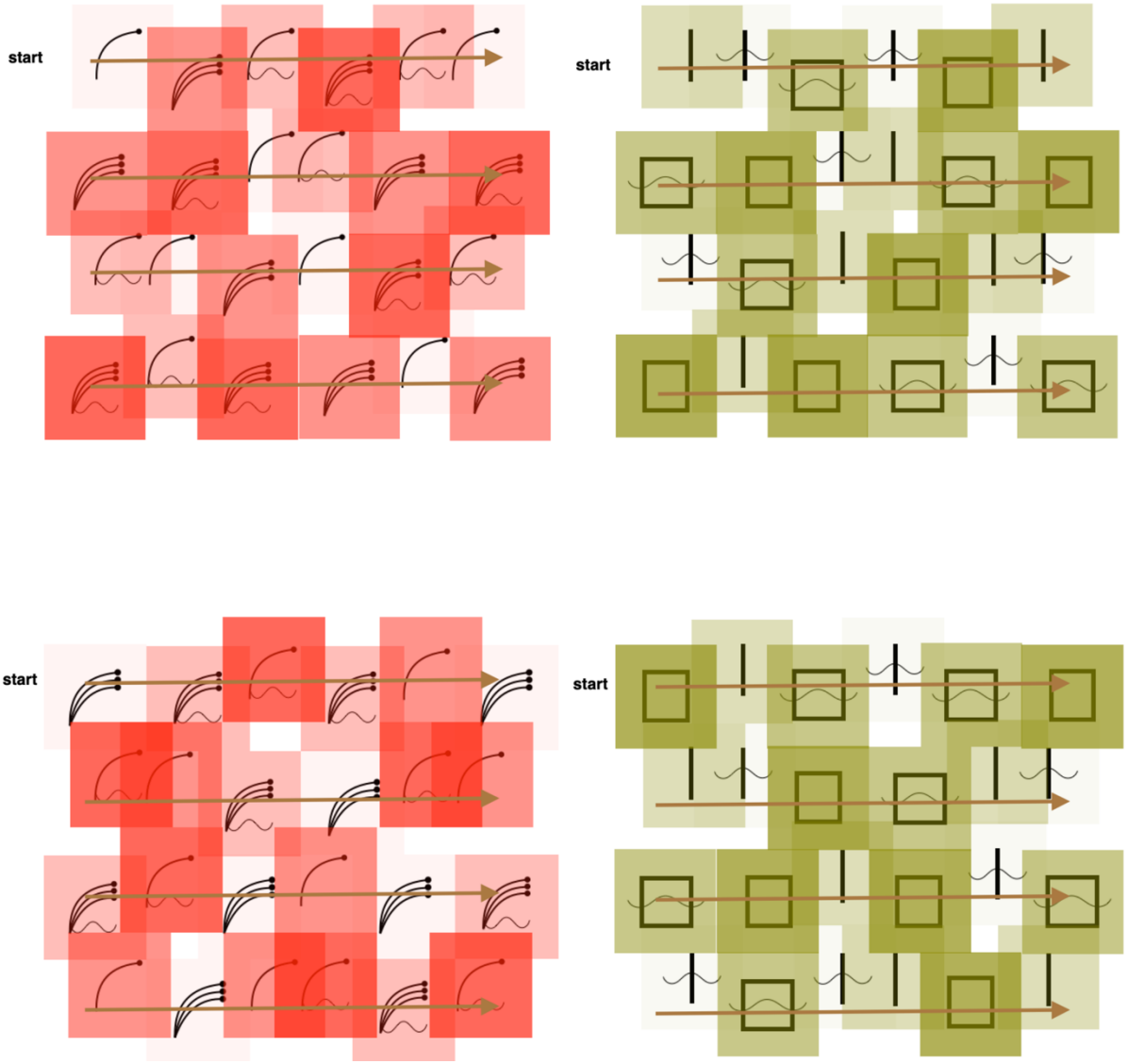
*Tin Paths,* Part Three (2)
Handwritten Score
Tomas Challenger
2019



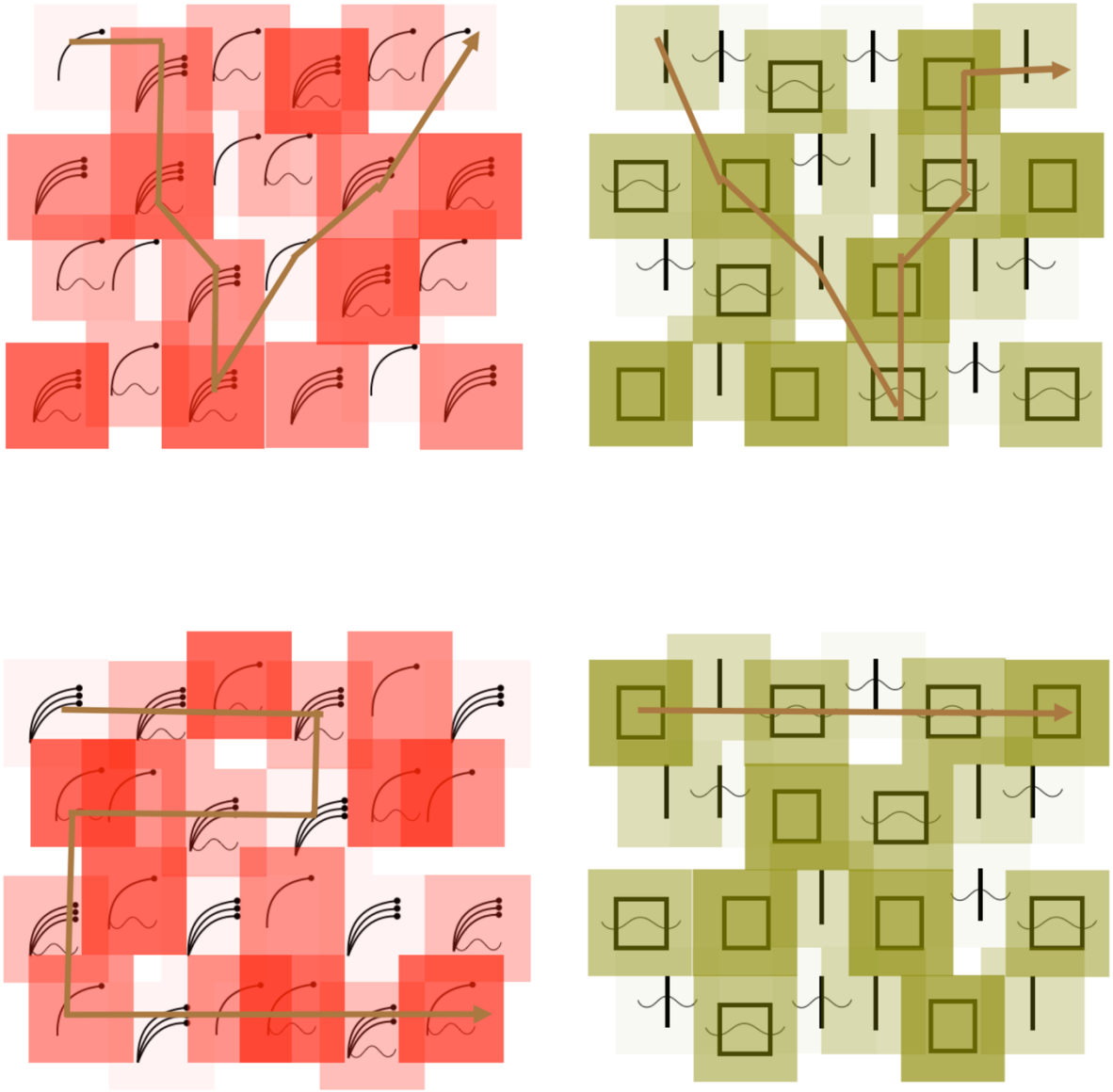
Appendix 4.4

*Tin Paths,* Part Four
Handwritten Score
Tomas Challenger
2019



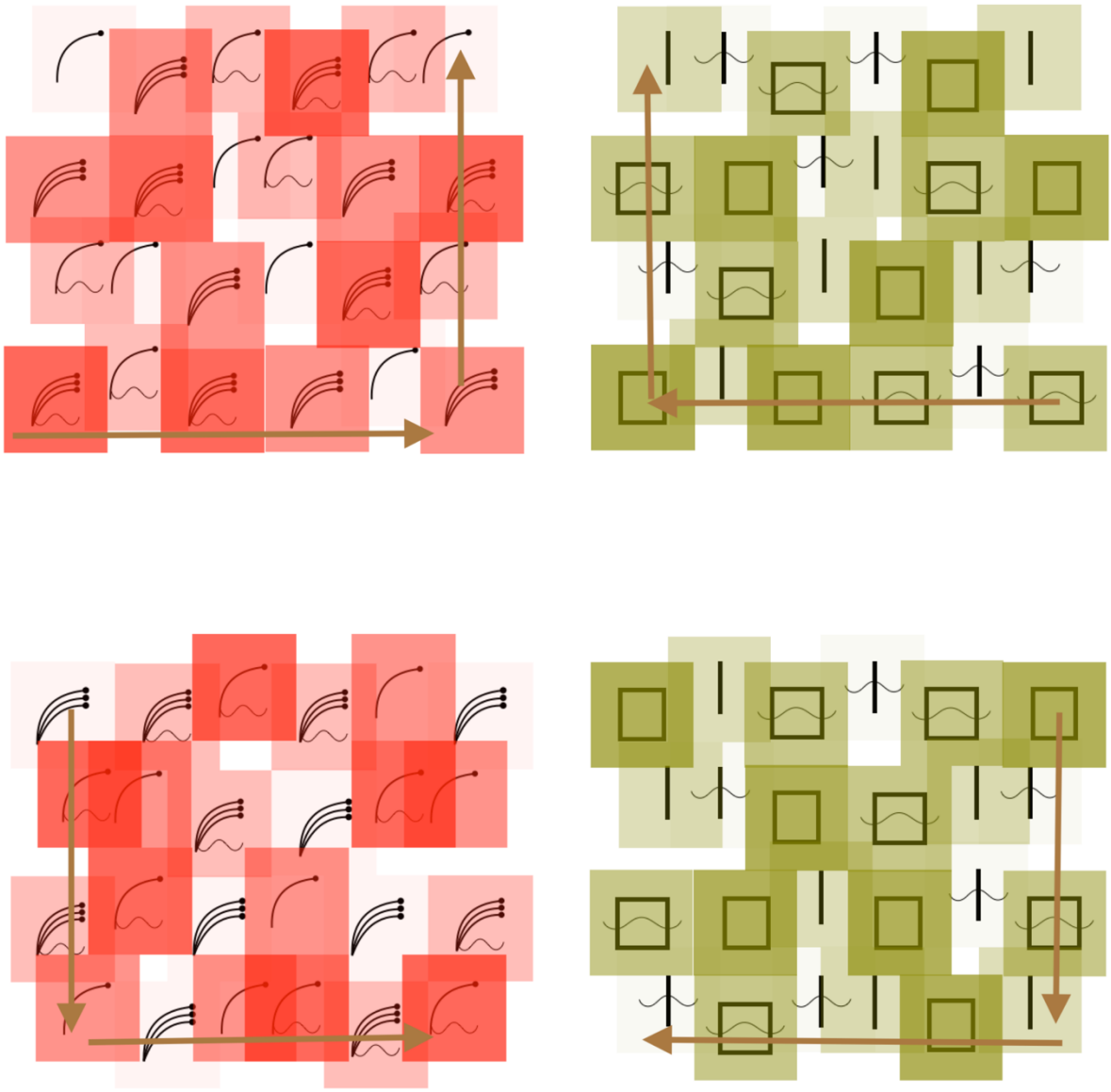

Appendix 5.1

*T-R,* Routing #0
2020



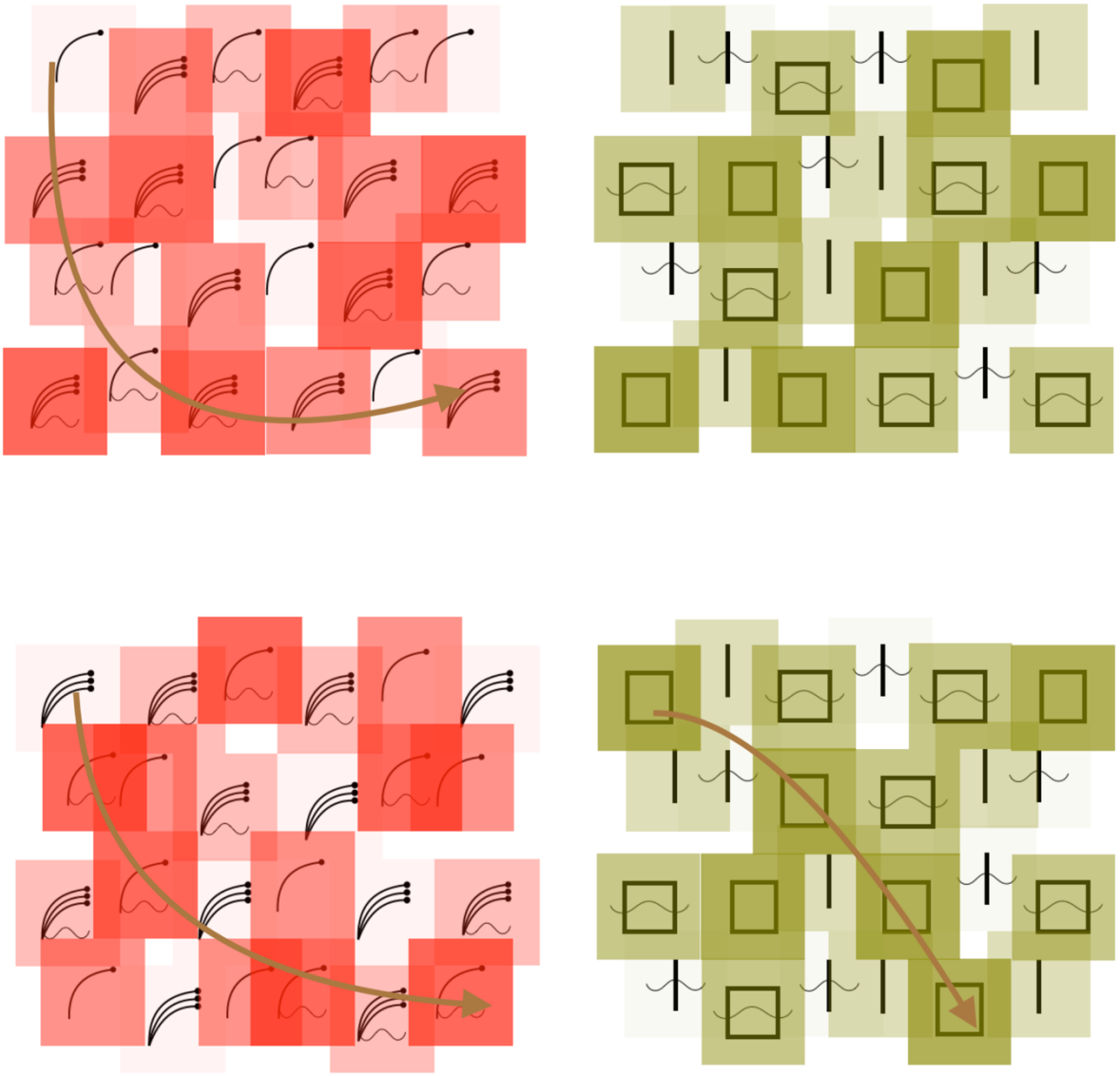
Appendix 5.2

*T-R,* Routing #1
2020



Appendix 5.3

*T-R,* Routing #2
2020



Appendix 5.4

*T-R,* Routing #3
2020

## *Strites Balneae*

1) A

2) B

3) C

Tomas Challenger – Tenor Saxophone

Kit Downes – Cello

John Edwards – Double Bass

Benedict Taylor – Viola

Recorded 18th May 2021; Trinity Laban, King Charles Court, London

Engineer – Barney Brosnan

Mastering – Alex Bonney

UNRELEASED

*Download HERE*

Appendix 6

*Strites Balneae*:
Album Credits
2021

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# Index of Supplementary Materials ii (Scores)

# Labtayt Sulci

(2018-19)

For Saxophone, three pages.

# Labtayt Sulci – Legend

Labtayt Sulci is a graphic scheme, for improvising saxophonist. It has been conceived to contribute to the preparatory activity undertaken for an improvised practice, over any given length of time. As such, this piece isn't designed for a typical, 'stand-alone' performance. Rather, it is expected that any resultant traits associated with the notation emerge in improvised performance/practice.

The notation is formed of three main pages. Each is a collection of 7 different instrumental and pitch parameters, which appear on separate layers (acetates/transparencies). In preparation, each 'page' is designed to last ca. 5 minutes, and the instructions appear proportionally on each (with one exception* – see below). As such, a complete reading with notation is expected to take ca. 15 minutes. It is expected that some variance in duration between pages and complete readings will take place.

The 7 different layers may be reorganised and placed, however desired. As such, there are many different combinations available when layers are mixed from different pages. It is perfectly acceptable for a page to omit certain parameters, if desired, however, only one of each parameter should appear on a page. The notation is to be read left to right, with one exception (Pitch, see below). Each layer directs the activity of a different parameter. These are:

The **V** (voice) staff (Black Line, top) stipulates the points in the scheme where the saxophonist's voice should be employed alongside other sonic elements at that point. The four intensity variables are intended to be 1) low 2) low-mid 3) mid and 4) high. As the intensity increases, the voice should be utilised with corresponding levels of movement and intensity.

The **T** (Throat) staff is a scheme of activity for two parameters: Front Oral Cavity (Green) - the tongue, jaw, lips and teeth; and Rear Oral Cavity (Red) - the back of

the tongue and throat. Activity within these areas increases as the lines ascend and decreases as the lines descend.

The **F** (Fingers) staff (Blue) is a scheme of activity for the fingers, which directs the rate of digital movement, which should correspond with the placement and trajectory of the line on the page (The higher the line, the greater the activity (and vice versa)).

The **A** (Amplitude) staff (Black, bottom) staff provides an outline of amplitude. As the line ascends up the staff, so the general amplitude of a performance should follow.

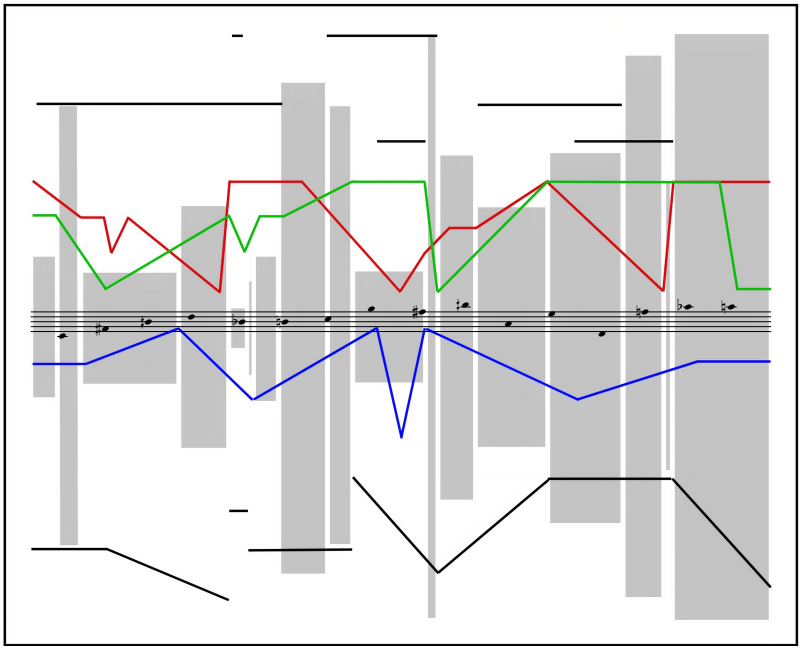
*The **Pitch** staff is traditionally notated, running across the centre of the score. However, unlike the other staffs/layers, *it can be read in any linear or non-linear direction*. It acts as a 'pool' of pitch choices that may inform any given reading. 'X' note heads indicate a free choice of pitch.

The **Pitch Filter** (squares) offers a set of pitch-use guidelines. It primarily provides a 'frequency filter' which the saxophonist can use to inform the amount of pitches available to them during a reading. The sizes of boxes follow a conventional pattern - the smaller the box, the smaller the frequency space the saxophonist should draw his/her pitch materials from at any given point (and vice versa). Note - the filter does not specify which pitches should be used at that point in the score, rather, it specifies the frequency range in which the improviser should exist within. It also provides a structural guideline for each page, which can be used to judge the time within which a reading is taking place. The perceived frequency range rests with the decision making of the saxophonist.

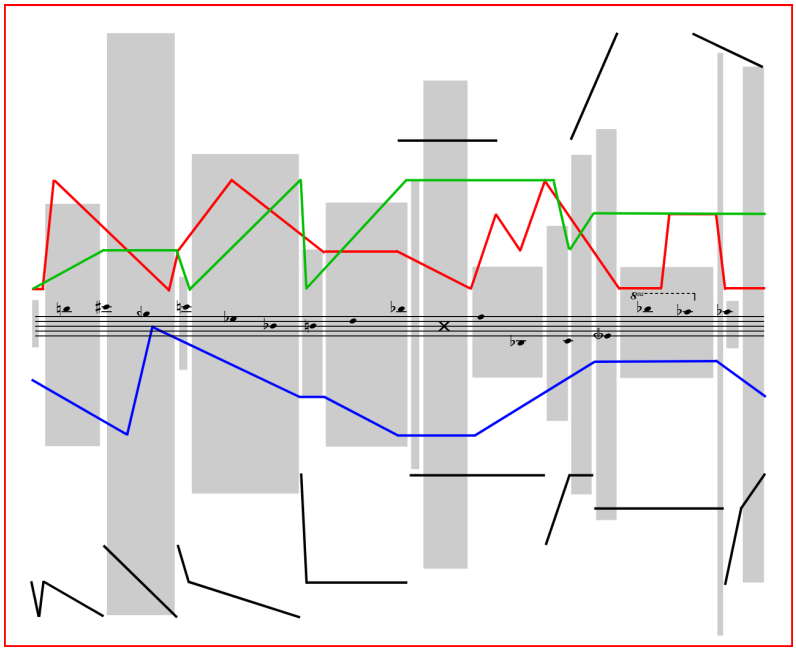
It is expected and hoped that the pitch sensibilities of the saxophonist also contribute to the general pitch environment.

Other notes:

Due to the nature of the notation, it is expected that there will be at times significant departures from the scheme. For example, each ascending line is expected to provide a **general trajectory**, in addition to pitch information acting as a starting point of activity. Initial timings may also vary slightly, as layers are re-organised and improvised actions developed. Similarly, and if the musical context requires, he/she may take curatorial decisions that actively challenge the score's direction.



Page 1.



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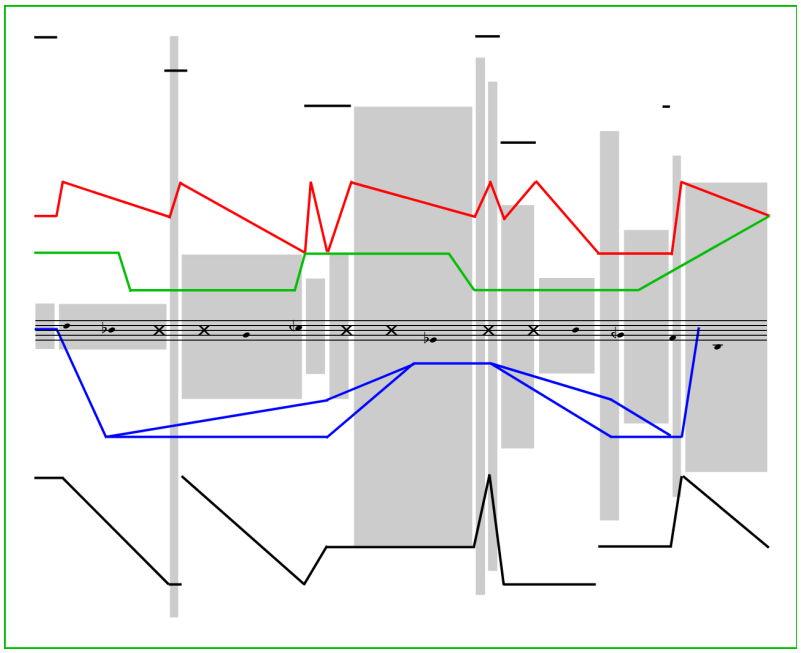
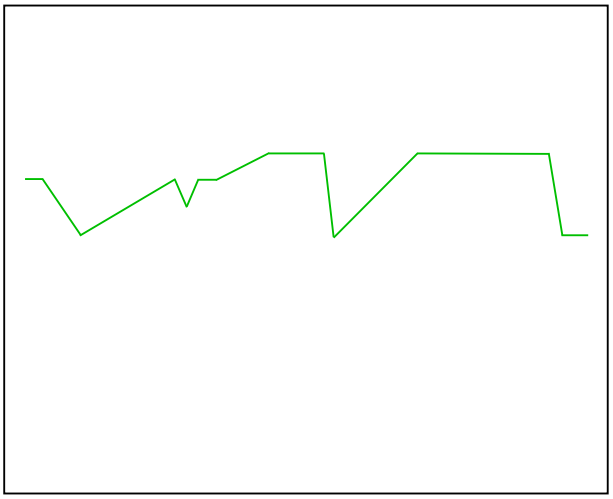


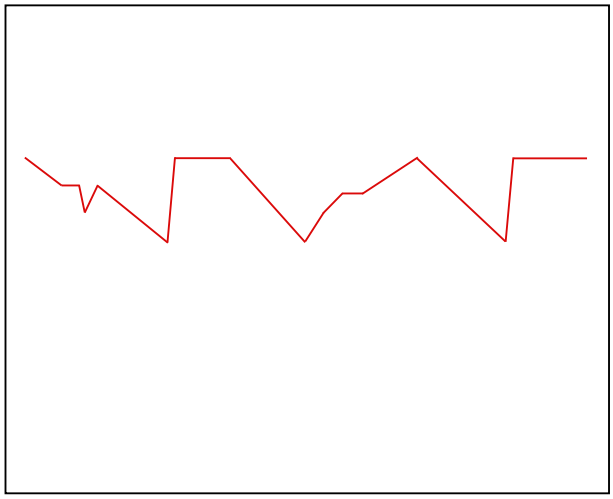
Page 3.

Transparencies: Page 1

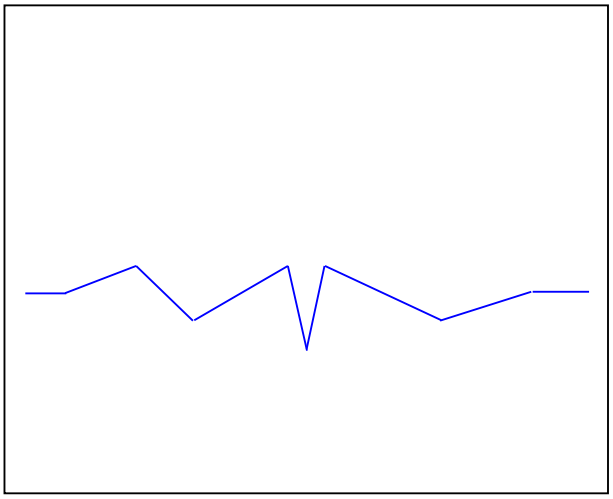
**V** (voice) staff



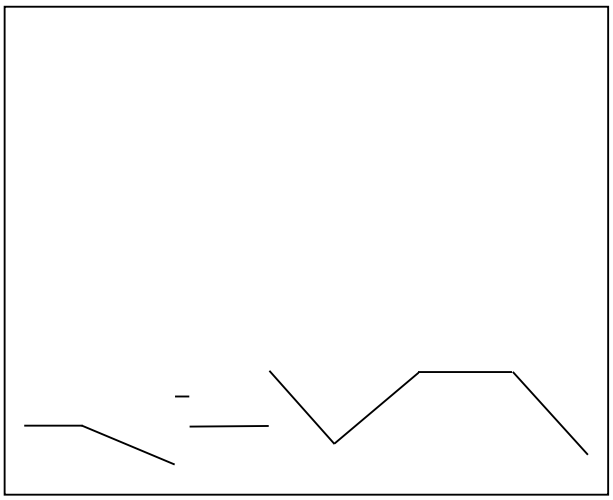
**T** (Throat, front) staff



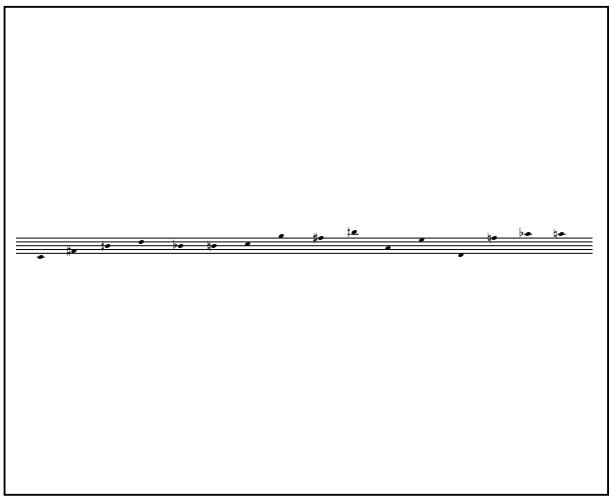
**T** (Throat, rear) staff



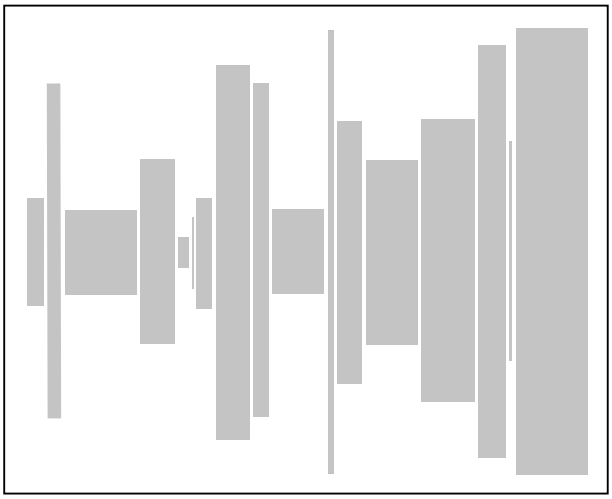
**F** (Fingers) staff



**A** (Amplitude) staff

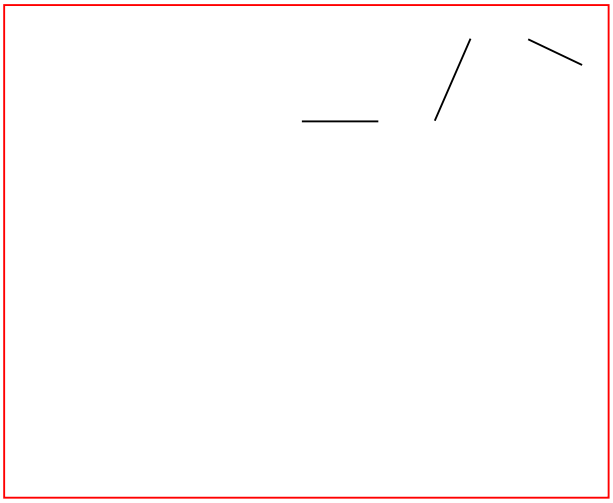


**P** (Pitch) staff

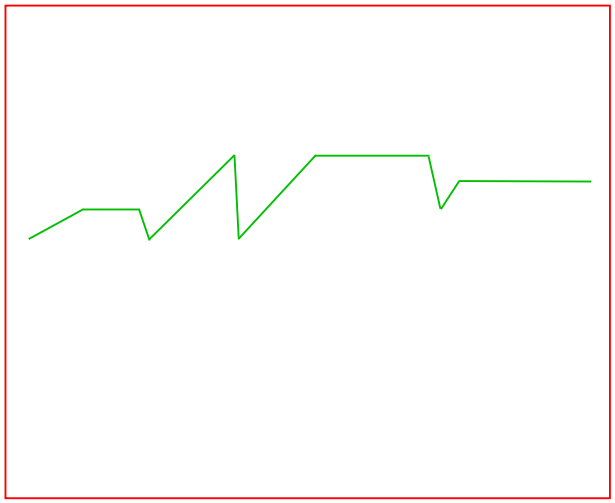


Pitch Filter

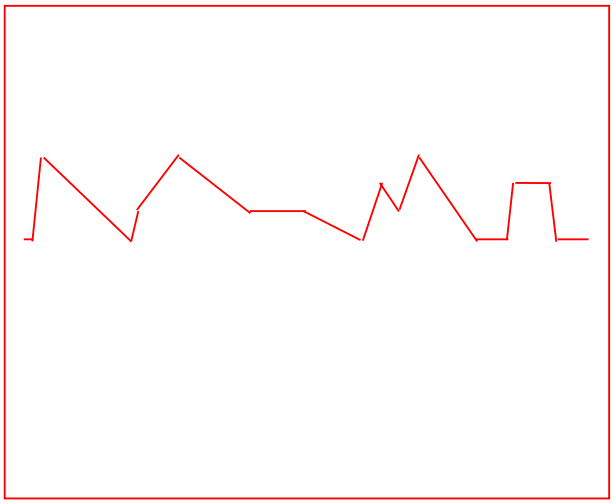
Transparencies: Page 2



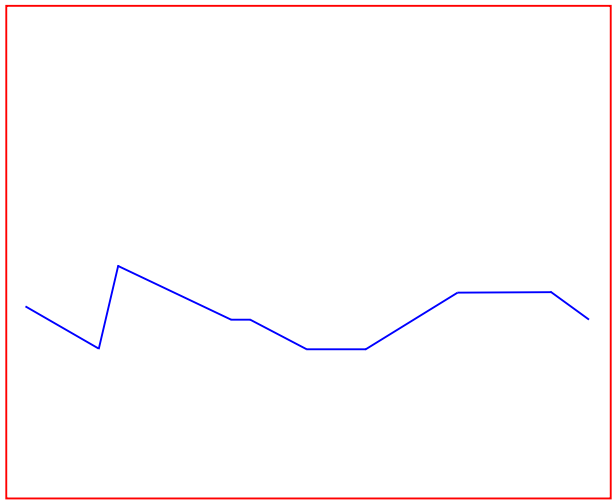
**V** (voice) staff



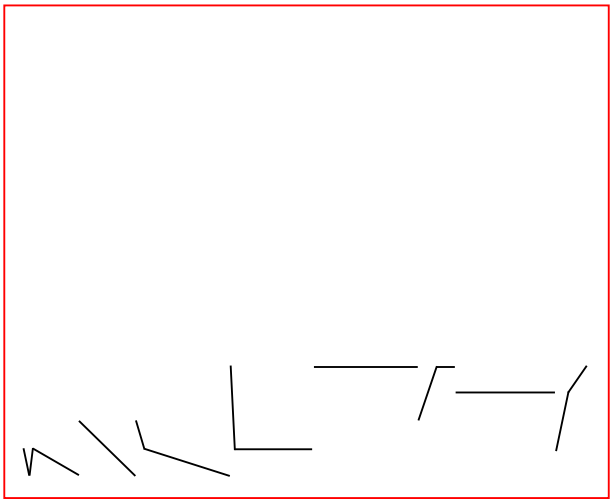
**T** (Throat, front) staff



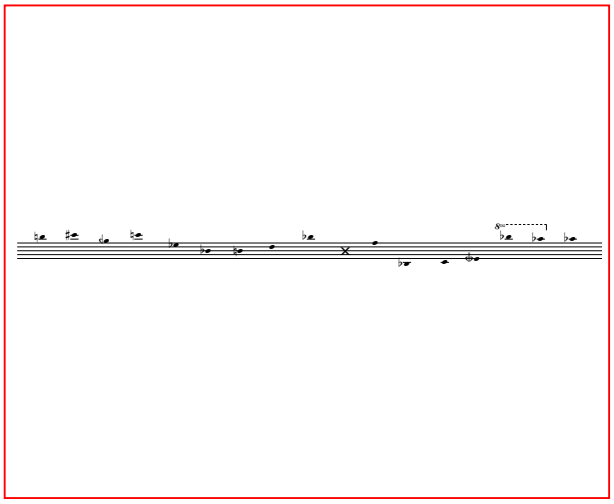
**T** (Throat, rear) staff



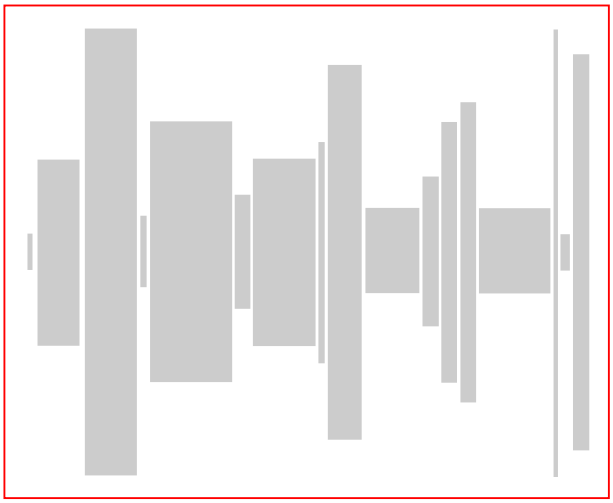
**F** (Fingers) staff



**A** (Amplitude) staff

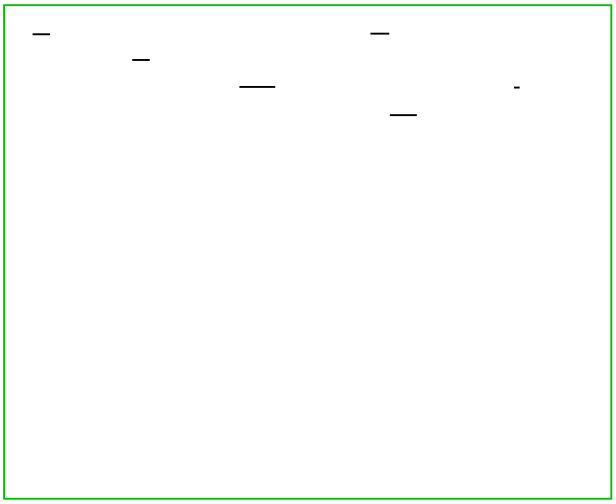


**P** (Pitch) staff

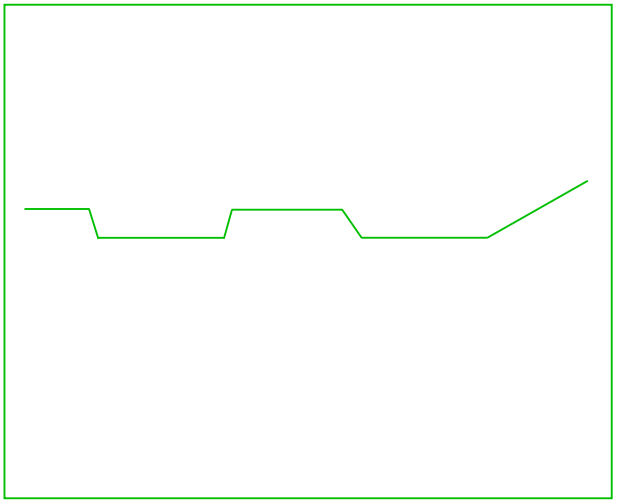


Pitch Filter

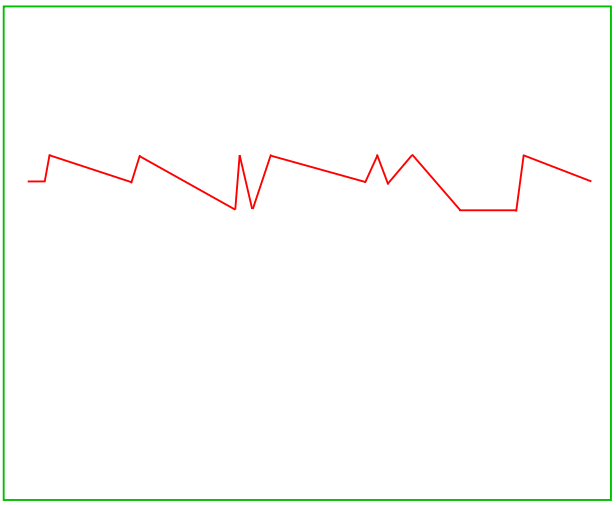
Transparencies: Page 3



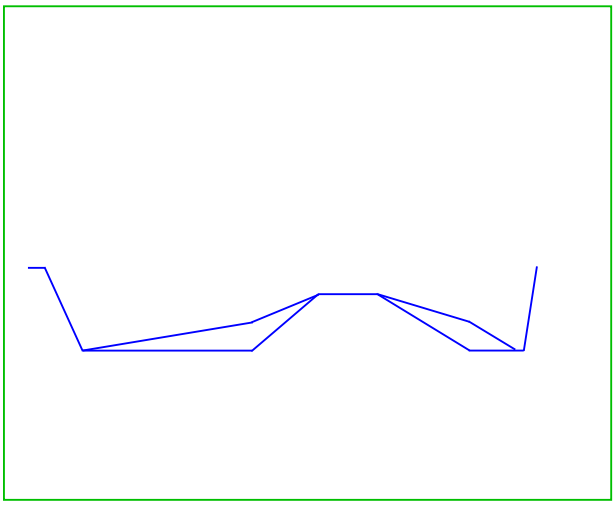
**V** (voice) staff



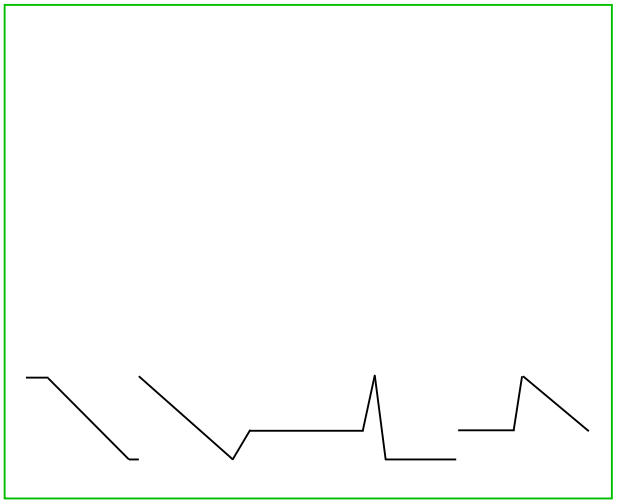
**T** (Throat, front) staff



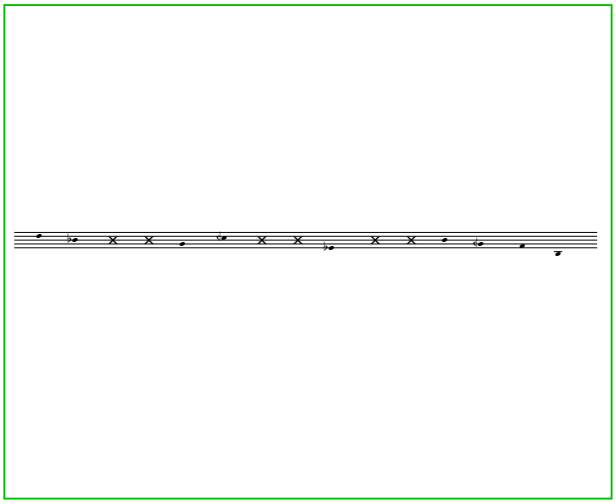
**T** (Throat, rear) staff



**F** (Fingers) staff

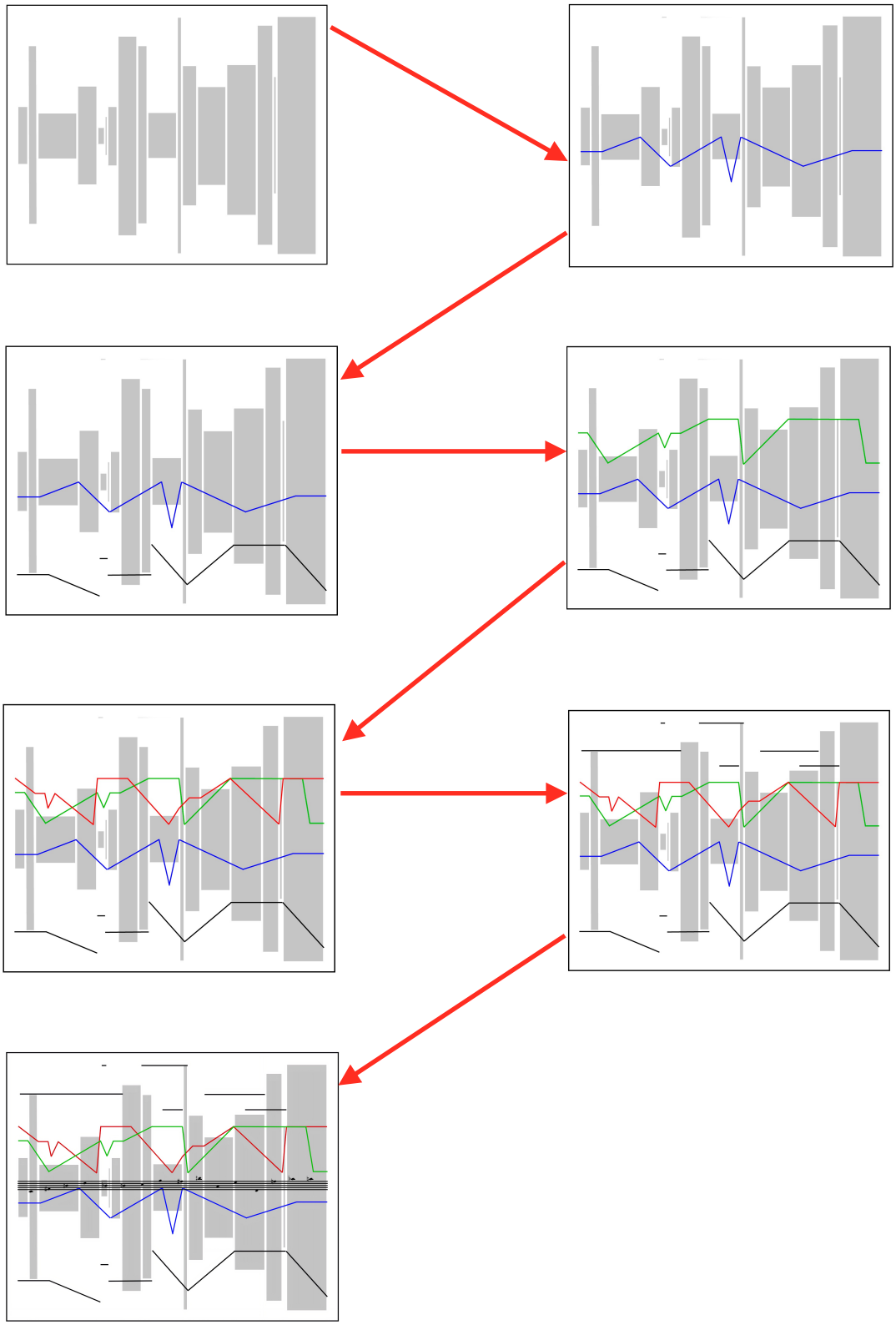


**A** (Amplitude) staff

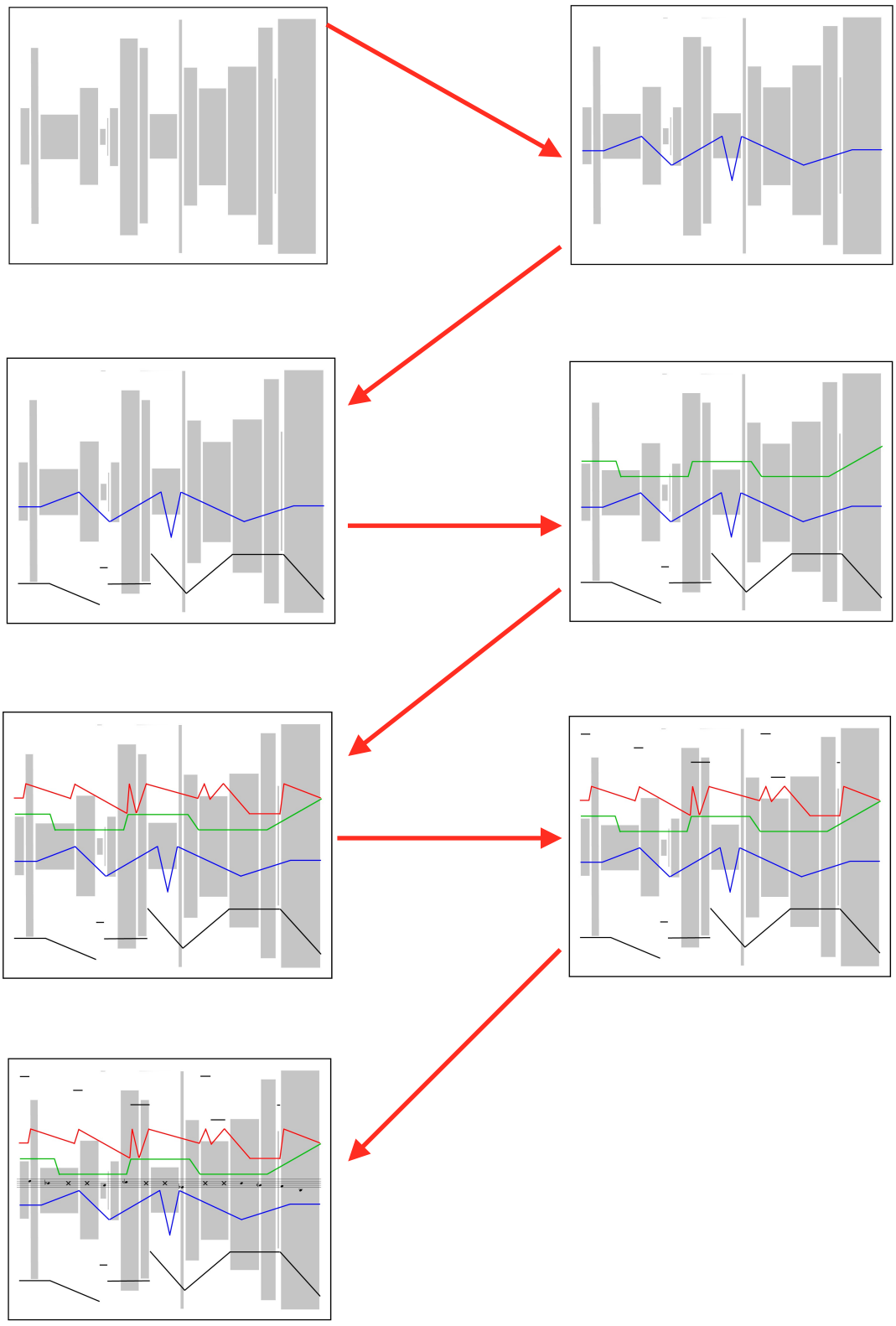


**P** (Pitch) staff

Pitch Filter



Ex. i of Module Construction (Page 1).



Ex. ii of Module Construction: Page 1 (Frequency Filter, Finger and Amplitude) & Page 3 (Throat (Red & Green), Voice & Pitch Environment).

# Tin Paths

## (2019)

For Saxophone, in four parts.

# Tin Paths - Legend

*Tin Paths* (for solo saxophone/improviser) is designed to provide a notated landscape with which improvised gesture and trajectory may correspond. It is primarily devised as a tool to infuse the preparation that accompanies an improvised practice. However, it may also be used in performance, if desired.

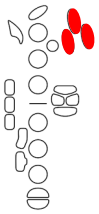
**Form**

The proportions of the four sections are 2:5:10:5. Each staff is proportionally notated and should last ca. 30 seconds. A complete reading is ca. 11 minutes. The distributed materials act as notated 'islands', around which improvised actions fill the vacant space. As the nature of the notated materials changes throughout, improvised actions may adapt as a particular reading progresses.

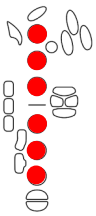
**Pitch**

Each pitch includes a symbol that encourages the alteration of written pitch through several transformative possibilities, representing a way of 'breaking' the fingerings associated with the pitches included on the score. There are five different symbols, each offering possibilities for frequency and timbre. The five symbols all respond to the mechanical needs of the saxophone, where certain hand combinations are needed to sound a particular note:

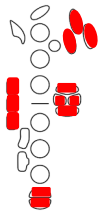
- A triangle is used on the notes B, Bb, A, G#, G, F#, F, E, Eb, D, Db, and C, except when they appear above a Db above the stave. The triangle sign denotes that the note should be 'broken' with any combination of the left-hand palm side keys:



- A ‘+’ sign is used on the notes G, F, F#, E, Eb, D, Db, C, B, Bb - only when appearing in or below the stave. The ‘+’ sign denotes that the note should be ‘broken’ by omitting ‘button’ fingers from the specified note



- A zig zag sign above a note can be used on any note, however it is commonly found on High F#, F, E, Eb, D, C#, C, and Bb: notes that generally utilise a ‘side’ key. It suggests the note should be ‘broken’ with any combination of side key from both the LH and RH.



- A black triangle sign is potentially used on any note which appears below the top C of two ledger lines. The note can be ‘broken’ with any combination of side key from the LH or RH, along with a button alteration/omission.

- A ‘o’ sign may appear on any note, and requests the performer play the written note at that time.

Their inclusion is designed to encourage the ‘discovery’ of alternative routes around the written materials, as well as to uncover new approaches to one’s instrument. Rather than a strict set of notated instructions, *Tin Paths* aims to develop a preparatory process that both challenges and embodies one’s own idiomatic interests with regards to the saxophone.

**Other notes:**

Where one or more pitches appear, it is hoped that a creative response leads to how this is negotiated. One note may be simply chosen over another. However, it is also feasible that each note might be played in ultra-rapid succession, or distributed between voice and saxophone (where it is possible to communicate two pitches simultaneously.

Some pitches fall outside of the range of the saxophone. As such, they may be simply made an octave higher, or gestured towards.

**Duration of notated materials**

Although the duration of a line is designed to last ca. 30 seconds, with notated points distributed proportionally, note heads omit any kind of durational guidance. As such, the improviser should shape each note length, taking into consideration the improvised trajectory of a reading, in addition to the observation of notated terrain that is passed.

**Throat staff/Dynamics**

The ‘throat staff’ encourages varied movements of the throat, to affect pitch output as well as the functionality of the saxophone. This part of the notation should be

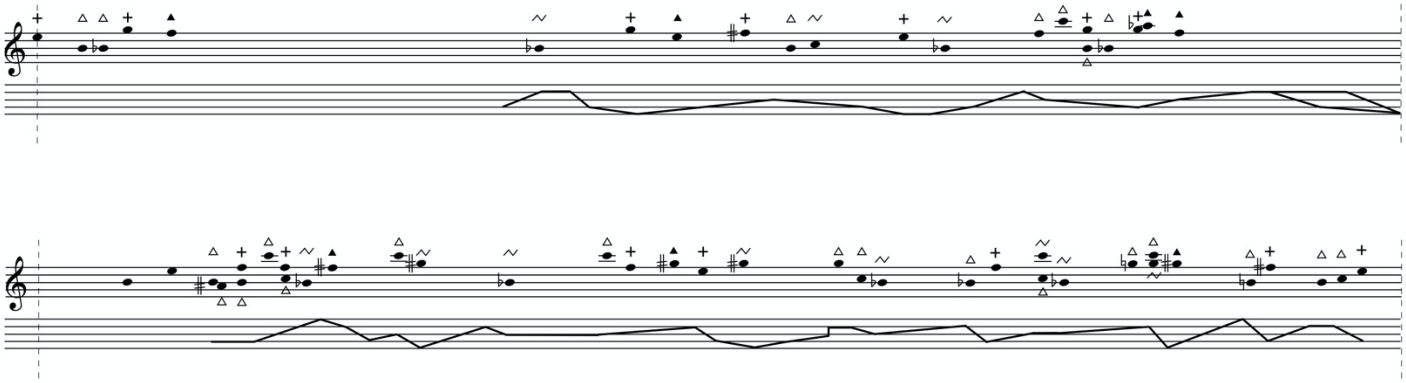
read as an intensity graph, where the positioning of the line represents a physical action of the throat that is relative to the nature of the musical events at that time.

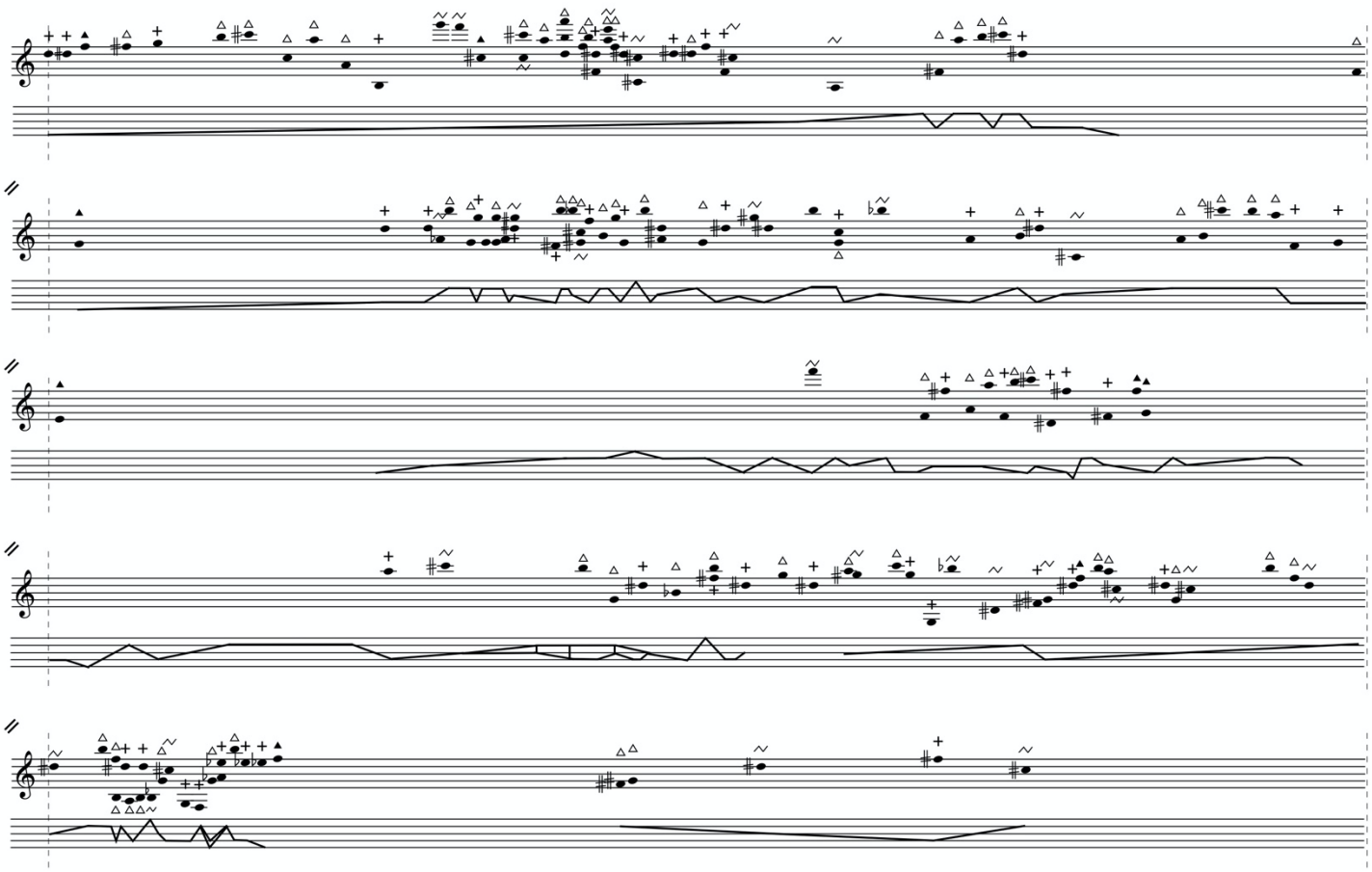
As the notation appears, the lower on the stave it is, the wider (flatter in pitch) the throat should operate. As it gets higher on the stave, so the throat should change/adapt accordingly. The performer may choose their own point on the notation where their 'normal' throat position may be. If the line splits, one route can be chosen.

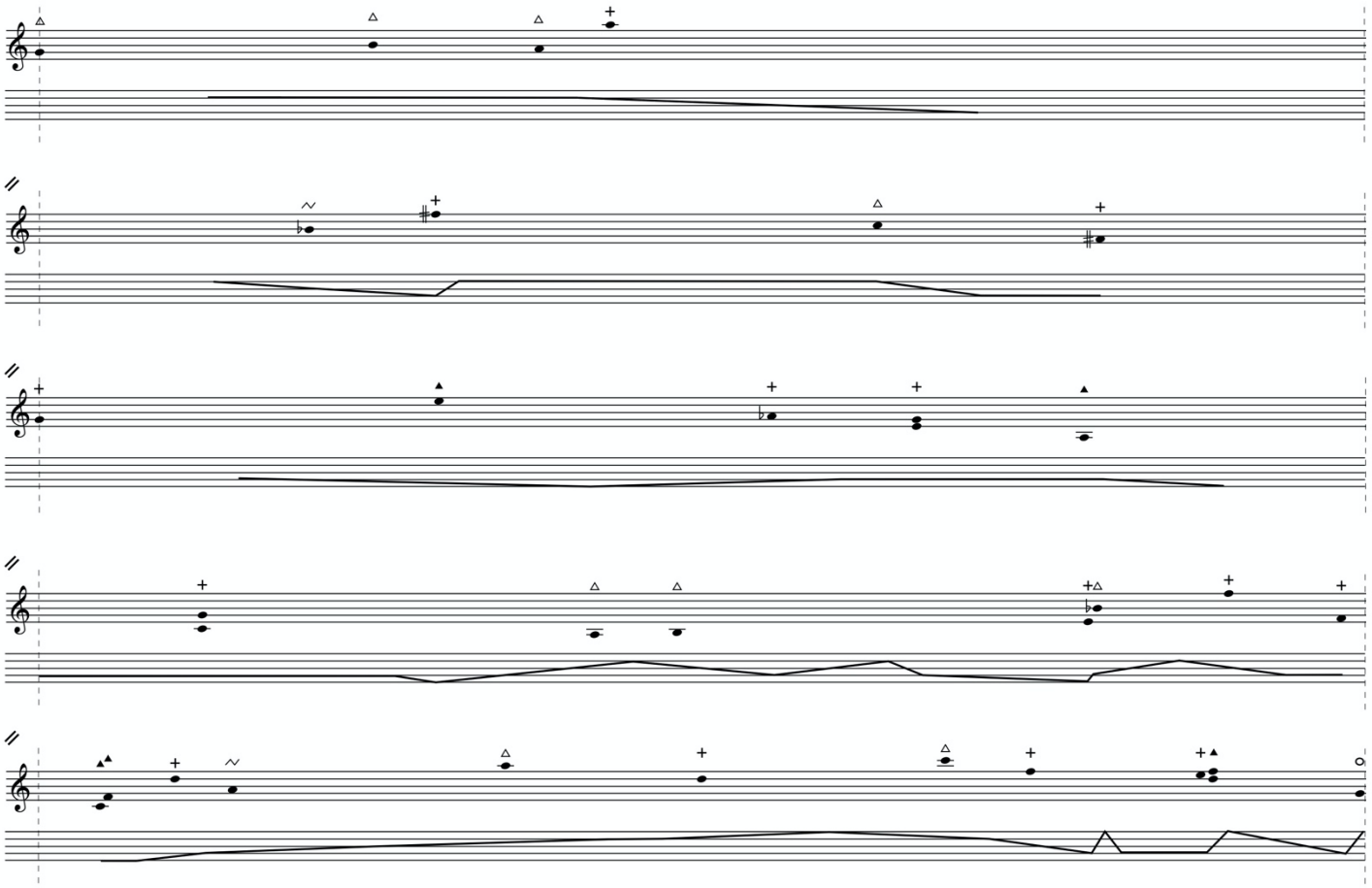
Acting as a counterpart to the pitch stave, this instruction contributes to the general guide for Tin Paths to be generally 'quiet', where slow oscillations of the throat might contribute to a slightly 'claustrophobic' sound world.

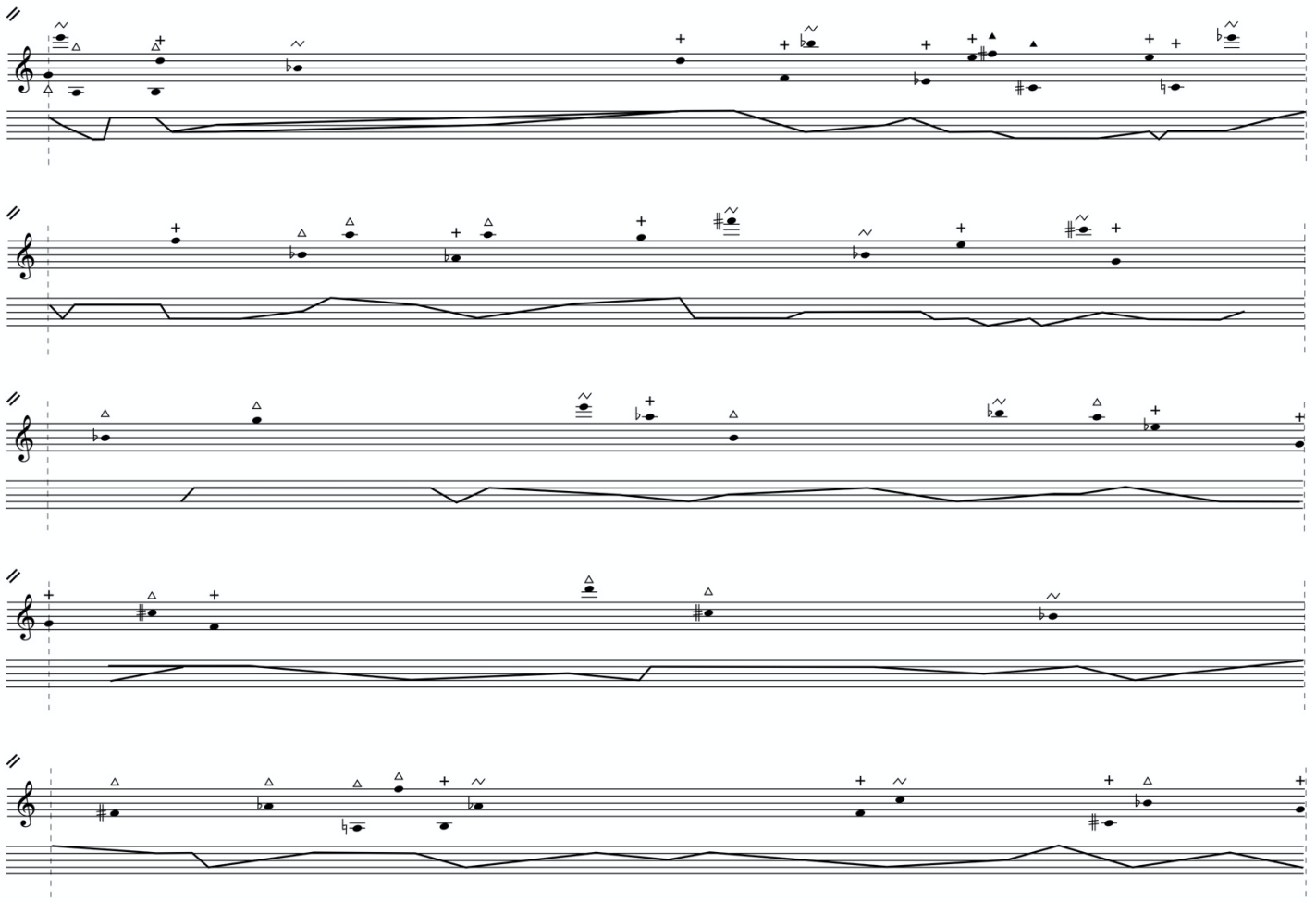
**Performance**

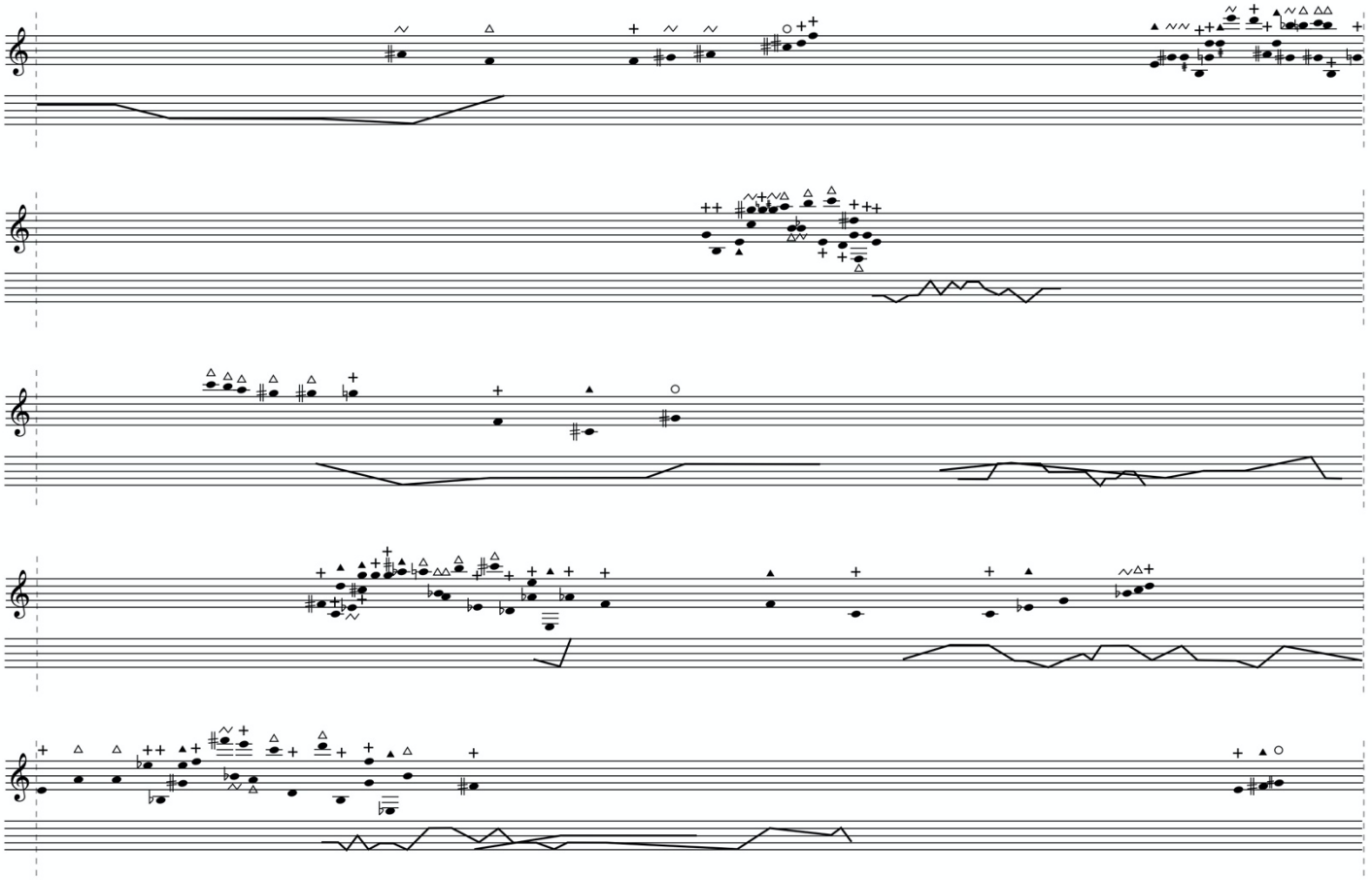
The aim of *Tin Paths* is to help create a specific space for improvising, that is also actively shaped by the improviser. This space is designed to help develop one's improvisatory practice. However, although the piece can be used in preparation, it may also be used in various modes of performance, if desired.











# Shadow(s)

## (2019)

For Saxophone, in three parts.

# *'Shadow(s)'* - Legend

## Parts 1, 2, + 3

Shadow(s) is a scheme for either preparation or performance that combines written (visual) and improvised materials. Written materials appear as a (metaphorical) shadow upon the improvisatory surface that exists. It is envisaged that the fixed (visual) materials appear in warped and disfigured states from their stipulated form (as shadows appear when fixed upon an uneven, moving surface), due to improvisation providing a dynamic, sometimes uneven terrain.

The three parts explore varying approaches to the parametrisation of instrumental faculties, as well as the development of the relationship between states of improvisation and composition. In Shadow(s), improvisation acts as a fixed procedure, with which the written materials correspond. Each part also explores differing approaches to notation which will be outlined in each section below.

Each part has a duration of ca. 7 minutes. Shadow(s) was initially produced to investigate approaches to improvisation in preparation, where work done is embodied and taken forward into improvised performance. However, how any realisation manifests rests entirely at the discretion of the performer. This piece may be used as an insert with another composition, or in an open improvisation. It can be performed as a stand-alone, or in tandem with its counterparts.

# Part 1

Part One notates two aspects of saxophone technique, articulation (upper staff) and the use of voice (lower staff). It uses conventional western-staff notation to convey the written materials. As the notated elements focus upon the oral cavity, it is expected that improvised materials will emanate from other sites of possibility: the fingers, stomach, and throat for example.

**Notation:**

The notation should be read conventionally. The upper (Articulation) staff provides rhythmic direction, alongside different articulation types:

Crossed Head: Muted Tongue

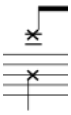
Diamond Head: ‘Tsh’ Tongue


Circle: Slap Tongue

Triangle Head: Tongue Ram

C above note head: ‘c’ Tongue (from back of the throat)

X head: Finger placement/pitch choice of Saxophonist



*Flz (///)*: Flutter Tonguing


Where more than one direction appears at once, they should be interpreted together. Arrows (↑ & ↓) indicate a slight tightening and relaxing of the jaw (arrow up = tightening and vice versa).

The lower (voice) staff provides pitch direction for the voice, to be sung together with the top stave. Text is used in the opening to encourage a pitch centre of G for that line.

The notation is to be read crotchet = 60 bpm. However, the score is not notated proportionally. Part 1 should last ca. 7 minutes. The ascending, dotted ‘bar lines’ are included as a remnant from the initial compositional workings, which delineate rough ‘working sections.’ Although they are present here, they are not essential for a complete reading.

**Other notes:**

DYNAMICS: Are not stipulated in the score. Any dynamic variation is at the discretion of the Saxophonist.

PITCH: Occurs primarily in the Voice staff. However, because of the specificity of the pitch instructions, to aid work done in preparation, the performer is encouraged

to view the instructions in terms of pitch contour. Thus, if there is change in pitch within quarter tones/semi tones, this may be seen as a ‘drone’ with subtle, equivalent variations in the fundamental.

Pitches can be introduced in the upper staff at letter C. These act as a guide for possible interpretation. Pitches will also emerge in performance, due to the use of improvisation. For this aspect, there are no pre-determined structures outlined.

IMPROVISATION: Having an improvisatory layer throughout is key to the realisation of the materials, where the relationship between the two can unfold naturally. It is expected that the improvisation effect written materials, and similarly, written materials impact upon the improvisation. To what extent the performer has control over these relationships is open. When there are no written materials present, markings appear for when, and how long improvisation can take place for. Where there are no notated materials, it is expected that improvisation fills these spaces.

# Part 2.

Part 2 notates two main parameters: Pitch and ‘Rate’. Pitch is expressed using conventional western staff-notation, whereas rate uses hand drawn lines that intersect the stave. Pitch is used conventionally here, however ‘Rate’ describes physical hand movements that should work against pitch instructions that appear on the score. Improvisation should again form the core-layer of an approach to this particular part of the notation, which may or may not affect the pitch outcome of a reading.

**Notation:**

Pitch appears on a conventional stave. However, where one or more voices appear at the same time, it is down the Saxophonist as to how this is interpreted. This may be achieved through improvised pitch placements, or the use of the voice. If the notation goes lower than the possible range of the Saxophone, then the instrumentalist may interpret as seen fit.

‘Rate’ appears as lines drawn upon the stave, in ascending whole or dotted lines. As lines converge, or ascend, it is expected that this represents a level of intensity that is interpreted using varying hand movements on the saxophone. They may take place anywhere on the instrument, from the key work, to the bell. As lines become dotted, this implies a fragmentation, or dissipation of physical gesture take place.

Arrows indicate a continuation of either pitch or improvised gesture.

Part 2 should last ca. 7 minutes. The notation is not proportional, however, pitch materials are roughly crotchet = 60 bpm. How the unfolding of their placement and use during a reading is down the saxophonist.

**Other notes:**

DYNAMICS: As Part 1.

IMPROVISATION: As Part 1.

# Part 3.

Part 3 is an action environment which notates the ‘perceived’ trajectories of the use of throat and tongue parameters. Included are pitch collections and contours that can inform a reading. Improvisation should again form the core-layer of an approach to this particular part of the notation, which may or may not affect the pitch outcome of a reading.

**Notation:**

Solid lines represent the trajectories that different tongue articulations may follow. As more than one happens at the same time, it is up to the saxophonist as to how this is interpreted, as a form of ‘inner’ counterpoint or otherwise. The instructions act as an intensity guide – the higher the line, the more articulation should be inputted.

Dotted lines represent the modulation of pitch materials (notated or improvised) through the modulation of the jaw and throat. The instructions work in the same way as above: the higher the line, the more articulation should be inputted. Where lines travel backwards on the scheme, it is expected the Saxophonist interpret this as they wish.

The notation is proportional and should last ca. 7 minutes and should be read left to right. At points on the timeline, pitch collections and trajectories can be inserted (arrows delineate where this takes place). These instructions may be articulated as the saxophonist wishes. The coloured sections are included as a remnant from the initial structural workings, which delineate rough ‘working sections.’ Although they are present here, they are not essential for a complete reading. Like the previous two sections, a reading may take on a modified durational structure, if desired.

**Other notes:**

DYNAMICS: As Part 1.

IMPROVISATION: As Part 1.

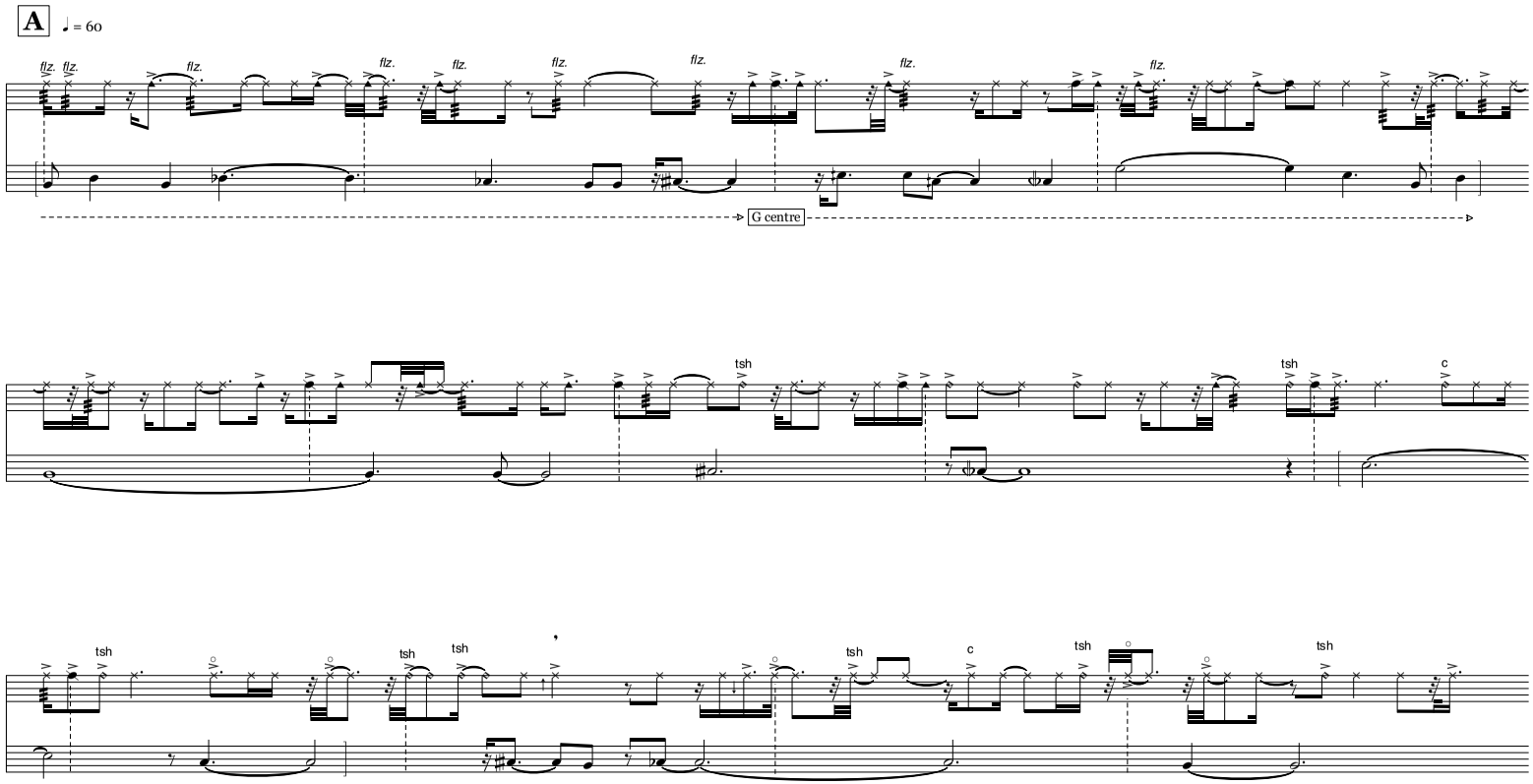
Shadow(s) pt.1 articulation notes:

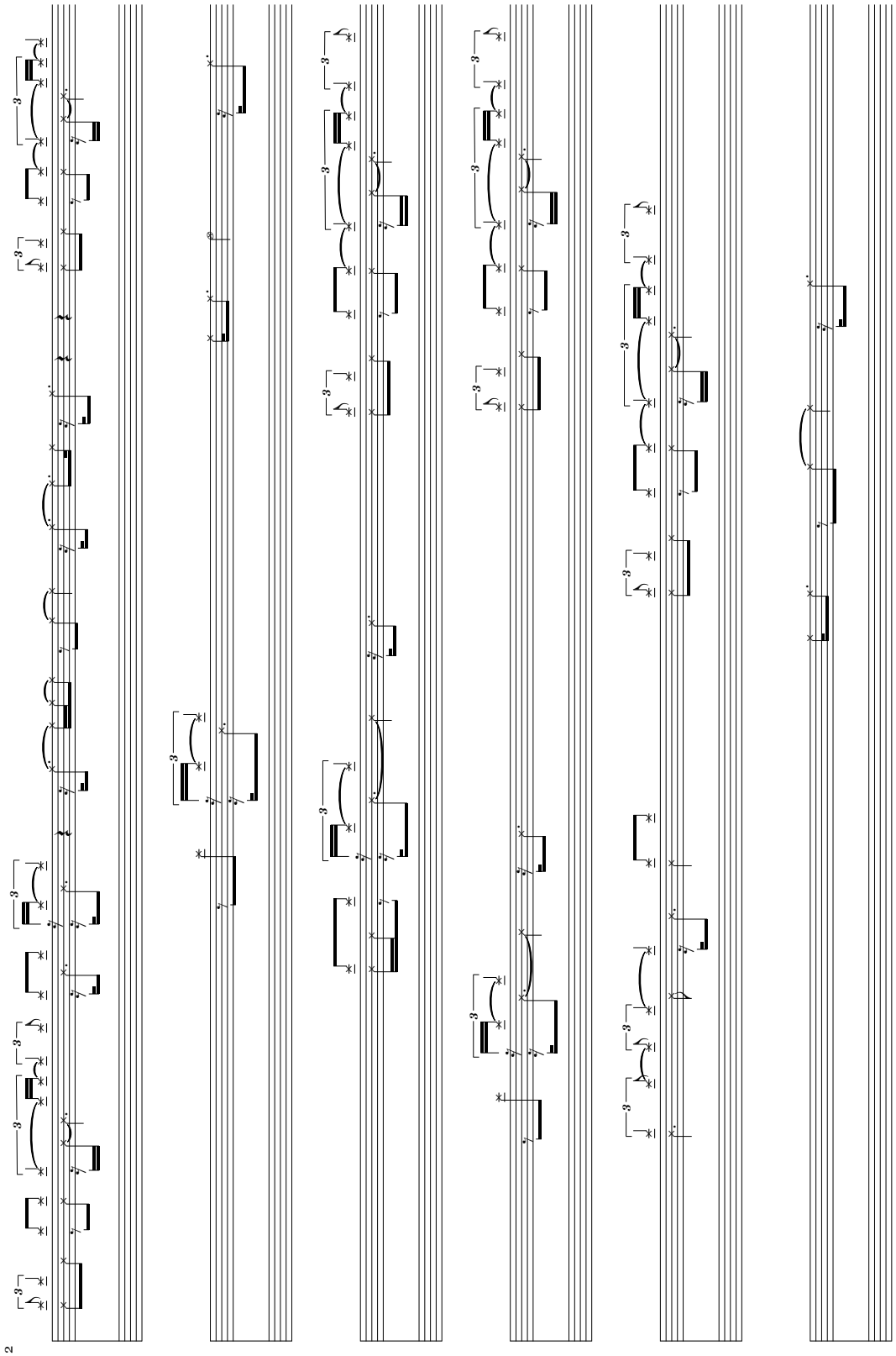
Crossed note heads = Muted tone
Diamond heads = 'tsh' tonguing
Circle = Slap tonguing
Triangle head = Tongue Ram
c = 'c' Tonguing (back of the throat)

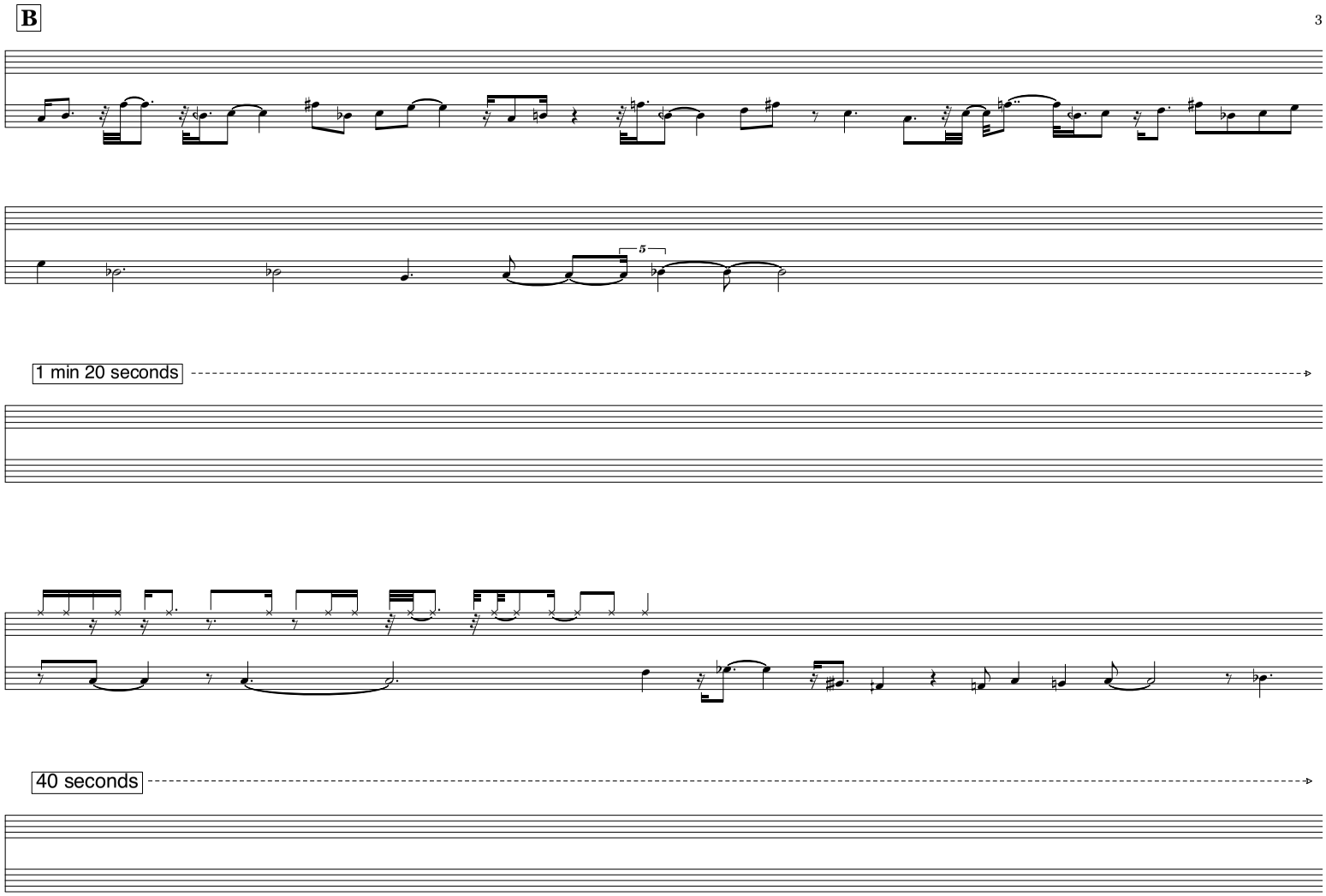
Pitches may be introduced at letter C on top staff

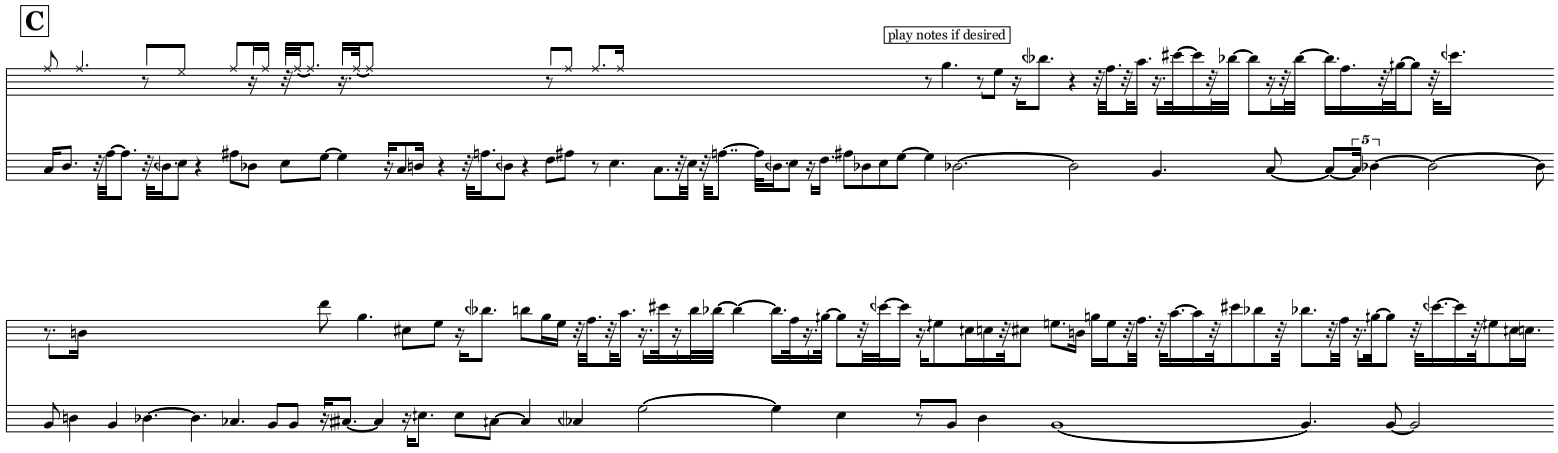
# SHADOW(S) - Part 1.

Tomas Challenger 2019

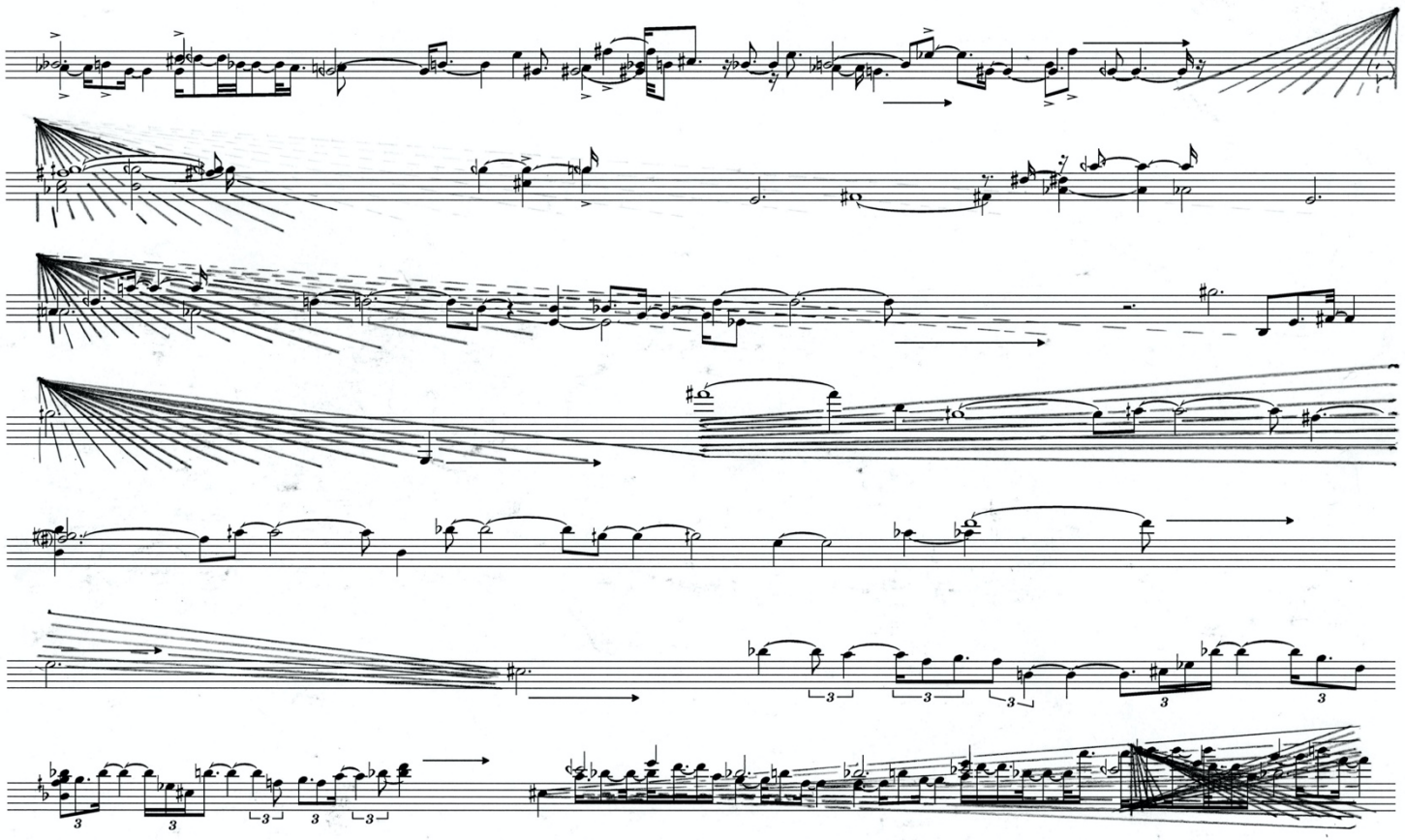


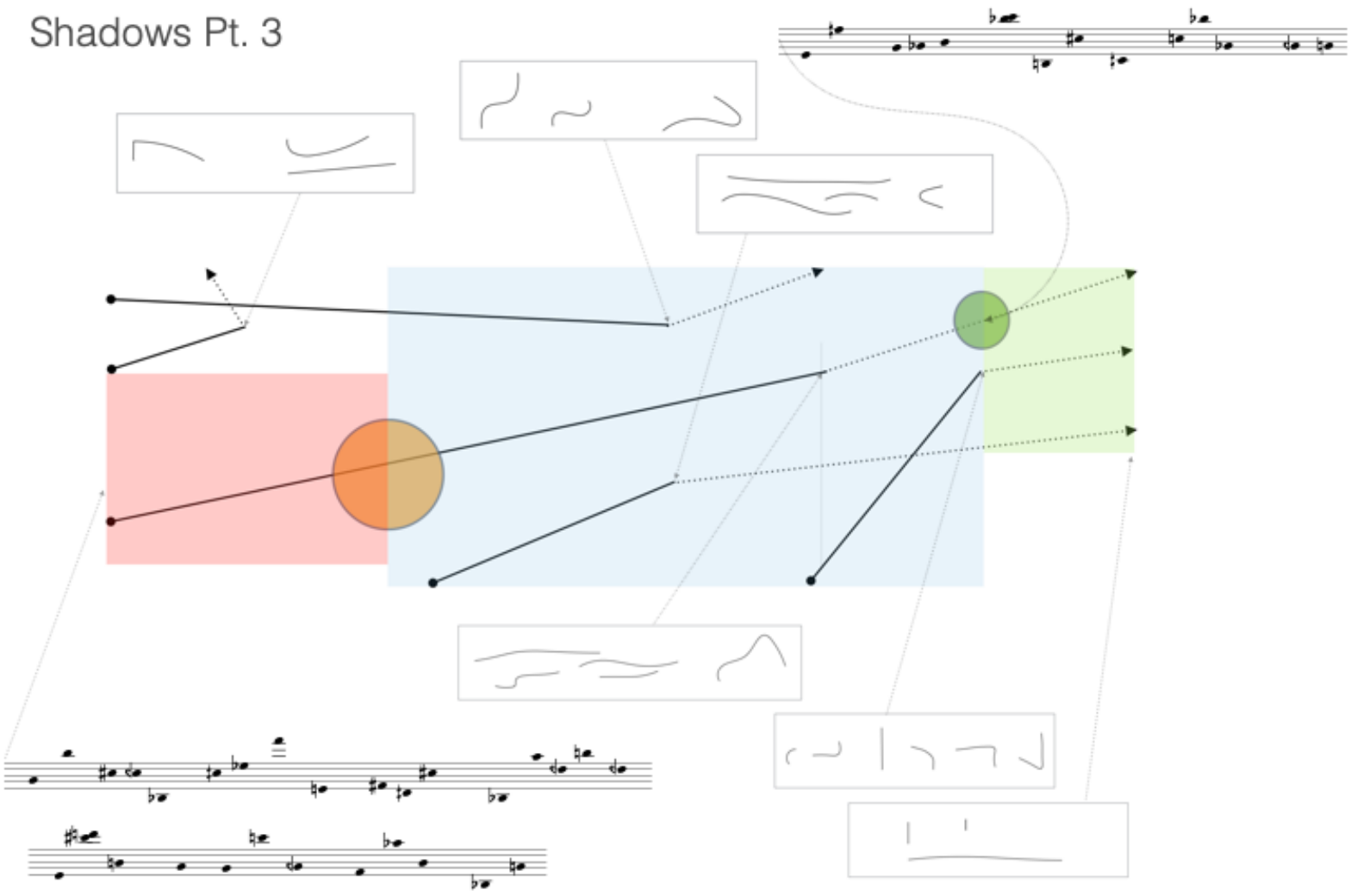



B
5
1 min 20 seconds
40 seconds


C
play notes if desired

# SHADOW(S) pt. 2




Shadows Pt. 3

# For Two Hands

## (2020)

For Saxophone, in four parts.

# *F.T.H.* - Legend

*F.T.H.* provides the solo improviser with a 'dynamic', or 'elastic' surface to interact with. It focuses upon two main components, one of which is an *'Ergonomic Notation'*, derived by conceiving of the saxophone *zonally*. The other component - the *'Pressure-Thread'* - is a linear notation delineating a guide to the pressure that might be applied using the area of the mouth. Each section has clear identifiers, however the most visible is the gradual disappearance of notated components in the third (5b) and fourth (4) sections. This piece may be performed, or used for preparation. The notation is to be read left to right and has no set duration.

The mechanical components of the instrument are divided into six zones (see below). Deploying various combinations of depressed keys leads to a variety of overtones, multiphonics, textures and pitches. The *'pressure-thread'* which runs throughout highlights these various combinations in positive and negative ways - enabling and preventing the sonic potential of certain finger combinations because of the interactive relationship between the 'physical' body and a 'mechanical' instrument.

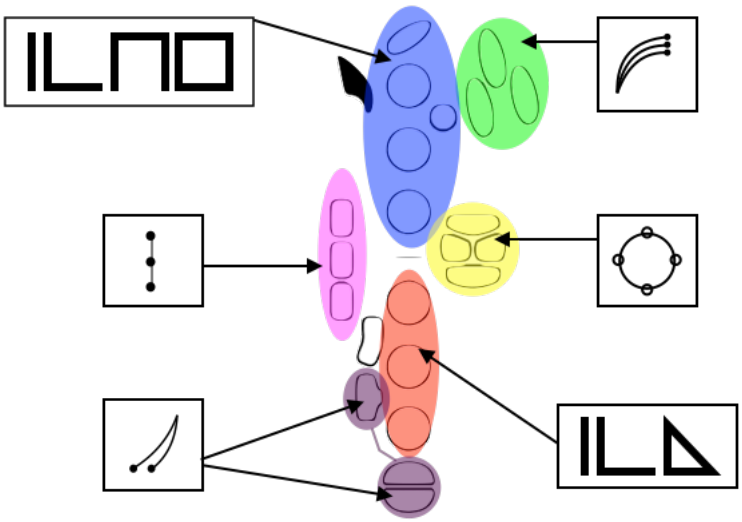
*Pitch, rhythmic and durational characteristics are formed primarily by the demands offered by the notation, alongside improvised actions and decisions the saxophonist may want to input*. These characteristics will exist in continuous flux as the improviser embarks on various stages of preparation/performance.

The gradual reduction of notational guidelines offers a way of both embedding notational guidelines and continuing the particular characteristics of a particular reading. Where there is a perceived absence of materials, the saxophonist can improvise materials that continue any ongoing creative threads into the particular 'proportional' space being realised. The interpretation of directions may take on several forms, both sonically and temporally. Concurrently, the actions of an

improviser are both conditioned and challenged in real-time as they navigate the surface.

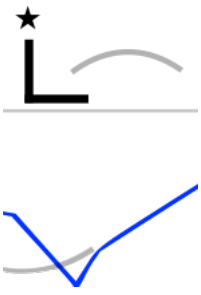
**Notational specifics**

The notation is in four parts, and divides the Saxophone into six zones, each delineated by a corresponding figure:

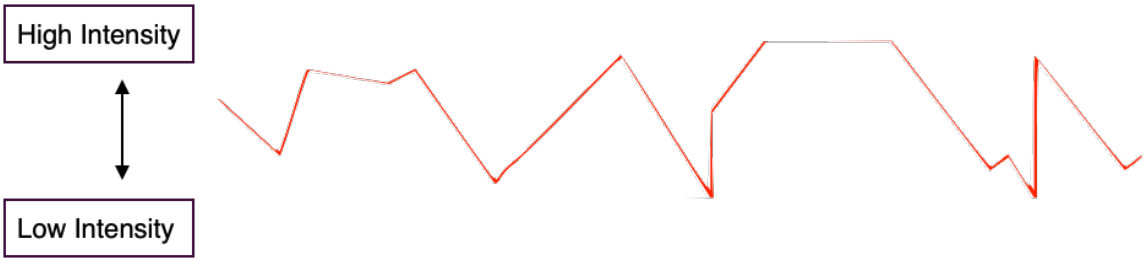


Blue: L.H. fingers (1, 2, 3, 3+)
Green: L.H. side keys
Yellow: L.H. little finger keys
Pink: R.H. side keys
Red: R.H. finger keys (1, 2, 3)
Purple: R.H. little finger keys

Each of the ILNO and ILA symbols denotes the amount of fingers that should be depressed. Each follow the same rule: one side represents one depressed finger; two sides, two fingers and three sides, three fingers. One exception is the square, which represents the need to press the first, third and fourth keys in the blue zone. Although not strictly four depressed fingers, the larger shape is indicative of the ergonomic spread needed for this combination. When a fingering is to be held down, a traditional slur sign is marked. The use of the octave key is delineated by the use of a star, above the blue zone:

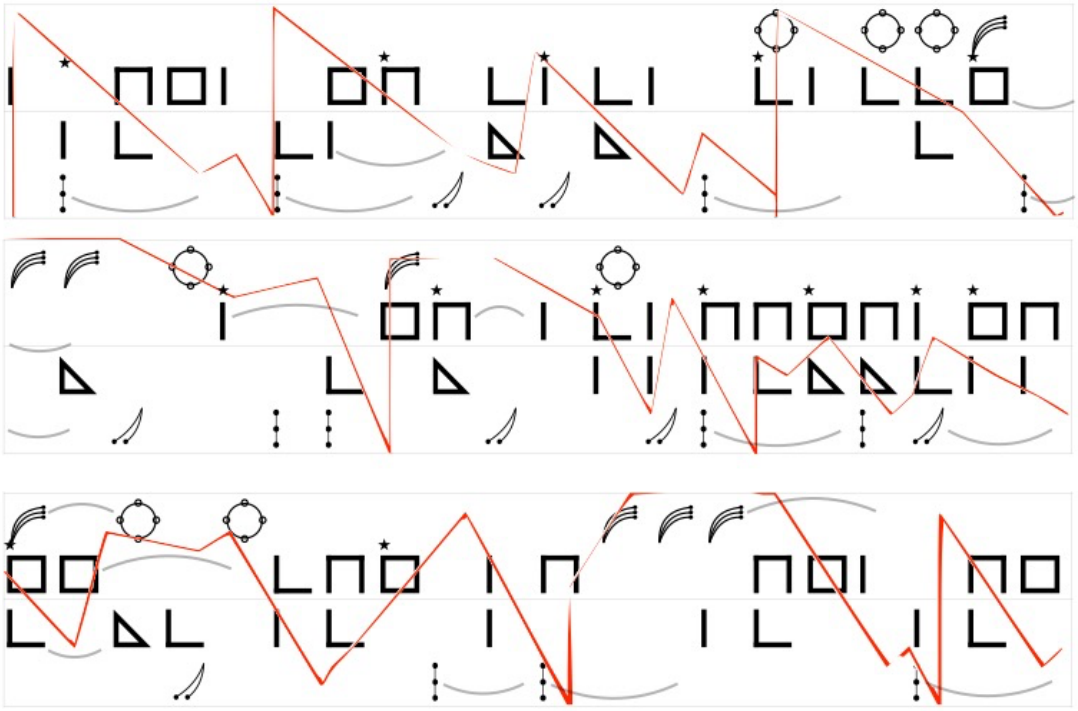


Oral articulations should be improvised. Different articulations may challenge the *'Pressure-Thread'*, due to the nature of the tongue making contact with the reed and mouthpiece. The *'Pressure-Thread'* serves as a guide as to how pressure can be applied from any or more than one of the components available to the saxophonist. This can be through the use of pressure from the jaw, cheeks, throat, or diaphragm:

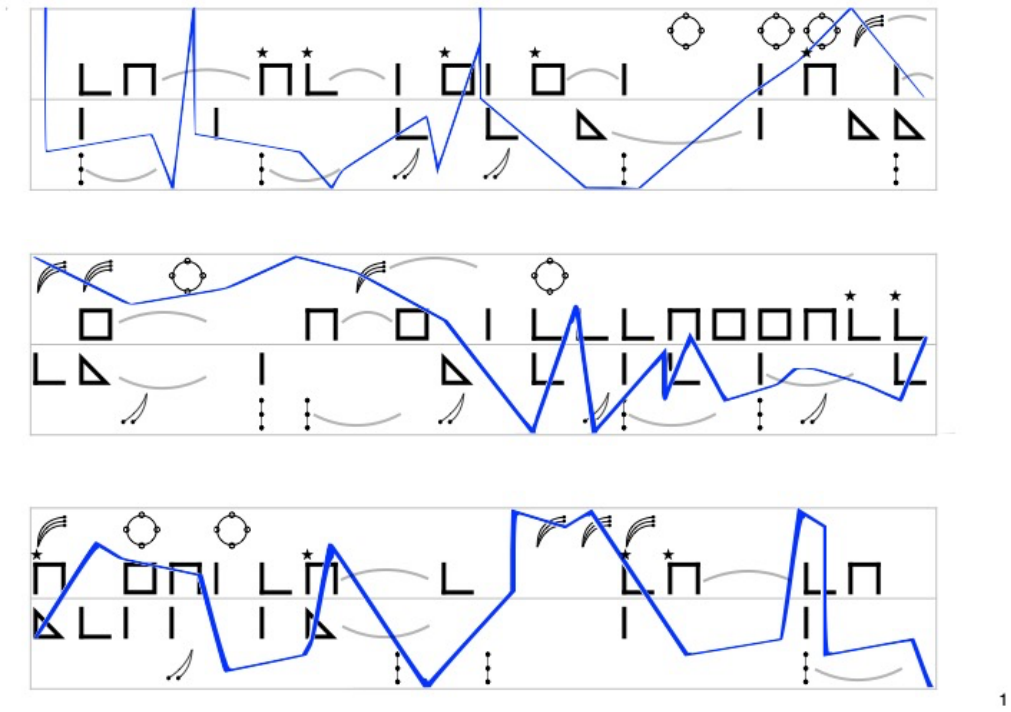



**Preparatory specifics**

Multiple readings should not aim towards a 'known' negotiation of the notational terrain. Rather, every reading should explore different sets of potential combinations. As the information within the notation slowly depletes, so the improviser can take on/further explore the characteristics arising from that particular reading. There is no time limit to preparatory activity.



Part 1 (1)



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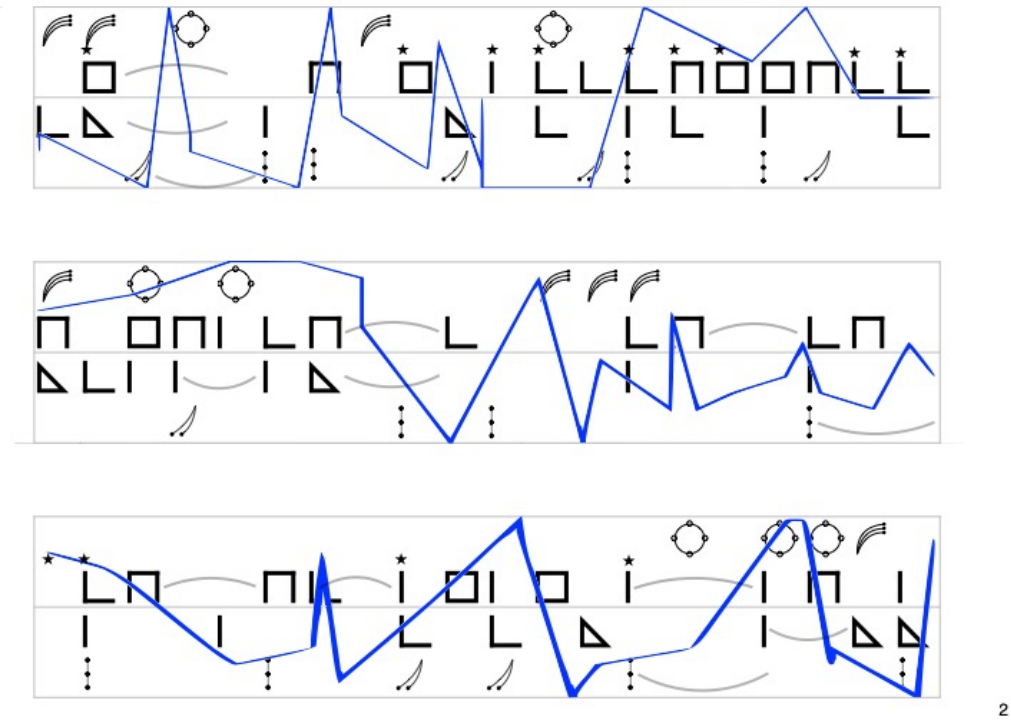

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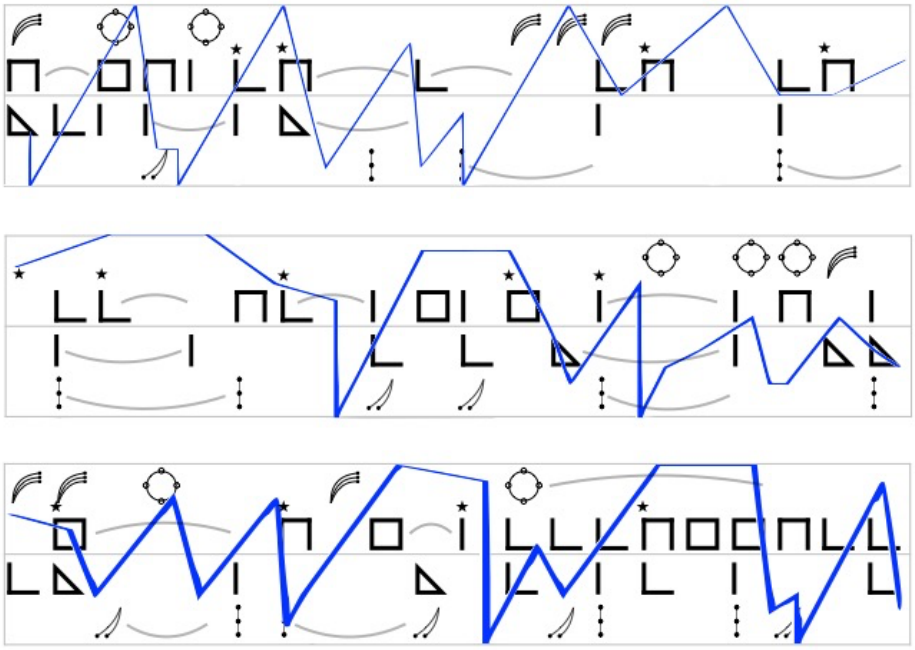

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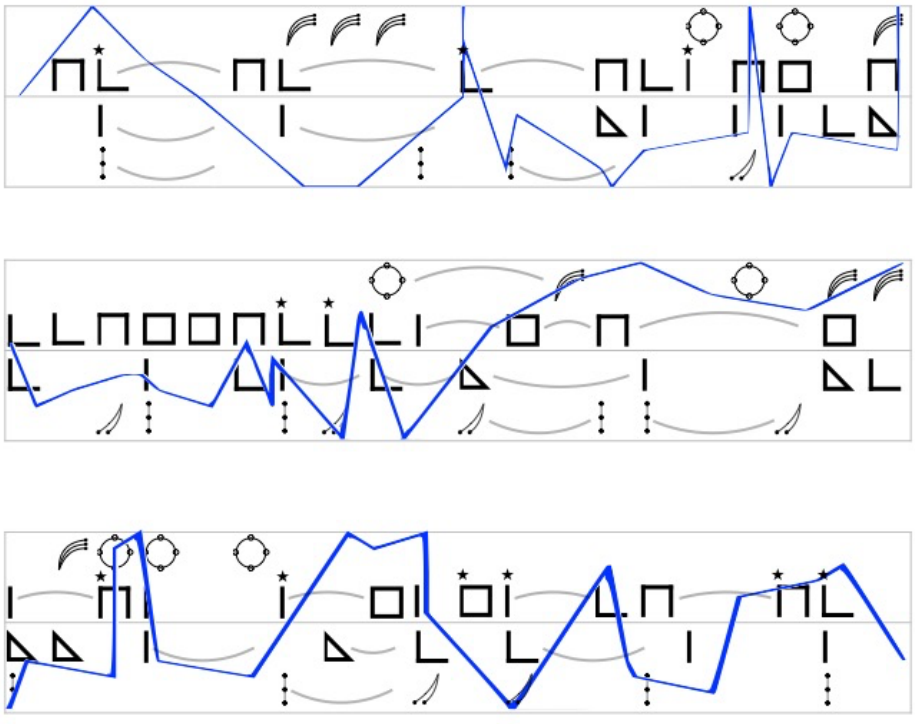

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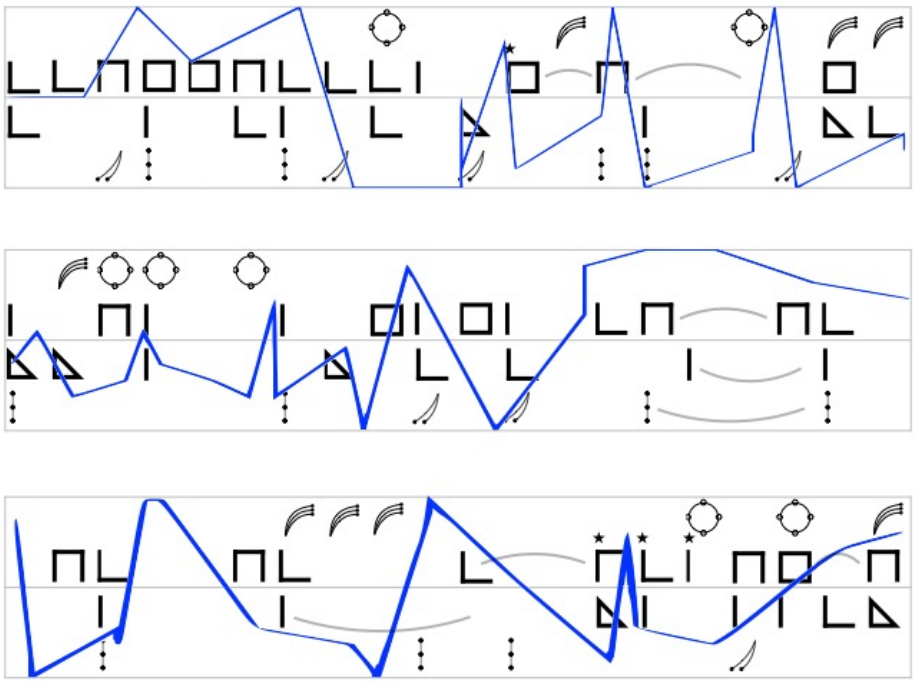

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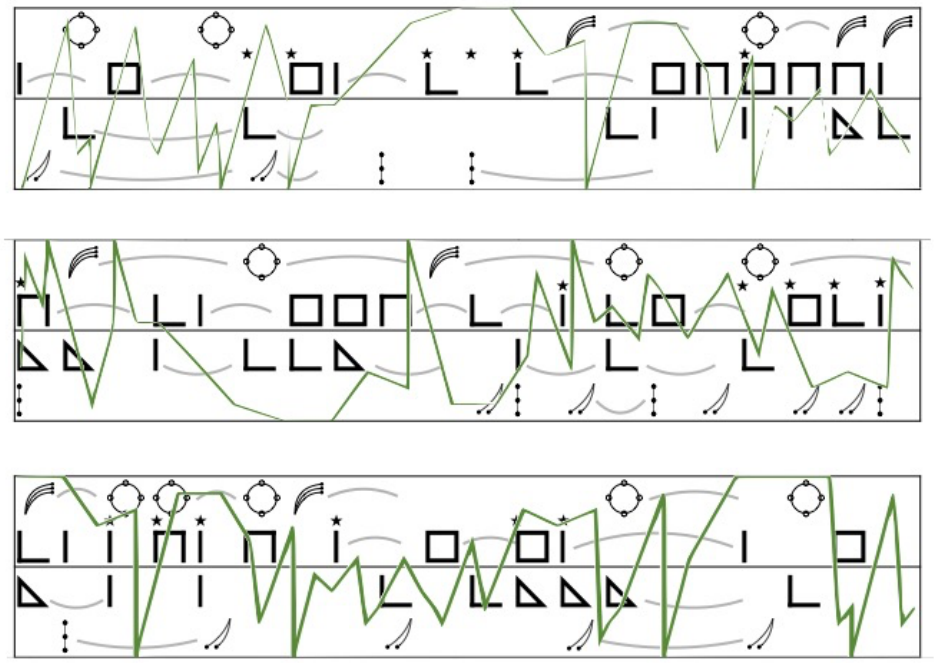

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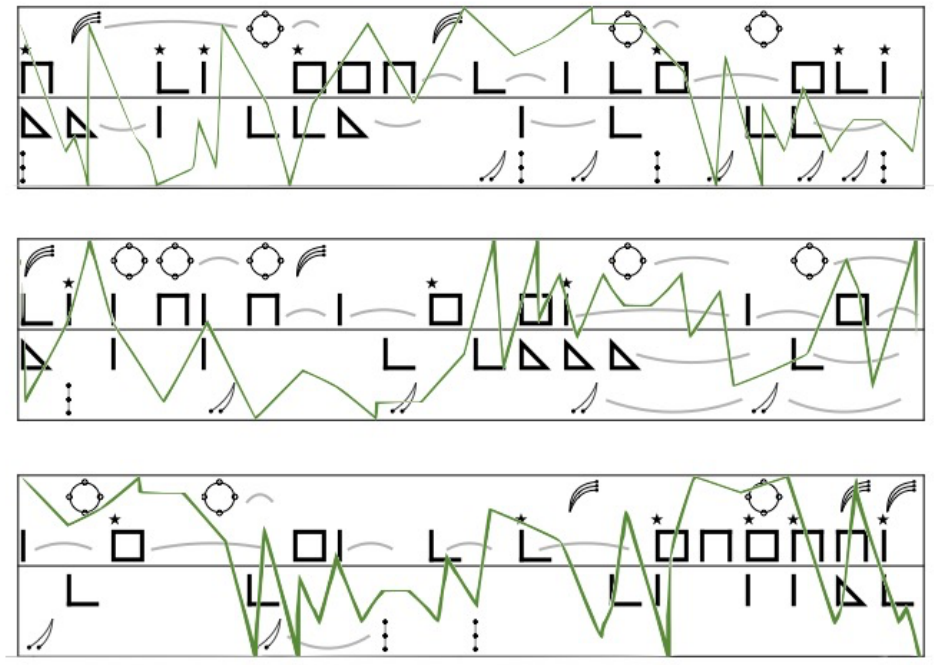

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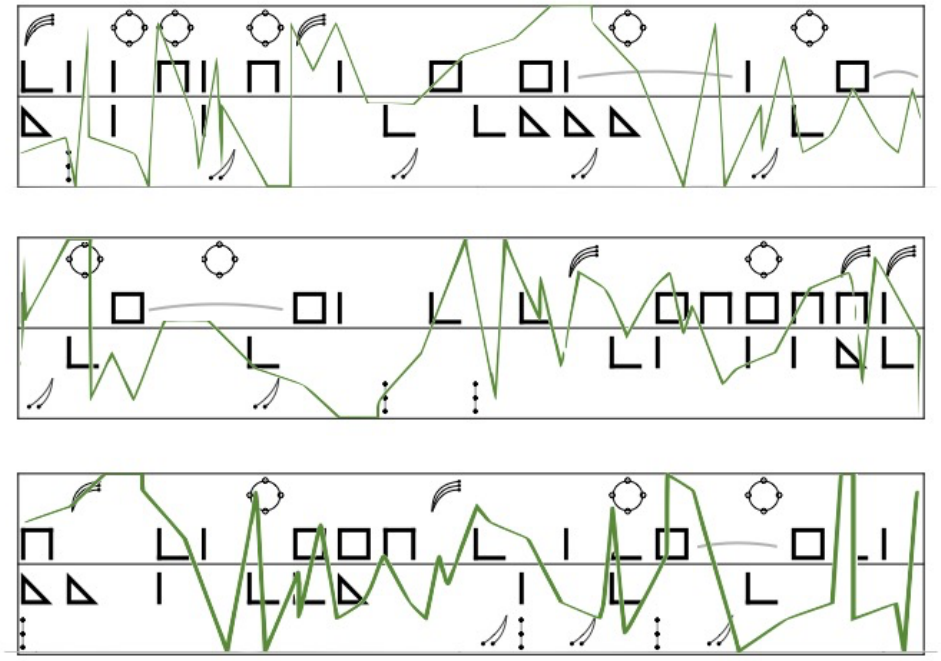

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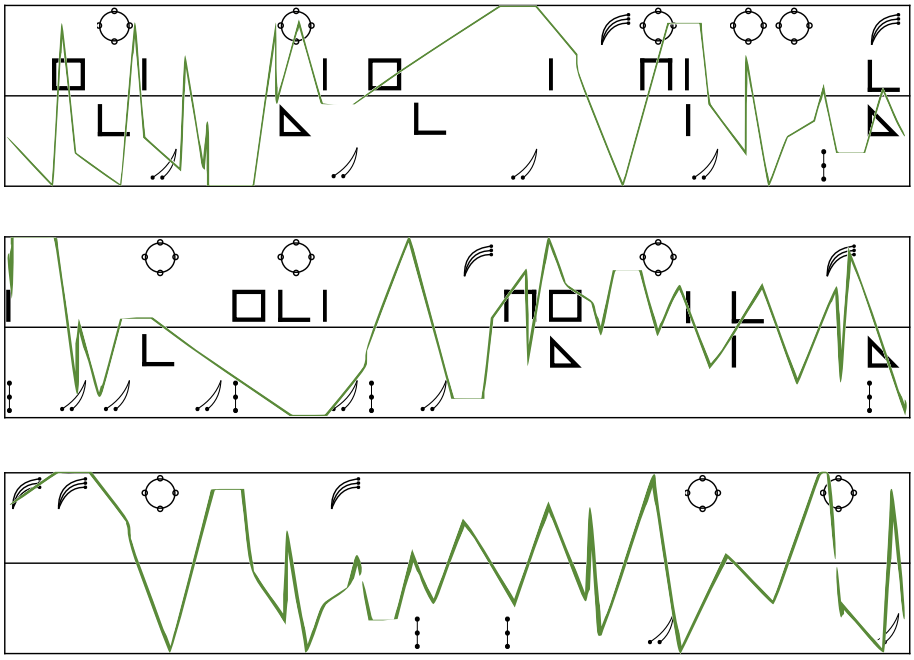

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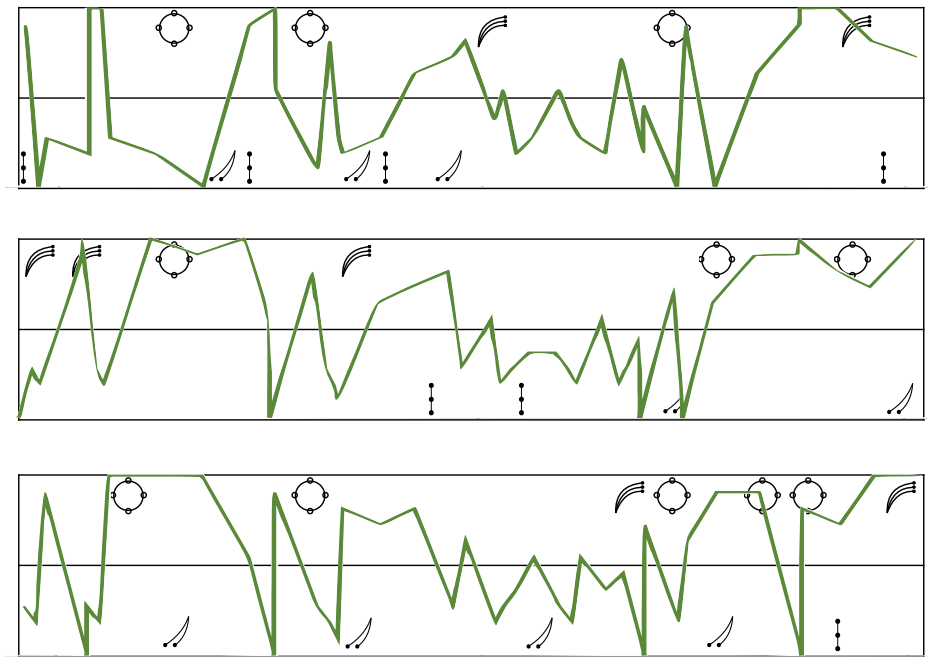

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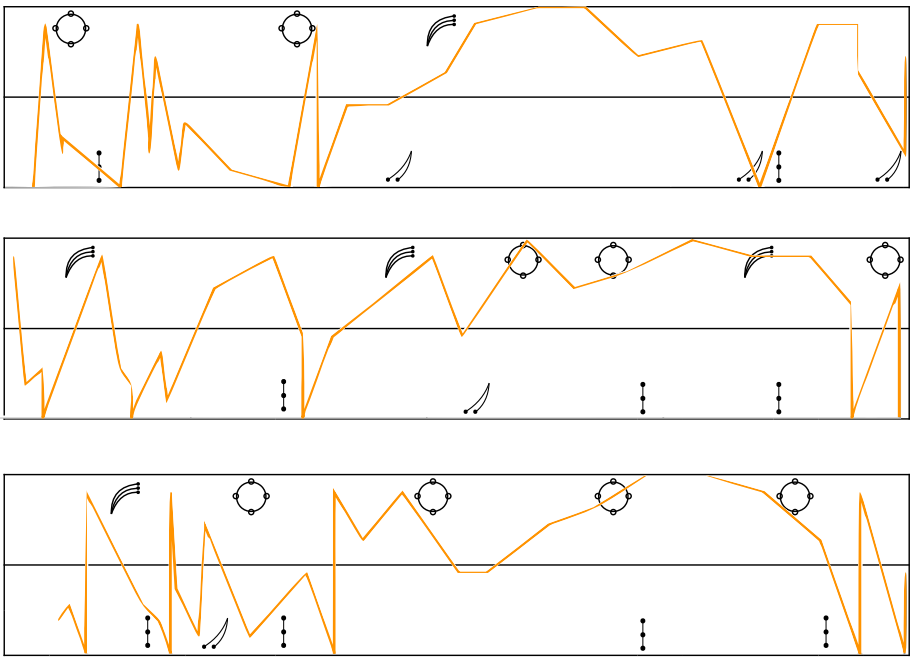

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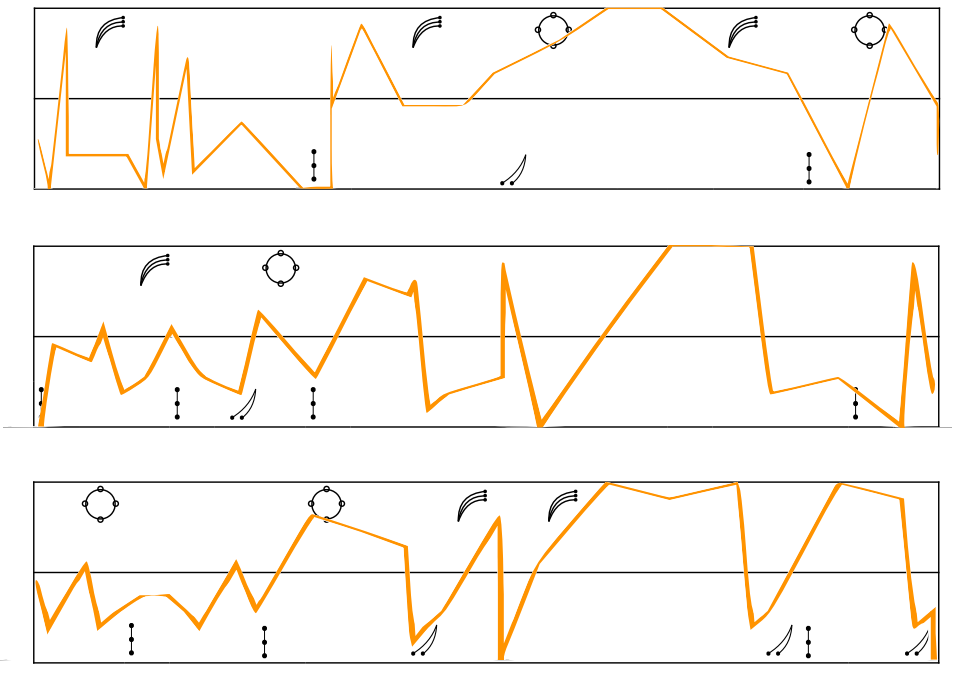

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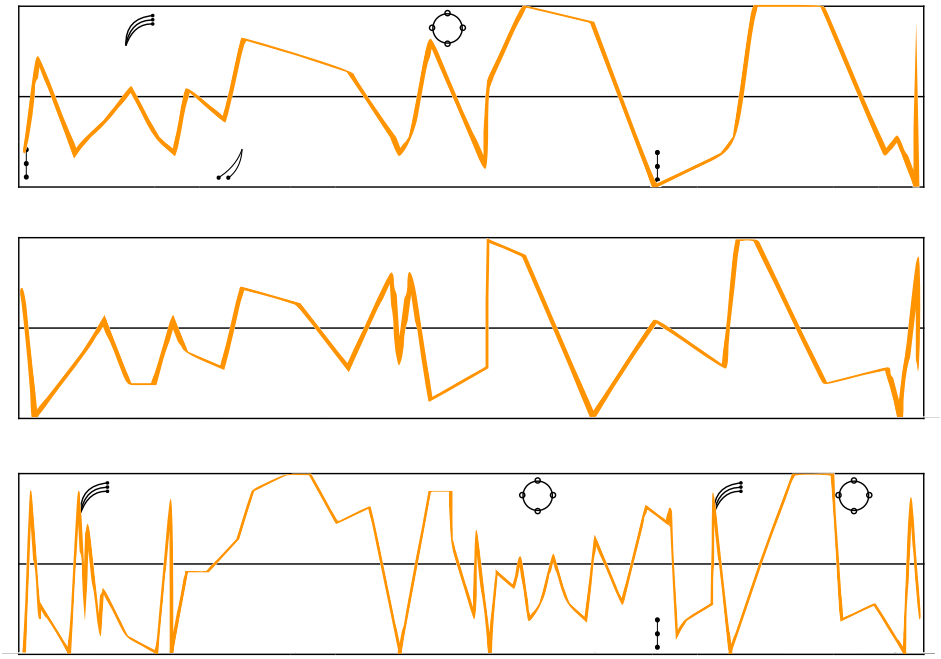

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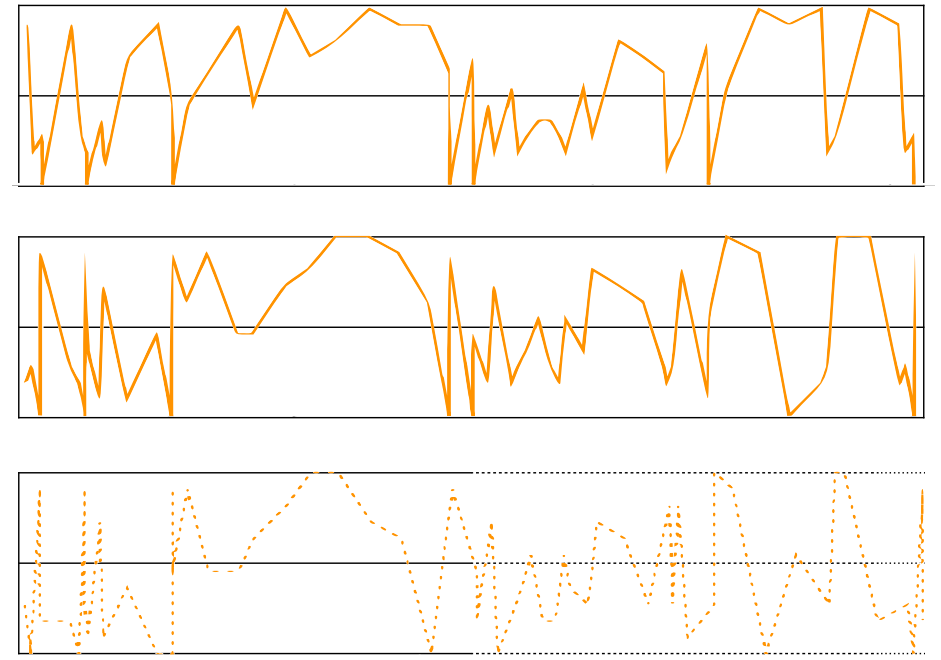

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Part 4 (4)

# T-R

## (2020)

For Saxophone, two pages.

# *T-R* - Legend

*T-R* re-configures the body's positioning towards the instrumental surface, with regards to holding and control. The positioning of hands upon the surface of the saxophone de-couples them from their positions as envisaged by instrumental design. In doing so, embodied, digital patterns are transposed to another area of the instrument, where their previous functionalities become the basis for a new approach to its surface.

The de-coupling of the instrumental is brought into focus by the visual de-coupling of the notation, where instructions for each hand are found in distinct partitions on the page. This is not to present a simple 'reading' challenge, but to instead present notation that foregrounds an approach to rhythm and timing that is at once body-led, and also constructed within a general practice. As such, *T-R* has no specified durational markers: the temporality of a reading should be the result of the route traced through each partition of the notation. *T-R* can be used for either preparation and/or performance.

**Surface control/breaking**

The notation forces a certain 'breaking' of my instrumental technique, by encouraging instrumental approaches that lead to sonic and instrumental instability. Instructions of certain levels of key depression for each hand lead to the pad resting just far enough away from the tone hole that an effective 'breaking' of the saxophone takes place.

Within this notation (which only uses the LH side keys and RH (LH) keys), there are two types of key depression: those that press down onto, and those that lift pads off the instrument. The 'one-size-fits-all' notation doesn't treat their movement uniformly, and as such, 'pressure' has opposite meanings depending on the key(s) pressed. This is further amplified by key mechanisms that bridge the two notated

‘partitions’. As such, it is also sometimes possible for actions of one hand to link into the activity of the other.

**Notational specifics/Directions**

The notation is to be read non-uniformly. By this, it is hoped that reading left to right is to be considered alongside other routes navigating the notation. The notation can be read vertically, horizontally, diagonally and non-linearly in all directions. Alongside the opportunity for each hand to follow a different route, the played (or enacted) form and subsequent durational characteristics are formed entirely by their correspondence with the instrument, the notated, the improvised, and the curated.

Each partition (Green = R.H; Red = L.H.) contains boxes that contains instructions for each hand. Boxes can be read or negotiated in their own time. For example, it is feasible for the L.H. to go over 3 boxes, whilst the R.H. continues to explore just one. The time taken on each box is to be decided by the instrumentalist.

The notation denotes a ‘pressure parameter’ by offering different box-shadings for each hand. Where the shading might be light, the pressure applied to the key is to be gentle, increasing incrementally as the shade darkens. As already discussed, what this translates to in terms of venting away from, or venting towards the instrument depends entirely on the key(s) being used.

As shadings cross over, an opportunity to look for further ways of finding instruction for movement in the notation arises. Though the score may be read in any direction, shades also change in the same manner. Thus, if desired, a proportional sense of action (and the subsequent temporal result) can be derived from the notation.

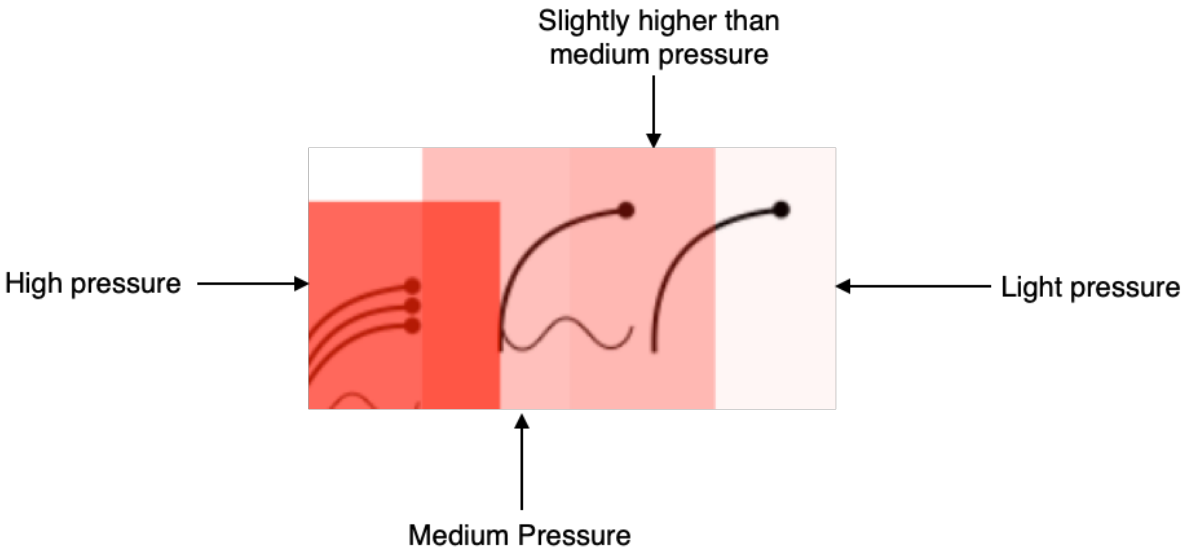
The symbols that are employed are detailed in the table below. The ‘wave’ line on some of the symbols requires finger/hand movement to take place within the perceived boundaries of the notation that is present at that point.

The notation omits various parameters. Articulation, amplitude, pitch, voice and timing may all be inputted in an improvised or curated way, but may also emerge from the ongoing interactions that arise from their inclusion, or omission from an enactment.

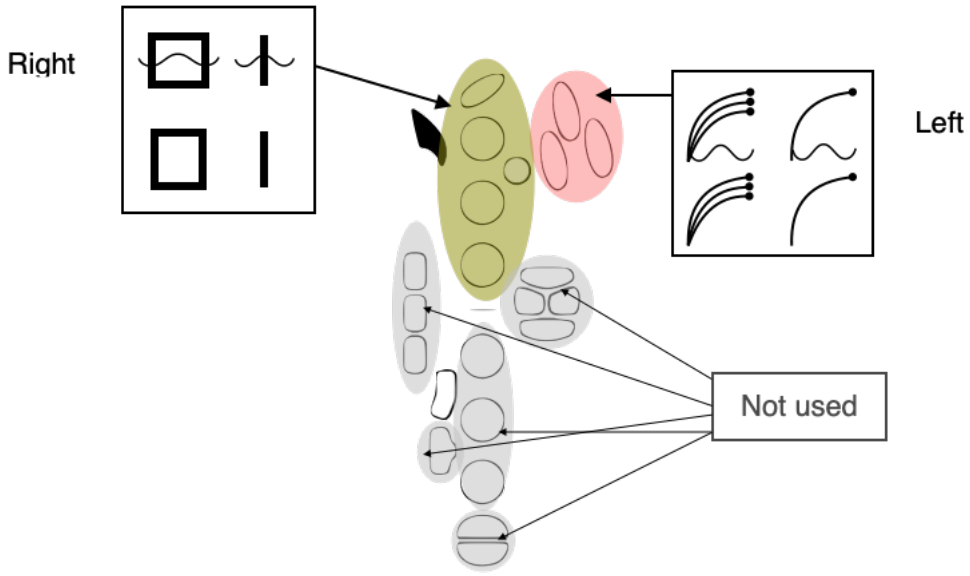
### Use of hands with regards to notation

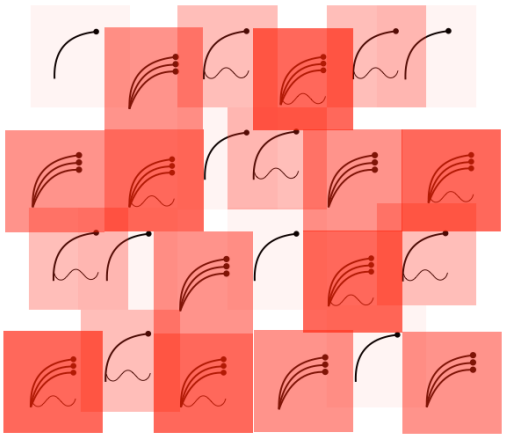
| | |
|---|---|
|  | L.H. side key to be used; L.H. side key to be moved within perceived boundaries of pressure |
|  | Combination of L.H. side keys to be used; Combination of L.H. side keys to be moved within perceived boundaries of pressure |
|  | R.H. side key to be used; R.H. side key to be moved within perceived boundaries of pressure |
|  | Combination of R.H. side keys to be used; Combination of R.H. side keys to be moved within perceived boundaries of pressure |

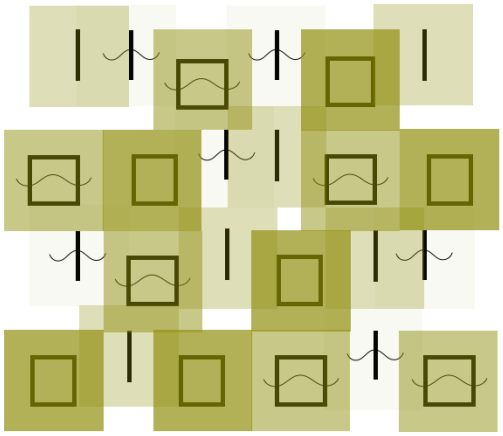
### Use of Pressure Shades



**Hand Placement**







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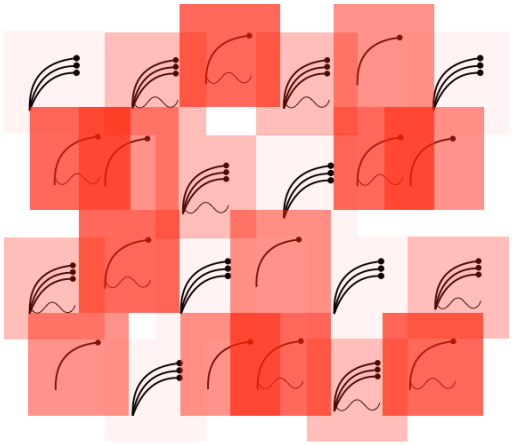

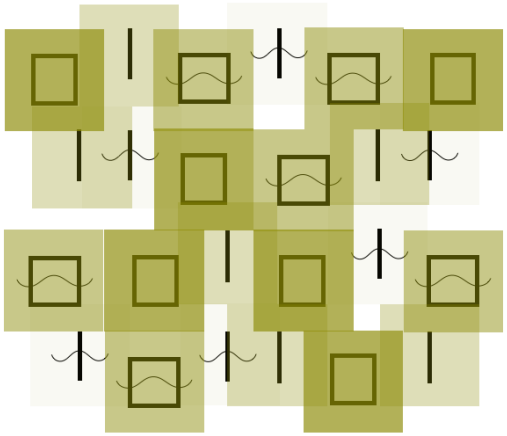

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