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**The Creation and Synthesis of
Zonal Elastics In Improvisation**

Sydney Conservatorium of Music, The University of Sydney
A Thesis to Fulfil Requirements for the Degree of Doctor of Philosophy

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Statement of Originality

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

This thesis has not been submitted for any degree or other purposes.

Sean Coffin

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As a saxophonist, composer and bandleader for over thirty years I have selected musicians willing to interpret my music, unique and strong in their identity and musicians accepting of the role as an equal collaborator within the collective environment. There have been far too many to name here, both in Australia and the United States but their involvement in my learning, development and a deeper understanding of my holistic identity has my heartfelt gratitude. However, I would like to extend my genuine appreciation and thanks to all the musicians who contributed and brought to life my Zonal Elastics concepts throughout 2023-2024. They include:

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Abstract

This research demonstrates a new language and perspective of musical expression, I term as Zonal Elastics. The research asks, *if* my individual improvisational language can be fundamentally formulated from a newly cultivated methodological system of pentatonic shapes and their transformation, assimilation and synthesis through rhythmic elasticity. A discovery is made early in the process involving intervallic properties, shapes and chromaticism. This changed the research question to *how* my individual improvisational language can be fundamentally formulated from a new system of five notes. The research cumulatively produces a new language through practise-led improvisation that reflectively forges my musical identity and the subsequent creation of an idiolect for jazz improvisation.

Initially the research thoroughly examines traditional and alternate pentatonic scales which did not directly yield expected results. However, it provided the foundation to organised, melodic and rhythmic pathways, determinant in the creation and synthesis of Zonal Elastics. This transformational study unveils uniquely designed cells of five-note intervallic shapes and properties I term as Zones. The extensive chronological process of unveiling Zone permutation methodology is undertaken to exhaust the search of all conceivable intervallic combinations, shape considerations and overall sound properties. Zones are then transformed and enriched through a comprehensive assimilation of rhythmic pathways I term as Gears. Gears provide new practices, perspectives and conceptions for the elasticity of melodic phrasing and intuitive creation. The innate assimilation of improvisational practise techniques are demonstrated and analysed throughout the research process. This is a treatise about the creation and synthesis of Zonal Elastics, a personalised but universal ideology for jazz improvisation.

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Complete Glossary of Terms

Ascending Zone is when the last note of a *Zone* is above the *Zonal Plane*.

Broken Rhythms are playing syncopated short phrases that contribute collectively towards a resolution

Catalytic Gears are quintuplet gears and sextuplet gears that precipitate a fast reaction and an extreme change of momentum in opposition to the constant pulse or groove.

Chromatic Fragment is the structural and intervallic component designated by the quintuplet rhythmic grouping, now a melodic sub-structure (1) of each of the three *Zone*'s designs: (212), (122) and (221).

Chromatic Link refers to the location and function of the intrinsic chromatic element which connects *Fragment A* and *Fragment B* in *Zone T* and *Zone X*. The placement of these connectors establishes the unique constructive characteristics of each *Zone*.

Consonance (i.e. Inside) is when notes and overall sounds are in common with the given harmony.

Descending Zone is when the last note of a *Zone* is below the *Zonal Plane*.

Dissonance (i.e. Outside) is when notes and overall sounds are not in common with the given harmony.

Elasticity is the fluctuations of time, duration and pulsations within a beat, bar, multiple bars whilst deepening your innate knowledge and location within the form of tune (see Part 4).

Exact Inversion occurs when the intervallic relationship remains the same if it is ascending or descending. (see 3.2)

Flattening (out the Gears) – where any gearing is played in a *straight* style or an *even* distribution of the notes, generally with no articulation...a welcome contrast to swung notes

Floating a state of expansive playing where torrid phrases start and soar over beats, usually playing sextuplets, rapid changes of direction creating a myriad of musical shapes under complete control and always with a resolution point or landing *Zone* identified.

Fragment (Zones) is an Interval Set designated by the *Pentatonic Zone* 's or *Zone* 's design sub-structure (2). Each *Zone* has a *Fragment A* and *Fragment B*. (see Chapter 4)

Gears refer to all rhythmic pulsations/pathways: eighth notes, sixteenth notes, triplets, quintuplets and sextuplets (see Part 4)

Changing Gears (also referred to as *gear change*, *change of gears*, *switching gears*, *gears shifts*, *shifting gears*) is simply phasing or multi-phasing from one rhythmic gear to another creating polyrhythmic effects within the span of a musical phrase - also referred to as *metric modulations*, or *rhythmic phasing*. (see Part 4)

Harmonic Ambiguity is playing with a mixture of consonant and dissonant notes and chromatic elements within a line which suggest neither harmonic equivalence nor opposition.

Interval Inversion/Inverted Interval occurs when a note shifts up or down an octave relative to another note. For instance, the ascending interval (C to E) is a major third and the descending interval (C to E) is a minor sixth. (see Part 2)

Line refers to a musical phrase or phrases

Pentatonic(s) are “five note scales. There are many different pentatonic scales...” (Bergonzi, 1994: 9) Dan Haerle states that “any arrangement of five tones within the octave forms a pentatonic scale”. (Haerle, 1980: 42).

Pentatonic Concepts (A, B, C and D) are the precursor pentatonic designs in Chapter 3 that transition from conventionally conceived to non-conventionally conceptualised designs, establishing parameters and providing foundational structural and melodic organisation of *Pentatonic Zones* in Chapter 4.

Pentatonic Zone is a uniquely designed pentatonic sequence for use in the creation and organisation of strong melodic lines. The derivation and inspiration for their design was the rhythmic groupings of a quintuplet (212), (122) and (221). These rhythmic groupings were

then transformed into melodic and intervallic sub-structures thus creating templates for the subsequent design of *Zone K*, *Zone T* and *Zone X*. (see 4.1)

Poly-Pentatonics is a harmonically comparative system termed by Jerry Bergonzi (Bergonzi, 1994), or what Ramon Ricker refers to as a *Continuum of relationships* (Ricker, 1976) and is a tonally progressive pentatonic system that highlights the comparison of common tones versus non-common tones around the Cycle of Fifths. (see 2.1)

Poly-Zonal Cycles are the transpositional and/or symmetrical intervallic sequencing of consecutive *Zones* via chromatic approach (termed the *Poly-Zonal Link*). (see 5.5) The term *Poly-Zonal Cycles* is influenced by my exploration of what Jerry Bergonzi terms as Poly-Pentatonics (Bergonzi, 1994). (see Chapter 2)

Poly-Zonal Link is the chromatically ascending or descending movement linking one *Zone* to another *Zone*.

Skips and Steps occur when a note moves by missing each consecutive note within a scale or *Zone* (similar in concept to a scale in thirds). *Steps* occur when a note moves into the next consecutive note via stepwise movement. (see 1.1.3)

Synthesis the mixing of different ideas, influences, or things to make a whole that is different, or new. <https://dictionary.cambridge.org/dictionary/english/synthesis>

Transition Area is the most distinguishable structural characteristic of *Zone K*, is designated by the design sub-structure (1) and only appears in this *Zone* design. It is a descending double chromatic bridge linking *Fragments A* and *B*. It is comprised of three tones T2, T3 and T4 (see 4.3).

Zonal Elastics is a state of improvisation created via the *synthesis* of all *Zone* conceptions (melody) and elastic transformations (rhythm). It is a fertile language of creative happening that does not predicate harmonic boundaries, melodic tendencies, rhythmic blocking and technical bias. In essence: freedom. (see Part 5)

Zonal Plane is an imaginary plane that exists to highlight notes above and below the first note of any *Pentatonic Zone* or *Zone*. This *Zone* design feature distinguishes itself from conventional scales because they mostly appear in a linear sequence of notes. The *Zonal Plane*

determines whether a *Zone* is an *ascending Zone* or *descending Zone* and in identifying the intervallic ratios for *Poly-Zonal Cycles* (see *Poly-Zonal Cycles* 5.5)

Zone is a uniquely conceived pentatonic melodic shape of interest designed from three quintuplet rhythmic groupings: (212), (122) and (221) (see Chapter 4)

Zone Elastics are phrases that have been designed exclusively as practise exercises for the assimilation and *synthesis* of poly-rhythmic improvisation. (see 8.2)

Zone Five-note Shapes are five-note (all inclusive) permutations of *Zone K*, *T* or *X*. (see 5.4)
For analysis purposes these will be labelled as 5NS.

Zone Four-note Shapes are four-note permutations of *Zone K*, *T* or *X* achieved by omitting one note (see 5.5). For analysis purposes these will be labelled as 4NS.

Zone K is a pentatonic sequence designed with (212) grouping/sub-structure (see 4.3.3).

Zone Linear Modes is a reorganisation of *Zone* notes in a linear sequence within the range of a tritone, determining their closest total intervallic range. (see 5.2)

Zone Modes are scale sequences starting from the different notes of a scale (see 5.1)

Zone T is a pentatonic sequence designed with (122) grouping/sub-structure (see 4.3.4).

Zone Three-note Shapes are three-note intervallic cells derived from all three *Zones* (see 5.6).
For analysis purposes these will be labelled as 3NS.

Zone X is a pentatonic sequence designed with (221) grouping/sub-structure (see 4.3.5).

Background and Context: Origins of Zonal Elastics

Zonal Elastics is a musical language I have created by synthesizing melody (Zone Conceptions) and rhythm (elasticity transformations). It fosters a creative flow free from harmonic constraints and technical biases—essentially, it represents improvisational freedom. This state allows musicians to transcend prior learning, enabling a natural synthesis of techniques with intent and control. Bob Moses describes organic drumming as rhythms not reducible to standard note values, highlighting a personal approach to rhythm. Ben Ratliff notes that musicians can blend complexity and simplicity, emphasizing individual expression.

For musicians to embrace Zonal Elastics, a solid understanding of jazz traditions, instrumental skills, and theoretical knowledge is crucial. My journey began with discovering jazz through my father's records, identifying with musicians based on their unique sounds and improvisational styles, such as Coltrane and Rollins. Growing up in a jazz-centric environment isolated me from peers, leading to a strong personal musical identity. Studying under Richard Percival, I learned the importance of sound, which became crucial in my creative process.

My education at Berklee and Manhattan School of Music further developed my sound, praised for its intonation. Over the years, my focus has been on achieving a sound that reflects my personality, culminating in successful research that remains true to my artistic self.

Reflecting on the past year, I'm pleased with my performances, including gigs with various original projects. These collaborations have provided new sonic insights and opportunities for improvisational exploration. Author Ben Ratliff describes John Coltrane's informed and intuitive state of play as:

The point to be drawn from this is that a musician can project his will on anything: harmonic restrictions and complicated structure can co-exist with simplicity and openness; lyricism can co-exist with ferocity. (Ratliff, 2007)

In the past 15 months, Zonal Elastics techniques have significantly expanded my abilities, with documented progress affirming my journey toward a unique sound and creative possibilities. Zonal Elastics revitalizes my music-making, allowing authenticity on stage and in practice. I hope this approach impacts others positively.

Fear never but you shall be consistent in whatever variety of actions, so they be each honest and natural in their hour. For of one will, the actions will be harmonious, however unlike they seem. These varieties are lost sight of when seen at a little distance, at a little height of thought. One tendency unites them all. The voyage of the best ship is a zig-zag line of a hundred tacks. This is only microscopic criticism. See the line from a sufficient distance, and it will straighten itself to the average tendency. Your genuine action will explain itself and will explain your other genuine actions. Your conformity explains nothing. Act singly, and what you have already done singly, will justify you now.

(Walt Whitman “*Self-Reliance*” essay, 1841)

<https://restlessimagination.blogspot.com/2010/05/voyage-of-hundred-tacks-part-2.html>)

Introduction

The Creation and Synthesis of Zonal Elastics in Improvisation offers new insights into how creative practice can be approached through an original system of pentatonic organisation and rhythmic elasticity. The research asks, if my individual improvisational language can be fundamentally formulated from a newly cultivated methodological system of pentatonic shapes and their assimilation and transformation through rhythmic elasticity. A discovery is made early in the process involving intervallic properties, shapes and chromaticism. This changed the research question to how my individual improvisational language can be fundamentally formulated from a new system of five notes. The research cumulatively produces a new language through practise-led improvisation that reflectively forges my musical identity and the subsequent creation of an idiolect for jazz improvisation.

Part 1: Survey of Concepts chronicles established conventional literature, foundational conceptions of musical knowledge and improvisational practices of intrinsic elements to be presented in this research. This survey will be the basis of a practise-led methodological creation and synthesis of a new improvisational language. Built upon the conventional foundations of pentatonics, balances of consonant and dissonant tonality, intervallic relationships forming characteristic shapes and contours, the intrinsic persuasiveness of chromaticism, rhythmic transformations of melody and personalised idiolect.

Part 2: Pentatonic Transformations provides a chronological, systematic practise-led exploration and distillation of pentatonics from conventional to non-conventional cells. Discussion of Poly-Pentatonic theory and practise-led demonstrations of pentatonics and alternate pentatonics leads to the creation of newly conceived Pentatonic Concepts. Further exploration of five-note design structures, intervallic properties and locations of the chromatic element, shape and contour, resolution points, melodic and harmonic considerations, reveal a need for change to determine the desired pentatonic sequences that will become the core element of this research.

Part 3: Zones focuses on the broader conceptual application of techniques and the reorganisation of Zone melodic pitches for practise in improvisation. The process and creation of Zones is the most important discovery, and now core element, of this research.

The research design for the conceptual transformation of Zones in Chapter 5 will be adapted through practise-led conventional improvisational practices. Chapter 6 will then move from practise to performance through Zone improvisation demonstrations and analysis of the melodic ramifications and intent.

Part 4: Gears explores Zone practices processed through rhythmic transformations. These transformations are designed to create elasticity of phrasing in improvisation. *Elasticity* (of phrasing) is the perceived polyrhythmic aesthetic that is created when opposing pulsations shift around a given pulse or groove. Essentially a ‘push and pull’, ‘stop and start’ and accelerative and decelerative effect opposing the metric pulse. Influenced by Part 3’s research design, Part 4 applies the technique and context methods of learning to achieve continuity of practise with Zone material. The practice technique is applying Zone concepts to individualized rhythmic disciplines, termed as gears. These are: sixteenth notes, triplets, quintuplets, and sextuplets - which enable the necessary rhythmic variations and spatial awareness for applications of poly-rhythmic improvisational practise and performance.

Part 5: Zonal Elastics is the culmination of this research and introduces a new improvisational ideology termed Zonal Elastics. It demonstrates broader applications of synthesis through transcription and analysis of real-time performances. Zonal Elastics is a new language and state of organic improvisational creativity that has synthesised prior knowledge, Zone conceptions and their gear transformations in conjunction with elements of elasticity.

Part 1: Survey of Concepts

Part 1: Survey of Concepts chronicles established conventional literature, foundational conceptions of musical knowledge and improvisational practices of intrinsic elements to be presented in this research. This survey will be the basis of a practise-led methodological creation and synthesis of a new improvisational language, built upon the conventional foundations of pentatonics, balances of consonant and dissonant tonality, intervallic relationships forming characteristic shapes and contours, the intrinsic persuasiveness of chromaticism, rhythmic transformations of melody and personalised idiolect.

Chapter 1 Survey of Concepts

1.1 Survey of Pentatonic Convention

Many jazz artists have influenced and inspired my propensity for pentatonic exploration. An exhaustive resource of musicians, if I had to name a few they would be John Coltrane, Joe Henderson, Michael Brecker, Kenny Garrett and my two idols Sonny Rollins and Jerry Bergonzi. My creative discovery of *Zones* begins with comprehensive research, analysis and practice of existing nomenclature, publications, and texts of pentatonic scales. Jerry Bergonzi states that pentatonic scales are “five note scales. There are many different pentatonic scales...” (Bergonzi, 1994: 9), and my first step will be searching for new approaches to conventional pentatonic improvisation using these *different*, or as we will learn *alternate pentatonic* scales. Ramon Ricker, in the mid-1970s, clarifies the common presence of the pentatonic scale with jazz improvisers and that “of late, drawn considerable attention by jazz artists as a tool in their improvisation” (Ricker, 1976: 1). Author Lewis Porter states that the “use of ‘pentatonic patterns’, as they are called.....is widespread today, primarily through Coltrane’s influence” (Porter, 1997: 151), along with the scholar O’Donnell in his thesis on the improvisational style of Woody Shaw, quotes from a 1980 Downbeat interview that “Coltrane’s influence detailed his use of pentatonic scales and their intervallic application of fourth and fifths.” (O’Donnell, 2009: 14). These intervallic applications will be important throughout the entirety of this thesis, lending not only structural shape but also intervallic interest. My intent is to discover my own way of presenting *alternate pentatonic* scales (Ricker, 1976: 24, Levine, 1995: 213), namely the Major b6 pentatonic scale and the Minor seven flat five pentatonic scales (see Part 2.2). As Jerry Bergonzi says; “I’ve often been asked by students, ‘Who plays strictly pentatonics?’ I can’t think of anyone who plays only pentatonics but many of the modern players have pentatonics at their command and melodic disposal” (Bergonzi, 1994: 8). With this sentiment in mind, I will create an original methodological process and language of improvisation.

Pentatonic scales, whilst ambiguous in sound, do present a gravitational pull towards a particular tonic, or tone of centrality. Vincent Persichetti solidifies pentatonic harmonic ambiguity stating that “Diatonic scales of five tones are harmonically limited in scope because of the lack of semitones (when all five tones of a pentatonic scale are sounded together they

form a somewhat static chord). It is therefore extremely difficult to achieve harmonic and melodic direction in a pure pentatonic form.” (Persichetti, 1961: 51), and Ben Ratliff quotes John McNeil, who states that the “...pentatonic scale is harmonically ambiguous...it doesn’t have the harmonic direction that we use in Western music...” (Ratliff, 2007: 150). This quality of sonic ambiguity is paramount to the pentatonic scale’s versatility and adaptability, very much resultant of the perfect fourth and fifth intervallic combinations and resultant shapes. These concepts and shapes will be intrinsic considerations for my own methodology and practices in this research.

1.1.1 Ramon Ricker

The 1970s saw Ramon Ricker state that the “pentatonic scale has, of late, drawn considerable attention by jazz artists as a tool in their improvisation” (Ricker, 1976: 1), and publish one of the foundational presentations and analysis of pentatonic scales. It is an influential model, that has taught me to develop, organise and extract as much information as possible from a simple idea. Ricker acknowledges that his book should be used as a supplement to the study of chord scale relationships, otherwise a stereotyped and predictable concept will occur, which negates the very definition, mystique, and nature of improvisation. Ricker’s book and other academic sources are important in establishing a documented timeline for my research and in establishing the concepts and techniques that are present in jazz vocabulary, both on the bandstand and amongst teaching environments.

In Chapter 2, Ricker establishes practical language for his methodology vernacular common to all jazz musicians, such as pentatonics, inside describing consonance, and outside describing dissonance (Levine, 1995). Ricker also introduces his own idiolect with terms such as *Continuum of relationships* (Ricker, 1976: 5), a similar concept to Jerry Bergonzi’s system termed (Bergonzi, 1994: 115), slip in - slip out (Ricker, 1976: 15), also referred to by David Liebman as side slipping – “describes the device of slipping a half-step up or down from the established key centre...” (Liebman, 1991: 51). Ricker also introduces the term ‘altered pentatonics’ (Ricker, 1976: 24), thus making his resource new and exciting, but also relevant and familiar, for any student of jazz. Ricker’s examples of terminology have served as an example in creating my own idiolect throughout this thesis.

Ricker introduces the major pentatonic scale (12356) and its modes (Levine, 1995), or the pentatonic sequences that occur when starting the scale in sequence from the different pitches. “It can be said that each pentatonic has five possible inversions, or what the author refers to as modes” (Ricker, 1976: 2), and from these five variations and twelve keys of the Western system of tonality, there are sixty possible linear pentatonic scale mode options.

Ricker introduces less commonly used pentatonic scale variations termed as *Altered Pentatonics* (Ricker, 1976: 24), which are labelled as variations of the major pentatonic scale: Major b3, Major b6, Major b2. Jerry Bergonzi simply labels these as “different pentatonics” (Bergonzi, 1994: 9) and Dan Haerle labels these as *Synthetic Pentatonics* (Haerle, 1980: 43). Incidentally, Dan Haerle also specifies the pentatonic *origin of the species*, by stating that a “pure pentatonic scale are those notes other than the C major scale on the piano”, essentially this describes a Gb major pentatonic scale or an Eb minor pentatonic scale” (Haerle, 1980: 42). These two pentatonics have a relative major and minor relationship, like that of major and natural minor scales. In the pentatonic section of the educational text *Expansions* (Campbell, 1988: 7), Campbell discusses two pentatonic scale variations that are rarely mentioned in publications, as opposed to delivering similar material on the major and minor pentatonic scales. Campbell describes the two pentatonic scales as mutations of the melodic minor scale. The variations are: Pentatonic b3 (Campbell, 1988: 7) which Ricker terms the Major b3 pentatonic and Bergonzi terms the Minor Seven b5 pentatonic. The other, is the Pentatonic b6 (Campbell, 1988: 8), which Ricker and Bergonzi term the Major b6 pentatonic. Having worked out of these texts as an emerging jazz artist living and studying in Boston and New York the fascination with these two pentatonic scales must have been seeded, reappearing twenty years later in this thesis (see Part 2.1).

The reason for alternate pentatonic scales is the many different chord types with varying combinations of tensions, or upper structures. The purpose for using pentatonic scales is that the tensions outlined in the chord symbol be present in the pentatonic substitution (Haerle, 1980). Traditional major (12356) and minor (1b345b7) pentatonic scales do not possess half step interval sequences that these more intricate chord symbols require for identification. In Part 2, I will explore the Major b6, Minor b5 and Minor 6 alternate pentatonics, in comparison to the recognised findings of Minor pentatonic scales.

Continuum of Relationships is Ricker’s concept of a moving spectrum flow of tonal sonorities from *inside* to *outside*, whilst Jerry Bergonzi terms this, *Poly-Pentatonics* (Bergonzi: 115).

This concept provides an improviser with a system for controlling the amount of consonance or dissonance over varying sonorities or harmonic structures, and as Ricker explains this is “...a way of classifying these scales in a continuum from the most *inside* to the most *outside* when played over a given sonority” (Ricker, 1976: 7).

Ricker’s text is a seminal resource. These concepts throughout, of quantifying pentatonic sounds against harmonic structures is something that this project do not wish to replicate. I wish to design sounds that have pentatonic qualities and involve more complex shapes and contours and present harmonically ambiguous sounds in a new creative process.

1.1.2 Jerry Bergonzi: Vol.1 Melodic Structures

The next two core texts for my research are written by Jerry Bergonzi from his *Inside Improvisation Series: Volume 1 Melodic Structures* (Bergonzi, 1992) and *Volume 2 Pentatonics* (Bergonzi, 1994). Seminal resources, Bergonzi’s methodologies with his calculated application of techniques and practices, has informed every aspect of my improvisational knowledge. Also, intrinsic models of process, these texts are from where I have adapted and created my own fundamental and structural practices for *Zonal Elastics*.

Bergonzi introduces the 1235 four-note grouping. Practise based learning systems which explore the many permutations and inversions of chords and scales starting on different chord tones and scale degrees. These fundamental practices enhance understandings and visualization of *inside* playing, ear training, and most importantly, the properties of voice-leading and Lewis Porter concurs, “One basic pattern, involving the first, second, third and fifth degree of each key, appears several times in an excerpt from Coltrane’s improvisation” (Porter, 1983: 603). The pattern described as “pentatonic patterns” (Porter, 1983), refers to the four note groupings or tetrachordal approach presented by many jazz educators including Bergonzi. Porter also explains “Coltrane alternated these pentatonic patterns with other material, most of it also derived from pentatonic scales.” (Porter, 1983: 603). These ideas significantly magnify your understanding of harmonic progressions in a vertical (chordal) and linear (scalar) approach. These fundamental methods are a fantastic way to begin your *outside* exploration of harmony, as they present sound groups which are easily permuted and substituted over existing harmony. All of these techniques and practices progress the goal of *inside* improvisation, playing diatonically within a chord symbol, or a particular key centre,

and as Berliner describes “...soloists commonly played *inside* the chords by emphasizing their most basic elements” (Berliner, Paul F, *Thinking In Jazz*, 1994: 159).

Jerry Bergonzi’s first approach in *Vol. 1 Melodic Structures* are four-note groupings. This concept is not a new one, with such practices being widely used by jazz musicians to extract the purest essence of a sound. These four note groupings, scale fragments, cells, or tetrachords are structured around the 1235 shape, each number being related to a degree of a scale or harmonic structure. These practices are both invaluable and necessary for understanding and visualising diatonic, or *inside* playing, ear training, and most importantly, the properties of voice leading. Bergonzi explains that the “purpose of this four-note system is to simplify and organise melodic material” (Bergonzi, 1992: 10), and not for complete application within an improvisation. This is a very intricate system where all notes within the grouping can be permuted, presenting many, many options. As Bergonzi explains “The key word here is ‘shape’” (Bergonzi, 1992: 25). What these practical methods reveal is that having an organised system provides the basis for improvisational development.

1.1.3 Jerry Bergonzi: Vol.2 Pentatonics

Inside Improvisation Series: Vol. 2 Pentatonics (Bergonzi, 1994) begins by stating that it “provides a practical yet creative approach to assimilating pentatonics into your melodic reservoir” (Bergonzi, 1994: 8); an all-inclusive approach serving as “a method for all instruments” (Bergonzi, 1994: 8) and these statements form the inspiration for my creative endeavours throughout this research.

In Chapter One, Bergonzi introduces the relative major and minor relationships that exist between the major pentatonic scale and the relative minor pentatonic scale - sharing the same notes but starting on a different pitch. Bergonzi also outlines the different inversions of these scales, or what Ricker describes as *modes* (Ricker, 1976: 2). Bergonzi, divides these inversions into tetrachordal shapes (Bergonzi, 1992: 8) or as we now know, four note groupings (1235) starting from each degree of the pentatonic scale. He states that the outcome is to “outline a system towards mastering pentatonics and to show different creative ways to convert pentatonic scales into melodies and music” (Bergonzi, 1994: 8). Creativity and originality inspire my process, but this method will serve as a profound model of process and technique.

In Chapter Two, Bergonzi presents pentatonics in diatonic *thirds* and describes them as *skips* and *steps*. “Using skips and steps provides us with a way to construct many pentatonic lines as it gives us a means to hear and analyse these different pentatonic lines.” (Bergonzi, 1994: 11). Essentially a skip and/or step describes the jumping or passing over of the note immediately adjacent. This sound reveals new dimensions and fertile scopes for exploring and organizing sounds, far removed from the tertian thirds and stepwise movement of Be Bop. Depending on the interval ratios of major and minor pentatonic scales, a skip could be an interval of a third or a perfect fourth, which presents an open and modern sound quality.

This formulaic methodology of permutations of 1235 or 1345 four note groupings, for my digestion, are best thought of and visualized as shapes or cells, always considering the “shape or contour of your line” (Bergonzi, 1994: 27). Shape determines the contour of a melodic line and therefore a fantastic method for learning in an alternatively simplistic way without having to be accurate in exact intervallic pitches. The ability to visualize the intended shapes or sequence of notes in an impending improvised line stems from your harmonic knowledge, technical facility and fluidity of thought, which all promote thinking in a forward direction. Shape will be discussed further as a concept for surveyance in Part 1 and is of paramount consideration throughout my thesis.

Bergonzi explores *new and different* pentatonic scales or (See 1.1.3), which Ricker describes as *alternate pentatonic* scales (Ricker, 1976) along with *inside* (diatonic) superimpositions to be applied over various harmonic structures. These are: Minor 6 Pentatonic (1 b3 4 5 6), *Major b6* Pentatonic (1 2 3 5 b6), Minor Seven b5 Pentatonic (1 b3 4 b5 b7), Major b2 Pentatonic (1 b2 3 5 6) and Whole-tone Pentatonic (1 3 #4 #5 b7). These *altered pentatonic* scales are composed of different combinations of the major and minor pentatonic scales and specifically designed to target notes within more intricate harmonic structures. Pentatonic scales are wonderfully adaptive within their simple five note structures. Having the ability to highlight specific notes and alter as little as possible will always cooperate with faster learning.

In Chapter Thirteen, Bergonzi introduces a concept called Poly-Pentatonics, a similar concept to Ricker’s Continuum of Relationships (Ricker, 1976). This concept allows the improviser or composer to control the degree of pentatonic superimposition through the Cycle of Fifths. Essentially, shifting tonalities by altering one note at a time. “Today many of the modern players are playing in and out of the modern harmonic structure. Poly-Pentatonics is one of the many harmonic devices used to get outside the harmony” (Bergonzi, 1994: 115).

Bergonzi's focus throughout are practical applications *inside* conceptions, because without these solid foundations of harmonic knowledge there is no pretext, and more importantly a context for dissonance or *outside* exploration. Bergonzi, approaches the *outside* concept by applying his Poly-Pentatonic methodology which utilises the twelve key tonal spectrums of their gradation from consonant sounds to more dissonant creativity. Before the discovery of my methodology of Pentatonic Zones I will, as a precursor, be investigating the possibilities of Poly-Pentatonics with the Majorb6 and the Majorb3 pentatonic scales in Part 2.

Ricker and Bergonzi's publications are important, not just for melodic and pentatonic practices, but for setting the precedent through an in-depth presentation and application of approaching and discovering as many possibilities from a simple concept.

1.2 Survey of Tonality

Harmonic ambiguity and the visualization of shapes (Part 1.5) has always been my natural inclination for musical expression. Creating a methodological system which reflects and expresses this personal, organic approach is vital for its purity, authenticity and longevity.

Tonality, simply described by Ludmila Ulehla as being created by "the movement of sound" (Ulehla, 1994: 284) and that dissonant structures need not be qualified if they resolve. Ulehla, who taught me composition whilst I was a post-graduate student at Manhattan School of Music, New York City, states:

Today, we are more accustomed to advanced forms of dissonance so that it doesn't obliterate the tonal content. The dissonance, no longer a novelty, is accepted, and the large path of tonal movement is sought. Recognised as part of the contemporary picture is the fact that all twelve tones will be bustling about all of the time. (Ulehla, 1994: 485)

Considered questions: How am I going to achieve the musical sound I desire? How shall the tonic be presented, perceived, de-emphasized, and yet always respected, as Whittall quotes Charles Ives, "Why tonality as such should be thrown out for good, I can't see. Why it should be always present, I can't see." (Whittall, 1999: 35) How do I wish to conceive of a tonic? Is

there a need for a tonic? How flexible a sound can be created with its expression of *inside* (consonant) and *outside* (dissonant) qualities (Berliner: 1994, Levine: 1995). How tonal and/or non-tonal a sound can be created?

In retrospect, Ludmila has served as an integral influence on my compositional and improvisational perceptions, and conceptions of sound. From playing a random two-handed voicing on the piano, to explaining that all sounds have melodic tendencies and harmonic properties. Asking what is the tonic? What is its harmonic quality? It's harmonic quality then being subject to the tonic, and how each note is related, or could it just be a sound? Why does it need qualification if its voice leads to another sound? If it, in essence, resolves? These perceptual revelations were and are life-altering and life-affirming - for me, having previously studied at Berklee College of music with Hal Crook, Bill Pierce and George Garzone who had already expanded my conventional and non-conventional tonal horizons. By experimenting with these two disparate qualities of music – consonance and dissonance, I will establish a new methodological process and improvisational language.

1.3 Survey of Chromaticism

The influence of chromaticism has been a feature of my improvisational style and an element that has always created harmonic ambiguity and avenues for expansive harmonic movement. Chromaticism induces musical anticipation and possibilities - prospects of impending tonal centres through leading tones and passing tones, twelve tone concepts with the innovations of pantonality, chromatic links/connections and general expansions of tonality via consonant and dissonant movements, through cycles and constant non-resolving progressions, and explorations of sound through the alterations of diatonic scale degrees. Mark Levine says that the chromatic scale “belongs to every chord, belongs to no chord.” (Levine, 1995: 191) and ultimately, a sense of harmonic freedom and melodic equality is the goal. Benward and White describe chromatic scales as “each tone is equidistant from the next, it has no tonic.” (Benward/White, 1997: 41) These conceptions are resultant from the smallest ‘Western’ interval and learning how to control their impact and location within a musical line will be one of the design challenges for this research. Composer and teacher Ludmila Ulehla states:

In the Classical period, the chromatic scale functioned primarily as the provider of embellishing harmonies for the diatonic order of tones. Gradually, as musical growth opened new doors of tonal development, the chromatic scale began to play a more important role in the structure of a composition. (Ulehla, 1994: 34)

Chromaticism is an intrinsic element in the creation, structural design, and sound of Zones (see Part 2). Chromatic connections between intervallic properties with the intent for expansions of tonality in my improvising and compositional language, Zonal Elastics. Schoenberg postulates that chromaticism “if it does not alter the harmonic progression, is, like substitution, a purely melodic matter” (Schoenberg, 1954: 25) and Zonal Elastics will employ strategic qualities for chromatic inclusions as a vital overall musical component. My heightened and informed conception of chromaticism stems from improvisational studies with Bill Pierce, Ed Tomassi, Hal Crook, Bob Mintzer and George Garzone, at Berklee College of Music in Boston.

George Garzone as a saxophonist and educator extends one hundred percent of his knowledge into his teaching, and therefore, to his students. The immediacy of his playing and teaching practice would see him teaching a concept he was exploring throughout a gig the night before. George’s teachings offered my musical world a new realm of consciousness. Anything was possible. My time studying with George coincided with his formative period now known as his *Triadic Chromatic Approach* (Garzone, 2016), a concept that has influenced my musical journey. Working strictly with major triads, chromatically voice-leading one major triad to a possible six major triads, with each of those six with the potential to voice lead to another six major triads and so on. It became apparent to me that the possibilities for melodic construction are endless with the element of chromaticism.

Chromaticism has influenced the shape and tonal construction of melodic lines that fluctuate between the diatonic tonality and the non-diatonic (*inside and outside*) spectrums where they exist as one organization. Chromaticism adds interest by contributing tension through mixing opposing tonalities against that of the tonic key centre. Schoenberg proposed the theory of the emancipation of the tonic; meaning through chromatic expansion of given tonalities, new sounds and shapes are created that contribute to the ear becoming accustomed to all twelve tones (Schoenberg, 1954). David Liebman explains that by using “combinations of diatonicism, tonal, and non-tonal chromaticism, the choices available for enhancing the expressive content of a melody can be limitless.” (Liebman, 1991: 15), resulting in a dissipation of tonal hierarchies leaving all notes with an equality of purpose and intent. Ludmila Ulehla states there is “no

need to chain modern sounds into a system for which it was never intended.” (Ulehla, 1994: 264), let all sounds exist and function together without stigmas and/or pre-conceived boundaries. The aspects of harmonic ambiguity, the diffusion of tonality and the presence of consonance and dissonance that only the chromatic element provides shall be a paramount consideration for methodological designs and outcomes throughout this research.

1.4 Survey of Shapes and Contours

In improvisation, visualisation of the territory for a musical line, and the approach to its subsequent unfolding, is innate and completely personal. The intervallic relationships and their ascending or descending directional vectors, in small intervals, large intervals and chromatic intervals, all combine in “creating asymmetric and jagged contours.” (Liebman, 1991: 47). These are considerations and practises that have generated the shape and contour of Zones and their variations (see Part 3). As Bergonzi states:

The key word here is shape. (Bergonzi, 1992: 25)

Shape is described by David Liebman as the “graphic contour of a line” (Liebman, 1991: 47) and regulates the creation of “densities , relative speeds, coloristic effects and overall sound groupings , in a sense, replace the conventional understandings of what is meant by melody, harmony and rhythm.” (Liebman, 1991: 30). Shape can assist in transcending all musical elements when the musical intent is strong. Intervallic combinations, which construct shapes and contours, are transforming the conventional, or traditional, roles of harmonic chords whilst creating “varying degrees of consonance or dissonance. Tonality is heard when intervals of strength predominate either in a vertical formation or during the course of a melodic line.” (Ulehla, 1994: 301). Finding the *right* combination of notes to create the desired shapes for Zone Conceptions begins with a combination of two notes. Quite simply, an interval - the smallest in Western Music - the half-step interval. Joe Lovano takes us to the core aesthetic of the relationship between two notes:

all notes are related...every two intervals can create tone colors, and suggest new keys...to use one note, to change its meaning in what you play.
(<https://youtu.be/a8-9DhC0ehY>, Joe Lovano Masterclass - Intervals and Borgani Saxophones [retrieved from YouTube 2008] [timestamp: 0.25 – 0.43]).

Considerations of shape and contour impact melodic perceptions, how a line or phrase is articulated, where the changes in direction are located, are the intervallic sets large or small and does it exist purely as a melodic shape of interest. These conceptions will be just as important to the methodological practices of this research as any other surveyed element.

1.5 Survey of Rhythmic Elasticity

At the beginning of this research, I identified rhythmic knowledge, sophistication and accessibility as a weakness in my overall technique and improvisational approach and this research will address these deficiencies whilst enhancing every other aspect of my musicianship.

Theoretical and practical applications of melodic creativity are a one-dimensional and limited in their synthesis required for optimum ideals of performance. Melodic and harmonic creation are only two of three ways that music can be conveyed. My mind has been hearing different rhythmic concepts, but unsure of what they are and how to access this future individualised sound. The rhythmic dimension needs to be applied and transform these melodic shapes I have been improvising. Hook in his publication quotes Messiaen's declaration of rhythmic importance:

is the primordial and perhaps essential part of music; I think most likely existed before melody and harmony, and in fact I have a secret preference for this element. (Hook, 1998: 97-120).

Schoenberg declared that theory "must never precede creation" (Schoenberg, 1954: 194) and the necessary requirements for creative expansion begin with rhythmic advancement and sophistication. In my initial supervisions with Dr Simon Barker, we focus on quintuplet rhythms (see Part 4.1), thinking of them as a grouping of five notes or five beats and not a 5-1 scenario. It is such a symbiotic connection, because of my focus on pentatonics and their themselves five note groupings. The challenge of playing quintuplets, an odd grouping of notes, increases your knowledge of spatial awareness within a pulsation and as Bergonzi states it makes your "time more elastic and will give playing eighth notes a different perspective." (Bergonzi, 2000: 97).

Bob Moses, in his seminal book *Drum Wisdom*, states that “Music consists of phrases, not just individual notes. The purpose of the resolution points is to give us something to resolve to, not just a single point to hit.” (Moses, 1980: 14). The resolution points could also be considered as target points or landing Zones and could be anywhere within the time structure, adding to the anticipation of each phrase. These strategies are designed to disguise and create illusory perceptions, and as Cope states, when examining “rhythm and meter inevitably leads to the division that distinguishes them: the bar line. For centuries music survived without bar lines.” (Cope, 1999: 89); in essence, playing freely over restrictive guidelines. Poly-rhythmic effects become the element that will disguise the melodic and sequential permanency of Zones. Each rhythmic discipline must be assimilated individually and as Bob Moses states, the “Independence means playing one rhythm against another.” (Moses, 1980: 36). The pragmatic results of this rhythmic elasticity are new levels of understanding of each beat, its partials, starting points and resolution points in the crossing of bar lines and, as Bergonzi explains:

displacing a rhythm $\frac{1}{2}$ a beat, or $1\frac{1}{2}$ beats, or $2\frac{1}{2}$ beats, you create entirely different sounding rhythm...alter the placement of each rhythm...play each rhythm one beat early, or two beats early, or one beat late...will help you to hear rhythms independent of bar lines and will help you develop ‘phrasing over the bar line. (Bergonzi, 1998: 20)

The scholar Chernoff, describes polyrhythms as “transient and changing rhythmic relationships” (Chernoff, 1991: 1101), and Handel states that they are a “presentation of two or more conflicting pulse trains.” (Handel, 1984: 407). So, applying this naturally occurring poly-rhythmic effect of beat displacement, enhances all perspectives of spatial awareness, influencing new pathways of phrasing melodic lines, and masking traditional lines and motives. Overall, these rhythmic assimilations will be most important because of the predictable sound and ambiguous nature of pentatonics and, as Ulehla comments:

Where Schoenberg departed from the classical hold on motives...is in the area of rhythm. Diverse rhythms accompany each reappearance of a motive. It is difficult to hear a motive return when the rhythm disguises the intervallic bond. By the same reasoning, the lack of rhythmic repetition permits the same interval combinations to return many times without the listener being made aware of every repetition. (Ulehla, 1994: 469)

The holistically cognitive and technical imaginations and ability to execute presented by Sonny Rollins and Jerry Bergonzi is presented in such a natural, organic, intuitive and most of all musical way. I identified rhythmic sophistication and control as a weakness in my technique and improvisational approach and now arises the perfect time to address these deficiencies. There are two specific recordings that have ignited my intrigue over the years. Both of these saxophonists exhibit intensely heavy sounds and a command and creative imagination with the creation of improvised lines.

- Sonny Rollins’ recorded version of ‘It Could Happen To You’ (Rollins, S (1964) *The Standard Sonny Rollins*. RCA Victor-LSP 355)

What fascinates me about Sonny Rollins’ version of ‘*It Could Happen To You*’ (Burke/Van Heusen, 1943), is even after listening to it hundreds of times, transcribing and attempting to play it has proved to be one of the most elusive of practices. The opening melodic statement is undoubtedly improvised as Rollins plays the original melody to close out the track. The highly sophisticated phrasing elasticity that Rollins executes generates constant poly-rhythmic tension and release. Bergonzi describes this elasticity of phrasing as *switching gears* and states that are “meant to develop the ability to change from one polyrhythm to another in an effortless way.” (Bergonzi, 2000: 107). These melodic phrases of Rollins’ melody exhibit technical and cognitive freedom and intuitively controlled rhythmic conceptions outlined through the precise note selection. This recording is pure phrasing elasticity and a lesson for life.

- Jerry Bergonzi’s version of ‘Dancing In The Dark’ (Bergonzi, J (2009) *Simply Put*. Savant-SCD 2099)

Jerry Bergonzi’s improvisation over the jazz standard ‘Dancing In The Dark’ (Dietz/Schwartz, 1931) absolutely mesmerises me every time I listen. Bergonzi’s control of all mathematical sub-divisional options, his control of harmonic possibilities, his intentional note choices and his spatial acuity are on full display. Bergonzi shifts rhythmic disciplines over a static background of swung eighth notes at will, with rapid fluctuations with pure technical and cognitive ease and balance of proficiency. Bergonzi employs combinations of multiple rhythmic disciplines he terms “Time Zones” (Bergonzi, 2000: 87): eighth notes, sixteenth notes, triplets, quintuplets, and sextuplets in an organic or non-predicated way creating decelerations “slower rate of motion” and accelerations “faster rate of motion” (Patty, 2009: 325) over a fixed pulsation or “more rigid renditions” (Benadon, 2009: 8) at a rapid rate of delivery and

exhibits a prolific improvisational master. These rigid renditions are the platform from which jazz improvisers tell their creatively intuitive stories and utilise rhythmically elastic properties of phrasing which “gives you another perspective on time” (Bergonzi, 2000: 108)

Rhythmic elasticity is having control of different rhythmic disciplines and then the ability to play poly-rhythmically. Elasticity requires innate knowledge of time and tempo, understanding the pulsation lengths of each beat, within a bar, multiple bars and knowledge of your location within the form of a musical framework. Other improvisational conceptual considerations are having control of phrasing: where to start and where to resolve a line, an innate ability to function freely within a beat, bar or form. The cognitive ability for spatial awareness or acuity in presenting your own thoughts and expressing yourself with clear intentions and precise control. These illusory polyrhythmic effects, elastic transformations with a heightened state of spatial acuity, will breathe new life, create unique pathways for improvisational outcomes

1.6 Methodological Approach and Idiolect Survey

The methodological practices employed throughout this research has been dependent upon existing knowledge and learnt practices over many years as a practitioner and teacher.

Documenting internally inspired abstract thoughts, transforming them into tangible creations and then allowing time for the natural synthesis of these ideologies to become second nature, organic in their appearance, is what defines a creative individual. Nicholas Cook quotes that (Schencker, in order to make his point) is the one that Johann Friedrich Rochlitz attributed to Mozart:

my ideas flow best and most abundantly. Whence and how they come I know not, nor can I force them...my subject enlarges itself, becomes methodized and defined, and the whole, though it be long, stands almost finished and complete in my mind. (Cook, Nicholas, 1990: 114).

The practices presented in this research have been predicated upon improvisational practise and the creation of conceptually designed sounds and shapes. My search for a personal sound in creative improvisation, and the subsequent cumulative development and documentation of varied concepts and theorems - learning to understand new materials, discovering their

propensities and characteristics, what works for me, what does not work for me - have all informed my decision making in this research. As Huib Schipper quotes from Brubaker's article *Questions not Answers: The Performer as Researcher* (Dutch Journal of Music Theory):

My playing is my research. More simply, my playing is reading— physicalized reading. And that close reading has led to some thoughts which do not comprise fully realized analyses in the conventional musicological sense, but do, it seems to me, offer empirical evidence that performance—with its attendant reading, hearing, and rereading, and rehearing—constitutes research. Performing is at least a fact finding mission. (Schipper & Fenaldy, 2010: 4)

In his book *Free Play*, Nachmanovitch quotes Carl Jung on instinctual creativity where the “creation of something new is not accomplished by the intellect but by the play instinct acting from inner necessity. The creative mind plays with the object it loves.” (Nachmanovitch, 1990: 42) and Brindle, in his classical textbook, references intuition with “Inspiration and fantasy, such vital elements in composition, are unfortunately elusive and subject to no rule or command.” (Brindle, 1990: 2). Bennett, Wright and Blom state that “the creative process is essential to the validity of creative research.” (Bennett/Wright/Blom, 2009: 6) and Nisenson in his biography of Sonny Rollins, quotes Rollins regarding his approach to his improvising in the moment:

You learn harmony and all that sort of stuff, and then push it to the back of your mind when you play because you have to be spontaneous. You have to digest all that stuff so it will come up intuitively and spontaneously. (Nisenson, 2000: 134).

The methods involved in this research have been Practise-Led discoveries and presented through real-time documentation. Exploration of intervallic possibilities, the inclusion and intrinsic placement of the chromatic element, directional contours and shapes all combining to form uniquely designed pentatonic sequences. Prior knowledge and intuition form the basis for all decisions in this research gradually unveiling the ultimate sound. This new sound will create and design new processes and a new vocabulary of materials presenting harmonically ambiguous sonorities simultaneously reflecting a balance of consonance and dissonance qualities, versatile in their harmonic and rhythmic context and revealing challenging creative conceptualisations for improvisational outcomes.

New research and subsequent ideologies will naturally encourage a new language and terminology reflecting its musical characteristics of creativity and autonomy of predication. The scholar Taylor describes the necessary ideology for a new idiolect:

the relativistic approach to physical problems has resulted in the substitution of new terms for many of the long-cherished terms of classical physics, so the re-evaluations in musicology made necessary by the appearance of Schoenberg's art have been distinguished by the introduction of new names in the aesthetic and theoretic construction of events in music. (Taylor, 1944: 4).

What this affirms is that new discoveries and language require new terminology. These new terms provide context and an un-biased understanding necessary for new conceptions, allowing for an original and descriptive lexicon of music. Simon Barker describes his research as developing “a musical idiolect through the use of expressive tools found in Korean traditional music” (Barker, 2015: 2). Andrew Gander, in his thesis, uses personalised terminology throughout his paper which describe his concepts in the most personal way, paraphrasing music researchers (Moore and Ibrahim 2005, Moore 2001, Pareyon 2009) who used “‘idiolect’ to describe a performer/composer’s unique sonic identity, or voice.” (Gander: 2017: 4). Original methodology presented throughout this research will possess its own characteristics not yet formally presented in music. Thus, applying a new and personalized terminology is the most natural way of understanding its intentions and ideology. All new terminology is presented in the Glossary and three examples of personalised idiolect are shown below:

Zone is a uniquely conceived pentatonic melodic shape of interest designed from three quintuplet rhythmic groupings: (212), (122) and (221) (see Chapter 4)

Zonal Plane is an imaginary plane that exists to highlight notes above and below the first note of any *Pentatonic Zone* or *Zone*. This *Zone* design feature distinguishes itself from conventional scales because they mostly appear in a linear sequence of notes. The *Zonal Plane* determines whether a *Zone* is an *ascending Zone* or *descending Zone* and in identifying the intervallic ratios for *Poly-Zonal Cycles* (see *Poly-Zonal Cycles* 8.2)

Zonal Elastics is a state of improvisation created via the *synthesis* of all *Zone* conceptions (melody) and elastic transformations (rhythm). It is a fertile language of creative happening that does not predicate harmonic boundaries, melodic tendencies, rhythmic blocking and technical bias. In essence: freedom. (see Part 5)

Part 2: Pentatonic Transformations

Part 2 Pentatonic Transformations provides a chronological, systematic practise-led exploration and distillation of pentatonics from conventional to non-conventional cells. Discussion of Poly-Pentatonic theory and practise-led improvisation demonstrations of pentatonics and alternate pentatonics leads to the creation of newly conceived Pentatonic Concepts. Further exploration of five-note design structures, intervallic properties and locations of the chromatic element, shape and contour, resolution points, melodic and harmonic considerations, reveal a need for change to determine the desired pentatonic sequences that will become the core element of this research.

Chapter 2 Poly-Pentatonic Explorations

Poly-Pentatonics, as termed by Jerry Bergonzi (Bergonzi, 1994), or what Ricker refers to as a Continuum of Relationships, is a tonally progressive and comparative pentatonic system of common tones versus non-common tones around the Cycle of Fifths. The lack of literature and information regarding Poly-Pentatonics along with the potential for a new creative direction is the impetus for devising an original pentatonic concept in this research. Levine’s description of the Cycle of Fifths “...is an arrangement of all 12 notes of the chromatic scale, each note a fifth lower than the preceding one.” (Levine, 1995: 23), while David Baker presents an alternative arrangement he terms “Key Circle” (Baker, 1983: 4). Both approaches offer a simplicity for organising a spectrum of tonal sonorities, consonance to dissonance. The Cycle of Fifths (i.e. Circle of Fifths, Circle of Fourths and Cycle of Fourths) has been used to represent gradating degrees of tonality and a way of calibrating the tonal spectrum of consonance and dissonance as a composer and improviser.

2.1 Poly-Pentatonics: Minor Pentatonic

The Minor pentatonic scale, as illustrated by Table 2.1, has a Poly-Pentatonic gradated spectrum of tonality from consonance to complete dissonance as these pentatonic scales shift through consecutive Poly-Pentatonic Cycles in comparison to the minor pentatonic control (see Notation 2.1) These analyses illustrate the tonal spectrum through the comparison of scale degrees and their numbered analysis. This distinguishes the presence of common tones versus non-common tones which is also indicated by the + symbol above each respective note. D Minor pentatonic is the ideal scale to compare shifts in tonality as it has no sharps and flats and can easily show how the tonalities transform through applied accidentals.

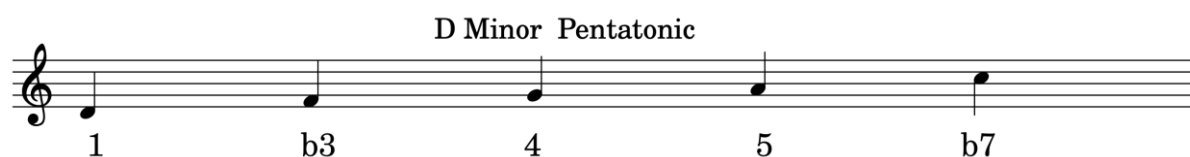
The numbering system is an ideal way to analyse and comprehend the results of each cycle’s effect on the tonal control of D minor by analysing each cycle’s pentatonic scales in relation to the (1) which is (D). In other words, all numbers are relative to the tonic of D minor pentatonic. The numbering system also presents an organised method for applying these Poly-Pentatonic

Concepts of superimposition through all twelve keys as opposed to just the example of D minor pentatonic.

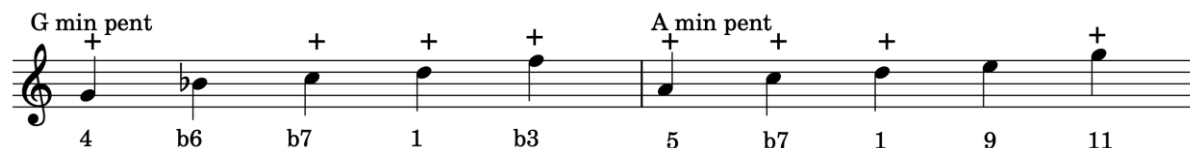
Common tones occur in the numbered analysis as (1, b3, 4, 5 and b7) as these are the notes of the control and all other numbered notes will be non-common tones. The most consonant comparisons appear in Notation 2.1.i where the pentatonic scale moves from D minor pentatonic through the *First Cycle* to G minor and A minor pentatonics, where there are four common tones and only one non-common tone. The most dissonant tonal comparison of the D minor pentatonic control occurs when the pentatonic scale shifts through both the *Fifth Cycle* in Notation 2.1.v (half-steps above and below) and the *Sixth Cycle* in Notation 2.1.vi (tritone) where there are no common tones.

Note analysis: [+] above each note of a pentatonic scale denotes a common tone. Note analysis: Number analysis (scale tone 2) sometimes is analysed as (tension 9).

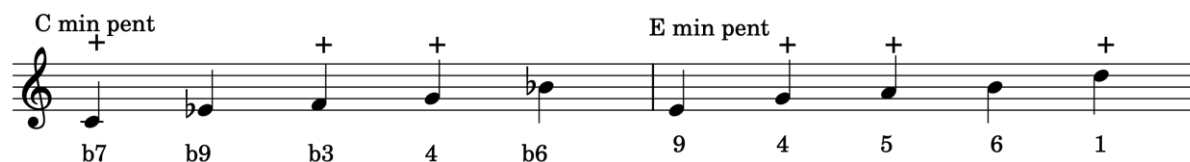
Notation 2.1 Poly-Pentatonics - Minor Pentatonic



Notation 2.1.i *First Cycle*: Four common tones - Least dissonant



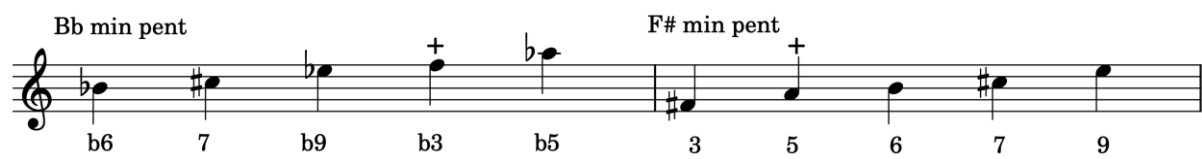
Notation 2.1.ii *Second Cycle*: Three common tones



Notation 2.1.iii *Third Cycle*: Two common tones



Notation 2.1.iv Fourth Cycle: One common tone



Notation 2.1.v Fifth Cycle:– No common tones



Notation 2.1.vi Sixth Cycle: No common tones - Most dissonant



Table 2.1 Poly-Pentatonics: Minor Pentatonics

Representing the Poly-Pentatonic spectrum this table shows in the first column each Cycle as an individual progression of the Cycle of Fifths. In the second column numbers represent intervallic distances from the (1) minor pentatonic, tonal comparisons and spectrum shifts in tonality from consonance to complete dissonance.

Poly-Pentatonic	Control - 1 minor Pentatonic	
<i>First Cycle</i> (most consonant) Perfect fourths/fifths Tonic System	4 min pent 4 common tones 1 non-common	5 min pent 4 common tones 1 non-common
<i>Second Cycle</i> Major second Tonic System	b7 min pent 3 common tones 2 non-common tones	2 min pent 3 common tones 2 non-common tones
<i>Third Cycle</i> Minor third Tonic System	b3 min pent 2 common tones 3 non-common tones	6 min pent 2 common tones 3 non-common tones
<i>Fourth Cycle</i> Major third Tonic System	#5 min pent 1 common tones 4 non-common tones	3 min pent 1 common tones 4 non-common tones
<i>Fifth Cycle</i> (most dissonant) Chromatic Tonic System	b2 min pent Zero common tones	7 min pent Zero common tones
<i>Sixth Cycle</i> (most dissonant) Tritone Tonic System	b5 min pent Zero common tones	

2.2 Poly-Pentatonics: Alternate Pentatonic Scales

Exploring new pentatonic scale sequences is an exciting proposition. The pentatonic scales I will begin exploring are some of the alternate pentatonic scales described by Ricker and Bergonzi. These are the Minor 6 pentatonic (2.2.1), Minor b5 pentatonic (2.2.2) and the Major b6 pentatonic (2.2.3) and a reason for choosing these apart from enjoying their sound properties is that they are not widely utilized and documented. Another reason for choosing to explore the scales is that each of these alternate pentatonic scales have only one alteration from either the major pentatonic or minor pentatonic scale. The chromatic interval within the pentatonic makes it less possible to superimpose over potential harmonic chord scales because there are only two locations within a ‘western’ seven note scale where there are chromatic intervals. However, the chromatic structural elements of alternate pentatonics allow for it to focus on alterations of chord tones and tensions within harmonic structures. The overall effect that one note can have is fascinating and worthy of exploring. Each of these alternate pentatonic scales will be explored, analysed, and improvised through the theory of Poly-Pentatonics.

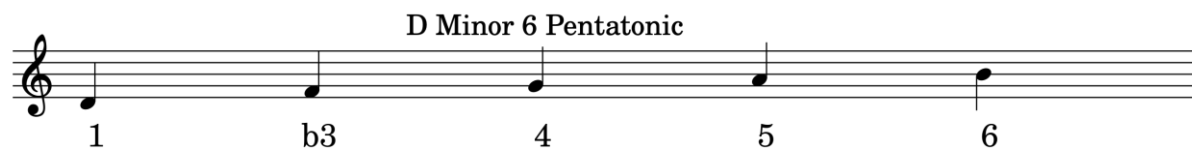
Note analysis: [+] above each note of a pentatonic scale denotes a common tone. Note analysis: Number analysis (scale tone 2) sometimes is analysed as (tension 9)

2.2.1 Minor 6 Pentatonic

The Minor 6 pentatonic, as referred to by Jerry Bergonzi, has one note alteration from the Minor 7 pentatonic, which is the 6 replacing the b7. The Minor 6 pentatonic has a sound, one that presents a melodic minor, lydian and wholetone sound because of the tone, tone, tone sequence from the b3 to the 6. The amount of dissonance is relevant to its harmonic superimposition and learning how to control the characteristic notes through articulations and length of notes. It is a fantastic option for altering the sound of minor and dominant chords (see Table 2.3) and is very limited in its use, compared to the minor pentatonic but has available options for superimposition on other harmonic sounds.

Notation 2.2 D Minor 6 Poly-Pentatonic

The Poly-Pentatonic analysis for Minor 6 pentatonic scales will be by using D Minor pentatonic as The Control for shifting the tonal spectrum and its respective numbering system.



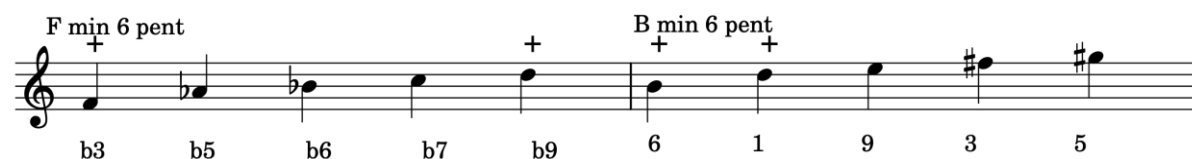
Notation 2.2.i *First Cycle*: Two common tones



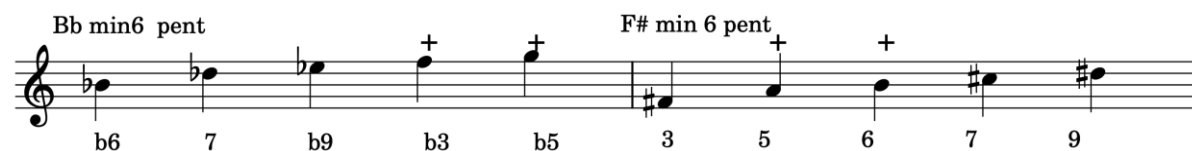
Notation 2.2.ii *Second Cycle*: Three common tones



Notation 2.2.iii *Third Cycle*: Two common tones



Notation 2.2.iv *Fourth Cycle*: Two common tones



Notation 2.2.v *Fifth Cycle*: No common tones - Most dissonant



Notation 2.2.vi *Sixth Cycle*: Two common tones



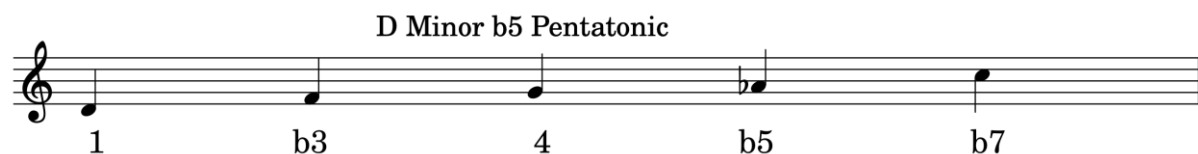
The scale of consonance to dissonance is not from one cycle to the next and therefore there will be different results for this Minor 6 alternate pentatonic. Similar to the minor pentatonic there is one Poly-Pentatonic Cycle, the *Fifth Cycle*, where there are no common tones, and this will be the most dissonant application of tonality. The most consonant Poly-Pentatonic Cycle, the *Second Cycle*, will have three common tones and therefore not an option for distinct transformations of tonality. In comparison to the minor pentatonic the Minor 6 pentatonic is closest in the tonal spectrum of consonant and dissonant possibilities.

2.2.2 Minor b5 Pentatonic

The Minor b5 pentatonic, referred to by Bergonzi, has one note alteration from Minor 7 pentatonic, which is the (b5) replacing the (5). This scale is also referred to as the Major b3 pentatonic by Ricker and in this form the starting note would be the (b3) of the Minor b5 pentatonic. For example, D minor b5 pentatonic is also F major b3 pentatonic. The Major b6 pentatonic has a sound, one that presents as dark in tonal colour, heavy with dissonant qualities, but also very similar in sound to the blues scale. The amount of dissonance is relevant to its harmonic superimposition and learning how to control the characteristic notes through articulations and length of notes. It is a fantastic option for altering the sound of major and dominant chords (see Table 2.3) and is very limited in its use, compared to the minor pentatonic but has available options for superimposition on other harmonic sounds.

Notation 2.3 D Minor b5 Poly-Pentatonics

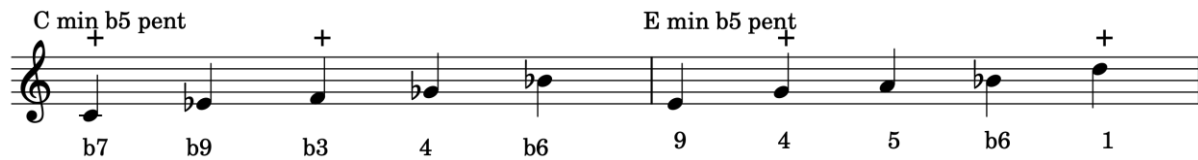
The Poly-Pentatonic analysis for Minor b5 pentatonic scales will be by using D Minor b5 pentatonic as the control for shifting the tonal spectrum and its respective numbering system.



Notation 2.3.i *First Cycle*: Two common tones - Least dissonant



Notation 2.3.ii *Second Cycle*: Two common tones - Least dissonant



Notation 2.3.iii *Third Cycle*: Two common tones - Least dissonant



Notation 2.3.iv *Fourth Cycle*: One common tone - Most dissonant



Notation 2.3.v *Fifth Cycle*: One common tone - Most dissonant



Notation 2.3.vi *Sixth Cycle*: One common tone - Most dissonant



The scale of consonance to dissonance is not a graduated progression from the First Cycle to the Sixth Cycle and therefore there will be different results for this Minor b5 alternate pentatonic. Unlike the minor pentatonic there are no Minor b5 Poly-Pentatonic Cycles where no common tones exist. The most dissonant Poly-Pentatonic Cycles will have at least one common tone, and these are the Fourth, Fifth and Sixth Cycles. The most consonant Poly-Pentatonic Cycles

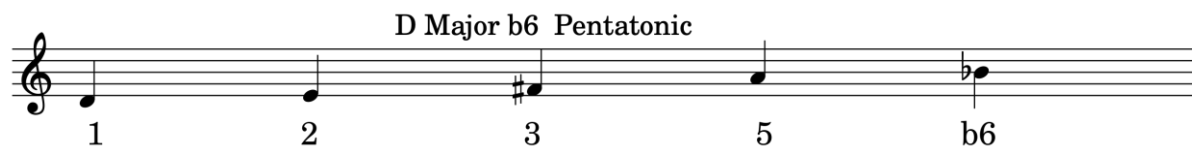
are the First, Second and Third which have two common tones. The scale of consonance to dissonance is extremely limited and the most tonally dissonant pentatonic scale to apply.

2.2.3 Major b6 Pentatonic

The Major 6 pentatonic has one note alteration from Major pentatonic, which is the 6 replacing the b7. Both Ricker and Bergonzi refer to this pentatonic by the same name. The Major b6 pentatonic has an intriguing sound, one that presents as dark in tonal colour and heavy with dissonant qualities. The amount of dissonance is relevant to its harmonic superimposition and learning how to control the characteristic notes through articulations and length of notes. It is a fantastic option for altering the sound of major chords as its characteristic note is the b6 or re-thought as the #5 which will generate the most tonal dissonance for a major chord. It is very limited in its use but has available options for superimposition on other harmonic sounds.

Notation 2.4 D Major b6 Poly-Pentatonics

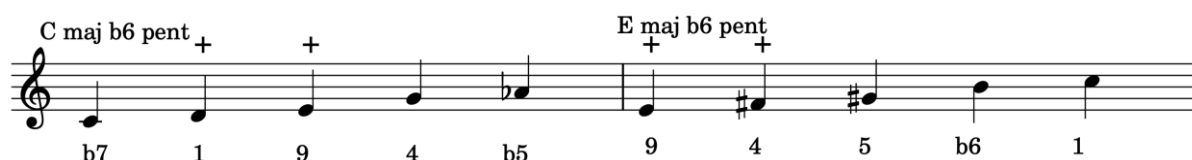
The Poly-Pentatonic analysis for Major b6 pentatonic scales will be by using D Major b6 pentatonic as the control for shifting the tonal spectrum and its respective numbering system.



Notation 2.4.i First Cycle: Two common tones



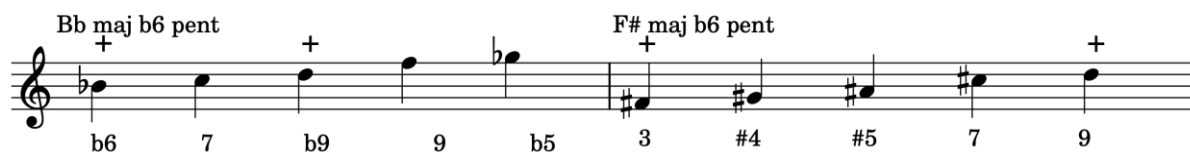
Notation 2.4.ii Second Cycle: Two common tones



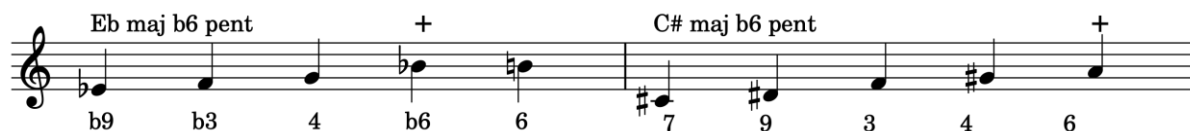
Notation 2.4.iii Third Cycle: One common tone



Notation 2.4.iv

Fourth Cycle: Two common tones

Notation 2.4.v

Fifth Cycle: One common tone

Notation 2.4.vi

Sixth Cycle: Two common tones

The Poly-Pentatonic scale of consonance to dissonance does not exist in a progression from one cycle to the next and therefore there will be different results for the Major b6 alternate pentatonic in comparison to the Minor pentatonic. Unlike the minor pentatonic there are no Poly-Pentatonic Cycles where there are no common tones and so the most dissonant cycles, the *Third* and *Fifth* Cycles will have at least one common tone. The *First*, *Second*, *Fourth* and *Sixth* Cycles are the most consonant which have two common tones. The scale of consonance to dissonance is very limited in tonal scope and the most effective way to apply the Poly-Pentatonic tonal superimpositions is via the *Third* and *Fifth* Cycles.

2.3 Poly-Pentatonic Improvising Demonstrations

Before beginning the improvisational adventures all the Poly-Pentatonic information needs to be compiled and now put in to practise. There are four different pentatonic scales multiplied by twelve keys to have mastered before the Poly-Pentatonic applications can be achieved.

Table 2.2 is an illustrated description of Inside pentatonic substitutions for different chord types. The numbers beneath each pentatonic scale relate to the degree of the chord scale from which to start the Inside pentatonic scale. For example: the numbers for the Inside minor pentatonic options for a Major 7th chord are 1, 2, 3, 6 and 7. When a Cmaj7 chord is played

the Inside pentatonic options will be: C min pent (1), D min pent (2), E min pent (3), A min pent (6) and B min pent (7).

Table 2.2 Minor Pentatonic Substitutions

	Inside pentatonic substitutions and degrees of the chord scales upon which these can be constructed.			
Chord Type/Scales	Minor Pent	Major b6	Minor b5	Minor 6
Major 7th	1 2 3 6 7	9 b5 7	9 4 6	9 #4 6
Minor 7th	1 2 4 5	1 4 9	9 4 6	1 9 4
Dominant	1 2 5 6	3 5 6	9 4 6	5 6
Dom 7 th Altered	b3 4 b7	b5 6	b7 1	b9 #9
Half-Dim 7 th	b3 4 b7	b5 7	1	b3 4

Having established the respective Inside pentatonic options for the different chord types, the next step is to apply Outside choices – Poly-Pentatonics. What needs to be decided is the amount of consonance or dissonance, what Poly-Pentatonic Cycle be applied. For example, there are four Inside Minor Pentatonic substitution choices for a Minor 7th chord: 1, 2, 4 and 5. Each of these choices could have all Poly-Pentatonic Cycles applied in creating consonant or dissonant sonorities. In the interests of clarity, choose one Inside pentatonic option and one Poly-Pentatonic Cycle. Over D-7, choose A min pent (5), then select the Fifth Cycle – Bb min pent and G# min pent (most dissonant) and then decide upon one substitution for improvisational practice. And so, the process is:

- (D-7) substitute A min pent (Inside) and combine with Bb min pent (Poly)

[All notations and analysis are in Bb Pitch, sounding a whole step below the written pitch. For example: when a (C) is notated it will sound a (Bb)]

2.3.1 Minor Poly-Pentatonic Improvising Demonstration

The Poly-Pentatonic focus for this D Minor pentatonic improvisation demonstration is the transposition and mixture of the *Fourth Cycle*, (major third transposition) one of the most dissonant Poly-Pentatonic superimpositions over a concert D minor vamp.

Inside choice: D min pent and Poly-Pent choices: F# min pent and Bb min pent

Notation 2.5 Minor Pentatonic Demonstration

Audio 2.1 <https://youtu.be/O-A8aJ2j6M8>

[Sean Coffin - Tenor Saxophone and Aaron Blakey – Piano]

The musical notation consists of ten staves, each representing a line of music. The notation is written in treble clef with a key signature of one flat (Bb). The time signature is 4/4. The notation includes various pentatonic scales and improvisations, with labels for D-11, Dmin pent, Ebmin pent, C#min pent, and Ebmin pent-Dmin pent. The notation is written in a standard musical notation style, with notes, rests, and accidentals. The notation is organized into groups of three staves each, with a label at the beginning of each group. The notation is written in a clear and legible manner, with a focus on the melodic lines. The notation is a demonstration of the minor pentatonic scale and its various applications in improvisation.

D-11 Dmin pent-----

Dmin pent----- Ebmin pent-----

D-11 Dmin pent----- Ebmin pent-----

C#min pent----- Dmin pent-----

D-11 Dmin pent----- C#min pent----- Dmin pent-----

Dmin pent----- Ebmin pent-----

Ebmin pent-Dmin pent----- Ebmin pent-----

Ebmin pent----- C#min pent-----

D-11 Dmin pent-----

2.3.2 Minor 6 Poly-Pentatonic Improvising Demonstration

The Poly-Pentatonic focus for this D Minor 6 Pentatonic improvisation demonstration is the transposition and mixture of the *Fourth Cycle* (major third transposition), one of the most dissonant Poly-Pentatonic superimpositions over a concert D minor vamp.

Inside choice: D min6 pent and Poly-Pent choices: F# min6 pent and Bb min6 pent

Notation 2.6 Minor 6 Pentatonic Demonstration

Audio 2.2 <https://youtu.be/-a1LjpmWro8>

[Sean Coffin - Tenor Saxophone and Aaron Blakey – Piano]

The musical notation is presented in seven staves, each with a treble clef and a 4/4 time signature. The notation includes various pentatonic scales and improvisations, with labels indicating the specific scales used:

- Staff 1:** Labeled "D-11" and "Dmin6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 2:** Labeled "F#min6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 3:** Labeled "F#min6 pent" and "Bbmin6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 4:** Labeled "Bbmin6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 5:** Labeled "Dmin6 pent" and "F#min6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 6:** Labeled "F#min6 pent" and "Bbmin6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.
- Staff 7:** Labeled "F#min6 pent" and "Dmin6 pent". It shows a sequence of notes starting with a rest, followed by a series of eighth and quarter notes.

2.3.3 Minor b5 Poly-Pentatonic Improvising Demonstration

The Poly-Pentatonic focus for this Minor b5 pentatonic improvisation demonstration is the transposition and mixture of the *Fifth Cycle* (half-step transposition), one of the most dissonant Poly-Pentatonic superimpositions over a concert D minor vamp.

Inside choice: B minb5 pent and Poly-Pent choices: Bb minb5 pent and C minb5 pent

Notation 2.7 Minor b5 Poly-Pentatonic Demonstration

Audio 2.3 <https://youtu.be/F7kpBfmarM0>

[Sean Coffin - Tenor Saxophone and Aaron Blakey – Piano]

The musical notation is presented in a single system with six staves. The notation includes various pentatonic scales and improvisations, with labels indicating the specific scales used:

- Staff 1:** Labeled "Bminb5 pent-----". It shows a sequence of notes with a triplet of eighth notes.
- Staff 2:** Labeled "Bminb5 pent-----" and "Cminb5 pent-----". It shows a sequence of notes with a triplet of eighth notes.
- Staff 3:** Labeled "Cminb5 pent-----" and "Bbminb5 pent----". It shows a sequence of notes with a triplet of eighth notes.
- Staff 4:** Labeled "Bbminb5 pent-----", "Cminb5 pent-----", and "Bminb5 pent-----". It shows a sequence of notes with a triplet of eighth notes.
- Staff 5:** Labeled "Bminb5 pent-----". It shows a sequence of notes with a triplet of eighth notes.
- Staff 6:** Labeled "Cminb5 pent-----" and "Bbminb5 pent---". It shows a sequence of notes with a triplet of eighth notes.
- Staff 7:** Labeled "Bbminb5 pent-----". It shows a sequence of notes with a triplet of eighth notes.

The notation is written in 4/4 time, with a key signature of one flat (Bb). The tempo is marked "D-11".

2.3.4 Major b6 Poly-Pentatonic Improvising Demonstration

The Poly-Pentatonic focus for this Major b6 pentatonic improvisation demonstration is the transposition and mixture of the *Fifth Cycle* (half-step transposition), the most dissonant Poly-Pentatonic superimpositions over a concert D minor vamp.

Inside choice: A Maj b6 pent and Poly-Pent choices: Bb Maj b6 pent and C Maj b6 pent

Notation 2.8 Major b6 Poly-Pentatonic Demonstration

Audio 2.4 <https://youtu.be/IXREcg1ZAEU>

[Sean Coffin - Tenor Saxophone and Aaron Blakey – Piano]

The musical notation is written on six staves in 4/4 time. The key signature has one flat (Bb). The notation includes various pentatonic scales and improvisations, with labels above the staves indicating the specific scales being used. The scales are: A Maj b6 pent, Bbmajb6 pent, Abmajb6 pent, Amajb6 pent, Bbmajb6 pent, and Dminor. The notation also includes a 'slide' instruction and a 'D-11' label. The piece concludes with a double bar line.

Amajb6 pent-----

Bbmajb6 pent-----

Abmajb6 pent-----

Amajb6 pent-----

Abmajb6 pent-----

Bbmajb6 pent-----

D-11

slide

Dminor

Chapter 2 Conclusions

The Poly-Pentatonic concept associated with minor pentatonics, as presented, by Jerry Bergonzi, exhibit a simple, yet elegantly ordered gradated process in its presentation through the Cycle of Fourths (see Table 2.3). The ideologies of this process and conceptions of these techniques are something to which I aspire for my own research outcomes. The Major b6, Minor b5 and the Minor 6 Poly-Pentatonic systems provide no fluidity, in comparison with the Minor pentatonic Poly-Pentatonic system. Without a precise gradated spectrum of consonance to dissonance and without an organised system it will lead to confusion and extreme difficulty in the teaching and learning process.

Table 2.3 Summary of Poly-Pentatonics Tonalities

Audio 2.5 Mixing Up The Poly-Pentatonics Take 1 <https://youtu.be/1eVJ8jZBEMI>

Audio 2.6 Mixing Up The Poly-Pentatonics Take 2 <https://youtu.be/Pcp02c65hwx>

Poly-Pentatonic Cycles	Minor Pent	Major b6 Pent (Alt Pent)	Minor b5 Pent (Alt Pent)	Minor 6 Pent (Alt Pent)
First Cycle (Perfect Fourths)	4 common 1 non	2 common 3 non	2 common 3 non	2 common 3 non
Second Cycle (Major Seconds)	3 common 2 non	2 common 3 non	2 common 3 non	3 common 2 non
Third Cycle (Minor Thirds)	2 common 3 non	1 common 4 non	2 common 3 non	2 common 3 non
Fourth Cycle (Major Thirds)	1 common 4 non	2 common 3 non	1 common 4 non	2 common 3 non
Fifth Cycle (Half-steps)	0 common 5 non	1 common 4 non	1 common 4 non	0 common 5 non
Sixth Cycle (Tritone)	0 common 5 non	2 common 3 non	2 common 3 non	2 common 3 non

The Major b6, Minor b5 and Minor 6 alternate pentatonic scales have one scale degree alteration from a Major and Minor pentatonic. The alteration for the Major b6 (scale degree 6 of the Major pentatonic becomes a b6) and Minor b5 (scale degree 5 of the Minor pentatonic becomes a b5) pentatonic is a chromatic element. The inclusion of these chromatic alterations

instinctively drew me to these scales for this research. The sonic and harmonic impact that one chromatic alteration affects upon tonality is profound. The dissonance that one note can have upon a common sound is something that has always intrigued and led my thinking and practice approaches to music.

Having initially explored and evaluated the Poly-Pentatonic properties of the Minor pentatonic and the Alternate pentatonics: Major b6 and Min b5, I deemed it a comprehensive endeavour to explore the Minor 6 (alternate) pentatonic. Both alternate pentatonics have chromatic properties which are the most important element of their design, the characteristic sound and the reason they were chosen for this research. The Minor 6 pentatonic does not have a chromatic element in its design and therefore the Poly-Pentatonic information it provides in comparison to pentatonic scales with chromatic elements is vital in understanding and determining the direction for this research. Table 2.3 shows that the chromatic element adversely affects the availability and adaptability of alternate pentatonics over common chord types but will be perfect for specifically voiced harmonic sounds with chord tone and/or upper structure (tension) alterations. When I was studying saxophone with George Garzone and his *Triadic Chromatic Concept* (Garzone, 2016) and composition with Ludmilla Ulehla the findings were that the chromatic intervals impact was one that provides an abundance of ideas, avenues and possibilities forming immediate consonant versus dissonant qualities, the knowledge to strengthen a musical line and the unpredictable resolution point variables that results.

I have enjoyed my time exploring and trying and attempting to expand the conventional conceptualisations of pentatonic theory but for now, in this research, it will end. I will continue to use these in my catalogue of ideas and possibilities but am compelled to find my ‘own’ sound within the structure of a pentatonic design. A design that utilises interesting intervallic distances and directions producing combinations of shape and contour, the strategic placement of chromatic elements whilst naturally exhibiting harmonically versatile and ambiguous tonalities of consonance and dissonance.

Chapter 3 Transformations of Pentatonic Convention

I began thinking holistically about the word ‘pentatonic.’ What is the meaning and definition of a pentatonic scale? Pianist and educator Dan Haerle provides states that a pentatonic scale “is simply a five (penta-) tone (tonic) scale” and more importantly that “any arrangement of five tones within the octave forms a pentatonic scale” (Haerle, 1980: 42). The established conventional pentatonic approaches demonstrated throughout Chapter 2 will contribute heavily to the organisation of a unique pentatonic design, challenging tonality and presenting a dynamic sound. However, the pentatonic conventions alone, do not reflect my vision, represent my natural and instinctive tendencies and will not yield new knowledge (Candy, 2006). However, it was a most necessary evolutionary undertaking, establishing the boundaries and foundations from which to create something new and very personal. Wilson depicts creativity “is the unique and defining trait of our species; and its ultimate goal, self-understanding...” (Wilson, 2018: 3) and the results from this practise-led inquiry have confirmed the fundamental elements intrinsic for this research.

What was revealed through conventional pentatonic practises are that individually intervallic relationships, consonance versus dissonance, chromaticism, shapes and contours and that the contribution of chromaticism is important, but when combined is necessary. This knowledge and understanding gave me the impetus to steer away from conventional pentatonic fundamentals and conceptualise my own pentatonic design and improvisational system.

How to create my own concept? The author Wilczek describes the beginning of a creative journey as, “now let’s make a leap of imagination, ascending from the solid ground of “what”, “how” and “why”, into the dreamscape of “what if”, “how to” and “why not” (Wilczek, 2015: 159), this describes the excitement and anticipation of new discoveries. A book pivotal in my musical journey, Nachmanovitch’s book *Free Play*, describes epiphany as a “moment of transformation through surrender, is reached, and how it works to potentiate and instil life into one’s creative voice.” (Nachmanovitch, 1990: 194).

Every musical teaching and endeavour I have experienced will assist this research in transforming conventional pentatonic ideologies and practices into creating an originally conceived pentatonic design.

3.1 Pentatonic Concept A

Pentatonic Concept A has strategic elements of chromaticism and internal shape, utilised in a traditional approach technique enclosing each chord tone, 1, 3, or 5 of a diatonic triad: (major, minor, augmented and diminished), thus creating a triadic pentatonic. These triads could be representing a tonic chord or upper structures within a harmonic sound.

Chromatic alterations to triads...provide a wealth of harmonic colour. Some combinations increase a dissonant quality while others function as smooth chromatic substitutes for the expected chord members. All qualities regardless of their consonant or dissonant make-up, are suitable in a musical phrase if they contribute to the texture and idiom of the composition as a whole. (Ulehla, 1994: 66)

Harmonically, chromaticism can be used to increase tension and harmonic rhythm within a given tonality by creating tension within a diatonic chordal structure. Pure chromatic playing suggests an independence and equality of all notes allowing for vast expansive exploration.

Triads are the most fundamental harmonic sound, simple, strong, versatile, adaptable and can be in any root position, first inversion, second inversion and six permutations of each and the enhancement and placement of chromatic enclosures could be at the beginning approaching the first note of the triad, the middle approaching the second or the end of the phrase approaching the third note of the triad. These chromatic enclosures extend the triadic influence and serve to heighten the selected chord tones of each triad whilst diluting the overall sound of the triad and therefore its melodic relationships with the given harmony.

3.1.1 Triadic Pentatonics: Root Position

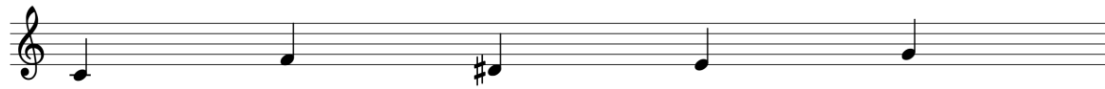
Notation 2.9

Chromatic enclosure of the 1 or tonic at beginning of the triadic pentatonic.



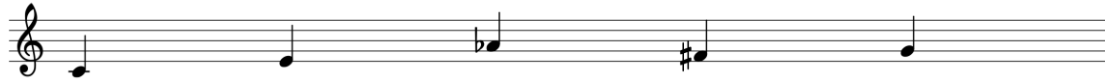
Notation 2.10

Chromatic enclosure of the 3 or tonic in the middle of the triadic pentatonic.



Notation 2.11

Chromatic enclosure of the 5 or tonic at end of the triadic pentatonic.

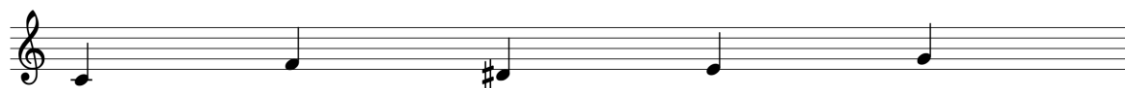


These triadic pentatonics are exhibited in root position but could also be superimposed off any chord tone, displayed as inversions, thus providing different starting points, different resolution points, a more open sound and generating more textural and range possibilities. Major triads are only shown but the different triadic qualities: major, minor, diminished and augmented produce many more options for melodic exploration. As tonic sounds these triads have their own characteristics but when superimposed as upper structure triadic sounds on chordal structures. They provide many consonant and dissonant hues with which to create, and as David Liebman confirms that using “combinations of diatonicism, tonal, and non-tonal chromaticism, the choices available for enhancing the expressive content of a melody can be limitless” (Liebman, D. 1991: 15). Jazz musicians use chromaticism in many ways: as approach notes to chord tones, also be used to act as passing tones between chord tones which are all effective ways to expand your knowledge and exploration of tonality.

3.1.2 Triadic Pentatonic Voice-leading

Notation 2.12

This Triadic Pentatonic (see also 2.10) is the control sequence for Notations 2.13-2.15



The last note in any Concept A pentatonic sequence always connects chromatically ascending to two resolution notes (Ab) or descending to (F#) appearing as the first note of the next pentatonic as shown in Notation 2.13 This chromatic connection ensures a smooth melodic

flow through a stepwise movement and creates harmonic ambiguity via the very nature of chromaticism.

Notation 2.13



Notation 2.14

Exhibits chromatic enclosure to the third of a C major triad, to enable an obvious and smooth chromatic voice leading into the next triadic pentatonic, F# major grouping in root position. The note (G) voice leads in a descending approach to the resolution note (F#) which could be the tonic of an F# major triad, the third of a D major triad or the 5th of a B major triad.



Notation 2.15

Ascending chromatic voice leading to Ab major triad



The note (G) voice leads in an ascending approach to the resolution note (Ab) which could be the tonic of an Ab major triad, the third of an E major triad or the fifth of a Db major triad. When this chromatic voice-leading of triad occurs, there will be two resolution tones, one ascending and one descending. Each of these resolution notes could be a (1), (3) or (5) of the succeeding triad and with two resolution tones, there will be access to six different triads (of the one type).

When all triadic types, inversions, melodic properties and harmonic functions are considered, the possibilities for consonant and dissonant choices are endless. Original concepts feed off simplicity, order, logic and functionality so that there is a conclusive conception and process to imitate. After experimenting with this for a week or so it still sounded within the tradition of Bebop improvisational approaches and related to a number of established improvisational and arranging concepts:

- Polychordal applications (Levine, M. 1995)

- Hexatonics (Bergonzi, J. 2006)
- Triad Pairs (Weiskopf, W. 2000) and (Campbell, G. 1993)
- Triadic Chromatic Concept (Garzone, G. 2016)

Concept A has also revealed parameters for conception and a beginning for the distillation of an original pentatonic design.

- Pentatonic design is the desired number of notes in the cell
- Not to have a completely linear sequential of notes
- Have multiple directions and shape/contours
- Two chromatic elements have been utilised in the pentatonic design of Concept A
- The location of the chromatic element(s) will be determinant on the design shape.
- Not to use conventional harmonic structures, such as triads

This is an excellent and necessary approach for completely absorbing knowledge and application of chord tones, but is not an original concept and once again, not representative of the sounds I had/have been hearing in my head for my music. However, working through these ideas some realisations unveiled themselves that have become parameters for my methodological practice. The sound and conceptual idea from the beginning was to have an all-inclusive harmonically ambiguous pentatonic system for this research and the parameters are that there be no tonicization of the pentatonic and that the chromatic element needs to have more purpose than being represented as approach notes.

3.2 Pentatonic Concept B

Pentatonic Concept B is a change in conceptions of Pentatonic Concept A resultant from practise-led inquiries of chromatic enclosure as applied to triadic chord tones. Pentatonic Concept B establishes the organisation of five-note structural designs utilizing chromaticism, shape and intervallic properties of perfect fourths and their inverted counterpart, perfect fifths. These intervallic choices are a direct influence from my application and synthesis of pentatonic improvisation, and in particular the technique of “skips and steps” (Bergonzi, 1994: 11), previously discussed (see 1.1.3). When conventional major/minor pentatonic scales are played

in thirds, hence skips and steps, the note sequence becomes perfect fourths, because of the missing second and sixth degrees of a minor scale.

The methodology for Pentatonic Concept B is to expand the intervallic and range spectrum for the five-note cells working to approach a target note or what is termed a Resolution note. The design for Concept B is two intervallic groupings, labelled as (2) indirectly and directly (vice-versa) chromatically approaching a resolution note, labelled as (R). This design will be labelled as (2-2-R). For Concept B the design structural grouping (2) will be an interval of a perfect fourth or fifth.

In Notation 2.16.i the first intervallic grouping (F# and B) is a perfect fourth and the second note of the interval is B has an indirect chromatic approach to the resolution note C (R). The second intervallic grouping (F# and C#) is a perfect fourth. The starting note of the second intervallic grouping will be determined from the fourth note of the sequence (C#) which has a direct chromatic approach to the resolution note C (R).

3.2.1 Resolution note technique #1

This pentatonic design (2-2-R) is constructed of perfect fourth intervallic enclosures: indirectly chromatic below and directly chromatic above of the resolution note (R).

Notation 2.16.i

Audio 2.7 <https://youtu.be/Zfx0hGMQmBQ>



Notation 2.16.ii

Audio 2.8 <https://youtu.be/Ipz3KPb-GvY>

This pentatonic design (2-2-R) is constructed of perfect fourth intervallic enclosures: indirectly chromatic above and directly chromatic below of the resolution note (R).

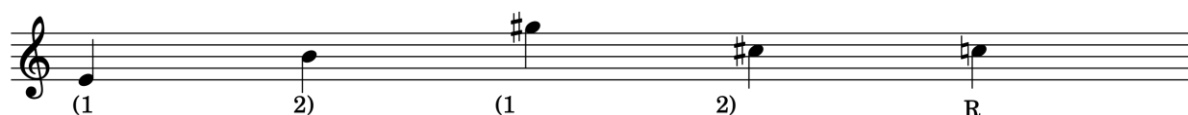


3.2.2 Resolution note technique #2

This pentatonic design (2-2-R) is constructed of perfect fifth intervallic enclosures: indirectly chromatic below and directly chromatic above of the resolution note (R).

Notation 2.17.i

Audio 2.9 <https://youtu.be/Ipz3KPb-GvY>



Notation 2.17.ii

Audio 2.10 https://youtu.be/_CAQ5yGHDZU

This pentatonic design (2-2-R) is constructed of perfect fifth intervallic enclosures: indirectly chromatic above and directly chromatic below of the resolution note (R).



3.2.3 Resolution note technique #3

This pentatonic design (2-2-R) is constructed of perfect fourth intervallic enclosures: indirectly whole-step below and directly whole-step above of the resolution note (R).

Notation 2.18.i

Audio 2.11 <https://youtu.be/sr9gC8m5xG4>



Notation 2.18.ii

Audio 2.12 <https://youtu.be/YBBaUpYnxZA>

This pentatonic design (2-2-R) is constructed of perfect fourth intervallic enclosures: indirectly whole-step above and directly whole-step below of the resolution note (R).



The realisation for (3.2.3) is that the absence of any chromatic element or flavour within the pentatonic cell is an ingredient that this research must include.

The intervallic nature of Concept B and the exhaustive combination of possibilities, whether they were chromatic by design, clustered by design, or wide ranging by design, made for an enticing concept.

- Pentatonic Concept A (a contracted five-note cell)
- Chromatic enclosure of a targeted triadic chord tone
- Pentatonic Concept B (an expanded five-note cell)
- The design for Concept B is (2-2-R), two intervallic groupings (perfect fourths or fifths), labelled as (2) indirectly and directly chromatically approaching a resolution note, labelled as (R).

The innate nature of these perfect fourth and fifth intervals suggest ambiguous harmonic entities, non-committal in their consonant or dissonant contexts and therefore are extremely adaptable and easily superimposed over many different harmonic structures. The number of possibilities and subsequent directional changes multiplied by twelve different starting notes in multiple registers, combined with their permuted mathematical combinations of intervallic choices could become a conceptual concern as narrowing down a methodology requires specific ideology and a fixed design structure and method, the multitude of possibilities one variation provides is astronomic.

3.3 Design of Pentatonic Concept C and D

Pentatonic Concepts A and B have contributed important characteristics for parameters in the distillation of concepts for pentatonic designs. *Pentatonic Concepts C and D* explore a different melodic organisational approach to the pentatonic design and functionality by organising intervallic groupings into cells of (3) and (2) connected with a chromatic element which enacts a change of direction. The deconstruction of a five-note cell, into (3) and (2) cell groupings is purely based on my basic knowledge, practise and compositional approach of five-note time

signatures. Below is a list of new design parameters and subsequent modifications realised for practise-led explorations of Pentatonic Concepts C and D:

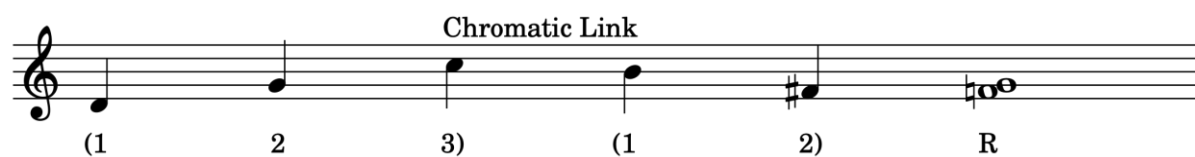
- The purpose of the pentatonic is to create expansive movement and harmonically ambiguous sounds towards a resolution note
- No resolution of a target tone within the pentatonic
- Pentatonic Concept C (3-2)
- Pentatonic Concept D (2-3)
- The resolution occurs when pentatonics final note resolves chromatically and externally to a resolution note, analysed as (R)
- (3) is the intervallic grouping of three notes, which contain two consecutive intervals the same direction and analysed underneath the staff as (1 2 3)
- (2) is the intervallic grouping of two notes approached chromatically and moving in the opposite direction and analysed underneath the staff as (1 2)
- The chromatic element, termed the *Chromatic Link* is located and connects the intervallic groupings (3) and (2) or (2 and (3) and effects a change direction whilst providing shape and contour
- The Chromatic Link can be ascending or descending
- Inversion (or Inverted Tones) is a melodic device for use with melodic variation. are those notes within the pentatonic that are transferred up or down an octave. The result of this is twofold: an automatic change of intervallic direction and an inversion of the interval – an alteration of the interval ratio even though the note names remain the same.
- The Exact Inversion is a melodic device for use with melodic variation. The result of this is twofold: an automatic change of intervallic direction and an exact transposition of the interval where the note changes.

The examples in 3.3.1 and 3.3.2 show two possible resolution notes relating to chromatic approach. All notation examples from 3.4 onwards will show only a descending chromatic resolution

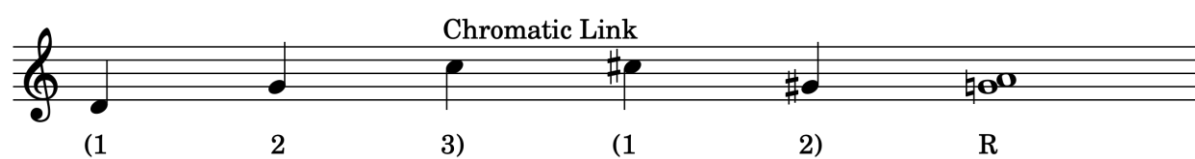
3.3.1 Pentatonic Concepts C Melodic Variations

Notation 2.19.i

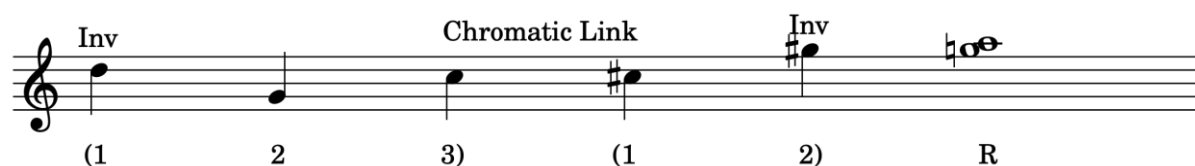
Descending Chromatic Link



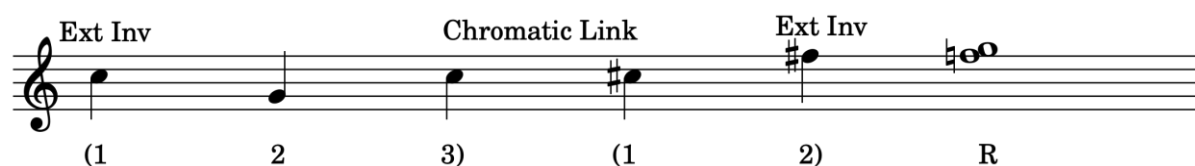
Notation 2.19.ii Ascending Chromatic Link



Notation 2.19.ii Inversion of the first and last tone of the pentatonic



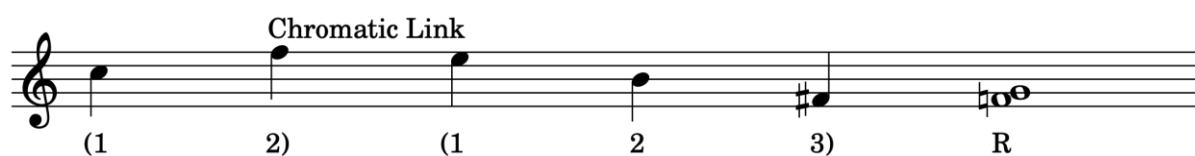
Notation 2.19.ii Exact Inversion of the first and last tone of the pentatonic



3.3.2 Pentatonic Concept D Melodic Variations

Notation 2.20.i

Descending Chromatic Link



Notation 2.20.ii Ascending Chromatic Link



3.4 Pentatonic Concept C (3-2) Groupings

Below is a list of design parameters and subsequent modifications realised for practise-led exploration of Pentatonic Concept C:

- the intervallic grouping (3) is located at the beginning of the pentatonic
- the intervallic grouping (2) is located at the end of the pentatonic
- the intervallic grouping (2) approaches the resolution tone (R)
- The Chromatic Link is located between the intervallic groupings (3) and (2)
- The Chromatic Link can be ascending or descending
- Inversion and Exact Inversions are melodic device to be applied
- Exact Inversion occurs when the exact interval is transferred up or down an octave.
- Inversions and Exact Inversions are contingent on the Chromatic Link not moving and this will happen when:
 - The first and second note of the (3) grouping can be inverted as this will affect an intervallic and directional change
 - The third note of the (3) grouping cannot be inverted as it will alter the Chromatic Link and the sequence of the (2) grouping
 - The second note (2) grouping can be inverted, but not the first

3.4.1 Pentatonic Concept D (3-2) Explorations

3.4.1.1 Prototype (3-2) : Descending Chromatic Link

Notation 2.21

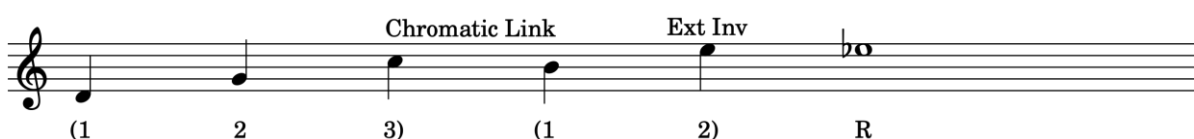
Audio 2.13 <https://youtu.be/fx76bLDirds>



Notation 2.21.i

Audio 2.14 <https://youtu.be/fUACVJ1qtRA>

Exact Inversion of the second note of the (2) grouping



Notation 2.21.ii

Audio 2.15 <https://youtu.be/2bxWWXHIEsk>

Inversion of the second note of the (2) grouping



3.4.1.2 Prototype (3-2): Ascending Chromatic Link

Notation 2.22



Notation 2.22.i

Audio 2.16 <https://youtu.be/OomM9KHSajQ>

Exact Inversion of the second note of the (2) grouping.



Notation 2.22.ii

Audio 2.17 <https://youtu.be/W8USQhYsP0g>

Inversion of the second note of the (2) grouping.



3.4.1.3 Inversion Prototype (3-2) : Descending Chromatic Link

Notation 2.23

Audio 2.18 <https://youtu.be/vei8rsKraEE>

The first tone of a (3) interval set can be inverted or octave shifted. This keeps the third note unchanged for the chromatic link to have the 2 interval and its variations unchanged.

Notation 2.23.i

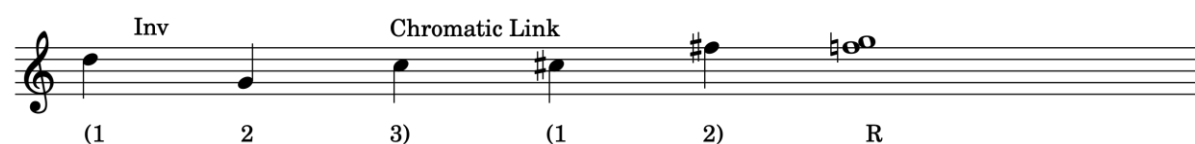
Audio 2.19 https://youtu.be/G_xohU8HTw0

Notation 2.23.ii

Audio 2.20 <https://youtu.be/t5KigKq83wI>

3.4.1.4 Inversion Prototype (3-2): Ascending Chromatic Link

Notation 2.24

Audio 2.21 https://youtu.be/Al_mp9Qp7go

Notation 2.24.i

Audio 2.22 <https://youtu.be/OomM9KHSajQ>

Notation 2.24.ii

Audio 2.23 <https://youtu.be/8U-y4mb5yR0>

3.4.1.5 Direction Change Prototype (3-2) : Descending Chromatic Link

The direction of the interval set changes – ascending to descending or descending to ascending. The intervallic qualities do not change.

Notation 2.25 (3)(2) Prototype – directional change

Audio 2.24 <https://youtu.be/qR1CW1Wf-9Y>



Notation 2.25.i

Audio 2.25 <https://youtu.be/9Uq5jDNG2Mo>



Notation 2.25.ii

Audio 2.26 <https://youtu.be/zeaT-v2-aBq>



3.4.1.6 Direction Change Prototype (3-2): Ascending Chromatic Link

Notation 2.26

Audio 2.27 <https://youtu.be/mFOrKRhE4EI>



Notation 2.26.i

Audio 2.28 https://youtu.be/_2jiPLTMJOA

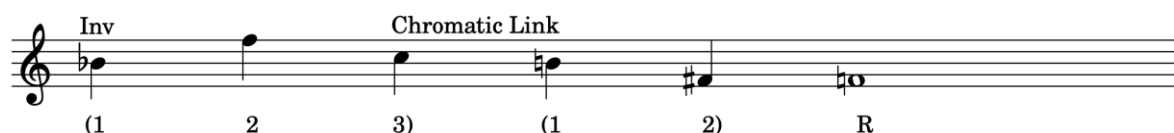


3.4.1.7 Inverted Direction Prototype (3-2): Descending Chromatic Link

Notation 2.27 (3)(2) Prototype Inverted Directional changes

Audio 2.29 <https://youtu.be/T0RzkMvc-u0>

The first note of the directional change variation is inverted or octave shifted.



Notation 2.27.i

Audio 2.30 https://youtu.be/h6f6Yx_yTXY



3.4.1.8 Inverted Direction Prototype (3-2): Ascending Chromatic Link

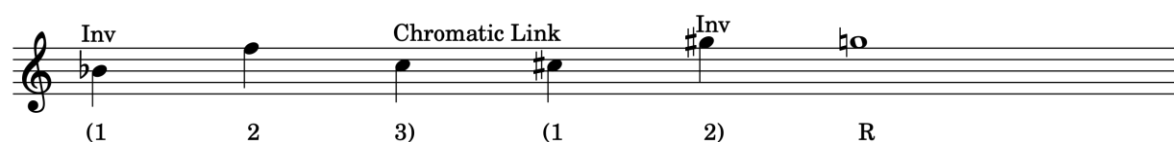
Notation 2.28

Audio 2.31 <https://youtu.be/b6wDU11QH90>



Notation 2.28.i

Audio 2.32 <https://youtu.be/En8C3oKmcU>



3.5 Pentatonic Concept D (2-3)

Below is a list of design parameters and subsequent modifications realised for practise-led exploration of Pentatonic Concept D (2-3):

- the intervallic grouping (2) is located at the beginning of the pentatonic
- the intervallic grouping (3) is located at the end of the pentatonic
- the intervallic grouping (3) approaches the resolution tone (R)
- The Chromatic Link is located between the intervallic groupings (2) and (3)
- Inversion and Exact Inversions are melodic device to be applied
- Exact Inversion occurs when the exact interval is transferred up or down an octave.
- Inversions and Exact Inversions are contingent on the Chromatic Link not moving and this will happen when:
 - The second and third note of the (3) grouping can be inverted as this will affect an intervallic and directional change
 - The second and third notes of the (3) grouping can be inverted as it will not alter the Chromatic Link
 - The first note (2) grouping can be inverted, but not the second as it will alter the Chromatic Link and the sequence of notes for the (3) intervallic grouping

3.5.1 Prototype (2-3): Descending Chromatic Link

Notation 2.29 (2-3) Prototype Chromatic Link descending

Audio 2.33 https://youtu.be/uIH4f2GiE_q

Inverted variations of this pentatonic are presented in all Notation 2.28 to 2.28.iv



Notation 2.29.i

Audio 2.34 <https://youtu.be/DMei8FGqkXM>

Inversion of the third note of the (3) grouping



Notation 2.29.ii

Audio 2.35 <https://youtu.be/ZCZ0Z5tbqxA>

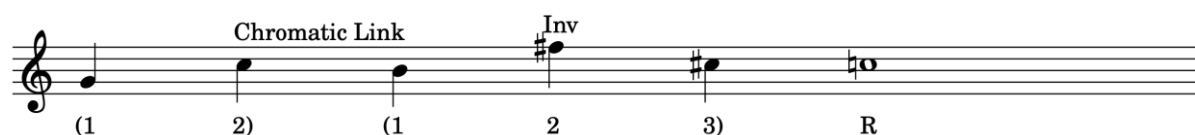
Inversion of the first note of the (2) grouping and third note of the (3) grouping



Notation 2.29.iii

Audio 2.36 <https://youtu.be/N5JKEY55OYQ>

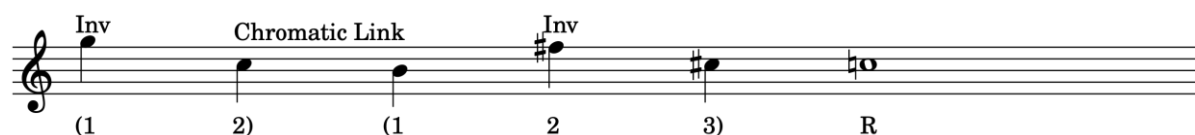
Inversion of the second note of the (3) grouping



Notation 2.29.iv

Audio 2.37 <https://youtu.be/rNs4M7cQWBE>

Inversion of the first note of the (2) grouping of the second note of the (3) grouping



Notation 2.29.v

Audio 2.38 <https://youtu.be/OawJtyApu-Q>

Inversion of the and the second and third note of the (3) grouping



All these inverted variations are ways to change the shape of the pentatonic and alter the perception of the same note's sound and intervallic context.

3.6 Pentatonic Concept C and D – Intervallic Expansions

There is only so much information and variation of sound to draw from these perfect intervals. The next step is to explore arbitrarily selected intervallic combinations within the groupings of the Concept Pentatonic (3-2) and (2-3) designs.

3.6.1 Pentatonic Concept C (3-2) Intervallic Expansions

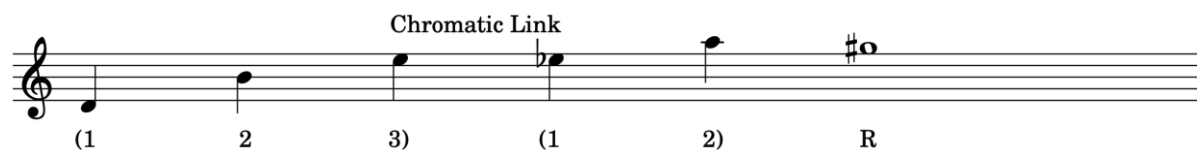
Notation 2.29 displays four arbitrarily selected intervallic (3-2) sets with varying intervallic directions and maintaining the Chromatic Link between each grouping (3) and (2) and the chromatic movement to a resolution tone (R).

Notation 2.30 (3-2) Arbitrarily Chosen Intervallic Groupings

Audio 2.39 https://youtu.be/JmteK7l_WS8



Notation 2.30.i

Audio 2.40 <https://youtu.be/fkAlHZuqjsA>

Notation 2.30.ii

Audio 2.41 <https://youtu.be/wAlbtkIbHfY>

Notation 2.30.iii

Audio 2.42 <https://youtu.be/rHcuqlSQzes>

3.6.2 Pentatonic Concept D (2-3) Intervallic Expansions

Notation 2.44 displays four randomly chosen intervallic (2-3) sets with varying intervallic directions and maintaining the Chromatic Link between each grouping (2) and (3) and the chromatic movement to a resolution tone (R).

Notation 2.31

Audio 2.43 <https://youtu.be/pkK3QyggSJs>

Notation 2.31.i

Audio 2.44 <https://youtu.be/QZhoRAjExKg>

Notation 2.31.ii

Audio 2.45 <https://youtu.be/cgFZ6tHE07o>

Notation 2.31.iii

Audio 2.46 <https://youtu.be/22ih9xPeWqE>

Chapter 3 Conclusions

Concept A, B C and D have revealed new pentatonic design parameters based on practise-led discoveries combining intervallic combinations, rhythmic groupings (3-2) and (2-3), and the pivotal placement of chromatic elements, thus reducing conceptional possibilities for future pentatonic development. Knowing that I am progressing in the right direction with a specifically organised pentatonic design with necessary components such as: intervallic considerations of shape and direction, placement and functionality of chromatic elements, overall aesthetics of sound, however, the design is not yet complete. There needs to be more compacted design strategies and parameters unveiled for consideration which will identify this future ‘sound’ and style. Having explored pentatonic groupings of (3-2) and (2-3), I find that they are almost indistinguishable as individual designs and not enough structural and shape complexity and sound scope. A new sequence of five notes that contains specifically formulated intervallic combinations, change of directions that provide interesting shapes and contours, tonally and harmonically ambiguous. The conceptions for this new methodology will result in a naturally adaptive over many different harmonic backgrounds, capable of simultaneous consonant and dissonant sonorities and an overall sound reflective of my inner vision all in the pursuit of a resolution point and individual sound. New conceptual considerations need to be unveiled and instituted and so with all this new information the search continues.

Chapter 4 Pentatonic Zones

4.1 Pentatonic Zone Design

Music is multi-dimensional: melody, harmony, rhythm, sonic, movement, duration, emotional...so why focus, as I have thus far, on only two of these dimensions: melody and harmony? Melodic and harmonic considerations are only two parts of a whole solution. I have found over the last thirty years that deeper, more innate levels of understanding, with transformational thought and action, occur when new ‘dimensions’ are internally synthesised. Here, the most basic musical element needs to be addressed, and that element is rhythm. I viewed this element as one of my weaknesses. This research was the perfect time to begin a deeper understanding of time, space and rhythm. In 1886 Claude Debussy wrote:

“As to the kind of music I want to make, I would like it to be flexible enough and sufficiently accented to correspond to the lyrical impulses of the spirit and to the capriciousness of dreams.” (Claude Debussy

<https://www.oxfordwesternmusic.com/view/Volume4/actrade-9780195384840-chapter-002.xml>)

The importance of rhythm has become intrinsic with my performances of late, along with the realisation that to transcend to the next levels, new thought and conceptions are required. Under the supervision of Dr Simon Barker, I began working on quintuplet rhythmic groupings, (see 4.1.1, 4.1.2 and 4.1.3) which number compliments the very nature of a pentatonic sequence, each having five elements. A sequence of one pentatonic can be exactly superimposed over a quintuplet rhythm and make for an easier way to assimilate and practise this rhythm without too much thought as to the note choice.

Notation 2.32 Quintuplet



Working in odd times challenges your note choice and strengthens awareness and knowledge of the spatial distance between down-beats of common time, by learning how to play uneven groupings of notes. A phrase of five rhythms against a quarter note feels and plays very differently to eighth notes, or sixteenth notes, or triplets, against quarter notes. Joe Lovano explains rhythmic spatial awareness and feelings in his master class at Berklee College of Music:

To study the polyrhythmic things that are happening, from the quarter note and under – you know...the ‘under-rhythms’, to draw from things that are happening within the bigger beat gives me a lot of ideas, trying to build melodies within the harmonic rhythm [of the tune], but letting the rhythm of the beat and all the different perspectives and points in the beat influence me, drawing from a lot of different places within the rhythm to build my ideas. (Lovano, Joe. Retrieved from 2008 [time-stamp: 2.47 – 3.37] <https://youtu.be/VUdeevt9qQg>)

The practise-led study of quintuplets saw the application of three different rhythmic groupings (grouping refers to the internal organization of rhythmic subdivision):

- (2-1-2)
- (2-2-1)
- (1-2-2)

[All treble clef notations are in Bb Pitch, sounding a whole step below the written pitch. For example: when a (C) is notated it will sound a (Bb)]

[All examples performed by: Sean Coffin - Tenor Saxophone and Pete Drummond – Drums]

4.1.1 Quintuplet Grouping (2-1-2)

This grouping will be presented two different ways:

1. Saxophone playing each partial of the quintuplet
2. Saxophone playing the quintuplet subdivisions (2-1-2)

[All Audio examples: 2.47, 2.48 and 2.49 display the saxophone in the treble clef and the kick drum in the bass clef.]

Notation 2.33.i Quintuplet (2-1-2) - partials

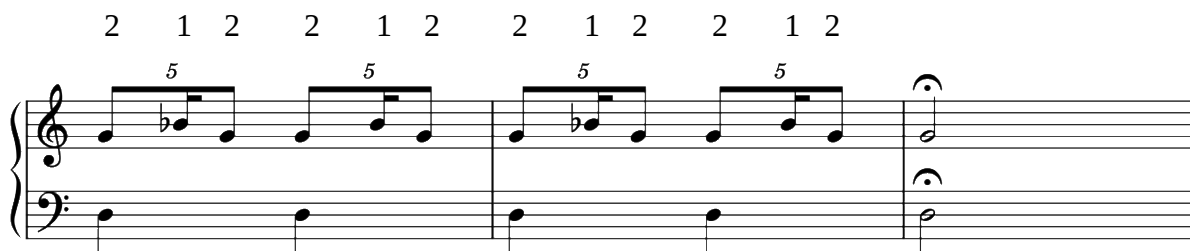
Audio 2.47 Quintuplet (2-1-2) - partials https://youtu.be/RleK2SuG_qY



Concentrate on playing the quintuplet as even as possible, as a 5:1 rhythm.

Notation 2.33.ii Quintuplet (2-1-2) - groupings

Audio 2.48 Quintuplet (2-1-2) - groupings <https://youtu.be/-hya6wr7sA0>



Each grouping to be accented/articulated and held for their full rhythmic values.

2 1 2 is sounded and played like ‘long short long’ or ‘dum di dum’ or ‘doo gah doo’

4.1.2 Quintuplet Grouping (1-2-2)

This grouping will be presented two different ways:

1. Saxophone playing each partial of the quintuplet
2. Saxophone playing the quintuplet subdivisions (1-2-2)

Notation 2.34.i Quintuplet (1-2-2) - partials

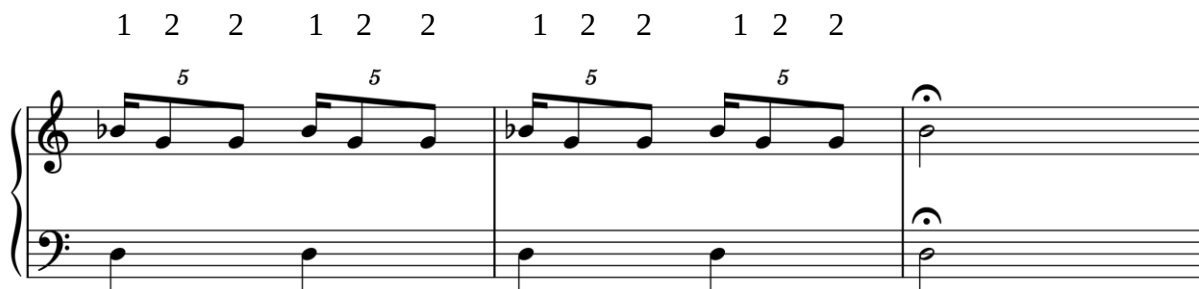
Audio 2.49 Quintuplet (1-2-2) - partials https://youtu.be/1pDz_-C292M



Concentrate on playing the quintuplet as even as possible, as a 5:1 rhythm.

Notation 2.34.ii Quintuplet (1-2-2) - groupings

Audio 2.50 Quintuplet (1-2-2) - groupings <https://youtu.be/-hya6wr7sA0>



Each grouping to be articulated and held for their full rhythmic values.

(122) is sounded and played like ‘short long long’ or ‘dee dum dum’ or ‘gah doo doo’

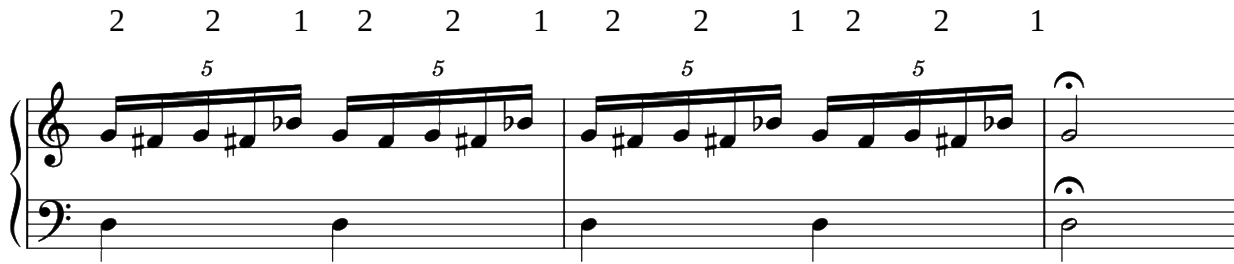
4.1.3 Quintuplet Grouping (2-2-1)

This grouping will be presented two different ways:

1. Saxophone playing each partial of the quintuplet
2. Saxophone playing the quintuplet subdivisions 2-2-1

Notation 2.35.i Quintuplet (2-2-1) - partials

Audio 2.51 Quintuplet (2-2-1) - partials <https://youtu.be/NMGVas3SShs>



Concentrate on playing the quintuplet as even as possible, as a 5:1 rhythm.

Notation 2.35.ii Quintuplet (2-2-1) - groupings

Audio 2.52 Quintuplet (2-2-1) - groupings <https://youtu.be/-hya6wr7sA0>



Each grouping to be accented/articulated and held for their full rhythmic values.

(2-2-1) is sounded and played like ‘long long short’ or ‘dum dum dee’ or ‘doo doo gah’.

After practising quintuplet rhythms for about six months, it occurred to me to incorporate their rhythmic characteristics in other creatively conceptual ways. As a melodic ideology...not rhythmic. The quintuplet groupings, (2-1-2), (1-2-2) and (2-2-1), present more active and complex designs from which to forge melodic templates. These templates will incorporate the melodic characteristics: intervallic qualities, shape, chromatic elements and their placement, overall sound, and a desire for new and challenging territories, which I will term as *Pentatonic Zones*.

4.2 Pentatonic Zone Conceptions

Pentatonic Zones are specifically designed cell-like sequences for use in the creation and organisation of strong melodic lines. Their design influence originates from pentatonic

conventions and Pentatonic Concepts A, B, C and D. They are organized by three rhythmic sub-structures of a quintuplet grouping (see 4.1.1, 4.1.2 and 4.1.3) creating three different structural pentatonic phrases. Due to each of these Zones having different sub-structures, their analysis and functionality will be specific to their design.

Simple, yet complex. Bergonzi comments, the purpose for his improvisational methods is that they are systems to “simplify and organise melodic material” (Bergonzi, 1992: 10). New language, new possibilities, and new musical pathways.

Why refer to them as Pentatonic Zones? I did not want to use the same language and terminology that has been used for traditional pentatonic conventions, established terms such as: tetrachords, four note groupings, skips and steps and modes. I will establish my own identity with a new methodological concept with an appropriately personalized idiolect. The Cambridge Dictionary defines Zone as a noun: ‘an area, especially one that is different from the areas around it because it has different characteristics or is used for different purposes...’ (<https://dictionary.cambridge.org/dictionary/english/zone>). This definition succinctly and simply describe the new pitch-class formation and/or sequencing that Zones present.

The vision for Pentatonic Zones, is that they will have a unique shape and a unique sound. Conventional pentatonic methodology organises five notes in a one-directional linear sequence, whilst creating open landscapes with fourth intervals, skipping techniques and have notes situated above and below the first note, not the tonic, in an exact sequence. I will refer to this as the *Zonal Plane*. The essence of simplicity is paramount to the Pentatonic Zone’s design. Simple, yet complex. Bergonzi comments, the purpose for his improvisational methods is that they are systems to “simplify and organise melodic material” (Bergonzi, 1992: 10). As Nachmanovitch describes, being creative “pulls out some more inclusive shape or progression that gathers an immense amount of complexity into a simple, satisfying notion.” (Nachmanovitch, 1990: 106). Simple and adaptable will be its most valuable resource.

Through practise-led discoveries of Pentatonic Concepts A, B, C and D, it is clear Pentatonic Zone methodology must shift away from tonicisation and tonal hierarchies of conventional pentatonics. This is in order to achieve one of the fundamental goals for this research of providing harmonically ambiguous properties. The purpose of further practise-led pentatonic explorations will be to create a sequence of five tones that decentralise the individual importance of each note through their intervallic and chromatic designs. By removing the

importance any one note has over another negates any presence of a tonic, or one note, that all revolves around. The overall sound and shape of the Pentatonic Zone will be of most concern.

There will be three unique Zone Template designs:

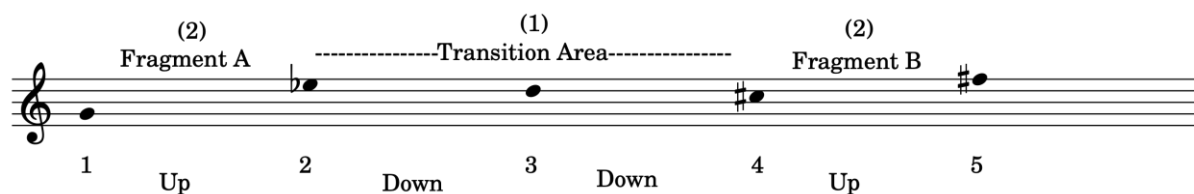
- (2-1-2) (see 4.3)
- (2-2-1) (see 4.4)
- (1-2-2) (see 4.5)

4.3 Pentatonic Zone (2-1-2) Prototype

Pentatonic Zone (2-1-2) is an originally conceived pentatonic sequence of notes and design structure based on melodic transformations of a quintuplet rhythmic grouping (see 4.1.1). The internal design structure of this Zone was focused on combinations of intervallic properties, changes of direction and the influence and location of the chromatic elements. The (2) grouping will reference each intervallic grouping, termed as *Fragment A* and *Fragment B*. The (1) grouping, termed as the *Transition Area*, is the most distinguishable structural characteristic of Zone K and only appears in this Zone design. It is a descending double chromatic bridge linking *Fragments A* and *B* and is comprised of three tones T2, T3 and T4.

Notation 2.36 Pentatonic Zone (2-1-2)

Audio 2.53 <https://youtu.be/yK9UZO2qIUk>



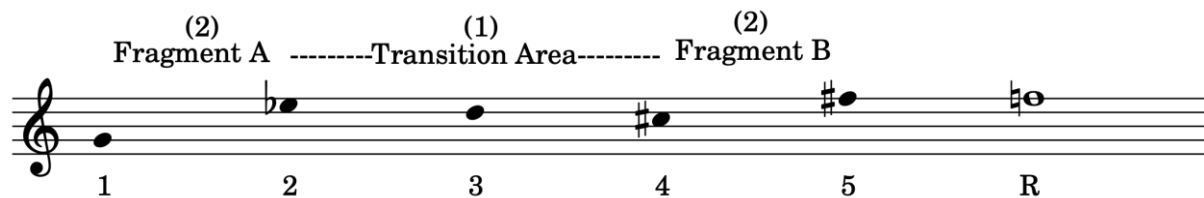
The structural analysis and components of Zone K (2-1-2):

- the number (1) refers to the chromatic *Transition Area* (2 3 4)
- the number (2) refers to the intervallic groupings labelled Fragment A and Fragment B
- R references the chromatic resolution point (in practice-led notations)
- 1 2 3 4 5 represents the sequence of notes for Zone (2-1-2)
- Up/Down describes the shape and contour of each Zone

4.3.1 Pentatonic Zone (2-1-2) Variations

Notation 2.37 Zone (2 -1-2) Variations with descending Transition Area

Audio 2.54 <https://youtu.be/yK9UZO2qIUk>



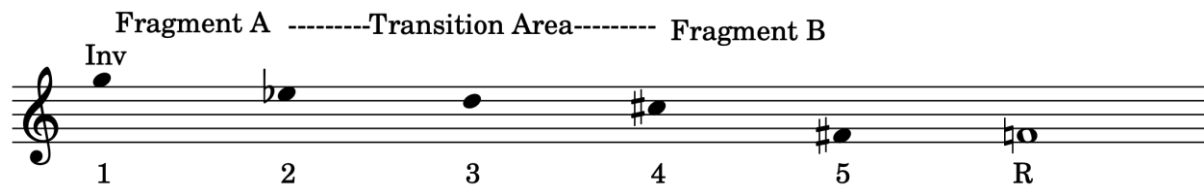
Notation 2.37.i

Audio 2.55 <https://youtu.be/RO1WimKkfJc>



Notation 2.37.ii

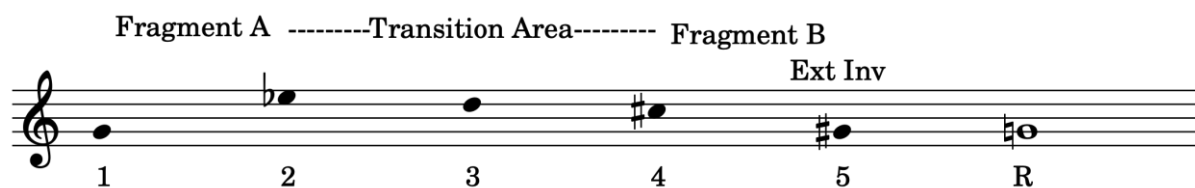
Audio 2.56 <https://youtu.be/-iDL2Ux80Fk>



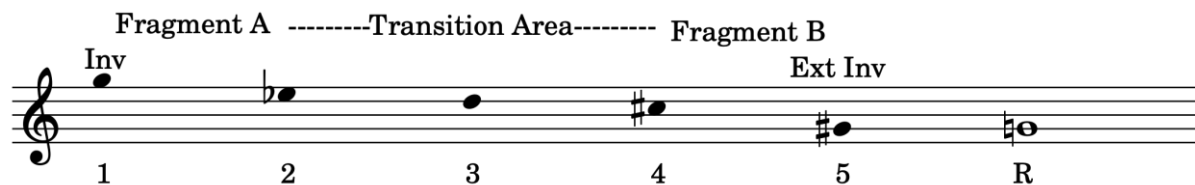
Notation 2.37.iii

Audio 2.57 <https://youtu.be/auQJXBybeSM>

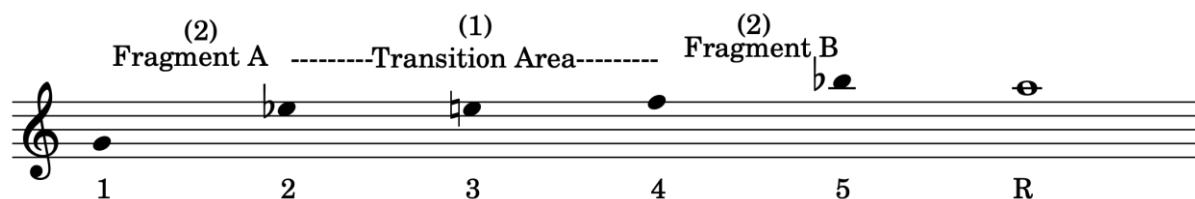
Notation 2.37.iv

Audio 2.58 <https://youtu.be/MxGA4EBMrvc>

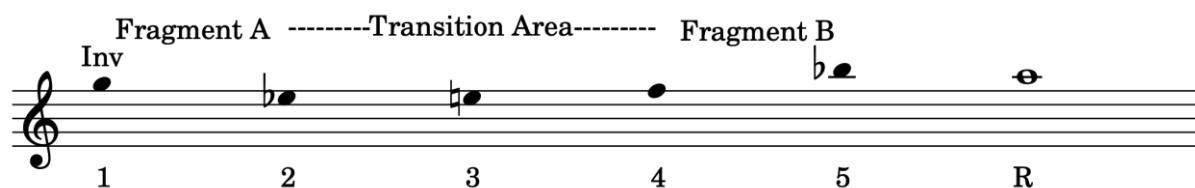
Notation 2.37.v

Audio 2.59 https://youtu.be/BWPf_YukApo

Notation 2.38 Zone (2 -1-2) Variations with ascending Transition Area

Audio 2.60 https://youtu.be/Afi3eD_1YA

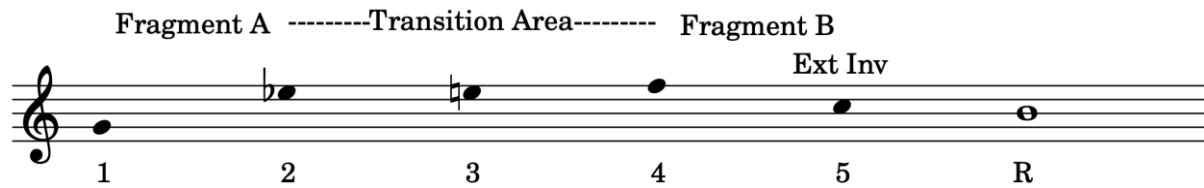
Notation 2.38.i

Audio 2.61 <https://youtu.be/t5vzuGyrCaA>

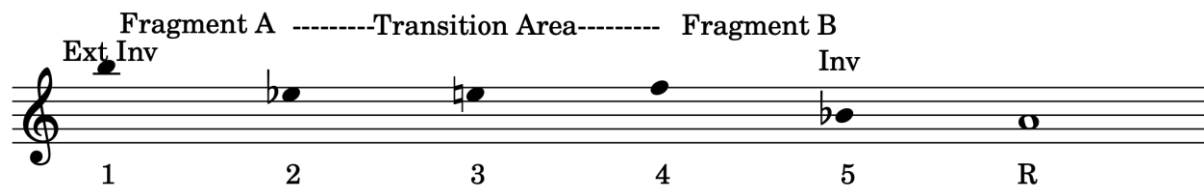
Notation 2.38.ii

Audio 2.62 <https://youtu.be/hELO4VNC8pk>

Notation 2.38.iii

Audio 2.63 <https://youtu.be/CJ7Q90OIEDE>

Notation 2.38.iv

Audio 2.64 <https://youtu.be/LfSiVCPDbOE>

As a result of the extreme variational possibilities, parameters or indicators need to be initiated to limit the choices to begin strengthening the design and characteristics of any Pentatonic Zones:

- The Transition Area will remain as descending
- The Zone will remain in its original notated sequence
- There will be no exact inversion of intervals, as this will alter the purity of the Zone sequence.
- Octave shifting, otherwise known as Inverting or Pivots will be an available variant option for all notes of the Zone

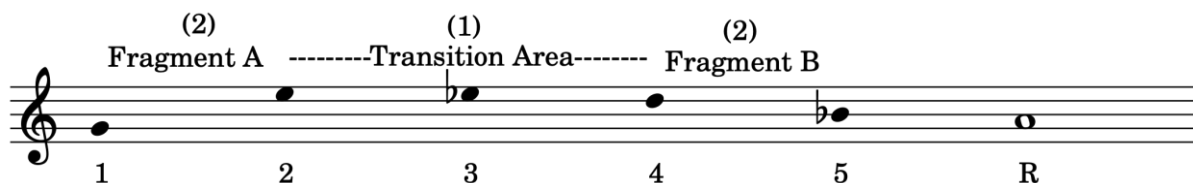
4.3.2 Pentatonic Zone (212) Explorations

These are just some of the many intervallic Pentatonic (212) Zones I have been exploring, using practise-led inquiry the parameters set out in all Notation 2.43 examples.

Audio 2.65 (212) Explorations <https://youtu.be/ydQ65XHYkw4>

[Audio 2.65 include all Notation 2.38 to Notation 2.52]

Notation 2.39 Zone (2 -1-2) all tones above



Notation 2.40 Zone (2 -1-2) all tones above



Notation 2.41 Zone (2 -1-2) all tones above



Notation 2.42 Zone (2 -1-2) above and below



Notation 2.43 Zone (2 -1-2) above and below



Notation 2.44 Zone (2 -1-2) above and below



Notation 2.45 Zone (2 -1-2) below and above



Notation 2.46 Zone (2 -1-2) below and above



Notation 2.47 Zone (2 -1- 2) below and above



Notation 2.48 Zone (2 -1-2) all below



Notation (ix) will reveal another parameter which will be that any Zone will not have tone 5 located a half-step below tone 1, which is referencing the Zonal Plane.

Notation 2.49 Zone (2 -1-2) all below



Notation 2.50 Zone (2 -1-2) all below



These last three examples are all above the Zonal Plane and extend too high, with too much range and they also create harmonically recognised triads, which is not a usable parameter.

Notation 2.51 Zone (2 -1-2) all above



Notation 2.52 Zone (2 -1-2) all above



Notation 2.53 Zone (2 -1-2) all above



4.4 Zone K (2-1-2)

Zone K was selected from the extensive search and practice-led discovery of Concepts A, B, C and D in Chapter 3 and the melodic realisation and re-imagining of the quintuplet sub-divisional groupings (2-1-2) and subsequent Pentatonic Zone (2-1-2) structural groupings throughout (4.3.1 and 4.3.2). Having observed all different Zone K (2-1-2) combinations with every detail and nuance of sound and shape, there was one sequence that I kept playing and

gravitating towards even when I was not consciously working on this research. This sequence, now known as Zone K, will be the first of three selected Zone designs.

Notation 2.54 Zone K

Audio 2.66 <https://youtu.be/ccuY26gBN5w>



Zone K's intervallic content is densely chromatic with the double chromatic Transition Area (see Notation 2.44) bookended by a minor third interval and a major third interval which are termed as Fragment A and Fragment B, respectively. These intervals are ingredients in the formation of harmonic sounds and reasons that Zone K suggest harmonic connections. These intervals do not form a triadic combination, other than a diminished triad which does not suggest tonicization and a formation I shall avoid in the explorations into this Zone's properties. The Transition Area separates the two fragments and the dense chromaticism dilutes any harmonic connection between them confirming the harmonically ambiguous nature of Zone K's overall sound.

As seen in Notation 2.52, the fragments have a chromatic relationship. Fragment A (G and Bb) and Fragment B (G# and E) which contain consonant and dissonant relationships with the notes (E and Bb) but particularly between the notes (G and G#). The smaller interval of Fragment A leads to a more expansive and strength Fragment B's major third interval. The effect of the dense chromaticism of the Transition Area is to transform and mask the intervallic aural perception of Fragment B making it appear a larger interval.

The Zonal Plane of this Zone K has three notes (Bb, A and G#) above the starting note (G) and one note below (E).

The interval relationships for Zone K are:

- minor third (up), half-step (down), half-step (down), major third (down)
- numbering analysis for Zone T is (1 b3 2 b2 6).
- linear numbering analysis for Zone T is (1 b3 3 4 b5)

4.5 Pentatonic Zone (1-2-2) Prototype

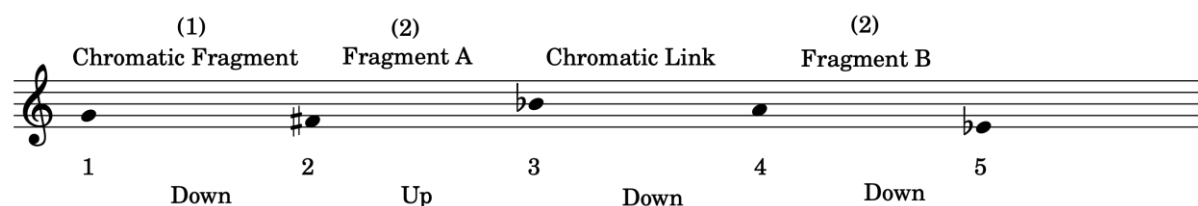
Pentatonic Zone (1-2-2) is an originally conceived pentatonic sequence of notes and design structure based on melodic transformations of a quintuplet rhythmic grouping (see 4.1.2). This design differs from Pentatonic Zone (2-1-2) as the location of Fragments A and B differ. The different internal organisation affects the chromaticism within the cell and there are now two separate chromatic properties: Chromatic Link and *Chromatic Fragment* (1). This new organisational design means that there are different characteristics and functionality for each tone and each Zone’s compositional structure and overall sound.

The design and structural analysis of Zone T (1-2-2)

- the number (1) refers to the *Chromatic Fragment*
- the number (2) refers to the intervallic groupings labelled Fragment A and Fragment B
- Fragment B
- the Chromatic Link is located between Fragment A and Fragment B
- R references the chromatic resolution point (in practice-led notations)
- 1 2 3 4 5 represent the sequence of notes for Zone (1-2-2)
- Up/Down describe the shape and contour of each Zone

Notation 2.55 Pentatonic Zone (1-2-2) Prototype

Audio 2.67 <https://youtu.be/Z2H0XI2HIh4>



4.5.1 Pentatonic Zone (1-2-2) Explorations

Audio 2.68 (1-2-2) Explorations <https://youtu.be/-auVk4BmsHs>

[Audio 2.68 include all Notation 2.55 to Notation 2.61]

Notation 2.56 Pentatonic Zones (1-2-2) Explorations

Chr Fragment Fragment A Chr Link Fragment B

1 2 3 4 5 R

Notation 2.57

Chr Fragment Fragment A Chr Link Fragment B

1 2 3 4 5 R

Notation 2.58

Chr Fragment Fragment A Chr Link Fragment B

1 2 3 4 5 R

Notation 2.59

Chr Fragment Fragment A Chr Link Fragment B

1 2 3 4 5 R

Notation 2.60

Chr Fragment Fragment A Chr Link Fragment B

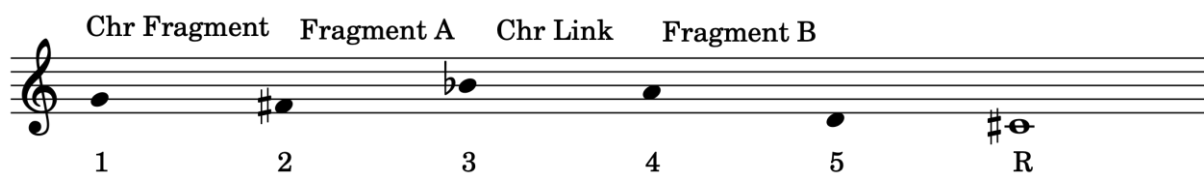
1 2 3 4 5 R

Notation 2.61

Chr Fragment Fragment A Chr Link Fragment B

1 2 3 4 5 R

Notation 2.62

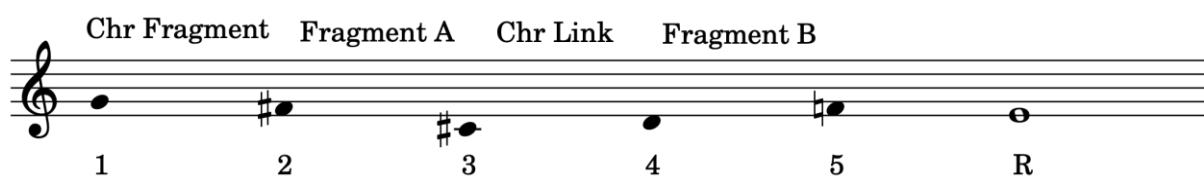


4.6 Zone T (1-2-2)

Zone T was selected from the extensive search and practice-led discovery of a Pentatonic Zone (1-2-2) is a pentatonic design structure based on melodic transformations of a quintuplet rhythmic grouping. Zone T was selected from the extensive search and practice-led discovery of many (1-2-2) melodic combinations, (see Audio 2.69) observing every detail and nuance of sound and shape. There was one sequence, now Zone T, that I kept playing and gravitating towards even when I was not consciously working on this research. A natural conclusion and discovery is always the most intuitive and honest way of developing an idea and the fact that it had the same total range (tritone) as Zone K, which could only be pre-destined. This also provides a design model capable of analytically comparative deductions of the Zonal Plane, intervallic combinations, shapes and sound.

Notation 2.63 Zone T

Audio 2.69 https://youtu.be/51d_z9VyouY



The Zonal Plane of Zone presents all notes below the starting note (G) as shown in Notation 2.47. This is a very different design and shape from Zone K and the final note of the Zone (F) is a tone below (G) which has an unresolved dark sonority. This Zone wants to keep moving and find a resolution point due to the final note (F) which in relation to (G) is the minor seventh or in the number analysis (b7).

The interval relationships for Zone T are:

- half-step (down), perfect fourth (down), half-step (up) and minor third (up).
- numbering analysis for Zone T is (1 7 #4 5 b7).
- linear numbering analysis for Zone T is (1 b2 3 4 b5).

4.7 Pentatonic Zone (2-2-1) Prototype

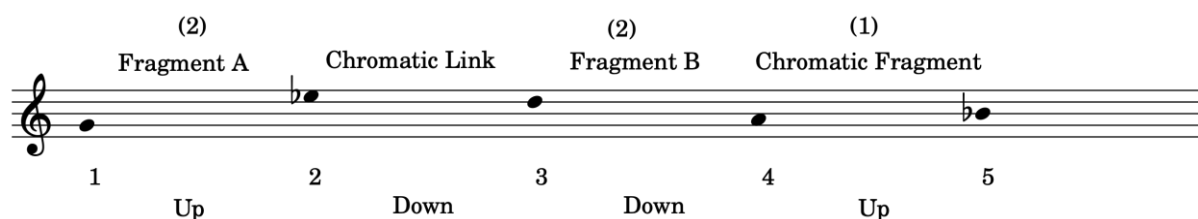
The design for Pentatonic Zone (2-2-1) is a retrograde design of Pentatonic Zone (1-2-2). , Whilst similar in their design template, the reverse structure of Pentatonic Zone's (1-2-2), note sequence, function of each tone, fragment, and the location of both chromatic elements will be different. The design for Pentatonic Zone (2-2-1), has two fragments a Chromatic Link and a Chromatic Fragment (1), but its organization places them in different areas of the Zone. The structural design means that there are new characteristics and functionality for each tone and sub-structure.

The design and structural analysis of Zone T (2-2-1)

- the number (1) refers to the Chromatic Fragment
- the number (2) refers to the intervallic groupings labelled Fragment A and Fragment B
- the Chromatic Link is located between Fragment A and Fragment B
- references the chromatic resolution point (in practice-led notations)
- 1 2 3 4 5 represent the sequence of notes for Zone (1-2-2)
- Up/Down describe the shape and contour of each Zone

Notation 2.64 Pentatonic Zone (2-2-1) Prototype

Audio 2.70 <https://youtu.be/bomEISSD6cI>

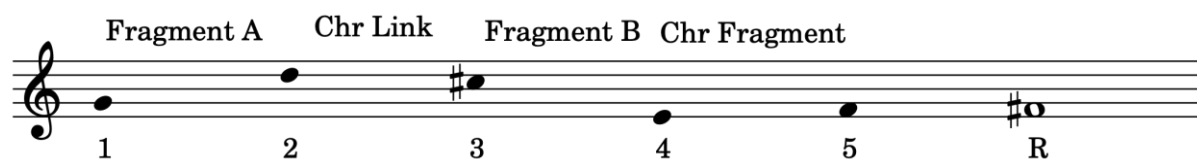


4.7.1 Pentatonic Zone (2-2-1) Explorations

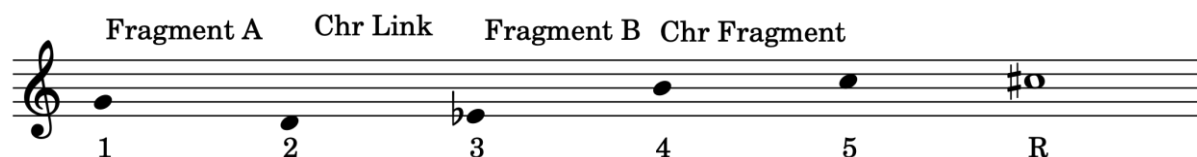
Audio 2.71 (2-2-1) Explorations <https://youtu.be/YazMhEHfPJk>

[Audio 2.71 include all Notation 2.64 to Notation 2.69]

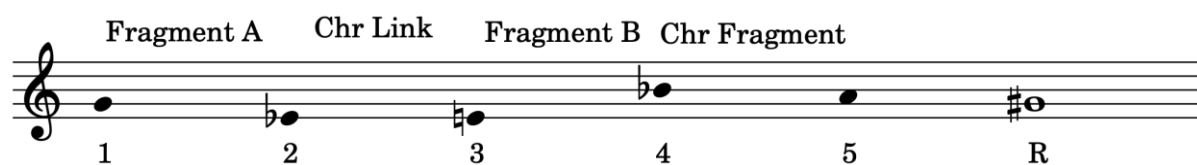
Notation 2.65



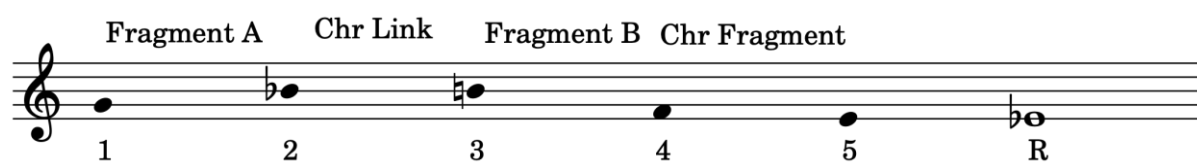
Notation 2.66



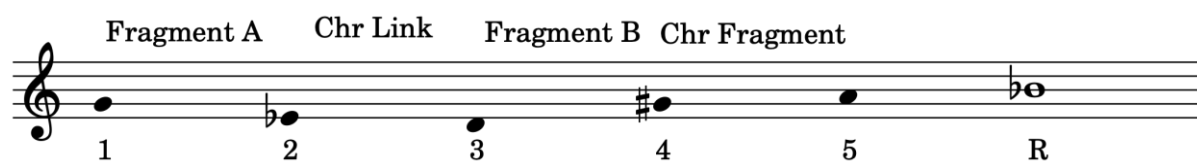
Notation 2.67



Notation 2.68

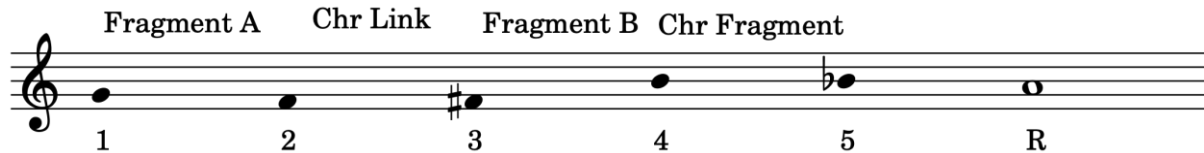


Notation 2.69



Notation 2.70

The total range of this Pentatonic Zone is same as Zone K and T. There are two notes below and above the Zonal Plane which is unique and when analysed from the note (G) it contains the major and minor third, but the chromaticism at the start is too dense.

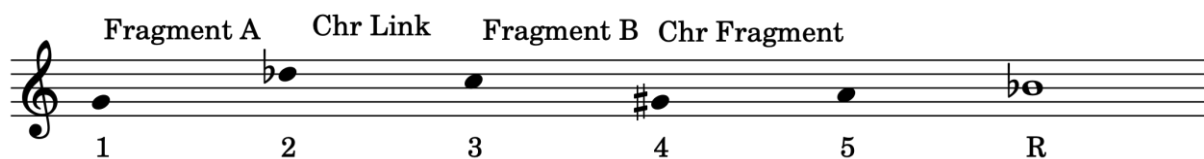


4.8 Zone X (2-2-1)

Zone X was the most difficult to realise and discover. There were a lot of precedents and previous design characteristics, intervallic content and shape aesthetics already decided upon with the creation of Zone K and Zone T which limited the choices for Zone X. This Zone had to be different and one of my concerns was the placement of the Chromatic Fragment, the (1) structural grouping and it not being a double chromatic segment, particularly one the chromatically ascending or descending voice-leading to a resolution point was enacted. After working through many different combinations of (2-2-1) Zone combinations, some have been included here (see Notation 2.71), I decided that the Chromatic Fragment (1) needed to move in an ascending direction providing a different shape and last note of a Zone. Zone X also had to have the same total range as Zone K and Zone T for purposes of comparison, the clustered design and harmonically ambiguous sound characteristics, as well as narrowing down of the parameters of possibilities.

Notation 2.71 Zone X

Audio 2.72 <https://youtu.be/9bLYfGy6Wy4>



The other concerns were the decisions about the combination of notes to use within the range of a tritone. To completely understand these properties, I re-phrased Zone K Zone T into their linear range from lower note to highest note within the total range and then analysed the notes using a numbering system where the lowest note is 1:

- Zone K (1 b3 3 4 b5)
- Zone T (1 b2 3 4 b5)

Another decision factor for design consideration was the need for a different combination of notes and because of the total range of a tritone (1 b2 2 b3 3 4 b5) there were limited choices. I initially found it challenging to find a sequence of notes that was different in design to Zone K which crossed the Zonal Plane and Zone T where all the notes are below the Zonal Plane. Zone X's design and note sequence selection even though there were limited choices it also provided me with clarity for its creation.

In contrasting the designs of Zone K and Zone T, I initially tried to start below the Zonal Plane and end above the sequence of notes became too similar to the other Zones and decided upon placing all notes above the Zonal Plane. For the choice of notes, I referred to the numbering system of Zones K and T and found that the number 2 was not part of a Zone sequence. Working the 2 into the design became limiting because of the placements of the intervallic design of the (221) sequence and in particular the Chromatic Fragment (1), previously mentioned. The absence of both tones b3 and 3 certifies that Zone X is different from Zone K and T and Fragment A is unique with an ascending tritone interval.

Zone X has the unique intervallic numbering sequence of (1 b5 4 b2 2), where (1) is the starting note (G) and when re-organised in a linear way for comparison to Zone K and T. The interval relationships for Zone X are:

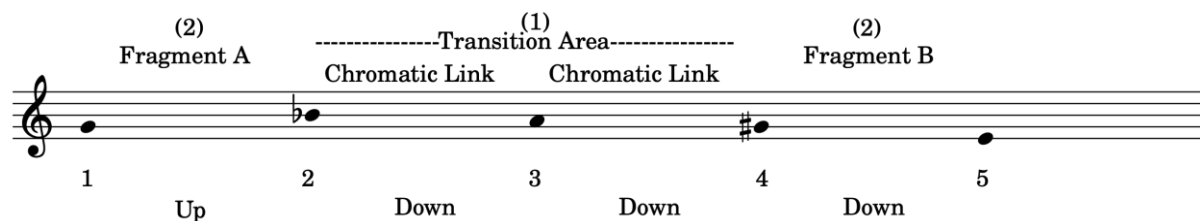
- tritone (up), half-step (down), major third (down) and half-step (up).
- numbering analysis for Zone X is (1 b5 4 b2 2).
- linear numbering analysis for Zone X is (1 b2 2 4 b5)

Part 2 Conclusions

Parts 1 and 2 is a chronological documentation of my research and process of the transformation of conventional and non-conventional pentatonic shapes and sounds for use in improvisation practise. Haimo says that Schoenberg's twelve-tone system was not an overnight accomplishment but a "gradual process of trial and error, correction and refinement." (Haimo, 199: 7). Bakhshi, Desai and Freeman comment that through basic research one can achieve "explicit and codified contributions to knowledge for its own sake... – that is, innovation." (Bakhshi/Desai/Freeman, 2009: 6) and my process thus far bares reflection to these observations. This is the beginning of a new improvisational concept. The practise-led discovery, creation, design, number analysis, the inclusion of intrinsic chromatic elements, compiling and distilling of intervallic combinations, can now be used to inform this research towards a methodological process for practise and performance; utilising the ultimate finalization of three innovative pentatonic shapes of interest and resource: Zone K, Zone T and Zone X.

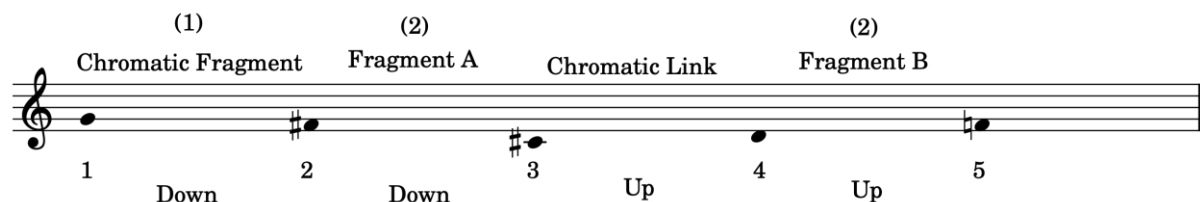
Notation 2.72 Zone K

Audio 2.73 <https://youtu.be/6j8sYUxXpHg>



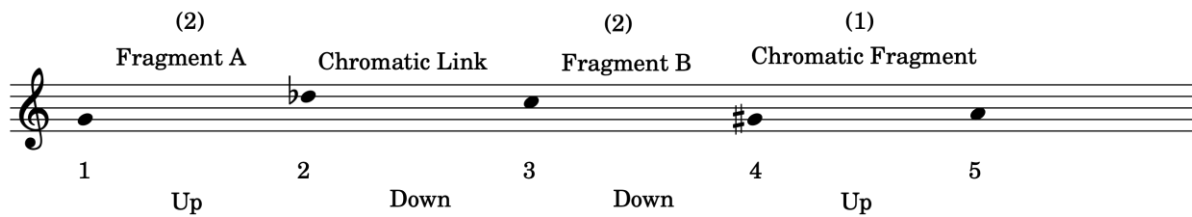
Notation 2.73 Zone T

Audio 2.74 <https://youtu.be/FUhmVkBZhjY>



Notation 2.74 Zone X

Audio 2.75 <https://youtu.be/uobKRR29WRE>

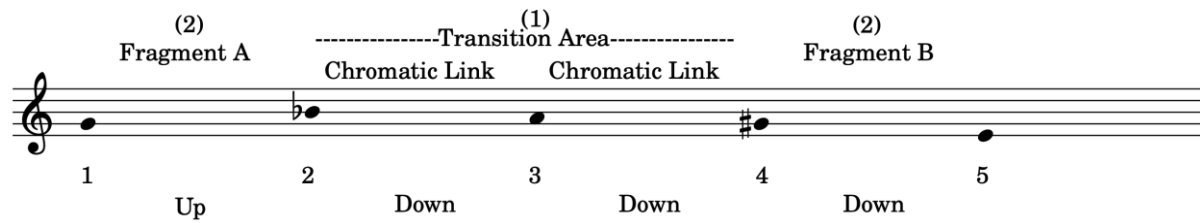


The origins of a creative discovery have revealed itself. Zone K, Zone T *and* Zone X represent a unique, original design of shape and sound. There is potential for harmonic ambiguity and adaptability giving rise to the potential of establishing a unique musical personality. These three Zones can now be transformed into improvisational practices and techniques to unveil their hidden resources to create a new, sympathetic language and improvisational pathways for further research.

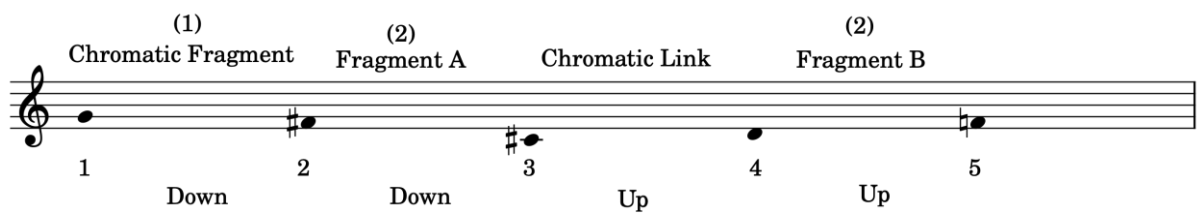
Part 3: Zones

Part 3: Zones focuses on the broader conceptual application of techniques and the reorganisation of Zone melodic pitches for practise in improvisation. The process and creation of Zones is the most important discovery, and now the core element, of this research. The research design for the conceptual transformation of Zones in Chapter 5 will be adapted through practise-led conventional improvisational practices. Chapter 6 will then move from practise to performance through Zone improvisation demonstrations and analysis of the melodic ramifications and intent.

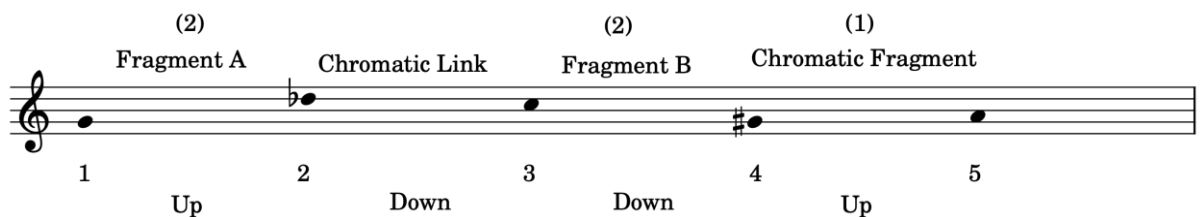
Notation 3.1 Zone K

Audio 3.1 <https://youtu.be/6j8sYUxXpHg>

Notation 3.2 Zone T

Audio 3.2 <https://youtu.be/FUhmVkBZhjY>

Notation 3.3 Zone X

Audio 3.3 <https://youtu.be/uobKRR29WRE>

Chapter 5: Zone Transformations

Schoenberg confirms the more one can modify a conceptual idea “in which variation produce an even stronger effect without endangering the memorability of the model.” (Schoenberg, 1954: 134) the properties and characteristics of Zones can remain present and recognisable regardless of its shape and melodic adaptation. The adapted conventional practices that I will apply to Zones for the assimilation and synthesis of improvisation practise techniques will be:

- Modes (see 5.1)
- Linear Modes (see 5.2)

- Harmonic Considerations (see 5.3)
- Five-note Shapes (see 5.4)
- Poly-Zonal Cycles (see 5.5)
- Four-note Shapes (see 5.6)
- Three-note Shapes (see 5.7)

5.1 Zone Modes

Mark Levine states “Like any other scale, the pentatonic scale has modes. These modes originate from the different notes that you can use as the starting point for the scale” (Levine, 1995: 195) and sequenced in their original order of notes, and Oliver Nelson describes modes as “a complete circulation of a (major) scale begun and completed on any one of its tones” (Nelson, 1966: 41). Here *modes* are used as conventional strategies of re-organising, reimagining, and synthesizing of the three *Zones* created in Part 2. The advantages for this re-organisation is the knowledge and accessibility gained from practising *Zones* off of different starting notes in all different registers and absorbing new perspectives from the focus of five notes.

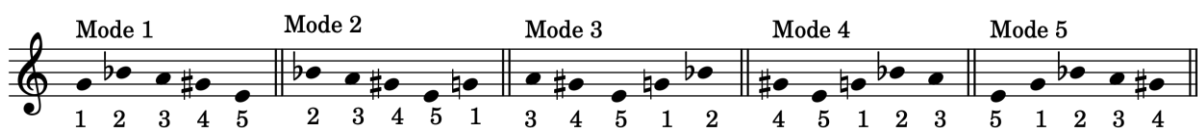
5.1.1 Zone K Modes

Notation 3.4 Zone K



Notation 3.5 Zone K Modes

Audio 3.4 <https://youtu.be/0Mwjk-2USbc>



Notation 3.6 Zone K Modes - Skips and Steps

Audio 3.5 <https://youtu.be/XPgo6JgWVyA>

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note.



Notation 3.7 Zone K Modes - Skips and Steps with Pivots

Audio 3.6 <https://youtu.be/dY5YJ8-yFGg>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone through Pivot notes. Pivot notes are when a note is notated and played up the octave increasing the total range of the Zone and allowing for the correction of restricted range issues of each instrument. This technique was previously explored in Chapter 3 and termed Inversions or Inverted intervals.



5.1.2 Zone T Modes

Notation 3.8 Zone T



Notation 3.9 Zone T Modes

Audio 3.7 <https://youtu.be/vQRZr3LUFOI>

Notation 3.10 Zone T Modes - Skips and Steps

Audio 3.8 <https://youtu.be/DyCu4dXJcEE>

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note, similar in concept to the skip/step technique of Bergonzi (see 1.1.3)



Notation 3.11 Zone T Modes - Skips and Steps with Pivots

Audio 3.9 <https://youtu.be/au7yry1HN6Y>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone through Pivot notes.



5.1.3 Zone X Modes

Notation 3.12 Zone X



Notation 3.13 Zone X Modes

Audio 3.10 <https://youtu.be/Vqn9nHIqSyw>

Notation 3.14 Zone X Modes - Skips and Steps

Audio 3.11 https://youtu.be/h1zSmSD_3E

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note.



Notation 3.15 Zone X Modes - Skips and Steps with Pivots

Audio 3.12 <https://youtu.be/6qiqq7Bx47E>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone through Pivot notes.



5.2 Zone Linear Modes

The Zonal Plane is a definition I termed for Zone methodology which highlights the shape of a Zone seen through the perspective of its first note. All three Zones, in different combinations, have notes located above and below the first note, a design that is different from conventional scales. As a result, each Zone has varied shapes and contours and are not sequenced in a linear way or moving in the same direction, similar to the horizontal way that scales and pentatonic

scales are presented. *Linear Modes* is a reorganisation of the Zone's sequence of notes in a linear format within the smallest total range, which for all three is a tritone. I have been using the note (G), arbitrarily, as each Zone's referential starting note, so when each Zone is prepared in their linear format and not starting on (G), then that Zone has notes below the Zonal Plane. The numbering system for Linear modes will have the number (1) for the lowest/starting note or (b5) as the highest in total range.

5.2.1 Zone K Linear Modes

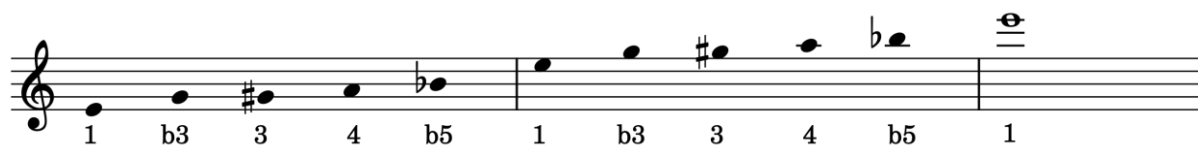
Zone K will have a different sequence of notes in its linear format because its starting note is not the lowest note (in range) of the Zone. Zone K's lowest note is E (see Notation 3.16) and highest note, within the total range of a tritone is Bb. Therefore, in a linear format Zone K will have E as its starting note (1) and each note will be analysed using the numbering system of intervallic distances from the number (1) and (Bb) will be (b5).

Zone K's linear format is: (1 b3 3 4 b5)

Notation 3.16 Zone K Linear Mode

Audio 3.13 <https://youtu.be/VEE2zEGr380>

Zone K's linear format is presented in two octaves.



Notation 3.17 Zone K Linear Modes

Audio 3.14 <https://youtu.be/vjGwqSi-6qI>

Applying the technique of modes to Zone X in this format provides new starting and resolution points and new perspectives of technical awareness and sound. As each mode starts on a different note the numbering analysis remains the same as in Mode 1.



Notation 3.18 Zone K Linear Modes - Skips and Steps

Audio 3.15 <https://youtu.be/p0c8RE6kr70>

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note.



Notation 3.19 Zone K Linear Modes - Skips and Steps with Pivots

Audio 3.16 <https://youtu.be/FfIIr0z18GE>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone through Pivot notes. Pivot notes are when a note is notated and played up the octave increasing the total range of the Zone and allowing for the correction of restricted range issues of each instrument. This technique was previously explored in Chapter 3 and termed Inversions or Inverted intervals.



5.2.2 Zone T Linear Modes

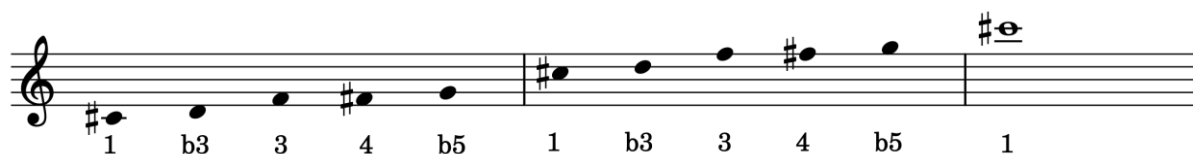
Zone T will have a different sequence of notes in its linear format because its starting note is the highest note in its range. Zone T's lowest note is C# (see Notation 3.20) and highest note, within the total range of a tritone is G. Therefore, in a Linear format Zone T will have C# as its starting note (1) and each note will be analysed using the numbering system of intervallic distances from the number 1 and Bb will be (b5).

Zone T's linear format is: (1 b2 3 4 b5)

Notation 3.20 Zone T Linear Modes

Audio 3.17 https://youtu.be/n_B275lERX8

Zone T's linear format is presented in two octaves.



Notation 3.21 Zone T Linear Modes

Audio 3.18 <https://youtu.be/qhyRO7ahukc>

Applying the technique of modes to Zone X in this format provides new starting a resolution points and new perspectives of technical awareness and sound. As each mode starts on a different note the numbering analysis remains the same as in Mode 1.



Notation 3.22 Zone T Linear Modes - Skips and Steps

Audio 3.19 <https://youtu.be/WQ3o4F09XYk>

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note.



Notation 3.23 Zone T Linear Modes - Skips and Steps with Pivots

Audio 3.20 <https://youtu.be/jAxhkt5uD78>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone through Pivot notes.



5.2.3 Zone X Linear Modes

Zone X will have a different sequence of notes, in comparison to Zone K and Zone T in its linear format because its starting note is the lowest note in its range. Zone X's lowest note is (G), (see Notation 3.24), and highest note within the total range of a tritone is (Db).

Therefore, in a Linear format Zone T will have (G) as its starting note (1) and each note will be analysed using the numbering system of intervallic distances from the number (1) and (Db) will be (b5).

Zone X's linear format is: (1 b2 2 4 b5)

Notation 3.24 Zone X Linear Mode

Audio 3.21 <https://youtu.be/-LYANwnObAQ>

Zone X's linear format is presented in two octaves.



Notation 3.25 Zone X Linear Modes

Audio 3.22 <https://youtu.be/qhyRO7ahukc>

Applying the technique of modes to Zone X in this format provides new starting and resolution points and new perspectives of technical awareness and sound. As each mode starts on a different note the numbering analysis remains the same as in Mode 1.



Notation 3.26 Zone X Linear Modes - Skips and Steps

Audio 3.23 <https://youtu.be/WQ3o4F09XYk>

The technique of playing a mode in thirds adds another common way to reorganise the notes starting off each note.



Notation 3.27 Zone X Linear Modes - Skips and Steps with Pivots

Audio 3.24 <https://youtu.be/pKh0HrTfsq0>

This technique is an adapted variant for Zones that explores the possible wider intervallic relationships within each Zone X through Pivot notes.



5.3 Harmonic Considerations

Zone harmonic considerations relate to their inside or consonant availabilities for the four commonly used chords in music: Major7, Minor7, Dominant7 and Minor7b5. A Zone's structural design, intervallic qualities and un-conventional shapes present an overall ambiguous sound and therefore many possibilities for superimposition of chord changes.

The number of chords that Zone K, T or X will be compatible is certainly a subjective consideration and tolerance of consonance versus dissonance. The harmonic considerations of minor pentatonic scales (see Tables 3.1, 3.2 and 3.3) were mostly all common tones, meaning the compatibility is exact. Zones have less of a conventional structure and intervallic nature so my process was to find at least four common tones and one common tone was more than an acceptable dissonance (see Bb Maj7 comparison to Zone K in Table 3.1). Sometimes there are three common tones and two non-common tones (see F#-7 comparison to Zone K in Table 3.1). which is the amount of dissonance I would accept, otherwise there is an imbalance of dissonance versus consonance and sounding out the chord. Other conceptual ideas for these harmonic considerations for improvisational situations:

- How many accidentals (dissonance opposing diatonicism)
- Focus on different degrees of the Zone
- Similar chord qualities adjacent to one another with the Cycle of Fifths
- Notes that are located where the structural grouping of each Zone: (212) (122) (221)
- Chord tones
- Intervals of a third because they suggest vertical sound
- Potential starting and resolution points – duration of notes and degrees of articulation
- Rhythmic creativity can mask the dissonant notes

The numbering analysis in Tables 3.1, 3.2 and 3.3 represent the comparison of notes for each of the three Zones in relation to the chord symbol listed. For instance, the (G) of Zone K will be the (6) of Bb Maj7, 7 of Ab Maj7 and 5th of C Maj7 as seen in Table 3.2.

5.3.1 Zone K Harmonic Considerations

Harmonic options which Zone K (starting on then note G) cand be superimposed.

Notation 3.28 Zone K Reference Control



Table 3.1 Zone K Harmonic Considerations

Bb Maj7	6	1	7	b7	#4
Ab Maj7	7	9	b2	1	#5
E Maj7	b3	b5	4	3	1
A Maj7	b7	b2	1	7	5
F Maj7	9	4	3	b3	7
Eb Maj7	3	b7	6	4	b2
C Maj7	5	b7	6	#5	3
D Maj7	4	#5	5	b5	9
G7	1	b3	9	b9	6
E7	#9	b5	4	3	1
Bb7	6	1	7	b7	b5
C7	5	b7	5	#5	3
Eb7	3	5	b5	4	b9
F#7	b9	3	#9	9	b7
A7	b7	b9	1	7	5
D-7	4	b6	5	b5	9
A-7	b7	b2	1	7	5
E-7	b3	b5	4	3	1
B-7	b6	7	b7	6	4
C#-7	b5	6	b6	5	b3
F#-7	b2	3	b3	9	b7
G-7b5	1	b3	9	b9	b6
E-7b5	b3	b5	4	3	1

5.3.2 Zone T Harmonic Considerations

Notation 3.29 Zone T Reference Control



Table 3.2 Zone T Harmonic Considerations

G Maj7	1	7	#4	5	b7
F Maj7	9	b9	#5	6	1
D Maj7	4	3	7	1	b3
F# Maj7	b9	1	5	#5	7
B Maj7	#5	5	9	b3	#4
Bb Maj7	6	#5	b3	3	5
G7	1	7	b5	5	b7
F#7	b9	1	5	#5	7
C#7	b5	4	1	b9	3
F7	9	b9	#5	6	1
D7	4	3	7	1	#9
Eb7	3	#9	b7	7	9
Bb7	6	#5	#9	3	5
G-7	1	7	b5	5	b7
D-7	4	3	7	3	b3
F#-7	b2	1	5	b6	b7
B-7	b6	7	b7	6	4
C#-7	b5	6	b6	5	b3
E-7	b2	3	b3	9	b7
G-7b5	1	7	b5	5	b7
B-7b5	b6	5	9	b3	b5
C#-7b5	b5	4	1	b2	3
E-7b5	b3	9	6	b7	b2

5.3.3 Zone X Harmonic Considerations

Notation 3.30 Zone X Reference Control



Table 3.3 Zone X Harmonic Considerations

Ab Maj7	7	4	3	1	b2
A Maj7	b7	3	b3	7	1
Db Maj7	b5	1	7	5	#5
F Maj7	9	#5	5	b3	3
G Maj7	1	#11	4	b2	9
G7	1	b5	4	b9	9
Ab7	7	4	3	1	b9
A7	b7	3	b3	7	1
C7	5	b9	1	#5	6
Eb7	3	b7	6	4	b5
F7	9	#5	5	#9	7
Bb7	6	#9	9	b7	7
Bb-7	6	b3	9	b7	7
D-7	4	7	b7	b5	5
F#-7	b2	5	b5	9	b3
A-7	b7	3	b3	7	1
G-7	1	b5	4	b2	9
C#-7	b5	1	7	5	b6
G-7b5	1	b5	4	b2	9
F#-7b5	b2	5	b5	9	b3
A-7b5	b7	3	b3	b7	1
C#-7b5	b5	1	7	5	b6

Despite each Zone's less recognisable structural and harmonic conventions, their range of a tritone, dense intervallic shapes, chromatic elements and harmonically ambiguous qualities are more harmonically compatible with the four chord types: Major 7, Minor 7 Dominant 7 and Minor 7b5 in comparison to the pentatonic and alternate pentatonic scale results (see 2.1)

5.4 Zone Five-note Shapes

Zone Five-note Shapes were explored and these were chosen for this section of the research purely within a practice-led forum of subjective resultant purpose. Decisions of inclusion were based upon how they ‘feel’ to play, their readiness and accessibility, their intent, shape and contour, intervallic combinations and the location and function of the chromaticism, but most importantly for how they sound. Zone Five-note Shapes are a way to re-organise each Zone and a creative way to re-imagine all five notes of each Zone in a new sequence.

There is no technique or method for selecting the shapes in Notation 3.50 unlike Bergonzi’s methods of five note permutations of pentatonics. Zone K, Zone T and Zone X were ultimately selected for their overall differences in sound and now re-arranging their order provides a new language of Zonal sounds and possibilities.

The creation of sounds is completely dependent upon their sequence. The re-arranged Five-note Shapes provide new context and function as there will be different locations and therefore functions of their shapes, intervallic combinations, and its overall sound. The numbering system beneath each shape illustrates the re-arrangement of the notes within the Zone Five-note Shapes which maintain the same numbering as Zone K, Zone T or Zone X.

Notation 3.31 Zone Five-note Shapes

Each audio example below, firstly reveals the original Zone (K, T or X) and then their respective three-note shape permutations in order as they appear in Notation 3.50.

Audio 3.25 *Zone K Five-note Shapes* https://youtu.be/b_g73H8ke5E

Audio 3.26 *Zone T Five-note Shapes* https://youtu.be/uaGVi_acG3E

Audio 3.27 *Zone X Five-note Shapes* <https://youtu.be/NnyPivanvM4>

[All treble clef notations are in Bb Pitch, sounding a whole step below the written pitch. For example: when a (C) is notated it will sound a (Bb)]

The image displays six rows of musical notation, each representing a different 'Five-note Shape'. Each row consists of three measures, labeled K, T, and X. The notes are written on a treble clef staff with a key signature of one flat (B-flat). The notes in each measure are numbered 1 through 5, indicating a specific sequence or permutation of the five notes in the shape. The shapes are defined by the following note sequences (from top to bottom):

- Shape 1: B-flat, A, G, F, E
- Shape 2: A, G, F, E, D
- Shape 3: G, F, E, D, C
- Shape 4: F, E, D, C, B-flat
- Shape 5: E, D, C, B-flat, A
- Shape 6: D, C, B-flat, A, G

The numbering system indicates the sequence of notes in each measure. For example, in the first row, the K measure sequence is 1 (B-flat), 2 (A), 3 (G), 4 (F), 5 (E). The T measure sequence is 1 (A), 2 (G), 3 (F), 4 (E), 5 (D). The X measure sequence is 1 (B-flat), 2 (A), 3 (G), 4 (F), 5 (E).

Five-note Shapes reconfigure the sequence of notes whilst maintaining all design and sound elements for each Zone. In doing so, each Zone is gradually being understood from many different contexts and perspectives. The numbering system in Notation 3.31 exhibits such thought, along with comprehensive variations of Zone permutations starting on all the different notes within a Zone. The outcomes for these Five-note Shapes are for invention, melodic interest and a creatively sonic approach to presenting Zones in their pentatonics or Zone variant sequences. In doing so, the integrity of the original Zone remains intact, however, the harmonic implications and naturally rhythmic machinations.

5.5 Poly-Zonal Cycles

Having reconfigured Zone sequences and considered their adaptability over harmonic situations questions arose regarding their extended movement such as: “How do I move Zones consecutively in the smoothest way possible”? Connective movement should not only connect

Zone sequences but also other improvisational melodic language, both vertical (chordal) and horizontal (stepwise) motion.

Poly-Zonal Cycles are the transpositional and/or symmetrical intervallic sequencing of consecutive Zones via chromatic approach. The term Poly-Zonal Cycles is influenced by my exploration (see Chapter 2) of what Jerry Bergonzi terms as Poly-Pentatonics (Bergonzi, 1994). Poly-Pentatonics and Poly-Zonal Cycles function by identifying how many common and non-common notes they share with Zones and their cyclic transpositions. These realisations help determine the comparative results of consonance and/or dissonance between Zones.

Unlike Poly-Pentatonics which move through all transposition cycles (see Table 2.1), Poly-Zonal Cycles are an adapted application for their unique design properties. Their consonant or dissonant ramifications are predicated upon their Zonal Plane (see Table 3.4), and the reason they are selected as parameters for the three Zone designs was that the Zonal Plane cannot be a half-step. Meaning, if the starting note of a Zone is (G) then the final note cannot be an (F#) or (Ab), as there will be only one Poly-Zonal Cycle. The smallest interval Zone K, Zone T and Zone X's Zonal Plane is a major second and therefore both an ascending and descending Chromatic Link can be employed. Ludmila Ulehla describes this as a 'melodic alteration' where... "Sequential extensions retain a motive's intervallic shape but transplant the entire unit to another pitch." (Ulehla, 1994: 23). This creates a smoothness, aiding the ambiguous nature of the Zone and providing new melodic avenues of exploration, new starting places (areas of the saxophone), along with an organized way of practicing, and a unique way of presenting melodic ideas.

Table 3.4 Poly-Zonal Spectrum of Tonality Table

The following table establishes the degrees of consonance and dissonance for Zonal explorations. The degrees are best displayed and understood from a theoretical and an aural perspective when Zones are presented in a consecutive format. The way I have chosen to present this is through what I term as Poly-Zonal Cycles. These Cycles are consecutive *Five-note Shape* Zones which are chromatically linked in an ascending or descending manner and presented in 5.5.1, 5.5.2 and 5.5.3. Presenting them in their original sequence allows the listener, already somewhat familiar with the Zone sounds, to hear how these sounds adjust their autonomous tonality over the same harmonic background.

Cycle of Fifths (degrees of consonance and dissonance)	Zone K	Zone T	Zone X
First Cycle (Perfect Fourths)	1 common 4 non-common	2 common 3 non-common	2 common 3 non-common
Second Cycle (Major Seconds)	2 common 3 non-common	1 common 4 non-common	1 common 4 non-common
Third Cycle (Minor Thirds)	2 common 3 non-common	1 common 4 non-common	1 common 4 non-common
Fourth Cycle (Major Thirds)	1 common 4 non-common	2 common 3 non-common	2 common 3 non-common
Fifth Cycle (Half-steps)	3 common 2 non-common	2 common 3 non-common	3 common 3 non-common
Sixth Cycle (Tritone)	2 common 3 non-common	2 common 3 non-common	2 common 3 non-common

In Part 2 it was shown that Minor Pentatonics have a perfectly gradated adjustment of tonality throughout the six cycles and that Alternate Pentatonics: Major b6, Minor b5 and Minor6 did not. This became a factor in moving forward in this research without their presence. There is no gradated degree of consonance or dissonance when Zone K, Zone T and Zone X are transposed through all six Poly-Zonal Cycles. However, after moving forward and creating my own pentatonic Zone designs with their unique shapes and sounds and a system for them to function melodically and harmonically then the knowledge of the system of Poly-Zonal Cycles is the most efficient way to synthesise degrees of tonality with Zones.

The Poly-Zonal Cycle examples demonstrate multiple functions: (see 5.5.1, 5.5.2 and 5.5.3)

- Ascending and descending Poly-Zonal Links provide options for the voice-leading of new starting notes and therefore options varying degrees of consonant and dissonant Zone transpositions
- Displacement of each note within a Zone creates elasticity within the melodic and harmonic elements
- The notes of the intervallic shapes and contours of each of the consecutive Zones are stressed or masked on different beats and locations within the phrase
- Different starting points promote new resolution points.

- The harmonic pad of the electric piano in the audio tracks provides great insight into consonant versus dissonant effects of the Zone Five-note Shapes.
- (5NS) indicates the use of a Zone Five-note Shape

5.5.1 Zone K Poly-Zonal Cycles

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb)].

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 3.32 Zone K Poly-Zonal Second Cycle (dsc)

Audio 3.28 Zone K Poly-Zonal Second Cycle (dsc) <https://youtu.be/C3ypvK-nt8A>

Ascending Chromatic Link is a descending major second Poly-Zonal Cycle.



Notation 3.33 Zone K Poly-Zonal Fourth Cycle (dsc)

Audio 3.29 Zone K Poly-Zonal Fourth Cycle (dsc) <https://youtu.be/iUTU9ga8Qwk>

Descending Chromatic Link is a descending major third Poly-Zonal Cycle.



Notation 3.34 Zone K (5NS) Poly-Zonal Third Cycle (dsc)

Audio 3.30 Zone K (5NS) Poly-Zonal Third Cycle (dsc) <https://youtu.be/Jcqw5P7wK4Q>

Descending Chromatic Link is a descending minor third Poly-Zonal Cycle.



5.5.2 Zone T Poly-Zonal Cycles

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 3.35 Zone T Poly-Zonal Fifth Cycle (dsc)

Audio 3.31 Zone T Poly-Zonal Fifth Cycle (dsc) <https://youtu.be/MhBwVzw4QP0>

Ascending Chromatic Link is an descending half step Poly-Zonal Cycle.



Notation 3.36 Zone T Poly-Zonal Third Cycle (dsc)

Audio 3.32 Zone T Poly-Zonal Third Cycle (dsc) <https://youtu.be/WyGR5JHSdVM>

Descending Chromatic Link is a descending minor third Poly-Zonal Cycle.



Notation 3.37 Zone T (5NS) Poly-Zonal First Cycle (asc)

Audio 3.33 Zone T (5NS) Poly-Zonal First Cycle (asc) <https://youtu.be/oWO85CXaPsg>

Ascending Chromatic Link is an ascending perfect fourth Poly-Zonal Cycle.



Notation 3.38 Zone T (5NS) Poly-Zonal Third Cycle (dsc)

Descending Chromatic Link is a ascending minor third Poly-Zonal Cycle.



5.5.3 Zone X Poly-Zonal Cycles

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 3.39 Zone X Poly-Zonal Fifth Cycle (asc)

Audio 3.34 Zone X Poly-Zonal Fifth Cycle (asc) <https://youtu.be/1vkOCvwMSb4>

Ascending Chromatic Link is an ascending minor third Poly-Zonal Cycle



Notation 3.40 Zone X Poly-Zonal Fifth Cycle (asc)

Audio 3.35 Zone X Poly-Zonal Fifth Cycle (asc) <https://youtu.be/df5nKq1c8Gk>

Descending Chromatic Link is an ascending half step Poly-Zonal Cycle.



Notation 3.41 Zone X (5NS) Poly-Zonal Sixth Cycle (asc)

Ascending Chromatic Link is an ascending tritone Poly-Zonal Cycle.



Notation 3.42 Zone X (5NS) Poly-Zonal Cycle (asc)

Audio 3.36 Zone X (5NS) Poly-Zonal Cycle (asc) <https://youtu.be/O9TgZCMdC7k>

Descending Chromatic Link is an ascending minor third Poly-Zonal Cycle.



5.6 Zone Four-note Shapes

Zone Four-note Shapes result from editing one note from any Zone. The examples in Notation 3.43 are shapes that have been chosen subjectively as examples how each Zone's characteristic sound ideologies can remain present even when one note is removed. There was no desire to move Zone sequences through all different permutations of four-note groupings, decisions were made arbitrarily through practice-led exploration of shape and sound. Another reason for not assimilating these shapes through (1235) four-note grouping permutations (see Bergonzi survey 1.1.2) is because they are already edited permutations of an originally designed sequence. The number analysis below each note exhibits different sequences of Four-note Shapes from each original Zone K, Zone T and Zone X.

What is most intriguing about Four-note Shapes is that it is the first time in this research that Zones have not been conceptualized in their five-note sequences. Reducing the number of notes with this methodological practice from five to four offers new insights into the strength and characteristics of Zone designs. Four-note Shapes are the closest way to retaining the core characteristics of Zones as there is just enough shape and sonic information to determine what Zone is being used.

The Shapes presented in Notation 3.43 have been subjectively selected in a variety of ways and ultimately this selection process has depended upon practise-led explorations. It was essential that a comprehensive collection of combinations represent all three Zone's combinations of intervallic relationships determining shapes and contours and overall sound. The construction of Four-note Shapes has three connecting intervals, not analysed as numbers but by their intervals as shown throughout Notation 3.43. A numbering system could have been used, which would have been useful in determining which note was omitted, but as the Zone becomes edited it takes on other levels of identity. These Four-note Shapes begin transcending the confines of pentatonic structures whilst still retaining the properties and unique sound of the derived Zone.

Notation 3.43 Zone Four-note Shapes

Each audio example below, firstly reveals the original Zone (K, T or X) and then their respective four-note shape permutations in each Zone column.

Audio 3.37 Zone K Four-note Shapes <https://youtu.be/cOjj4rizBa4>

Audio 3.38 Zone T Four-note Shapes <https://youtu.be/l-AIWWIOGVQ>

Audio 3.39 Zone X Four-note Shapes <https://youtu.be/ymYb43crhog>

The musical notation displays 24 four-note shapes across three columns: Zone K, Zone T, and Zone X. Each shape is a four-note melodic line on a staff, with intervallic relationships labeled below the notes. The shapes are grouped by double bar lines.

Zone K:

- K1: m3, m2, m2, M3
- K2: M3, M2, m3, M2
- K3: m2, M2, m3, M2
- K4: M3, P4, M2, M2
- K5: TT, P4, m2, M2
- K6: m3, M2, m2, M2
- K7: M2, TT, m2, M2
- K8: TT, m2, m2, M2

Zone T:

- T1: m2, P4, m2, m3
- T2: m3, M2, TT, M2
- T3: TT, P4, M3, M2
- T4: M2, P4, m3, M2
- T5: TT, M2, m3, M2
- T6: M2, m3, M3, M2
- T7: m3, M3, P4, M2
- T8: M2, TT, P4, M2

Zone X:

- X1: TT, m2, M3, m2
- X2: m2, m3, P4, M2
- X3: TT, M2, m3, M2
- X4: M2, P4, M3, M2
- X5: P4, m2, m3, M2
- X6: P4, M3, m3, M2
- X7: TT, P4, m3, M2
- X8: M3, P4, TT, M2

Note: From Chapter 6 Zone Improvisation Demonstrations, and throughout the remainder of this research, Four-note Shapes' analysis will be represented by this rectangular symbol surrounding the notation.

5.7 Zone Three-note Shapes

Three-note Shapes was the minimum number that I was comfortable assimilating whilst being able to reference their Zone of origin (see Notation 3.44). Five-note Shapes contain all the notes and characteristics of Zones and Four-note Shapes maintain enough of the design and sound of each Zone, but their structures and sounds are starting to become less identifiable. Three-note Shapes was a practice-led happening as I was improvising using five and four notes and then began to deconstruct these shapes and began applying intervallic sets which I'll refer to as Three-note Shapes.

Each three-note shape has a chromatic element and therefore an ambiguous sound and elements of consonance and dissonance within their structure. Each Zone has their chromatic element at the height or lowest part of their total range: Zone K (G, Bb, A), Zone T (G, F#, C#) and Zone X (G, Db, C). The chromatic element continues to invoke its presence and importance with the decision making of these shapes, (refer to 4.5.2 and shown below) the comparison Zone linear ranges and the locations of the chromatic elements. The chromatic element locations for Zone K (b3, 3, 4, b5), Zone T (1, b2 and 4, b5) and Zone X (1, b2 and 4, b5).

- Zone K (1, b3, 3, 4, b5)
- Zone T (1, b2, b3, 4, b5)
- Zone X (1, b2, 2, 4, b5)

The numbering analysis was not appropriate as these edited versions of the three Zones became an amalgamation of interval sets within the range of a tritone and the intervallic sequential and total shape range identification appeared more appropriate for analysis and practical synthesis.

Notation 3.44 Zone Three-note Shapes

Each audio example below, firstly reveals the original Zone (K, T or X) and then proceeds with their respective three-note shape permutations in order as they appear in Notation 3.44.

Audio 3.40 Zone K Three-note Shapes <https://youtu.be/UsHlszd-YTI>

Audio 3.41 Zone T Three -note Shapes <https://youtu.be/asZcFReiCkq>

Audio 3.42 Zone X Three -note Shapes <https://youtu.be/7t88DyD9bA4>

Zone K Zone T Zone X

K1 T1 X1

K2 T2 X2

K3 T3 X3

K4 T4 X4

K5 T5 X5

K6 T6 X6

K7 T7 X7

K8 T8 X8

The total intervallic range of all Three-note Shapes in Notation 3.44:

Minor Third: K6 and K8 (same but different permutation)

Major Third: K5 T5 X7 (same) T8 X8 (same)

Perfect Fourth: K3 T3 X5 (same) K4 T4 (same) X6 and X2 (different)

Tritone: K2 T2 X4 T6 (same) X3 T7 (same) K1 T1 (same) X1 (different)

There are Three-note Shapes exactly the same in the other Zones: for example, K4 and T4. The six permutation variations (see Notation 3.45) are conventional ways to reveal all possible permutations of three note cells, often used with triadic practice. The numbering analysis does not represent their intervallic distances from the lowest note but a generalised system of (1, 2, 3) and the notes represented by the numbers do not change. Three-note Shapes do not strictly use these permutations in their synthesis in this research but are utilised in identifying similarities between Three-note Shapes.

Notation 3.45



Many of these Three-note Shapes appear in the other Zones: for example, K4 and T4

- (1 3 b5) K1 and T1 are permutations of each other
- (1 4 b5) K2 T2 T6 and X4 are permutations of each other
- (1 3 4) K3 T3 and X5 are permutations of each other
- (1 b3 4) K4 and T4 are the same very pentatonic -
- (1 b3 3) K5, T5 and X7 are permutations of each other
- (1 b2 b5) T7 and X3 are permutations of each other
- (1 b2 3) T8 and X8 are permutations of each other
- (1 2 b5) X1 is the first inversion of K1 and T1
- (1 b2 b3) K6
- (1 2 4) X2 very pentatonic
- (1 b3 b5) K7 will be excluded because it is a recognisable harmonic triad
- (1 2 b3) K8 will be excluded because it is a recognisable scalar sound

The compositional and improvisational analysis for Three-note Shapes will be different from Zone Five-note Shapes and Four-note Shapes because of the deconstructed sequence of notes and shapes and their disassociation of sound and qualities from the three Zones.

Note: From Chapter 6 Zone Improvisation Demonstrations, and throughout the remainder of this research, Four-note Shapes' analysis will be represented by this oval symbol  surrounding the notation.

5.8 Zone Design Comparison Summary

The table below shows the comparative characteristic elements and structural design properties for *Zone K*, *T* and *X*.

Table 3.5 Zone Design Comparison

	Zone K	Zone T	Zone X
Starting Interval	Asc. Minor 3rd	Dsc. Half-step	Asc. Half-step
Last interval	Asc. Major 3rd	Asc. Minor 3rd	Dsc. Major 3rd
Full Range	Tritone	Tritone	Tritone
Linear Range	1 b3 3 4 b5	1 b2 3 4 b5	1 b2 2 4 b5
Shape	Up Down Down Down	Down Down Up Up	Up Down Up Down
Asc. or Dsc. Zone	Descending	Descending	Ascending
Poly-Zonal Cycles	Asc. Major Seconds (Second Cycle) Dsc. Major Thirds (Fourth Cycle)	Asc. Half-steps (Fifth Cycle) Dsc. Minor Thirds (Third Cycle)	Dsc. Major Thirds (Fourth Cycle) Dsc. Tritone (Sixth Cycle)
Interval Properties	Asc. Minor 3rd Dsc. Half-step Dsc. Half-step Dsc. Major 3rd	Dsc. Half-step Dsc. Perf 4th Asc. Half-step Asc. Minor 3rd	Asc. Half Dsc. Perf 4th Asc. Minor 3rd Asc. Major 3rd
Zonal Plane	Dsc. Minor 3rd	Dsc. Major 2nd	Dsc. Perf 4th
Range Above	Minor 3rd	None	Tritone
Range Below	Minor 3rd	Tritone	None

Chapter 6 Zone Improvisation Demonstrations

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a C is notated it will sound a Bb.]

Hearing how these Zones react with one another in a very simplistic way lends even more context to their existence, the effect they bestow upon a very recognisable chord progression, hearing the consonant and dissonant harmonically ambiguous imprints, the different combination of shapes and angles and intervallic sonorities. These improvisational demonstrations over minor blues format, being a standardised jazz harmonic template, enables the contextual understanding of Zone Conception practices applied in Part 3.

Analysis Legend:

Analysis placed **above** the notation:

- + (symbol) Dissonance
- **ZK-----** Zone K and derivative Five-note Shapes (5NS)
- **ZT-----** Zone T and derivative Five-note Shapes (5NS)
- **ZX-----** Zone X and derivative Five-note Shapes (5NS)

Analysis symbols **surrounding** the notation (see 7.5):

- (Rectangle) Zone Four-note Shapes (4NS) 
- (Oval) Zone Three-note Shapes (3NS) 

Zone conceptions and tonal functions of inclusivity are audibly and visually evident in the following improvisations over a minor blues. The harmonic chords are simply and sparsely played focusing on the utilisation of conceptualised Zone Five-note Shapes, Four-note Shapes and Three-note Shapes providing crucial insight into their organically stated presence within my existent broader jazz vocabulary. These practices provide evidence of the methodological note re-organisation of Zones into various cell combinations which in the initial stages of use are conceptually assimilated and over time and with a controlled understanding of their

techniques, locations within a phrase and of their melodic and harmonic ramifications will by osmosis naturally embed themselves into one's improvisational language.

6.1 Zone Improvisation Demonstration 1

Notation 3.46 Zone Improvisation Demonstration 1

Audio 3.43 Mixing Up The Zones <https://youtu.be/fXcdQoYdu7E>

The musical notation consists of eight staves, each representing a different harmonic zone. The notation includes various chords and melodic lines, with specific patterns highlighted by blue circles and boxes. Red dashed lines with labels 'ZT' and 'ZK' indicate zone transitions.

- Staff 1:** D-7. Melodic line with blue circles around specific notes.
- Staff 2:** D7alt, G-7. Melodic line with blue circles around specific notes.
- Staff 3:** D-7, Bb7. Melodic line with blue circles around specific notes.
- Staff 4:** A7, D-7. Melodic line with blue circles around specific notes.
- Staff 5:** D-7. Melodic line with blue circles around specific notes. Red dashed line labeled 'ZK' above the staff.
- Staff 6:** D7alt, G-7. Melodic line with blue circles around specific notes. Red dashed line labeled 'ZT' above the staff.
- Staff 7:** D-7, Bb7. Melodic line with blue circles around specific notes.
- Staff 8:** A7, D-7. Melodic line with blue circles around specific notes. Red dashed line labeled 'ZT' above the staff.

Analysis of Notation 3.46

Bars 1 – 6

The initial phrase of this improvisation is a conventionally constructed line that slowly ascends in range with an eighth-note groove across four bars. The end of the second bar there is a 3NS (Bb C# A) implying a dominant ninth chord and forward momentum and at the third bar there is a 3NS (F# F D) creating an instant major third dissonance over the D minor chord, knowing that the other two notes of this shape will be consonant in the key and also creating a blues sound. This was an intentional choice of notes through understanding designed Zone practices in a performance. This phrase continues and that connects with another 3NS (F# C F), both shapes share two common tones and yet because of the change in chord to a D7 the function of these notes is reversed. The F# is consonant and the F is dissonant and an available tension the #9, both shapes project the same blues inflections over different harmonic structures and then resolve in a traditional dominant to tonic fashion.

Bars 7 – 12

Starts with three connected 3NS cells with similar contours and different functions of harmonic tension within a descending melodic phrase. The first 3NS (C# G C) has the widest intervallic range and starts out dissonant to consonant, the second 3NS (C G B) moves consonant to mild dissonance as the major sixth has harmonically ambiguous qualities on a minor chord, and the third 3NS (B F# Bb) remains dissonant throughout the duration. This note (Bb) becomes the first note in another 3NS (Bb B F#) that is identical in note combinations as the previous 3NS but organised in a different order which changes the contour of the shape and therefore its overall sound, as discussed (see 5.7). This shape also has a rest in the middle occurs on a new chord change which induces forward movement in the music then two dissonant notes. The pointillistic articulations and organically accented notes of this phrase have shortened the length of notes granting a new dimension to these practices whilst lending a different perspective of Zone material and understanding. This phrase finishes with a three-note scalar leap into two 3NS combinations. The first is a change of gear into an eighth-note triplet (C# C A) expresses a blues sound over the A7 chord moving into the next 3NS (E C# Eb) changing gears back to eighth notes creating more time for the dissonant properties of these notes over A7.

Bars 13 – 14

The second chorus of this minor blues improvisation starts out with a 3NS (F B F#) which is the widest intervallic range for shape and has a consonant to mild dissonance to dissonance effect over the D minor followed by another 3NS (F E Ab) which is a more contracted intervallic range and a different contour that exudes a consonance to dissonance. The end of this phrase moves in a chromatically bebop fashion with a chromatic enclosure of the diatonic note (F).

Bars 15 – 18

Starts with a Zone K 5NS (Bb Ab E G A) over D minor which creates harmonic ambiguity over D minor connecting within the phrase with a Zone T 5NS. This shape (Ab Eb D G F#) is played over a D7 altered chord and whilst appearing to be dissonant it outlines consonant scale tones. The (F#) drops to the (Eb) and then into a 4NS (F# B C G#) over G minor, which is completely dissonant, then repeating the notes (C B) and producing a delayed resolution to the desired minor third (Bb) across Bar 18.

Bars 19 - 21

The beginning of this diatonic and melodically floating phrase begins on beat 2 of Bar 18 and reaches its turning point in preparation for the finish in Bar 21 with an homage to John Coltrane's Mr P.C. with the upbeat (Ab) across the bar line syncopation voice-leading chromatically to the sustained note (G).

Bars 22 - 24

Anticipated eighth notes starting on beat 4 of Bar 21 propel forward the final two phrases of this improvisation in Bar 22 with an A major triad, over (A7), followed by a Zone T 5NS (G# Eb D G F#) full of harmonic dissonance and descending into an F# major arpeggio over D minor. This arpeggio will sound as an Eb minor pentatonic connecting over D minor chord, which is a Poly-Pentatonic Fifth Cycle, creating complete dissonance and forward movement for the final phrase which resolves diatonically.

6.2 Zone Improvisation Demonstration 2

Notation 3.47 Zone Improvisation Demonstration 2

Audio 3.44 <https://youtu.be/Kj2AOMJF5Eq>

The notation is written on eight staves, each with a key signature of one flat (Bb) and a 4/4 time signature. The chords and melodic lines are as follows:

- Staff 1:** Chord: D-7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZT" spans the first four notes. Red dashed line labeled "ZK" spans the last four notes.
- Staff 2:** Chord: D7alt. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZT" spans the last four notes. Blue circles highlight the last four notes.
- Staff 3:** Chord: D-7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZT" spans the last four notes. Blue box highlights the first four notes. Blue circle highlights the last four notes.
- Staff 4:** Chord: A7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZK" spans the last four notes. Blue box highlights the first four notes.
- Staff 5:** Chord: D-7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZK" spans the last four notes. Blue box highlights the first four notes.
- Staff 6:** Chord: D7alt. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZT" spans the last four notes. Blue box highlights the first four notes.
- Staff 7:** Chord: D-7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZT" spans the last four notes. Blue box highlights the first four notes.
- Staff 8:** Chord: A7. Melody: Bb, A, G, F#, E, D, C, Bb. Red dashed line labeled "ZX" spans the last four notes. Blue box highlights the first four notes. Blue circle highlights the last four notes.

Analysis of Notation 3.47

Bars 1 – 3

This improvisation begins with a Zone T 5NS (Ab G D Eb F#) deliberately starting on a dissonance knowing the location of the consonant notes are in the core of the Zone (G D) which has blues inflections over D minor. These first three notes of the move into a dissonance with

the notes (Eb F#) the last note being sustained creating harmonic tension. This tension resolves chromatically the note (F) which drops down to the note (B), the major sixth which has consonant and dissonant qualities over D minor. Bar 3 is the final part of this phrase consisting of a Zone K Linear Mode (D C# C B Ab) resolving chromatically to (G F E).

Bars 4 – 6

Starts in Bar 4 with a conventional dominant altered line resolving into a G minor triad in Bar 5. Bar 5 beat 4 starts a short phrase comprising a Zone T 5NS (G Db C G# B) which is mostly consonant but with alternate dissonant qualities outlining the major seventh, minor seventh and major sixth intervals of D minor. The last note of Zone T (B) becomes a pivot note for consecutive 3NS (B F# Bb) and (Bb A F) which progress dissonantly at first in an intervallic angular way resolving consonantly

Bars 7 – 12

The first phrase is a 4NS (G# C# A C) starting on the second eighth note partial meaning that the notes (C#) dissonant and (C) consonant are on downbeats and will be naturally accented and emphasized. This shape progresses scalar ascending to a 3NS (C# D A) which resolves the phrase dissonant to consonant. Bar 9 starts and the second partial beat 1 with a Zone 5NS (Bb Db Eb A D) over Bb7 chord. The Zone sounds out a minor function then a major function creating harmonic ambiguity with both dissonance and consonance. This is connected to a 3NS (D C# A) which implies a D minor tonality which continues through Bars 10, 11 and 12 with conventional jazz phrasing.

Bars 13 – 17

Bar 13 is approached by a catalytic sextuplet gear, a F major arpeggiated glissando to an altissimo (A) setting up the second chorus from Bar 13. Bars 13 and 14 float in a descending syncopated fashion to an eighth anticipation of Bar 15 with a harmonically ambiguous note (C#) which is the first note of a Zone K (C# E Eb D Bb) where the last three notes create a short dissonant triplet into a double chromatic bebop cell. The notes in Bar 16 are played over a D minor chord and whilst not sounding out a D minor sound they sound an A dominant chord, connecting with the next Zone. Bar 16 continues the A7 line which is also a chromatic enclosure for (F#) which is the first note of Zone K (F# A Ab G Eb) creating harmonic tension of the D7 altered chord resolving the phrase on beats 1 and 2 of Bar 17.

Bars 18 – 25

Bar 18 begins with two overlapping Zone 5NS over G minor. The first is a Zone T 5NS (E G A Eb Ab) starts on an upbeat the G and Eb on strong beats (downbeats) giving emphasis to their function and intent and as a result this Zone sounds consonant to dissonant. The last two notes (Eb Ab) are the common tones connecting with the Zone T 5NS (Eb Ab G D F#) and because the note (G) is on a downbeat 3 the Zone sounds consonant with indirect chromatic approach. In Bar 19 after three descending diatonic notes in D minor a Zone T 5NS (A F E Bb G#) occurs and such is the rhythmic phrasing that the first three notes are consonant and the last two are dissonant before resolving the phrase on the repeated note (E). In Bar 21 a robust line plays off of the (Bb7) chord into the (A7) connecting with a 4NS (G F# Bb F) in Bar 23 which creates harmonic tension. Within the same bar a Zone X 5NS (E Ab G Eb D) starting on the upbeat of beat 2 so as to create harmonic tension and forward momentum into Bar 24 where a blues infused 3NS (F# D F) resolves into consonance.

Note: [Appendix A contains three more Zone Improvisation Demonstrations]

Part 3 Conclusions

Part 3 began with the prior creation and establishment of Zone K, Zone T *and* Zone X. *Zone Conceptions* has initiated a research design based on conventional practices of re-organisation, harmonic ambiguity, composition, various combinations of intervallic shapes searching for the maximisation of each Zone's individual and collective qualities and capabilities. The presentation and analysis of improvisational demonstrations has formalised their techniques and synthesised their conceptualisations creating new musical pathways of expression.

- Zone Modes (see 5.1)
- Zone Linear Modes (see 5.2)
- Zone Harmonic Considerations (see 5.3)
- Zone Five-note Shapes (see 5.4)
- Poly-Zonal Cycles (see 5.5)
- Zone Four-note Shapes (see 5.6)
- Zone Three-note Shapes (see 5.7)

The insights processed through consistent and methodical Zone improvisational practise, when they transform to being innate and intuitive, over time, translates into organic contextual performance. These intuitive choices include:

- What is the melodic intent over any given harmonic setting? Is it to be harmonically ambiguous all the time? Is it to be consonant or dissonant all the time? Is it to be consonant then dissonant or dissonant then consonant? The perception of the Zones in these circumstances present varying melodic versus harmonic ramifications.
- Selection of Zone Type and is the starting note consonant or dissonant and is the final note or the chromatic ascending or descending resolution point consonant or dissonant over harmonic settings
- Where and what are notes of the Zone? The high or low points of the range where the directional changes occur? Are these notes consonant or dissonant?
- What is the voice leading or connection to the next Zone, is it continuous Poly-Zonal Cycles or are there rests?

- Where within the beat and bar and harmonic form or chord change is the Zone located?
- If at the start of a chord change is the Zone harmonically responsible to that harmony?
- At the middle or the end of a chord change is the Zone melodically responsible to that harmony, or is the Zone's melodic responsibility in anticipation of the following chord change?
- What are the rhythmic values or duration of the notes in relation to the harmony and where are they placed within the phrase? Are they consonant or dissonant?

Zone K, Zone T and Zone X will provide melodic direction and stimulus for the remainder of this research. The complete aggregation of shapes, contours, intervallic relationships, chromaticism, and most importantly unique sounds, demonstrate their melodic consequence and harmonic adaptability and/or ambiguity. This presents a new lexicon of melodic and rhythmic syntheses within a performance context.

Part 4: Elasticity

Part 4 explores the cumulative development of Zone creative practices processed through rhythmic transformations. These transformations are designed to create elasticity of phrasing in improvisation. Elasticity (of phrasing) is the perceived polyrhythmic aesthetic that is created when opposing pulsations shift around a given pulse or groove. Essentially a ‘push and pull’, ‘stop and start’ and accelerative and decelerative effect opposing the metric pulse. Influenced by Part 3’s research design, Part 4 applies the technique and context methods of learning to achieve continuity of practise with Zone material. The practice technique is applying Zone concepts to individualized rhythmic disciplines, termed as *Gears*. These are: sixteenth notes, triplets, quintuplets, and sextuplets - which enable the necessary rhythmic variations and spatial awareness for applications of poly-rhythmic improvisational practise and performance.

Fundamentals of Elasticity

Why elasticity? Elasticity is the perceived polyrhythmic aesthetic, one that is created when opposing pulsations shift around a given pulse or groove. Essentially a ‘push and pull’, ‘stop and start’ and accelerative and decelerative effect opposing the metric pulse (see Chapter 8). Before this research, I had been considering and formulating an approach to achieving broader rhythmic conceptions and practise applications for the synthesis of melodic improvisation. It was a natural progression that another element was to be applied to Zone conceptions to elevate and achieve new perceptions of time and space and create spectrums of sound.

Elasticity is the fluctuations of time, duration and pulsations within a beat, bar, multiple bars whilst deepening your innate knowledge and location within the form of tune. Having control of phrasing: where to start and where to resolve a line, which is any melodic statement improvised or composed. Understanding and having an immediate access to all mathematical sub-divisions or partials of a beat: sixteenths, triplets, quintuplets and sextuplets and having the innate ability to function freely within a beat or bar. The cognitive ability for spatial awareness or acuity in presenting your own thoughts and expressing yourself with clear intentions and precise control. These are all the thoughts, wishes and obsessions to pursue, and personally manufacture as improvisational and compositional concepts and then conceptions.

Rhythmic Possibilities

Part 3 documented the organization, melodic permutation, refinement and variation of Zone Conceptions, creating a new musical lexicon. Purely melodic and harmonically engineered improvisational contributions, such as Zones, will affect new directions of sound and challenge the boundaries of tonality, but are limited in their development as melodic entities in producing an overall creative concept. Zone melodic cells needed something else, another contributing element to transform and elevate their predictability and existence. Quoting Nachmanovitch, “something lacking” (Nachmanovitch, 1984: 2), some element of my creativity and technique was missing and needed developing. This for me, is rhythm and Berliner quotes jazz pianist Barry Harris: ‘Don’t forget different rhythms. Rhythm is what’s pretty!’ (Berliner, 1994: 265) and a rhythmic transformation of Zones will be the next stage of development. Schoenberg declares:

Rhythm is particularly important in moulding the phrase. It contributes to interest and variety; it establishes the character; and it is often the determining factor in establishing the unity of the phrase. The end of the phrase is usually differentiated rhythmically to provide punctuation. (Schoenberg, 1967: 3)

Rhythmic transformation will have a profound impact on the phrasing of Zone melodic lines, allowing them to relinquish control their many permuted design identities and systematically be synthesised for improvisational practises. A rhythmic concept that compliments and re-imagines the Five-note, Four-note and Three-note Shapes resulting in unpredictable phrases and injecting vitality and energy into each musical line. Zone T transformations will be further developed through the synthesis of rhythmic pathways, termed as gears listed below:

- *Sixteenth Gears* (double time) – ratio 4:1 (see 7.2)
- *Triplet Gears* (compound or triple time) – ratio 3:1 (see 7.3)
- *Quintuplet Gears* – ratio 5:1 (Catalytic Rhythms see 7.6)
- *Sextuplet Gears* – ratio 6:1 (Catalytic Rhythms see 7.6)

These rhythmic pathways will have an equal or even greater say in the creation of future musical phrases, sculpting outcomes that will have a more focused intent whilst creating a multi-dimensional approach to composition and improvisation of *Zonal* language. Before any wholly elastic transformations take place the understanding and control of these individual “time gears” (Bergonzi, 2000: 93), the rhythmic disciplines needs to take place. The collective effects of these gears will firstly be assimilated individually and secondly polyrhythmically and quantified against quarter note or eighth metric pulses, being the staple rhythm in jazz improvisation. The gears listed above automatically create an elasticity of phrasing, a tension and release relationship conceptualised against the control of a quarter note accompaniment or a swing style eighth note grooves.

Rhythmic Displacement

Rhythms will be presented in phrases of five quarter-note beats, automatically creating elastic phrasing. Zone sequences, because of their five-note sequence, and when played consecutively, allow for a natural displacement of rhythmic material that is presented in rhythmic groups of two and four.

Notation 4.1 Eighth note displacement - five note grouping



A *partial* is a term for equally ratioed subdivisions of a beat or group of beats and as Gary Chaffee states that the “individual partials of any given figure can be subdivided in a variety of ways” (Chaffee, G, 1976: 32). The example above shows a five-note grouping notated in eighth note rhythms being naturally displaced as shown by the number sequence: 1 2 3 4 5.

Eighth notes are the fundamental jazz pulse from which all gearing variables will be quantified. Eighth note rhythms in Jazz can be played two ways. The first is *straight*, or metrically even. The second is *swung* where the first note, starting on a downbeat is played longer than the offbeat which is played shorter, very similar to a triplet or shuffle feel. This swing pulse has its origins in West African culture “transcriptions of West African music are dominated by triplet patterns expressed in both duple and, more commonly, compound meters” (Agawu, 1987:406), and throughout the last two hundred and fifty years has morphed into the *long-short* pulsation that we know today. This is the beginning of rhythmic interpretation and that of elasticity of phrasing.

Notation 4.2 Eight starting and resolution points



As musical phrases begin and end each of these beats could be thought of as both starting points and resolution points. Bob Moses in his book, *Drum Wisdom*, refers to eight possible subdivisions as starting points, “The idea of playing off a resolution point brings us to what I call the 8/8 concept. There are eight resolutions points in a bar: the four downbeats and the four upbeats.” (Moses, 1980: 10). Varying the starting points of phrases will invariably disguise and reinvent any musical phrase whilst also affecting the placement of the resolution point. Not only does this help with new phrasings but also provides one with a thorough understanding of time as Moses says: “The basic principle behind playing off the flow is to imagine a steady series of eighth notes, like an imaginary click. Once you can hold that eighth note flow in your internal hearing, then you are free to vary the resolution points from measure to measure.” (Moses, 1980: 34)

Starting Points and Resolution Points

Starting points and resolution points are locations where melodic and/or rhythmic phrases within a bar begin and temporarily settle. To become more skilled and aware of time and spatial distances within beats and bars, practising phrases from different starting beats helps to understand where the line resolves. Down-beats are the pulsations of each meter and partials are the subdivisions of each beat (see Notation 4.3). Each of these points can be a starting or resolution points for any phrase, and as Bob Moses describes:

The way to master the eight points is not an intellectual process, but is best achieved by becoming familiar with how they feel. They each have a distinctly different feeling. There is as much difference between 4 and the & of 4 as there is between the color blue and the color green. This leads back to attitude. One of my concepts of music – which I apply to all instruments and all music – is that every note should be played for a reason. When I play an & of 4, I play it because it has a certain feeling, and it is my conscious choice to play that feeling. (Moses, 1980: 12)

The example below identifies the quarter note downbeats (1, 2, 3, 4) and their eighth -note partials which comprise of fifteen rhythmic accents, accounting for three consecutive Zone phrases within eight quarter-note beats of common time.

Notation 4.3 Eighth note partials



Having the innate ability to start on any partial of the beat affords any improviser the spatial awareness of each beat, each bar and the overall form. Joe Lovano describes this as:

...feeling the different points in the beat...eighth notes off the quarter note beat/pulse (accenting a different way)...off the half note....my phrases are really different; I'm playing from a different perspective in the beat. (Lovano, J [retrieved from YouTube 2023] [timestamp: 0.08 – 1.31] *Joe Lovano: Improvisation Developing A Personal Approach*.

<https://youtu.be/VUdeevt9qQg?si=a4BhjTeYRXHI0ZEN>)

Crossing the bar line

Elastic outcomes will be achieved through the synthesis of individual rhythmic gears and the subsequent mixing of polyrhythmic conceptions. The crossing of bar lines leads to the eradication of the unnecessary control and hindrances created by the time signature barriers known as bar lines, and as Crook states, “Over the bar-line (or beat-line) phrasing will often produce the effect of anticipating the next chord in the progression.” (Crook, 1991: 131) and Bergonzi states “motion over the bar line” (Bergonzi, 2000: 64) in creating another perspective of a melodic phrase. The concept occurs for the displacement of beats, as Patel states that “A musical beat typically occurs in the context of a meter, a hierarchical organization of beats in which some beats are perceived as stronger than others.” (Patel, 2006: 100). Notes within a Zone sequence will be de-emphasized through different stress points, starting points and resolution points within the metric structure. The example below shows how a five-note grouping will cross-over each beat and begin its sequence on each partial of different beats.

Notation 4.4 Crossing of beats/bar lines



According to Cope “Discussing rhythm and meter inevitably leads to the division that distinguishes them: the bar line. For centuries music survived without bar lines.” (Cope, 1999: 89), there is no reason other than formal structures and perhaps to maintain a sense of order and visual connectiveness to a piece of music to maintain bar lines. The crossing over of a beat or bar line also provides new resolution points, thus creating anticipation and interest in a musical line (Brindle, 1990: 25).

Broken Rhythms

The genesis of broken rhythms (i.e. broken time, syncopated rhythms) in my improvisational journey began with the rhythmic imaginations of Jerry Bergonzi, Joe Lovano and Sonny Rollins. Later, when I began studying improvised rhythmic concepts with Dr Simon Barker, we discussed the avoidance playing on the downbeat of every bar and not playing constant streams of eighth note gears and triplet gears but syncopating them in elongated phrases. These

syncopations transform an imaginative shift of rhythmic values generating suspense and forward momentum, requiring an innate knowledge of the partials within each gear where they are located within the metric structures (bars).

Notation 4.5 Zone K broken rhythmic sequence



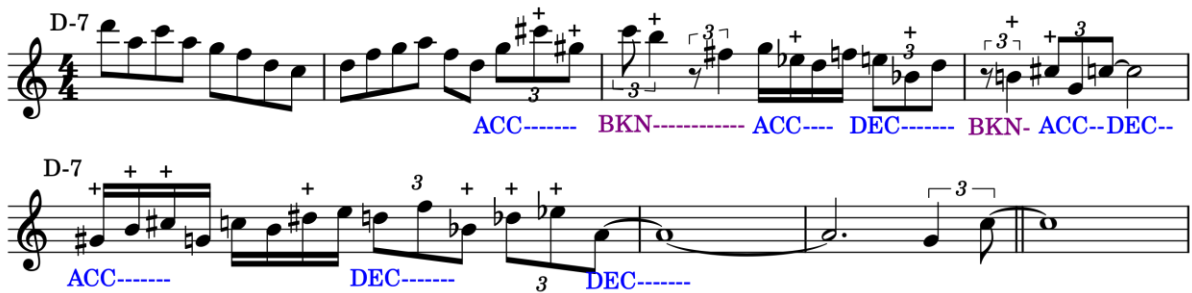
Broken rhythms are an inspired way to mask the familiar sounds of any developed melodic entities and in presenting them with feeling.

Changing Gears

The rhythmic gears listed in 7.1.1: sixteenth notes, triplets, quintuplets, and sextuplets are the rhythmic disciplines that each Zone will be assimilated. This assimilation requires the innate knowledge and understanding of every aspect of each Zone’s methodological deconstruction and revealed practices such as: Five-note Shapes, four-note-shapes and Three-note Shapes before any synthesis can occur. The application of poly-rhythmic phrasing or *changing gears*, referred to by Jerry Bergonzi as “Switching Gears” (Bergonzi, 2000: 107) and Gary Chaffee as “Rhythmic Mixtures” (Chaffee, G, 1976: 19) becomes more challenging when assimilated through Zone practices and techniques. This research initiates a systemised plan for the gradual assimilation and eventual synthesis of Zones.

Because of their subdivisional ratios these gears automatically create an elasticity of phrasing, an *inside/outside*, tension/release relationship, against the control of a quarter note accompaniment or a swing style eighth note grooves. This poly-rhythmic elasticity is essentially a “speeding up or slowing down” (Bergonzi, 2000: 97) of not only the rhythms against the metric pulse or the groove but also of the rhythms used in the improvisations before and after the change of gears.

Notation 4.6 Changing Gears Example

Audio 4.1 Changing Gears <https://youtu.be/UghtEI6udhE>

Notation 4.21 illustrates the accelerations and decelerations of the rhythmic interpretation of the melodic line would suggest eighth notes moving into triplet pulsations (see Bar 1 and 2) and triplets and broken triplets moving into sixteenth notes (Bar 2), sixteenth notes into triplets (Bar 3 and 4) and (Bar 5) creating a constant state of tension and release all leading towards a gentle resolution of the phrase (Bars 7 and 8).

Chapter 7 Gears

7.1 Sixteenth Gears

Each quarter note can be subdivided equally into four rhythmic units, called sixteenth notes. These subdivisions will be referred to as partials and are analysed as (1 e + a). Sixteenth note gears are a variable gearing and will be quantified against the eighth note gearing pulse. Sixteenth notes will provide a solidified conceptual understanding of duple time/common time and the space it occupies, along with a fast reactionary and reliable technique.

Sixteenth notes have a pulse transformation equivalence of twice the speed to eighth notes, otherwise known as double-timing. Berliner describes Ragtime drummers “playing twice as fast as the beat and filling in the rests around their prescribed figures, a practice known as doubling.” (Berliner, 1994: 325) and Hal Crook states that double-time is a “special effect which occurs when one or more players make the tempo sound twice as fast as the original tempo. The soloist usually initiates this by playing melodic phrases comprised of sixteenth note rhythms while the chords continue to pass at the original tempo. (Crook, 1991: 140). In the contemporary music world sixteenth notes are the modern sound. Notation 4.7 below identifies the elasticity of sixteenth notes, their partials and the natural displacement of a five-beat grouping, identified by the numbers above each note.

Notation 4.7 Sixteenth note displacement



When Zone K is applied to the five-beat rhythmic phrasing above, melodic displacements occur. The melodic displacement occurs because each note of the Zone gets redistributed across different partials of every beat, (as shown above rhythmically and below melodically). This grants each note of a Zone the opportunity to be emphasized on each of the five downbeats. This natural displacement of five over four and crossing of the beat is the beginning of phrasing elasticity.

Notation 4.8 Zone K sixteenth note displacements

Audio 4.2 <https://youtu.be/Y4yiUEbujUg>



Notation 4.9 Zone T sixteenth note displacements

Audio 4.3 <https://youtu.be/UwcqMNNqY2o>



Notation 4.10 Zone X sixteenth note displacements

Audio 4.4 <https://youtu.be/NpQPCcDIDs0>



This naturally occurring displacement occurs because of the five notes against a grouping of four, which shifts each time a Zone sequence re-occurs (see above). Their sequence remains the same but the subdivision on which they begin shifts to the next sixteenth subdivision, and Berliner states that “Lennie Tristano directed students to formulate new phrases by dividing the beat symmetrically into patterns of eighth notes, sixteenth notes and thirty-second notes, and asymmetrically in any number of ways.” (Berliner, 1994: 152). These serve to create anticipatory and unpredictable rhythmic and melodic phrasing from anywhere within the bar and ultimately within the form of a song or groove. This natural displacement within the Zone leads to the de-emphasis of the importance of any one note, and therefore the centric qualities of a tonic. This concept of 5 over 4 radically changes the contours and shapes and the placement of the articulations which make the rhythms themselves seem more illusory and difficult to grasp and play.

7.2 Sixteenth Gear Displacement Cycles

In one quarter note there are four sixteenth note partials with each Zone containing five sixteenth beats. Sixteenth gear displacement cycles (See Notation 4.11 through 4.16) are five quarter-note beat Poly-Zonal practise exercises. These exercises consist of four consecutive Zones of five-beat cells when connected, making twenty sixteenth notes. This demonstrates the naturally occurring displacement and elasticity of phrasing of five over four. This also promotes the displacement of Zone starting pitches leading to crossing of the bar line and influencing different resolution points within this phrase cycle.

Audio 4.5 - 4.10 exhibit different Poly-Zonal Cycles displaying different transpositions of Zones creating harmonic ambiguity through fluctuations of consonance and dissonance. Designed for maximum speed of learning from different perspectives of the beat and phrase-cycle within a single exercise, they synthesise how Five-note Shape Poly-Zonal Cycles can start and resolve on different beats and sixteenth note partials.

These can be practised two ways: straight sixteenths and swung sixteenths (refer to the audio). Moses in his comment refers to the variable application of eighth notes, “there are different types of eighth notes. There are what we call ‘straight’ eighth notes, which are played exactly as written, and there are ‘rounded’ eighth notes, which are also called ‘swung’ eighth notes or ‘jazz’ eighth notes.” (Moses, 1980: 10). I am using this in reference to sixteenth notes, but they are essentially the same thing just played twice as fast.

The sixteenth gear examples demonstrate multiple functions: (see 5.5.1, 5.5.2 and 5.5.3)

- Ascending and descending Poly-Zonal Links that provide options for the voice-leading of new starting notes and therefore options varying degrees of consonant and dissonant Zone transpositions
- Zones are presented in Poly-Zonal Cycles
- Each note of each Zone on each of the sixteenth note partials.
- Displacement of each note within a Zone which creates elasticity
- The notes of the intervallic shapes and contours of each of the consecutive Zones are stressed or masked on different beats and locations within the phrase
- Different starting points promote new resolution points.

- The harmonic pad of the electric piano in the audio tracks provide great insight d a frame of reference for the consonant versus dissonant effects of the Zone Five-note Shapes synthesized through sixteenth note gears
- (5NS) indicates the use of a Zone Five-note Shape

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb)]

[Each example is superimposed over a D minor chord (C minor sounding pitch)]

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.11 Zone K Sixteenth Note Displacements

Audio 4.5 Zone K Sixteenth Note Displacements <https://youtu.be/sc91lkhgHq0>

The descending Zone K Poly-Zonal Fourth Cycle (major third transpositions) demonstrates the accelerated pulsation of sixteenth gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.12 Zone K2 (5NS) Sixteenth Note Displacement Cycles

Audio 4.6 Zone K2 (5NS) https://youtu.be/uBGw_6LDa_M

The descending Zone K2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) whilst demonstrating the accelerated pulsation of sixteenth gears and the

elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.13 Zone T Sixteenth Note Displacement Cycles

Audio 4.7 Zone T <https://youtu.be/t-QX1583cWc>

The descending Zone T Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of sixteenth gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.14 Zone T2 Sixteenth Note Displacement Cycles

Audio 4.8 Zone T2 <https://youtu.be/5zNYqeX6JoM>

The descending Zone T2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of sixteenth gears and the elasticity

created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.15 Zone X Sixteenth Note Displacement Cycles

Audio 4.9 Zone X <https://youtu.be/cFX2wmJn4SY>

The ascending Zone K Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of sixteenth gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.16 Zone X1 (5NS) Sixteenth Note Displacement Cycles

Audio 4.10 Zone X1 (5NS) <https://youtu.be/yOkpL3AvJwc>

The ascending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Fourth Cycle (major third transpositions) demonstrates the accelerated pulsation of sixteenth gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



These fundamental performative exercises contribute towards the synthesis of elastic improvisation practice. The beginning of the rhythmic transformation of Zones, they are the synthesis for organic elasticity of phrasing, and the creative development of a personalised improvisational expression.

7.3 Triplet Gears

Triplet gears will be quantified against the eighth note gear pulsation for the transformation of Zones, and as Jerry Bergonzi states that practicing “triplets is one way to get more connected to the rhythm section groove and so it can help to improve your placement of eighth notes.” (Bergonzi, 1998: 80). The triplet ratios will be eighth note triplets, a ratio of three beats into one (3:1), which will provide a stronger conceptual understanding of duple time/common time and the space it occupies, along with a fast reactionary and reliable

technique. This ratio can also function as quarter note triplets, three beats over two (3-2), and can be used to suspend beats and useful for faster tempos. Zone phrasing in triplets automatically generate a suspended-like elasticity against formal rhythmic structures by stating a three-beat pulse over a quarter note (see Notation 4.17, 4.18 and 4.19).

The eighth note triplet has a significant importance in jazz, because of the swing phrasing that is naturally imposed upon regular eighth notes and as Collier & Collier writes that “two key elements of swing were analysed; placement of the downbeats, and the swing or triplet ratio.” (Collier & Collier, 2002: 463). This swing pulse was cultivated by jazz musicians (such as Buddy Bolden and Louis Armstrong) in New Orleans and having its origins in West African culture. Agawu states that West African culture (music) is intrinsically conceived of “triplet formations would seem to be of no consequence were it not for the fact that the surface of much purely instrumental music” (Agawu, 1987:406), meaning that the West African culture has no association with any meter or rhythmic ratio because this is not how these ideas are conceived. These triplet conceptions are notated as understandings referenced to Western music formalities in the form of “published transcriptions of West African music are dominated by triplet patterns expressed in both duple and, more commonly, compound meters.” (Agawu, 1987 :406)

Over the last hundred and fifty years (or so), Jazz swung eighth notes has morphed into the *long-short* pulsation that we know today. As Benadon quotes Gunther Schuller (1968: 257): "the eighth-notes [in Fletcher Henderson's band] are played very much as a dotted eighth-sixteenth pattern," whereas "at the same time (1923) the [King] Oliver and [A.J.] Piron orchestras were playing a more loping, triplet rhythm." (Benadon, 2006: 92-93). The consensus being that throughout the history of jazz the triplet pulse is perhaps the most intrinsically fundamental element in jazz. The triplet *feel* is what distinguishes a jazz groove from any other style of music. Benadon substantiates these individual triplet conceptions through other jazz sources:

the rhythmic interpretation of the jazz improvisers most consistently used rhythm, the eighth-note pattern ... becomes a long-short triplet pattern. (Coker 1964:46) The rhythm of legitimate jazz...included triplet swing... (Robinson 1994:11) Jazz musicians do not usually notate swing rhythm the way that it sounds, because indications of a triplet subdivision of the beat clutter the page. (Kernfeld 1995:15) [Charlie Parker] supplied linear substance and an eighth

note triplet approach to phrasing that was perfectly right... (Crouch [1989] 1996:1026) When a jazz musician is given a passage of quavers... the resulting rhythm is nearer to a triplet (Dankworth 1968:39) (Benadon, 2006: 90)

Zone eighth note triplet applications will be presented over a five-beat cycle (see Notation 4.17, 4.18 and 4.19) as previously documented sixteenth note gears. They are deliberately designed this way to highlight their differences for purposes of analysis and a relative understanding. The displacements are more visible in Zones because of the different shapes (high notes and low notes) and are presented below.

Notation 4.17 Zone K Triplet Displacement



Notation 4.18 Zone T Triplet Displacement



Notation 4.19 Zone X Triplet Displacement



Over a five-beat cycle there will be fifteen triplet partials, which is perfect because three five-note Zones can be sequenced in this cycle. As shown in Notations 4.17 – 4.19, all notes of the three Zones, because of their five-beat sequence will start on a different partial of the triplet, which leads to the displacement of each Zone sequence over a quarter note cycle of five beats. This cycle of five beats enables a crossing of the bar line starting from any beat withing a metric 4/4 bar and adds interest and a certain unpredictability within this and other metric time signatures. Berliner states that “Triplet subdivisions have special significance” and quotes Carmen Lundy who says that “ triplets are “unlike straight eighth notes or any other kind of rhythms,” possessing something that’s “hypnotic”... (Berliner, 1994: 152). By starting on different parts of the beat there is a default diminishing of the importance of any one note,

because there is a constant displacement of notes within the Zone cell as it is notated through each beat.

7.4 Triplet Gear Displacement Exercises

In one quarter note there are three eighth note triplet partials with each Zone containing five triplet beats. Triplet gear displacement cycles (See Notation 4.20 through 4.25) are five quarter-note beat Poly-Zonal practise exercises. These exercises consist of three consecutive Zones of five-beat cells that, when connected, make fifteen triplet notes. This demonstrates the naturally occurring displacement and elasticity of phrasing of five over three. This also promotes the displacement of Zone starting pitches leading to crossing of the bar line and influencing different resolution points within this phrase cycle.

The triplet gear examples below (see Notation 4.20 through 4.25) demonstrate multiple functions and tendencies which are shown through the notation and analyses of a Poly-Zonal Cycle of transposition.

- Ascending and descending Poly-Zonal Links that provide options for the voice-leading of new starting notes and therefore options varying degrees of consonant and dissonant Zone transpositions
- The Zone's pentatonic sequences are presented in Poly-Zonal Cycles of transposition which serve to promote an innate spatial awareness of presence in the form and phrase through starting on different eighth note triplet partials of a quarter-note and the crossing of a beat and bar line
- Each note of each Zone on each of the eighth note triplet partials.
- Displacement of each note within a Zone inducing a natural elasticity of phrasing
- The notes of the intervallic shapes and contours of each of the consecutive Zones are stressed or masked on different beats and locations within the phrase
- Different starting points promote new resolution points

Audio 4.11 through 4.16 are practise performances of the three Zones and a Five-note Shape permutation of each. They are performed through Poly-Zonal Cycles, displaying different transpositions of Zones, exhibiting harmonic ambiguity through fluctuations of consonance

and dissonance. Designed for maximum speed of learning from different perspectives of each beat and phrase-cycle, within a single exercise.

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb)]

[Each example is superimposed over a D minor chord (C minor sounding pitch)]

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.20 Zone K Triplet Displacement Cycles

Audio 4.11 Zone K https://youtu.be/vxKp_g6AnP0

The descending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Fourth Cycle (major third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat, bar and the visible, audible crossing of bar lines.



Notation 4.21 Zone K2 Triplet Displacement Cycles

Audio 4.12 Zone K2 (5NS) <https://youtu.be/Xh6pq50TAv4>

The descending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.22 Zone T Triplet Displacement Cycles

Audio 4.13 Zone T <https://youtu.be/9udhWzma08E>

The descending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.23 Zone T2 Triplet Displacement Cycles

Audio 4.14 Zone T2 (5NS) <https://youtu.be/rKILHa9eFHc>

The descending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat and a bar and the visible and audible crossing of bar lines.



Notation 4.24 Zone X Triplet Displacement Cycles

Audio 4.15 Zone X <https://youtu.be/tFZZ67vhWJQ>

The ascending Zone X2 (Five-note Shape see Notation 3.31) Poly-Zonal Third Cycle (minor third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat, a bar and the visible, audible crossing of bar lines.



Notation 4.25 Zone X1 Triplet Displacement Cycles

Audio 4.16 Zone X1 (5NS) <https://youtu.be/sc91lkhgHq0>

The ascending Zone X1 (Five-note Shape see Notation 3.31) Poly-Zonal Fourth Cycle (major third transpositions) demonstrates the accelerated pulsation of triplet gears and the elasticity created through the different starting points and resolution points within a beat, a bar and the visible and audible crossing of bar lines.



These fundamental performative exercises contribute towards the synthesis of elastic improvisation practice. The beginning of the rhythmic transformation of Zones, they are the synthesis for organic elasticity of phrasing, and the creative development of a personalised improvisational expression.

7.5 Sixteenth and Triplet Gears Synthesis

These improvisational examples are practice assimilations of Zone material applying sixteenth note gears and triplet gears over an eighth note swing groove creating consonance and dissonance against the Concert C-11 harmonic background. These examples are intuitive performances of Zone methodological practises including Five-note Shapes, Four-note Shapes and Three-note Shapes (Part 3), as well as pentatonic scale applications (Part 2).

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb).

[Each example is superimposed over a D minor chord (C minor sounding pitch)]

Analysis Legend:

Analysis placed **underneath** the notation:

- **ACC** Acceleration (elasticity) placed underneath the notation
- **DEC** Deceleration (elasticity)
- **BKN** Broken rhythms indicating abrupt starts and stops (elasticity)

Analysis placed **above** the notation:

- + (symbol) Dissonance
- **ZK-----** Zone K and derivative Five-note Shapes (5NS)
- **ZT-----** Zone T and derivative Five-note Shapes (5NS)
- **ZX-----** Zone X and derivative Five-note Shapes (5NS)

Analysis symbols surrounding the notation (see 7.5):

- (Rectangle) Zone Four-note Shapes (4NS)
- (Oval) Zone Three-note Shapes (3NS)



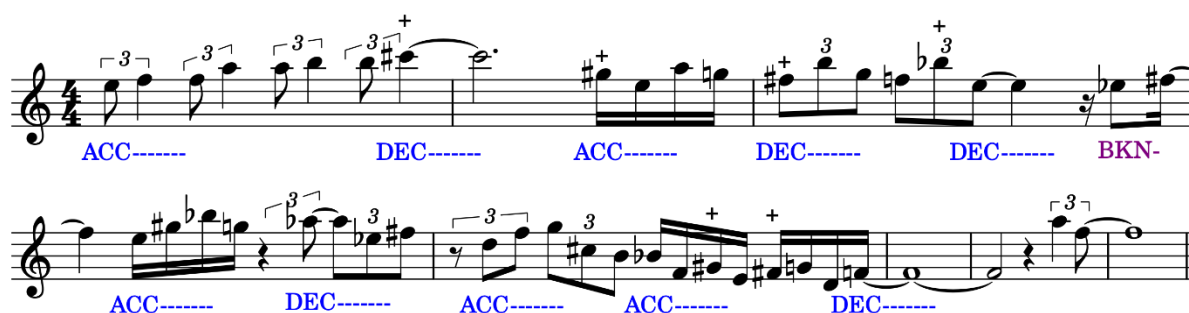
[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

7.5.1 Triplet and Sixteenth Gear Elastic Improvisation Demonstrations

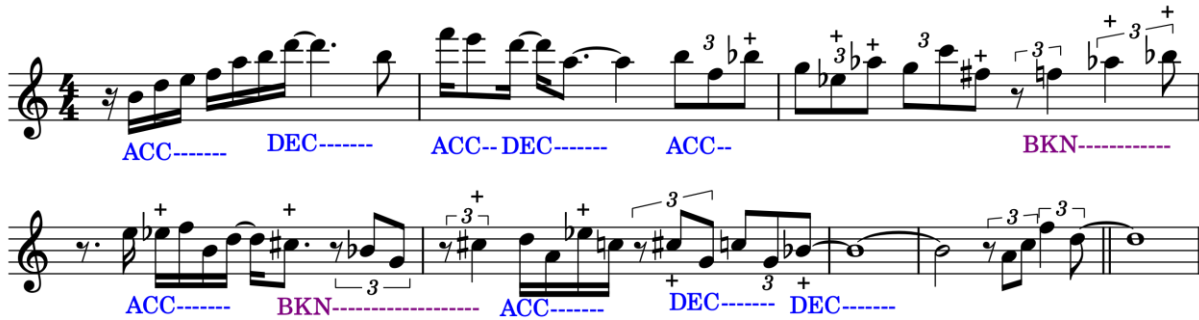
The focus for this conceptualised improvisation is to demonstrate the learning and assimilation of all sixteenth gears and triplet gears variations utilising melodic constructs of Zone and conventional practices. The practice to performance synthesis takes time but demonstrating changing gears through accelerations, decelerations, broken rhythmic concepts, varying starting and resolution points within the bar and partials within a beat within the framework of a familiar jazz chord progression (minor blues) is essential to everyone's understanding of their poly-rhythmic contributions to melodic lines. The following two exercises have been composed for the purpose of learning to shift between sixteenth gears and triplet gears in an organic way. They are simulated practise exercises for application and interpretation in improvisations.

Notation 4.26 Sixteenth Gear and Triplet Gear Synthesis Exercise 1

Audio 4.17 <https://youtu.be/8XRJAVSnCYI>



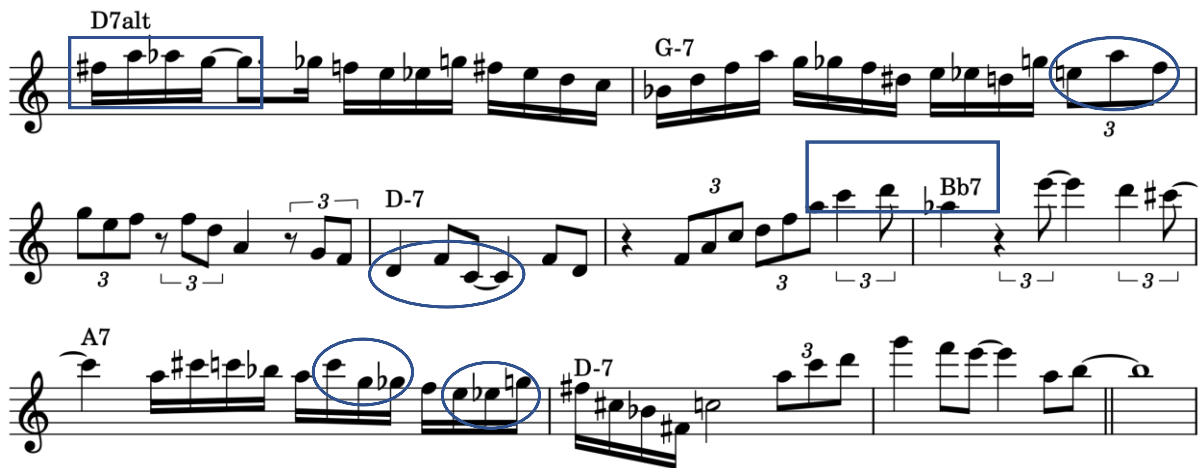
Notation 4.27 Sixteenth Gear and Triplet Gear Synthesis Exercise 2

Audio 4.18 <https://youtu.be/0GsGzBEpMUK>

The focus for this conceptualised improvisation is to demonstrate the innate learning and assimilation of all variations of sixteenth gears and triplet gears utilising melodic constructs of Zone and conventional practices. The practice to performance synthesis takes time but demonstrating changing gears through the accelerations, decelerations, broken rhythmic concepts, varying starting and resolution points within the bar and partials within a beat within the framework of a familiar jazz chord progression (minor blues) is essential to everyone's understanding of their poly-rhythmic contributions to melodic lines.

Notation 4.28 Sixteenth Gear and Triplet Gear Improvisation Demonstration

Audio 4.19 <https://youtu.be/qZ8DNI0504>



7.6 Catalytic Gears

The sixteenth gears and triplet gears assimilated thus far have added phasing shifts against the typical jazz accompaniment beats of quarter note and eighth note grooves. More explosive rhythms need to be introduced to generate varying spectrums of poly-rhythmic activity. *Catalytic Gears* are those that precipitate an extreme change of momentum in opposition to the constant pulse or groove. These rhythmic gears need to be vastly different in nature (Chaffee, 1976: 19) having volcanic effects to the pulse. These Catalytic Gears will be quintuplet gears and sextuplet gears.

I am not intending to play the following gears exactly as notated, but as an individual interpretation. There are many ways to play rhythms and jazz musicians have granted and offered many different approaches to eighth note swung rhythms, quarter note triplet rhythm (Benadon, 2006: 90, Schuller 1989: 433) and my intention for these Catalytic Gears is that they will have a more personal, interpretive, and organic feel and perception. Quintuplet and sextuplet gears presented in 7.6.1 and 7.6.2, respectively, will be notated as a rhythm and then applied to Zone 1 Poly-Zonal Cycles.

7.6.1 Quintuplet Gears

A quintuplet is the symmetrical ratio of 5 notes or beats within one quarter note beat.

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.29 Quintuplet Gears

Audio 4.20 Quintuplet Gears <https://youtu.be/73WtFQR1zno>



This rhythm is an intense rhythm designed to shake up and agitate the fundamental gears of sixteenths and triplets. It will inject an accelerated spark or pulsation contrary to the metric pulses and violently induce forward momentum and a demand for a quick resolution to a down beat. The focus in practicing and the challenge in utilizing this rhythm is for the evenness and smoothness of each partial the quintuplet. By not articulating and accenting or stressing any one subdivision within the quintuplet will add more intrigue for its perception during a performance. Having said that, certain variations of this grouping will allow the predictability of a quintuplet to create more interest as will be shown below. Both approaches are necessary for the complete effect and desired execution of performance.

7.6.2 Sextuplet Gears

A sextuplet is the symmetrical ratio of 5 notes or beats within one quarter note beat.

Notation 4.30 Sextuplet Gears



This rhythm is the natural extension of an eighth note triplet, essentially being a double-time grouping of two eighth note triplet sets. I am choosing to use sextuplets because I once asked a drummer colleague to rhythmically analyse what I was intuitively playing. I wanted to know exactly what my intuitive self was doing because that is the most organic or natural approach and the most valuable learning method. Learning from yourself. I was playing sextuplet lines or in groupings of sixes by flattening out the time, otherwise known as playing fast or speeding up the time over a metrically set pulse or groove. This is a style of improvisation I learned by osmosis from George Garzone and Jerry Bergonzi.

Notation 4.31 Sextuplet Gears Variation 1

Audio 4.21 *Sextuplet Gears Variation 1* <https://youtu.be/0vz476JnVsQ>

Notation 4.32 Sextuplet Gears Variation 2

Audio 4.22 *Sextuplet Gears Variation 2* <https://youtu.be/gboH3NKSDjM>

My approach to this sextuplet grouping is not to be exact as the notation dictates. For me, this rhythm is a fast quintuplet rapidly propelling to the resolution on the next downbeat. I've heard Jerry Bergonzi use this rhythm many times to create a hurricane-like effect at the beginning of a line, accelerating and distorting the metric pulse and jump-starting the musical line.

Chapter 8 Elasticity of Phrasing

8.1 Concepts of Elasticity

Part 4 has been focused on mastering and assimilating the gears through cognitive assimilation and practise techniques and improvisation. The process is a holistic assimilation is from all perspectives of the rhythmic pulse and how it affects each beat, each bar and varying concepts of formal structures. The control gained from these assimilations are the beginnings of elasticity of phrasing. The gears of sixteenths and triplets, the Catalytic Gears of quintuplets and sextuplets will be applied, mostly against quarter note pulses and grooves and as the scholar Benadon states: “elasticity is especially striking when it appears side by side with more rigid rhythmic renditions.” (Benadon, 2009: 8). The holistic understanding of gears will enhance spatial awareness and promote the elastic characteristics of contraction and expansion of beats, developing the overall creativity of movement, whilst obscuring established Zone sequences. These rhythmic gears generate dynamic movements and create interest in the development of the musical line.

Why elasticity? Before this thesis, I had been considering and formulating an approach to achieving broader rhythmic conceptions for the synthesis of melodic improvisation. It was a natural progression that another element was to be applied to Zone conceptions in elevating and achieving new spectrums of sound. Broken rhythms require a deeper understanding and recall of Zone conceptions which produce elasticised and unpredictable phrasing and a freeing nature of the regimented Zone repetition. Elasticity, as a term, is an abstract entity, is one that intentionally manipulates and opposes the metric pulse, accelerates and decelerates, generating *push and pull* and *stop and start* effects in opposition of the groove pulsation. However, when performing these elastic concepts, these concepts suddenly become tangible, palatable, and very real in their existence within the performer. The internal effects as a performer feel that these pulsation shifts become live entities and not just theoretical conceptions. Within an improvisation in real-time, as will be shown through Part 5, gearing elasticity is most convincingly performed intuitively. When played in a technical way, meaning playing blocks of one rhythmic gearing, the process sounds predictable and predicated. It sounds like you are practising as opposed to being creative and letting go.

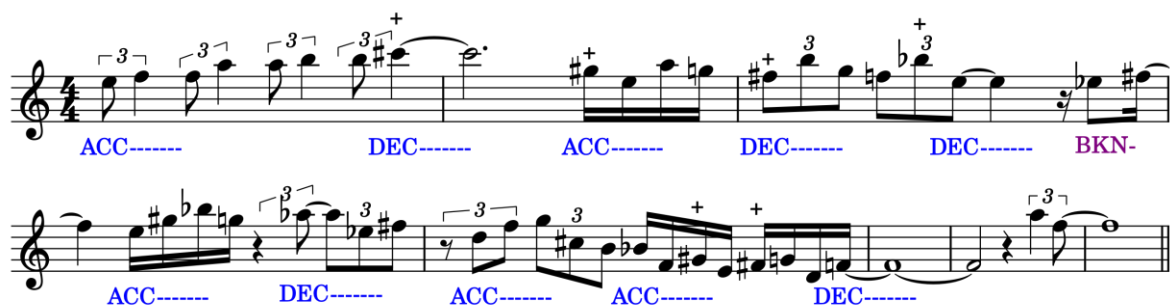
The metric ambiguity, the polyrhythmic nature, is the rhythmic equivalent to that of harmonic ambiguity, which is referred to constantly. Elasticity is the *inside* and *outside* aesthetics of rhythmic conceptions, creating polyrhythmic accelerative and decelerative movements around a given pulse or groove. Notations 4.33 and 4.34 show how gears can have a gradual increase or decrease in momentum through an increased sub-division of a beat.

Accelerated rhythms (ACC) have a higher subdivided ratio than the metric pulse or tempo and the result is an increase in rhythmic pulsations, otherwise known as acceleration. The example below showcases rhythmic ratios over the span of two beats. All rhythms can be accelerations, it all depends on what rhythmic gears precede. Acceleration is an intrinsic quality for elasticity of phrasing.

Decelerated rhythms (DEC) are antecedent rhythms that have a lower subdivided ratio. The result is a decrease in rhythmic pulsations, otherwise known as diminution. The example below showcases rhythmic *blocking* ratios over the span of two beats. All rhythms can be decelerations, it all depends on what rhythmic gears precede. Deceleration is an intrinsic quality for elasticity of phrasing. The two examples below exhibit acceleration and deceleration elasticity of phrasing.

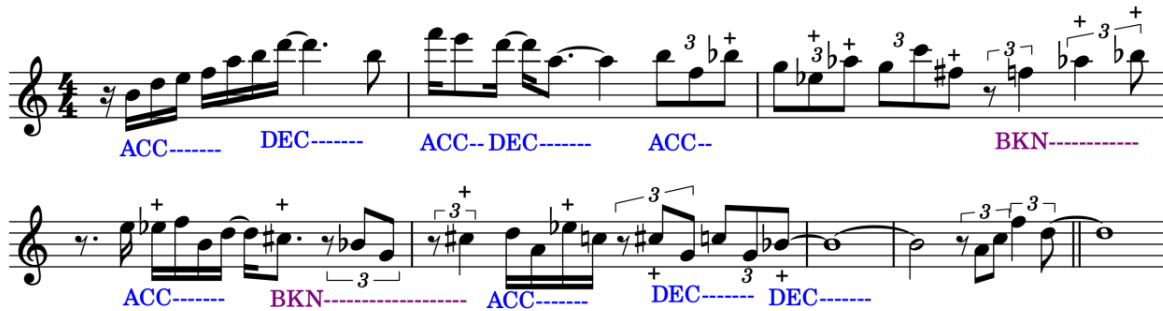
Notation 4.33 Acceleration/Deceleration Demonstration Example 1

Audio 4.23 <https://youtu.be/8XRJAVSnCYI>



Notation 4.34 Acceleration/Deceleration Demonstration example 2

Audio 4.24 <https://youtu.be/0GsGzBEpMUk>



These contextualised examples are an unlimited resource of rhythmic interpretation and one of the parameters is to not play on Beat 1 of any time signature, start lines from a downbeat or land on a downbeat and still be accurate with the Zone sequences. The outcome of this polyrhythmic approach is freedom of the melodic and/or harmonic content by having the ability to use at will, a greater awareness of time, space, trusting your sound and an overall strength of melodic development and phrasing in an improvisation. Messiaen describes these opposing rhythmic polyrhythmic entities as “the superposition of two rhythms of unequal lengths, repeated until the return of the combination of departure.” (Messiaen, 1956: 22), whilst promoting the emancipation of spatial time.

Once comfortable with these concepts and spatial acuity the fun begins with the intuitive actions of elasticity. The location of any elastic content could be at the beginning (then resolve into the regular pulse), in the middle (shift out then resolve into the regular pulse), the end (resolving the line by using elasticity) or playing polyrhythmically for the entire musical phrase, similar to the application of consonance and dissonance. These concepts of rhythmic movement, the fluctuation of gears define elasticity and having this innate ability to impose your rhythmic will whilst not detracting from the interest and curiosity of the improvisation.

8.2 Synthesis of Elasticity

The next step in maximising the outcomes of this research is to formally organize the rhythmic gears into phrases that accelerate and decelerate and challenge the space between each beat. These formal examples will be called *Zone Elastics* and are phrase exercises designed for synthesizing rhythm and melody whilst creating a more organic approach to improvisational

practise. Ulehla states that rhythmic “stresses give attention to select groups of pitches.” (Ulehla, 1994: 485), so by changing the rhythmic pulse streams using elastic syncopations, accelerations and decelerations against a constant metric pulse will produce new improvising conceptions.

Dizzy Gillespie was quoted as saying “I hear rhythm, mostly,” Dizzy Gillespie reports, “and then I put notes to them.” (Berliner, 1994: 153). They are designed to rhythmically punctuate Zone phrases and instigate polyrhythmic phases opposing the metric pulse, exhibiting elastic and illusory effects. The rhythms are the phrasing inspirations and as Bergonzi states that in most cases “jazz educators present improvisation techniques by first teaching which notes to play and then describing how to put these notes to various rhythms. There is a profound difference in taking rhythms and the applying the notes to the particular rhythms.” (Bergonzi, 1998: 8), these elastic rhythmic concepts shape Zone phrasing and will provide the nucleus and the impetus for melodic exploration.

Parameters for *Zone Elastics*:

- They will be quantified initially from a quarter note pulsation from the drums in the Audio examples for each of the *Zone Elastics 1-10*
- Rhythmic Gears need to be established for contextual purposes before rapidly shifting from gearing to gearing. I surmised that at least two quarter beats of eighth note triplets would be enough amount of time to contextualise
- Triplets would be the main source of gearing elasticity
- Sixteenths will act as Catalytic Gear or act as an accelerant, not as *double-time*
- The examples must have as many gearing shifts as possible within the fifteen pulses
- Using quintuplets and sextuplets within this small phrase meant that their inclusion had to be strategically placed as their use contributes to more than a third of the phrase. This is a great way to learn to apply these rhythms as one must be very selective and specific to their intent.
- The balance of density with modulated gears must be used as that of its harmonic counterpart, with balance and intent.
- Constant acceleration and decelerations
- Starting points must be strong and varied

- Resolution points must be strong and varied
- A balance of Catalytic Gears at the beginning, in the middle and at the resolution stage of a phrase

8.2.1 Zone Elastics

The ten Zone Elastic phrases below have been designed exclusively as practise exercises for the assimilation and synthesis of poly-rhythmic improvisation. Jerry Bergonzi states “Rhythms are inexhaustible.” (Bergonzi, 1998: 8) and these conceptualised phrases are a microcosm of inexhaustible poly-rhythmic combinations designed to develop the learning and development of innate poly-rhythmic skills for improvisations.

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb).

[Each example is superimposed over a D minor chord (C minor sounding pitch)]

Analysis Legend:

Analysis placed **underneath** the notation:

- **ACC** Acceleration (elasticity) placed underneath the notation
- **DEC** Deceleration (elasticity)
- **BKN** Broken rhythms indicating abrupt starts and stops (elasticity)

Analysis placed **above** the notation:

- **+** (symbol) Dissonance
- **ZK-----** Zone K and derivative Five-note Shapes (5NS)
- **ZT-----** Zone T and derivative Five-note Shapes (5NS)
- **ZX-----** Zone X and derivative Five-note Shapes (5NS)

Analysis symbols surrounding the notation (see 7.5):

- (Rectangle) Zone Four-note Shapes (4NS)
- (Oval) Zone Three-note Shapes (3NS)



[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

The following three examples, Notation 4.35, 4.36 and 4.37 share the same Zone Elastic template but have Zone K, Zone T and Zone X simulated within this template using Poly-Zonal Cycles of transposition. This allows us to hear (Audio 4.25) and understand the melodic interpretation and re-invention of the rhythm, the different consonant and dissonant qualities through the elasticity of the template phrasings and by their consonant resolution.

Audio 4.25 Zone Elastics 1 <https://youtu.be/ssor1Wme5LM>

[Audio 4.00 includes Notations 4.35, 4.36 and 4.37]

Notation 4.35 Zone Elastics 1 Zone K

This example shows Zone K presented through Poly-Zonal *Fourth Cycles*



Notation 4.36 Zone Elastics 1 Zone T



Notation 4.37 Zone Elastics 1 Zone X



What can be observed from the analysis of Notation 4.35, 4.36 and 4.37 is that the elements of elasticity do not change but what does change is the consonant and dissonant effects of the different Zone note sequences, intervallic shapes, chromatic locations and the starting areas within the range of, in this case, the tenor saxophone assessed against the D min harmonic accompaniment.

The Zone Elastic phrases in Notations 4.38 to 4.46 are slightly different in content from those in Notations 4.35, 4.36 and 4.37, which mix up Zone K, Zone T and Zone X Five-note Shapes in Poly-Zonal Cycles of transposition. The differences are the limited use of Five-note Shapes

sequenced in Poly-Zonal Cycles of transposition and written with the intent of a synthesised improvisational integration of other Zone practices, such as Four-note Shapes and Three-note Shapes, which will be analysed using symbols as shown in the analysis legend.

Notation 4.38 Zone Elastics 2

Audio 4.26 Zone Elastics 2 https://youtu.be/LusDsD_7-xw

Notation 4.39 Zone Elastics 3

Audio 4.27 Zone Elastics 3 <https://youtu.be/XNxMHdFaB30>

Notation 4.40 Zone Elastics 4

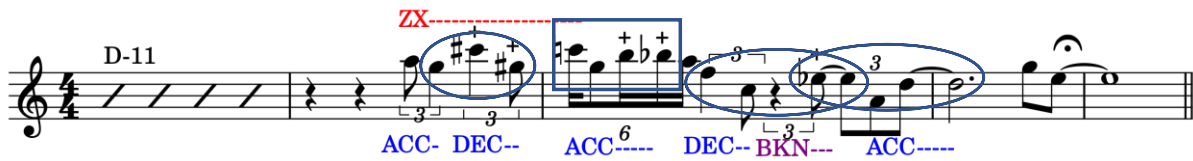
Audio 4.28 Zone Elastics 4 <https://youtu.be/Y1XlGRXrTuM>

Notation 4.41 Zone Elastics 5

Audio 4.29 Zone Elastics 5 https://youtu.be/dYQQ_5H-ptg

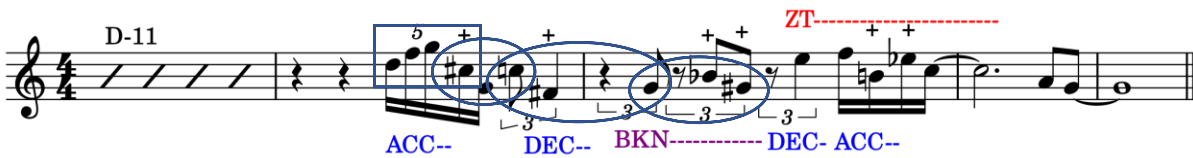
Notation 4.42 Zone Elastics 6

Audio 4.30 Zone Elastics 6 <https://youtu.be/zpMseLDI5Ok>



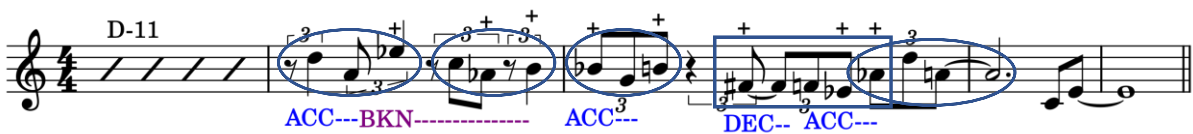
Notation 4.43 Zone Elastics 7

Audio 4.31 Zone Elastics 7 <https://youtu.be/l6TjVegNpS4>



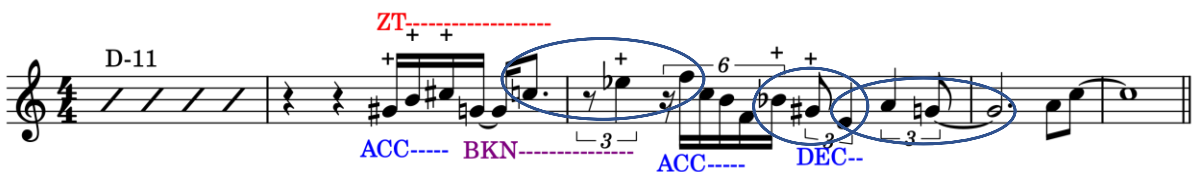
Notation 4.44 Zone Elastics 8

Audio 4.32 Zone Elastics 8 <https://youtu.be/TrtVN-57yTc>



Notation 4.45 Zone Elastics 9

Audio 4.33 Zone Elastics 9 <https://youtu.be/-MXX3fh6Vi0>



Notation 4.46 Zone Elastics 10

Audio 4.34 Zone Elastics 10 <https://youtu.be/MwngPxs2WkM>



This practise leads to organic interpretations of complex rhythms in an improvisation where being exact with a rhythm can sound manufactured. Playing a rhythmic phrase with control

and an innate awareness of time and space becomes a very different organic outcome. Not for the purposes of exact replication but for the experience, as the opening paragraph of Benadon's journal article *Time Warps in Early Jazz* (Music Theory Spectrum):

By most accounts jazz rhythm is elastic and adventurous. Attacks are displaced, phrases are laidback, time is stretched, subdivisions are blurred, and beats are turned around. Young Louis Armstrong was renowned for “cutting entire phrases afloat from the beat,” and Coleman Hawkins could “assert his [rhythmic] conception over that of the accompanying rhythm section, in fact completely ignoring it” (Gushee 1998, 308; Schuller 1989, 433). Beyond such anecdotal description, music theoretic studies that unravel and formalize these phenomena are scarce...Still, these discussions rely almost exclusively on standard notation and thus miss out on many of the nuanced temporal dimensions critical to jazz rhythm. (Benadon, 2009:1)

Benadon's insights speak to my personal approach to improvisational methodology: a technical learning phase, followed by applied practise, culminating in organic, synthesised and intuitive performance. Practising Gears in a technical, yet somewhat improvisational, setting (see 7.5.1), new windows of opportunity are presented for personalised Zone phrasing. The final step of the process is then removed from the performance context and now enters a phase of documentation through transcription, analysis and reflection. This allows for others to be invited into the notated world of the performer's personalised approach, and as Nachmanovitch explains:

There is in all these forms of expression a unitive experience that is the essence of the creative mystery. The heart of improvisation is the free play of consciousness as it draws, writes, paints the raw material emerging from the unconscious. (Nachmanovitch, 1990: 9)

Chapter 9 Zone Elastic Improvisation Demonstrations

[All notations are in Bb Pitch, sounding a whole step below the written pitch.

For example: when a (C) is notated it will sound a (Bb).

[Each example is superimposed over a D minor chord (C minor sounding pitch)]

Analysis Legend:

Analysis placed **underneath** the notation:

- **ACC** Acceleration (elasticity) placed underneath the notation
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- **BKN** Broken rhythms indicating abrupt starts and stops (elasticity)

Analysis placed **above** the notation:

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- **ZX-----** Zone X and derivative Five-note Shapes (5NS)

Analysis symbols **surrounding** the notation (see 7.5):

- (Rectangle) Zone Four-note Shapes (4NS)
- (Oval) Zone Three-note Shapes (3NS)



The two improvisation demonstrations (see 9.1 and 9.2) illustrate the organic outcomes of synthesized practices of elasticity of phrasing combined with the inclusivity of Zone concepts and practices through the analysis symbols embedded within the transcriptions.

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

9.1 Elasticity Improvisation Demonstration 1

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.47 Elasticity Improvisation Demonstration 1

Audio 4.35 <https://youtu.be/LKxh07pTvxq>

The notation consists of eight staves of music, each representing a different chord or harmonic context. The staves are labeled with chords: D-7, D7alt, D-7, A7, D-7, D7alt, D-7, and A7. The music is written in 4/4 time and includes various rhythmic markings such as ACC (Accented), DEC (Decelerated), BKN (Broken), ZK (Zonal K), ZT (Zonal T), and ZL (Zonal L). The notation also includes various accidentals (sharps, flats, naturals) and articulation marks (accents, slurs). The music is organized into measures, with some measures containing multiple notes and others containing rests. The notation is color-coded, with blue lines for the main melody and red lines for the Zonal K and Zonal T markings. The notation is also annotated with various rhythmic markings such as ACC (Accented), DEC (Decelerated), BKN (Broken), ZK (Zonal K), ZT (Zonal T), and ZL (Zonal L).

Analysis of Notation 4.47

Bars 1 – 3

This improvisation begins with a Zone K Catalytic Gear of broken sextuplet creating a dissonant (B D C# C Ab) over a D minor chord start to the phrase which immediately decelerates and resolves chromatically and diatonically. The resolution note (G) is the first note of a 4NS which then accelerates and decelerates connecting to another catalytic sextuplet gear change chromatic and harmonically ambiguous in content which gently resolves sounding diatonic D minor scale tones.

Bars 4 – 6

Is a diatonic phrase through the chord progression which change gears from triplets to sixteenth notes to eighth notes landing in another gentle diatonic resolution. In the middle of this phrase in Bar 5 is a 3NS (C Bb F#) a tone, major third which is an intervallic shape common to all Zones, these notes imply a dominant resolution in G minor.

Bars 7 – 9

Includes two phrases into one complete phrase. Starting with two connecting consonant 3NS (C B F) and (D C# F) each starting on the second partial of a triplet gear with the lowest note of their shapes (the second note) sounding on the third partial generating dissonant properties over D minor. These dissonances create forward momentum within the phrase changing gears to eighth notes and quarter notes to a consonant end of phrase (A) via chromatically indirect approach notes (G# C#). Bars 9 – 10 unfold a traditional be-bop infused line with three 3NS (Ab F A) with the (Ab) dissonant and the (F A) consonant, the next 3NS (G F C#) is angular and consonant whilst the third (E C# Eb) is a more condensed intervallic shape which creates harmonic ambiguity and altered note of resolution on the A7 chord, the flat-five (Eb). These two phrases generate constant elasticity of phrasing through the multiple acceleration and decelerate of gear changes between triplets and eighth notes.

Bars 11 – 14

Starts with an accelerated gear change from eighth notes to a sixteenth note phrase of two bars starting with a Zone T 5NS (D F G C# F#) creating consonance and dissonance over D minor. This then connects with a 4NS (Ab G Eb D) acting as chromatic and a dissonant approach to another Zone T 5NS (D G F# C# F) which propels into three beats of sixteenth notes consisting of chromatic and dissonant note combinations sounded by an F# major arpeggio, basically an

Eb minor pentatonic adjacent to a D minor seventh arpeggio finally resolving into a G minor chord on its major sixth, the note (E). This note also creates a slight harmonic tension indicating that the phrase will continue.

Bars 15 – 16

This phrase starts with on beat 4 with a chromatic sixteenth note approach into a 3NS (F# B F) and then a 4NS (Ab G Eb D) over D minor presenting chromatic dissonance and therefore harmonic ambiguity and changing gears to triplets in Bar 16 finishing the phrase with a mildly dissonant Zone T 5NS (D F G C# F#) cell where the resolution note and the major third F# on (D) dominant occurs on beat 4.

Bars 17 – 20

Occur elastic phrasings of broken triplet accelerations and decelerations consisting of consonant melodic choices.

Bars 21 - 24

Bar 21 accelerates with another gear change via a consonant but angular Zone T 5NS (Ab Eb D G F#) which the changes gear constantly until the final resolution note.

The musical score is written on a single staff in 4/4 time. It features a variety of chords and rhythmic patterns. The chords are: D-7, D7alt, G-7, Bb7, A7, and B-7. The rhythmic patterns include triplets, sixteenth notes, and sixteenth rests. The score is divided into sections with blue and purple annotations: ACC (Accents), DEC (Decays), BKN (Bent Notes), and ZT (Zig Zag). The score is written on a single staff with a key signature of one flat (Bb).

Analysis of Notation 4.48

Bars 1 – 2

Starts with a 3NS (E F C#) sounding an F augmented arpeggio over a D minor chord which indicates a D melodic minor tonality then leaps up the interval of a tritone to the note B which starts the next 3NS (B A F) consecutive intervals of a major second and major third. This 3NS intervallic combination is common to all three Zones. This obtuse and slightly dissonant phrase beginning leads into a D minor ninth arpeggio which resolves on (E), the ninth of D minor. The entire phrase moving dissonant to consonant over D minor.

Bars 3 – 5

A 4NS with a gear change starting on beat 2 which exacts immediate dissonance (F# Bb F Eb) over D minor, but upon analysing its function, its intent is as a dominant approach to the note (D). This 4NS cell lasts one beat before changing gear to triplets defined by consonant note choices until its temporary dissonant resolution to the note (F#) over a G minor chord. This appears to be the end of the phrase but beat 2 has a short Catalytic Gear burst of connecting sextuplet grouping resolving on the note (E). This briefly sustained major sixth interval generates tension and a harmonically ambiguous tonality over G minor.

Bars 6 – 11

Short melodic phrases illustrating the organic synthesis and desired control over many varying triplet gear permutations which start on different partials creating an elasticity of phrasing through accelerations, decelerations and broken rhythmic concepts. Within these phrases are a few 3NS at each of the resolution points.

Bars 12- 14

Is one triplet gear phrase articulated two ways. The first way is accents on the first two triplet partials creating a slight poly-rhythmic accelerations with a start/stop effect. The second way occurs by accenting the first and third partials fabricating a lazy swung feel and all these broken triplet gears adds interest to the diatonic note choices.

Bars 15 – 17

This phrase accelerates into broken sixteenth gears then an immediate gear change to triplets which decelerate to quarter note resolution in Bar 16 on beat 1 of D7alt. Beat 2 of Bar 16 immediately accelerates into sixteenth Gears with a consonant Zone 4NS (F# A G Eb) over a

D7alt harmony resolving into G-7 with a conventional inside jazz line extending into the lower register of the saxophone.

Bars 18 – 22

Starts with an acceleration of broken triplets off the second partial of beat which decelerates into two quarter notes on beats 1 and 2 of Bar 19 creating harmonic tension with the notes (E C#). An immediate gear change begins a phrase of broken sixteenth notes creating a lot of dissonance and harmonic ambiguity and tension that propel a complete sixteenth note line through Bars 20 and 21 full of chromaticism and dissonance via a Zone X 5NS and a Zone T 5NS. The end of the phrase happens with a dissonant to consonant 3NS (F#, C# and C) in Bar 22.

Bars 23 – 24

There is a dramatic change of Catatlytic Gears into sextuplets full of harmonically ambiguous Zone 3NS content and chromaticism which accelerates the line creating a vast ration difference with the polyrhythmic elements along with harmonic tension which resolves in beat 4 of Bar 24.

Note:

[Appendix B provides two further Zone Elastic Improvisation Demonstrations]

Part 4 Conclusions

The realisation from extensive technical and contextual practise of synthesising Zone variations with poly-rhythmic gears is the elastic polyrhythms create metric ambiguity in the same way Zone phrasing creates harmonic ambiguity. The insights processed through consistent and methodical poly-rhythmic gears (elastic) improvisational practise, when they transform to being innate and intuitive, over time, translates into organic contextual performance. These intuitive choices include:

- What is the rhythmic gear being used?
- What is the Zone variation being used?

- How will a gear affect the melodic intent over any given harmonic setting? Is it to be harmonically ambiguous all the time? Is it to be consonant or dissonant all the time? Is it to be consonant then dissonant or dissonant then consonant? The perception of the Zones in these circumstances present varying melodic versus harmonic ramifications.
- Is it an accelerated gear? – the perception and understanding of melodic versus harmonic properties will become less distinct
- Is it a decelerated gear– the perception and understanding of melodic versus harmonic properties will be more readily comprehensible
- Will the phrase start on a partial of a rhythmic gear and if so, what notes will be naturally stressed or articulated on a downbeat? Will either of these be consonant or dissonant? Will the gear be accelerated or decelerated?
- What are the rhythmic values or duration of the notes in relation to the harmony and where are they placed within the phrase? Are they consonant or dissonant? Are they part of the harmony (within the bar) or presented in anticipation
- Do the Zone elastic phrases create forward momentum?
- What notes are to be punctuated and articulated?
- Apply the use of multiple gears in any phrase to create surprise and unexpected movement of sound as opposed to non-creative predictable rhythmic blocking

These realisations are the very premise for the genesis of this research influenced heavily by my interpretations from listening to the improvisational performances of Jerry Bergonzi and Sonny Rollins (see 1.5). Eric Nisensen quotes Sonny Rollins:

I use a variety of systems...What I'm trying to do is to get to the point where I can have a really complete expression of what I'm thinking about...That is what I am looking for, that's what I'm trying to get to. (Nisensen, 2000)

Part 5: Zonal Elastics

Part 5 is the culmination of this research and introduces a new improvisational ideology termed as *Zonal Elastics*. It demonstrates broader applications of synthesis through transcription and analysis of real-time performances. *Zonal Elastics* is a new language and state of organic improvisational creativity that has synthesised prior knowledge, Zone Conceptions and their gear transformations in conjunction with elements of elasticity.

Chapter 10 Zonal Elastics

10.1 Zonal Elastics Aesthetics

Zonal Elastics is a new language and state of organic improvisational creativity that has synthesised prior knowledge, Zone conceptions and their phrasing transformations of elasticity. It is the state of playing, encompassing everything that I have learnt about the saxophone, music, theory, harmony rhythm, incorporating all the Zone language and gear elasticity into a personal sound. Zonal Elastics is a universal language and musical conception that is accessible for all and can be customised for individual needs and therefore assimilated differently, producing varying outcomes for everyone. It provides the improviser with a methodology and practice models that promote original thought and most importantly instantaneous problem solving, a trait all improvisors needs to possess. Every person has had different instruction and prior learning. All this knowledge, personality traits and life experience will all determine similar content but different outcomes of expression.

Zones were designed to produce harmonic ambiguity at their very essence. I never completely liked spelling out chord changes the way bebop musicians did and certainly not what others were doing around me. I always tried to find my own path. I always considered myself to be an *inside* style of player with exploratory fringes of external chaos and a yearning for pushing boundaries, no matter the outcome or success. Mistakes are a part of life and if you are not reacting and researching on the band stand then it will not matter how much you practise. Individuality is a lonely space and always trying to find the internal pathway, means facing rejection, people not understanding what you trying to achieve.

Zones were designed to not have a linear directional sequence, such as modes and pentatonics and other scale sequences. Zones needed to be different, they needed to challenge my melodic and technical acumen to present new language, and this has been achieved. Zones also needed to have a harmonically ambiguous aesthetic and sound, and they do by having the sonic ability to be superimposed over any chordal structure or harmonic situation.

The most interesting and compelling albeit memorable moments in an improvisation is the strength and element of surprise that rhythmic contributions can produce. Rhythm transforms/ transports musical notes to another level/dimension. This extra dimension is available to everyone and provides complete freedom from the constraints of metrically organised musical notation and formal constructs. Through practising the various rhythmic gears, a new spatial awareness becomes evident and produces stronger timekeeping abilities, strong musical thoughts and the ability to freely let go of all logic and reason.

Listening back on the recordings in this research with honest reflection I can say wholeheartedly, for the first time in a long time, I am enjoying my musical improvisations and the inspiration the compositions provide; as vehicles for improvisational creation. It is, however, a constant work in progress. The foundational conceptions and practices of Zonal Elastics allow for such adjustments without detracting from its core essence. It is enthralling, and well-worth all the years of hard work navigating the development of a practise to performance process. The reward of Zonal Elastics is free play.

10.2 Zonal Elastics: Improvisational Approach

How do I begin conceiving of Zonal Elastics improvisations? How to begin implementing Zonal Elastics philosophies over jazz standards (conventional terrain), original compositions (new terrain) and modal vamps (one chordal terrain)? These all require varying subtleties of thought and consideration. How to be musical and creative using a new language? The infant stages require direct and a forced referencing of Zone material, however contrived, but these injections allow for informed musically appropriate decisions to be made for the next attempt and the next. Gradually, the understanding and execution of Zonal Elastics concepts become an intuitive and natural act.

Some aesthetic considerations that crossed my mind. The ability to communicate an *inside* line, allowing small excursions of Zone Elastic content then instantly returning to the *inside* line. Over time, a greater in-depth understanding of the Zones personalities and intentions allow for longer zonal excursions creating the deliberate harmonic or rhythmic ambiguity against the harmonic template and the tempo. Once the melodic considerations and harmonic

terrain are aligned then the elasticity of phrasing can begin usurping control of the improvisational direction.

All the musical knowledge learnt in crafting an improvisation: the melody, the *inside line*, conventional ways of playing *outside* the key, direct and indirect Zone influences upon the phrasing, the command of rhythmic gears, innate understandings of each beat, each bar and formal structures, knowledge of all starting and resolution points, the ability to inject accelerative and decelerative rhythmic qualities and the intuitive execution of gearing shifts at will and above all being musical. For Zonal Elastics to be a success these conceptual ideologies need to be ever-present in establishing their own path of participation, thus creating intrigue and acceptance from the performer the audience and most importantly the music.

This is a time where years of discovery, preparation and synthesis of ideologies meets real-time performance. Zonal Elastics has completely reconstructed my attitude to improvisation and composition. The following live performances are testament to the practised applications and dedication to my new language and philosophy of Zonal Elastics.

Zonal Elastics Legend for Transcription Analysis

[All tenor saxophone transcriptions are notated in Bb Pitch, sounding a whole step below the written pitch. For example: when a C is notated it will sound Bb.]

The following analysis icons will appear above or below the stave and musical notation:

Analysis Legend:

Analysis placed **underneath** the notation:

- **ACC** Acceleration (elasticity) placed underneath the notation
- **DEC** Deceleration (elasticity)
- **BKN** Broken rhythms indicating abrupt starts and stops (elasticity)

Analysis placed **above** the notation:

- **+** (symbol) Dissonance
- **ZK-----** Zone K and derivative Five-note Shapes (5NS)
- **ZT-----** Zone T and derivative Five-note Shapes (5NS)
- **ZX-----** Zone X and derivative Five-note Shapes (5NS)

Analysis symbols **surrounding** the notation (see 7.5):

- (Rectangle) Zone Four-note Shapes (4NS)
- (Oval) Zone Three-note Shapes (3NS)



Time-stamp Analysis:

All my saxophone solo analysis will be via time-stamp analysis

1.23 represents 1 minute and 23 second mark

Chapter 11 Zonal Elastics Improvisation Analysis

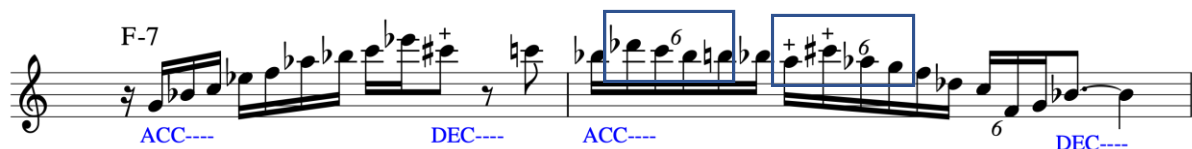
11.1 ‘Shapeshifting’ (Coffin, S. 2010)

[Sean Coffin (Tenor Saxophone) Simon Barker (Drums) Karl Dunncliff (Bass) Greg Coffin (Piano)]

Notation 5.1 Example 1

Audio 5.1 <https://youtu.be/BkknAUUNto0>

[Audio Timestamp: 2.25 – 2.31]



Bar 1 - 2

The groove or pulse for ‘Shapeshifting’ is sixteenth notes, which means that a melodic acceleration would require a rhythmic subdivision greater than a ratio of 4 notes to 1 beat (4:1), which would be quintuplets (5:1) or sextuplets (6:1). A deceleration would require a rhythmic subdivision less than a ratio of 4 notes to 1 beat (4:1), which would be triplets (3:1) or eighth notes (2:1). This example displays a gear change from a driving ascending minor pentatonic sixteenth gears with a sudden resolution to an outside note creating harmonic tension derived from the Poly-Pentatonic Sixth Cycle (C#). This note is accentuated by being articulated on the third sixteenth partial, essentially the (3+) which creates forward momentum. a downbeat rest on the next beat. The note (C) starting on the (4+) sets up a Catalytic Gear acceleration to sextuplet gears. This deliberately controlled gearing shift highlights phrasing elasticity with Zone content consisting of two 4NS (Db C Bb B) and (A C# Ab G) which because of their dense shapes and chromaticism create harmonic ambiguity.

Notation 5.2 Example 2

[Audio Timestamp: 3.39 – 4.02]

The musical notation consists of five staves of music in 4/4 time, starting with a C-7 chord and a key signature of one flat. The notation includes various rhythmic patterns, accidentals, and gear change indicators. Blue boxes highlight specific rhythmic groups, and red dashed lines indicate Zone T (ZT) transitions. Blue dashed lines indicate acceleration (ACC) and deceleration (DEC) points.

Staff 1: C-7, ACC--- (blue dashed line), blue box around the final eighth notes.

Staff 2: ZT--- (red dashed line), DEC--- (blue dashed line), ACC--- (blue dashed line), blue box around the final eighth notes.

Staff 3: ZT--- (red dashed line), ZT--- (red dashed line), ZT--- (red dashed line), ACC--- (blue dashed line), blue box around the final eighth notes.

Staff 4: DEC--- (blue dashed line), blue box around the first eighth notes, blue box around the second eighth notes, blue box around the third eighth notes, blue box around the fourth eighth notes, blue box around the fifth eighth notes, blue box around the sixth eighth notes, blue box around the seventh eighth notes, blue box around the eighth eighth notes.

Staff 5: ACC--- (blue dashed line), DEC--- (blue dashed line), blue box around the first eighth notes, blue box around the second eighth notes, blue box around the third eighth notes, blue box around the fourth eighth notes, blue box around the fifth eighth notes, blue box around the sixth eighth notes, blue box around the seventh eighth notes, blue box around the eighth eighth notes.

Bars 1- 10

Following a held altissimo note (Bb), an acceleration falls into a sixteenth gear line. Comprised of mostly inside note choices, chromaticism creates harmonic tension leading to an inside to outside 4NS shape (F G F# C#) at the end of Bar 2. Bar 3 starts with a 3NS (Eb Gb AB) acting as a chromatic side-slip into Zone T (D F G C# F#), moving into a decelerative gear change to triplet gears. It immediately launches into an acceleration of sextuplet gears which hover with consonance and dissonance, resolving briefly on the sixth partial of the sextuple beat tied over into beat 2 of Bar 5. Another immediate sextuplet gear acceleration presented through a Poly-Zonal Cycle (Fourth Cycle); Zone K phrase is displaced across sextuplet gear pulsations. Each Zone starts on different partials (see Bars 5 and 6) adding to the elasticity and harmonic ambiguity over the D minor vamp. The final phrase (Bars 6 – 10) leaps into sixteenth gears at the end of Bar 6 moving through different registers and utilising Zone 3NS and 4NS creating fluctuations of harmonic ambiguity.

11.2 ‘Stablemates’ (B. Golson, 1955)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Jacob Graham (Bass) Aaron Blakey (Piano)]

Notation 5.3 Example 1

Audio 5.2 <https://youtu.be/SKZ5qzTQcvs>

[Audio Timestamp: 1.14 – 1.35]

The image displays four staves of musical notation for the piece 'Stablemates' by B. Golson. The notation is in 4/4 time and features various chords and rhythmic markings. The first staff shows chords F#-7, B7, F-7, Bb7, Ebmaj7, A-7b5, and D7b9. The second staff shows Bb-7, Eb7+, Abmaj7, and G-7, with a blue dashed line labeled 'ACC-----' and a purple dashed line labeled 'BKN-----'. The third staff shows C7, F-7, Bb7, and Ebmaj7, with blue dashed lines labeled 'ACC-----', 'ACC-----', and 'ACC-----', and a blue dashed line labeled 'DEC-----'. The fourth staff shows F#-7, B7#, F-7, Bb7, and Ebmaj7, with blue dashed lines labeled 'ACC-----', 'ACC-----', 'DEC- ACC-----', 'DEC- ACC-----', and 'ACC-----'. There are also blue circles highlighting specific notes in the first and fourth staves.

Bars 1 – 7

This excerpt displays the results of Zone Elastic practises for eighth note and sixteenth gears. Bars 1 – 7 show traditional eighth note jazz motific lines displaying different starting notes, direction of phrases and displacement of phrases (see Bar 1 and Bars 5 and 6). The suspended effect of the rhythmically played note (G) in Bar 4 breaks up the conformity of the traditional swing phrasing.

Bars 8 - 17

Bar 8 starts on beat 2 with an acceleration of broken and fragmented sixteenth gears across the next (9) bars providing abrupt sixteenth gear phrases which create accelerations and decelerations. These also contribute to the constant changes in momentum, articulations and harmonic tension. Flattening of the sixteenth note line adds another dimension of interest and interpretation of the time, something that was developed in Part 3.

Notation 5.4 Example 2

[Audio Timestamp: 3.21 – 3.34]

The musical notation consists of four staves. The first staff begins with a treble clef and a key signature of one flat (Bb). It contains several measures of music with annotations: 'ACC-----' (blue), 'DEC-' (blue), 'ACC----' (blue), and 'BKN-----' (purple). Chords are marked above the staff: G-7, Ab7, and ZT (circled in blue). The second staff continues the notation with 'A7' (circled in blue), 'ZK-----' (red), 'D7' (blue), 'Db7' (blue), and 'DEC.' (blue). The third staff has 'C7' (blue), 'B7' (blue), 'ACC-----' (blue), 'ACC-----' (blue), 'ACC-----' (blue), and 'DEC-----' (blue). The fourth staff includes 'Bb' (blue), 'F#-7' (blue), and 'B7' (blue). Various other annotations like '+', '5', and '6' are present throughout the notation.

Bars 1 - 3

The initial phrase starts on Bar 1, beat 4 with a dominant resolution into two consecutive Zone 3NS (G# Eb D) (D G# F#) creating dissonance and tension which continues with broken sixteenth gears with all different starting points and phrases crossing bar lines. This initial phrase comes to rest on the third sixteenth partial of beat 4 in Bar 2 having melodically outlined a Zone 3NS (F# A Ab) and Zone T 5NS (Ab Eb D G F#) creating slight harmonic tension with chromaticism.

Bars 4 - 7

Starts with a Zone 4NS (G A C# Ab) and continues with constant broken sixteenth gears providing the listener with a different perspective of time and note organisation over the quarter note swung pulse. The melodic line unfolds through Zone K (F Ab G F# D) a Zone 3NS (D G F#) moving vertically into a Zone 4NS (Ab G Eb D) creating much harmonic ambiguity and

tension which resolves on the third sixteenth partial of beat 4 with the note (E) in harmonic anticipation of (C7) chord in Bar 7.

Bars 7 - 10

These bars demonstrate an innate knowledge and assimilation of Zone techniques (Zone K and Zone 4NS), rhythmic elasticity and playing through chord changes creating elasticity of time and harmonic ambiguity and resolution.

11.3 ‘Old Milestones’ (J. Lewis, 1947)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Jacob Graham (Bass) Aaron Blakey (Piano)]

Notation 5.5 Example 1

Audio 5.3 https://youtu.be/hV_IJs9nBPY

[Audio Timestamp: 2.08 – 2.26]

The image displays four staves of musical notation for the piece 'Old Milestones' by J. Lewis. The notation is in 4/4 time and features various chords and melodic lines. Key annotations include:

- Staff 1:** Chords D-7, G7, Cmaj7, F7, Bb-7, and Eb7. A blue box highlights a melodic phrase in the G7 chord, and a red dashed line labeled 'ZT' is above the F7 chord.
- Staff 2:** Chords D-7, Eb-7, C#-7, F#7, D-7, G7, and Cmaj7. A blue box highlights a melodic phrase in the C#-7 chord, and a blue circle highlights a melodic phrase in the D-7 chord.
- Staff 3:** Chords D-7, Cmaj7, and F7. Red dashed lines labeled 'ZK' are above the D-7 and Cmaj7 chords. Blue annotations 'ACC-----5' and 'DEC-----' are below the staff.
- Staff 4:** Chords Bb-7, Eb7, D-7, Eb-7, C#-7, and F#7. A blue circle highlights a melodic phrase in the Eb-7 chord. Blue annotations 'ACC-----5' and 'DEC-----' are below the staff.

Bars 1 - 8

This entire excerpt demonstrates the synthesis of Zone concepts and elastic practices comprising of eighth note lines constantly tingeing upon harmonic ambiguity, using chromatic approach and Zone K and X Five-note, Four-note and Three-note Shapes. The constant changes of direction and the location of the dissonant choices in the melodic line presented in Bar 1 – 8 promote an anticipation of greater things to happen.

Bars 9 -11

Has three Zone K Catalytic Gear short bursts of sound with different starting (beat 2 and beat 1 respectively) and resolution points (beat 3 and beat 2 respectively). Zone K in bar 9 strategically begins on beat2 on a chord tone and ending on a chord tone, Zone K in bar 10 on beat 1 displacing the phrase burst and Zone K in bar 11 begins on a non-chord tone and

ending on a chord tone creating a melodic statement of harmonic ambiguity. The Zone K quintuplet phrase in bar 11 presents with inside and outside harmonic properties with the notes Eb and F# are outside of the tonality of Cmaj7 and the last two notes, (E) and (C) are inside, being the third and resolution to the tonic.

Notation 5.6 Example 2

[Audio Timestamp: 3.36 – 3.51]

The image displays four staves of musical notation for Example 2. The first staff shows a sequence of chords: D-7, Eb-7, C#-7, F#7, D-7, and G7. The second staff begins with Cmaj7 and includes annotations: ZK (red dashed line), ACC (blue dashed line), and DEC (blue dashed line). The third staff includes G7, ZT (red dashed line), Cmaj7, F7, and ZK (red dashed line). The fourth staff includes Bb-7, Eb7, D-7, Eb-7, ZT (red dashed line), and C#-7. Various other markings like '5+', '+', and circled notes are present throughout the notation.

Bars 1- 4

Presents an elasticity of phrasing with broken triplet accelerations and quarter triplet decelerations, Bar 3 and 4. Harmonically there is an intentional effort to start diatonically and anticipate the harmony, creating melodic and harmonic forward motion along with the rhythmical phrase design.

Bars 5 - 6

There are Poly-Zonal Cycles (Fourth Cycle) of Zone K Catalytic (quintuplet) Gearing phrases, which start alternately on chord tones challenging the tonality with their dense shapes and sequence of notes within the range of a tritone.

Bars 7 -11

Has Zone T and Zone K influenced material changing gears into flattened sixteenth gear phrasings with inside harmonic shifting back and forth between dissonant options. This dissonance and contours of the phrases create tension and release along with forward momentum within the entire phrase.

11.4 ‘The Zone Age’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Karl Dunncliff (Bass)]

Notation 5.7 Example 1

Audio 5.4 <https://youtu.be/hB7hkkUt3as>

[Audio Timestamp: 0.28 – 0.54]

The image displays four staves of musical notation for a tenor saxophone. The notation includes various rhythmic markings such as triplets, quintuplets, and specific phrasing like 'D-11', 'BKN', 'ACC', 'DEC', and 'ZK'. The notation is written in 4/4 time and features a mix of eighth, quarter, and half notes, with some notes beamed together in groups. The notation is color-coded with blue and purple lines and text.

Bars 1 - 6

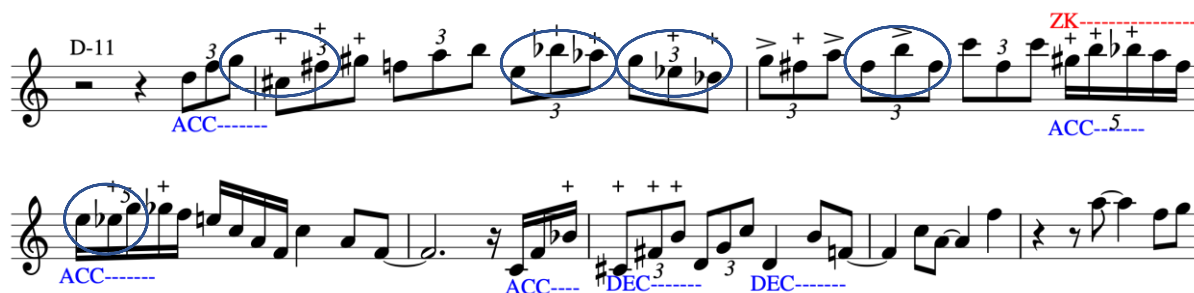
The initial five bar phrase of this excerpt has a delayed resolution into a D minor vamp. The broken triplet gear in the Bar 1 and 2, set up the rhythmic opposition against the pulse of the vamp and contextualises the acceleration in beat 2 bar 3, and the gradual decelerations of the (5:2) quintuplet phrase and the (3-2) quarter note laid-back triplet feel of bar 4. This is controlled phrasing elasticity.

Bars 7-14

Begin after a long silence of approximately 2 bars adding context the broken triplet improvisation, beginning with three consecutive Zone K Poly-Zonal Cycles (Fourth Cycle) creating a fluctuation of harmonic ambiguity over D minor. The broken triplet feels adds interest through its melodic strength and its playful recognisable nature.

Notation 5.8 Example 2

[Audio Timestamp: 2.18 – 2.30]



Bars 1 – 4

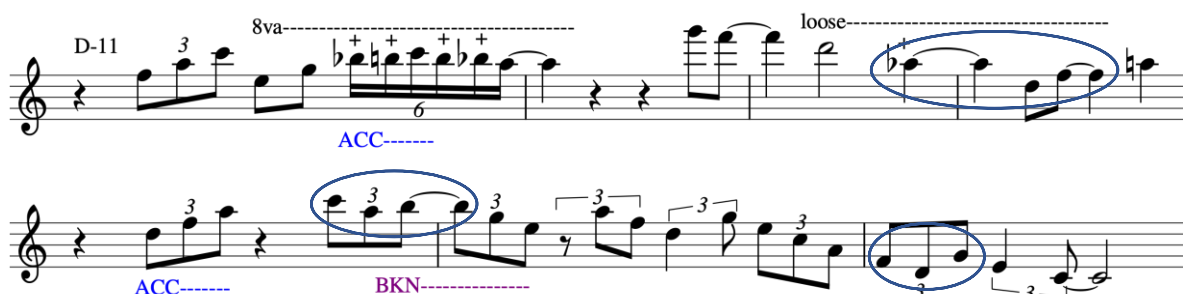
Bar 3 consists of melodically connected Zone 3NS which have different contours performed with articulated eighth note triplets grouped in two's, something which masks the derivative nature of a triplet grouping of (3). The triplet feel is rapidly accelerated on beat 4 bar 3, with Zone K (G# B Bb A F) which decelerates in bar 4, to sixteenth notes and then to eighth notes.

Bars 5 – 8

This phrase decelerates rapidly with a constant gear changes from sixteenth notes to triplets to eighth notes. A good example of organic Zonal Elastic improvisation.

Notation 5.9 Example 3

[Audio Timestamp: 3.18 – 3.30]



Bars 1 - 7

These two phrases exhibit at the outset, a controlled accelerated phrase in the altissimo range. The second phrase, Bar 3 and 4, groove in a cascading broken triplet gears and resolving into the lower register of the saxophone.

11.5 ‘Shapeshifting’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Julien Wilson (Tenor Saxophone) Sam Bates (Drums) Sam Anning (Bass) Mark Fitzgibbon (Piano)]

Notation 5.10 Example 1

Audio 5.5 <https://youtu.be/oqVRkh-2Yo8>

[Audio Timestamp: 0.31 – 1.05]

The musical notation is presented in seven staves, each containing a sequence of notes and rests. The notation includes various annotations and markings:

- Staff 1:** Starts with a treble clef and a 4/4 time signature. The first measure is marked 'F-11'. The second measure has a triplet of eighth notes marked '3' and 'ACC-----'. The third measure has a half note marked 'BKN-----'.
- Staff 2:** Continues the sequence. The first measure has a half note marked 'ACC-----'. The second measure has a half note marked 'ACC-----'.
- Staff 3:** Continues the sequence. The first measure has a half note marked 'DEC-----'. The second measure has a half note marked 'ACC-----'.
- Staff 4:** Continues the sequence. The first measure has a half note marked 'DEC-----'. The second measure has a half note marked 'ACC-----'.
- Staff 5:** Continues the sequence. The first measure has a half note marked 'DEC-----'. The second measure has a half note marked 'ACC-----'.
- Staff 6:** Continues the sequence. The first measure has a half note marked 'DEC-----'. The second measure has a half note marked 'ACC-----'.
- Staff 7:** Continues the sequence. The first measure has a half note marked 'ACC-----'.

Additional markings include: 'C-11', 'Amaj7#5', 'Bb-11', 'G7alt', 'ZK-----', '5', '6', and various accidentals (sharps, flats, naturals) and articulation marks (accents, slurs).

Bars 1 -8

This improvisational excerpt starts with a sixteenth note ascending line connecting with broken sixteenth lines with heavy articulations and accentuations creating energetic forward momentum. In bar 3 the line deliberately sustained an (F#) dissonant repeated note, articulated five times creating intense harmonic tension with a half-step melodic device and releasing into an F minor pentatonic line. Bar 5 starts a wide range sixteenth gear phrase starting on the second partial and moving freely between inside and outside notes creating harmonic ambiguity until its resolution on then third sixteenth note partial in bar 8.

Bars 9 – 15

These bars enact a motific concept of a high registered sustained notes followed by a sixteenth gear line starting on the second partial of beat 2 with a dissonant 3NS (Db C Ab) connecting shortly after with three Zone 3NS (Bb Db C) (Bb B F#) and (F Bb A) moving chromatically into another 3NS (E Eb G) which combined create constant harmonic ambiguity over D minor. This phrase reaches a climax, in bar 15, where a theatrical gearing shift occurs as a complete deceleration and fluctuation of a quintuplet (5:2) rhythmic elasticity of Poly-Zonal Zone K Fourth Cycle transpositions then accelerates into another Catalytic rhythmic sextuplet line featuring Zone K (Eb Bb D E C#) and (C G B C# Bb) with other 3NS (G# Bb G) and (A G Eb) material which act very dissonantly over the harmony of D minor. This is about letting go of all inhibitions and allowing all the intuitively informed resources to create a perfect Zonal Elastics phrase.

11.6 ‘The Zone Age’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Tom Botting (Bass) Peter Koopman (Guitar)]

Notation 5.11 Example 1

Audio 5.6 <https://youtu.be/oP98QydZ1Yo>

[Audio Timestamp: 0.16 – 0.50]

The musical notation is presented in four systems. The first system begins with a key signature change to Eb-11 and includes annotations for 'ACC' (Acceleration), 'DEC' (Deceleration), and 'BKN' (Broken). The second system features a key signature change to D-11 and includes 'ACC' and 'DEC' annotations. The third system includes 'ZX' and 'ZT' annotations. The fourth system includes 'ACC' and 'DEC' annotations. The notation is annotated with blue and red markings, including 'ACC' (Acceleration), 'DEC' (Deceleration), 'BKN' (Broken), 'ZX' (Zone X), and 'ZT' (Zone T). The notation is divided into four systems, each with a key signature change indicated above the staff: Eb-11, D-11, and two systems with no key signature change indicated.

Bars 1 - 13

The opening phrase of this improvisation is a diatonic acceleration of eight note triplets in bar 1, followed by a cascading broken triplet line into a sextuplet pentatonic line resolving into the ninth of D minor in bar 4. In Bar 5 – 13 there are gear changes to eighth notes comprising of Zone material creating consonant and dissonant lines with added chromaticism and shape of the phrase.

Bars 14 – 18

These Bars demonstrate the ideologies of Zonal Elastics by changing gears three times, broken sixteenth notes, quintuplets and triplet rhythms combined with Zone X 5NS connecting with a Zone T 5NS and a 3NS which creates anticipation and forward momentum.

Notation 5.12 Example 2

[Audio Timestamp: 0.57 – 1.25]

The musical notation consists of four staves. The first staff begins with a treble clef, a key signature of one flat (B-flat), and a 4/4 time signature. It features a triplet of eighth notes (D, E, F) marked with a '3' and a 'D-11' above it. The second staff continues the melody with various rhythmic patterns, including triplet eighth notes and a quintuplet of sixteenth notes. The third staff shows a triplet of eighth notes and a quintuplet of sixteenth notes. The fourth staff features a triplet of eighth notes and a quintuplet of sixteenth notes. Annotations include 'BKN' (Broken Note) and 'ZT' (Zone T) in red, and 'ACC' (Accented) and 'DEC' (Decelerated) in blue. Blue boxes highlight specific melodic phrases, and blue circles highlight specific rhythmic patterns.

Bars 2 – 7

There are triplet accents are on the third partial of the triplet on beats 1 and 3 and then in Bar 4 there is a seamless displacing the same triplet accents to beats 2 and 4.

Bars 8 – 11

This phrase displays Zone material and traditional bebop style of line construction.

Bars 12 – 15

There is a series of gear changes comprising of a mixture of eighth note and broken triplet gears launching on beat 4 of Bar 13 into a sixteenth gear line chromatically derived and containing two separated Zone T 5NS combined with strategically located chromaticism creating a balance of consonant and dissonant momentums resolving diatonically.

Notation 5.13 Example 3

[Audio Timestamp: 2.01 – 2.12]

The musical notation consists of two staves. The first staff begins with a treble clef and a 4/4 time signature. It contains several triplet markings (indicated by a '3' and a bracket) and a 'ZT' (Zone Transition) marking in red. Below the staff, there are labels: 'ACC-' (blue), 'BKN-' (purple), and 'ACC-----' (blue). The second staff continues the sequence, featuring more triplet markings and a 'DEC' (Deceleration) marking in blue. Below this staff, there are labels: 'ACC-----' (blue), 'DEC---' (blue), 'ACC-----' (blue), and 'ACC-----' (blue). The notation is annotated with various rhythmic markings and zone transition labels.

Bars 1 - 6

This example is preceded by a very melodic phrase with longer held notes which is why the sequence of broken triplet perfect fifths such an elastic and pointillistic impact. These internal triplet accents give the triplet line in Bar 3 a fluid groove, presenting Zone T 5NS moving into a Zone 3NS, and a 4NS moving inside to outside over the harmony of D minor and resolving to a major third dissonance on beat 1 in Bar 4. The rests in Bar 4 lend a false sense of rest when a gear change occurs starting on the third sixteenth note partial of beat 3 with an accelerated sixteenth note short statement, followed by another gearing shift starting on the second triplet partial, decelerating to broken triplets and a fast cascading sextuplet Catalytic Gear variation arpeggiation in Bar 6 into a quiet resolution of phrase.

11.7 ‘Zoning Laws’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Tom Botting (Bass) Peter Koopman (Guitar)]

Notation 5.14 Example 1

Audio 5.7 <https://youtu.be/YKUmyCnn81U>

[Audio Timestamp: 0.24 - 0.1.04]

The musical notation is presented in six staves. The first staff begins with a D-11 chord and a ZT (Zone T) cell. The second staff features a G-11 chord and a D-11 chord, with a blue box highlighting a triplet of eighth notes. The third staff includes Bb7, A7, and D-11 chords, with a blue box highlighting a triplet of eighth notes. The fourth staff starts with a D-11 chord and a blue box highlighting a triplet of eighth notes. The fifth staff features G-11, D-11, and Bb7 chords, with a blue box highlighting a triplet of eighth notes. The sixth staff includes A7, D-11, and D-11 chords, with a blue box highlighting a triplet of eighth notes. Various annotations include 'ZT', 'ACC', and 'DEC' with dashed lines, and '+' signs above notes.

Bars 1 - 18

This improvisational excerpt begins with two Zone T 5NS cells. The first Zone 5NS was chosen because it ends on the note (B), the sixth on (D-7) and creates tension as it is sustained for (6) beats moving inside to (C) then outside to (C#), basically a reverse line cliché: The next Zone 5NS is contracted and rhythmically displaced whilst masking its presence and setting up an essentially eighth note line creating harmonic ambiguity and suspense.

Bars 19 - 20

This phrase changes gear to broken triplets followed by another change of gears to sixteenths in Bars 21 & 22 and then a final strategically placed cascading triplet anticipation of the resolution into the top of the minor blues chorus. A well-controlled and narrated two choruses of Zonal Elastics.

Notation 5.15 Example 2

[Audio Timestamp: 1.13 – 1.32]

The musical notation consists of three staves. The first staff shows a melodic line starting with a D-11 chord, followed by a Bb7 chord, then an A7 chord, and ending with a D-11 chord. The notation includes a broken triplet (6) and a cascading triplet (3). The second staff continues the melodic line with a D-11 chord, followed by a G-11 chord. The notation includes a cascading triplet (3) and a cascading triplet (3). The third staff shows a melodic line starting with a D-11 chord, followed by a cascading triplet (6), and ending with a cascading triplet (3). The notation includes a cascading triplet (6) and a cascading triplet (3). The notation is annotated with various rhythmic patterns (ACC, DEC, ZT, BKN) and articulation (6, 3).

Bars 1 – 8

This example even in the first 5 bars show multiple gearing changes and is highlighted by melodic temporary resting places that move on quickly, which is the elasticity of the initial phrase. The cascading anticipatory triplet run outlines a D minor triad jumping up to the 6th (B) creating tension before resolving.

Bars 9 - 13

Starts with a Zone T 5NS (A Bb F G# G), itself and inside to outside to inside Zone over D minor creating harmonic ambiguity connection with a gear change from broken triplet gears to sixteenth gears creating melodic tension throughout the phrase. Bars 9 – 13 accelerates into a sixteenth run then a Catalytic Gear accelerates into the dissonant resolution (F#).

Notation 5.16 Example 3

[Audio Timestamp: 1.39 – 1.59]

The musical notation consists of three staves. The first staff begins with a D-11 chord and features a triplet of eighth notes. The second staff starts with a G-11 chord, followed by a triplet of eighth notes, and then a triplet of quarter notes. The third staff begins with an A7 chord, followed by a triplet of eighth notes, and then a triplet of quarter notes. Various Zonal Elastics (ZT, ZK) are marked with ACC (Accelerated) and DEC (Decelerated) annotations. The notation includes many triplets and some quintuplets, with some notes circled in blue.

Bars 1 – 7

This example is a full 12 bar minor blues chorus with an emphatic opening statement, traditional in nature. The space between Bars 1-3 and Bars 4-7 accentuate and lend greater attention to the triplet phrasing comprising of 4NS and 3NS Zone material. In Bars 4 and 5 the triplets are played in groups of two and in Bars 6 and 7 these triplets are articulated in groupings of 4, comprising of 4NS and 3NS Zone material.

Bars 8 – 10

This phrase employs a rhythmic sequence of Zone T 5NS triplets delayed and rhythmically displaced by starting on a different beat, which connects all to the final phrase in Bars 11-13

Bars 11 – 13

This final phrase weaves its chromatically designed undulations, creating harmonic tension and ambiguity. Bar 12 explodes with an accelerated Catalytic Gearing of quintuplets utilising Zone K 5NS cells.

Notation 5.17 Example 4

[Audio Timestamp: 2.39 – 2.45]

The musical notation consists of two staves. The first staff begins with a treble clef and a key signature of one sharp (F#). It starts with a whole rest, followed by a quarter note G4, then a sextuplet of eighth notes (A4, B4, C5, B4, A4, G4) marked '6' and 'ACC-----'. This is followed by a deceleration marked 'DEC-----'. The second staff continues with another sextuplet of eighth notes (A4, B4, C5, B4, A4, G4) marked '6' and 'ACC-----', followed by a deceleration marked 'DEC-----'. The notation includes various accidentals (sharps, flats, naturals) and dynamic markings (ACC, DEC) to indicate the 'Zonal Elastics' concept.

Bars 1 – 4

This phrase is everything that encapsulates and describes Zonal Elastics and simultaneously a technical control of the saxophone. This phrase comes amid a torrent of phrases as this solo builds momentum and starts with a higher altissimo accelerated sextuplet gear flurry into two eighth notes which immediately decelerate the phrase. This is immediately followed by an accelerated chromatically dense sextuplet gear from lower in the altissimo into the higher register of the saxophone. Once again, the stop and start of an abrupt gear change to eighth notes for three beats which then accelerates with a quintuplet gear the deceleration to eighth notes then a slight acceleration to triplet gears for three beats and then to finish the phrase another acceleration to sixteenth gears for two beats and resolving on beat 1. The elasticity alone creates metric ambiguity but along with the balance of Zone 4NS and 3NS and inside and outside note choices this is Zonal Elastics.

11.8 ‘Shapeshifting’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Tom Botting (Bass) Peter Koopman (Guitar)]

Notation 5.18 Example 1

Audio 5.8 <https://youtu.be/i5e4mXqN0RQ>

[Audio Timestamp: 0.38 – 0.54]

Bars 1 -2

This Zonal Elastics example begins with a heavy articulated, ascending pentatonic triplet phrase, which acts as a decelerative gearing elasticity over a sixteenth note pulsations.

Bars 3 – 5

Is an accelerated sixteenth gear phrase starting on the second partial of a sixteenth note of beat 3 with consecutive 3NS shapes which continue consonantly with a consonant to dissonant Zone 4NS and the line resolves consonantly on the fourth partial.

Bars 6 – 8

Concepts of elasticity and harmonic ambiguity are present in the three-bar excerpt. Starting with a sixteenth gear off the second partial of beat 2 propelling the phrase through a Zone K 5NS which launches a Catalytic Gear phrase of Zone K Poly-Zonal Cycles using the Fourth Cycle creating a dense level of harmonic ambiguity over the harmonic background.

Notation 5.19 Example 2

[Audio Timestamp: 1.07 – 1.3]

The musical notation consists of seven staves. The first staff begins with a treble clef and a key signature of one flat (Bb). It contains a series of sixteenth notes and eighth notes, with a 'F-11' chord symbol above the first measure. The second staff continues the melody, with 'BKN' (Broken Keyboard) markings below the first two measures and 'C-11' above the third. The third staff features 'BKN' below the first measure, 'Bb-7' above the second, 'G7alt' above the third, and 'C-11' above the fourth. The fourth staff has 'BKN' below the first measure, 'ZK' (Zone K) above the second and third measures, and 'ACC' (Accelerated) below the second and third measures. The fifth staff has 'DEC' (Decelerated) below the second measure and 'ACC' below the third. The sixth staff has 'C7ALT' above the first measure and 'DEC' below the first. The seventh staff has 'F-11' above the first measure and 'DEC' below the first. Various rhythmic markings (6, 5, 3) are present throughout the notation.

Bars 1- 7

This excerpt begins with broken rhythm and articulated sixteenth gears combining to form one elongated phrase filled with energy and forward momentum.

Bar 8 – 15

Bar 8 has an accelerated broken sextuplet gear setting up a two-beat quintuplet Catalytic Gear Change with Zone K Poly-Zonal Cycles (B D Db C Ab) and (G Bb A G# E) using the Fourth Cycle creating harmonic ambiguity with fluctuations of inside and outside notes. An immediate gear change to sixteenth note phrase follows to its resolution on the third partial of beat 4. The final phrase starts in Bar 11 with broken sixteenth notes then settles and accelerates and decelerates with a burst of sixteenth-note triplets in a motific sequence.

11.9 ‘The Zone Age’ (S. Coffin, 2023)

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Tom Botting (Bass) Peter Koopman (Guitar)]

Notation 5.20 Example 1

Audio 5.9 <https://youtu.be/bzUEIGpc0EA>

[Audio Timestamp: 0.19 – 0.32]

Bars 1 – 2

This is the opening phrase of this improvisation is very elastic begins with decelerating Catalytic Gear of a quarter-note quintuplet, ratio (5:2) immediately followed by a decelerated quarter-note triplet gear, ratio (3:2) which accelerates from the third partial with eighth notes resolving briefly and consonantly into Bar 2 (C), creating a harmonically ambiguous start of the improvisation magnified by the elasticity of phrasing.

Bars 2 – 6

In Bar 2 the next phrase begins on the third partial of beat 2 and accelerates with a gear change to sixteenth notes and launches a complex and connected intuitive performed series of four Zone 5NS, three Zone K (C F# A# B A), (F# A# B A C) and (F# A Ab G Eb) and one Zone T (D F G C# F#). The speed at which these are innately executed are testament to the practise to performance conditioning over many years creating a line of harmonic constant consonance and dissonance that it's difficult to comprehend every melodic ramification. This is Zonal Elastics.

Notation 5.21 Example 2

[Audio Timestamp: 1.57 – 2.05]

The image displays three staves of musical notation in treble clef, representing a musical phrase. The notation includes various musical symbols such as notes, rests, and accidentals. Annotations in blue include circles and rectangles highlighting specific groups of notes. Below the staves, there are labels: 'C-11' at the top left, and 'ACC-----' and 'DEC-----' repeated under the first and second staves, and 'DEC-----' under the third staff. The notation is complex, featuring many accidentals and rhythmic markings.

Bars 1 - 5

This musical phrase is a microcosm of Zonal Elastics. The Zone content is too numerous to individualise, Zone 4NS and 3NS, are integrated and synthesised within this phrase incorporating constant fluctuations of the gear changes creating elasticity, harmonic tension and release over C minor and forward momentum of the elasticity of phrasing. As mentioned previously (see 1.5) Jerry Bergonzi's influence with his elastic improvisational conceptions, exhibited in his improvisation on 'Dancing in the Dark' (Simply Put: 2009), is clearly apparent with these constant and unpredictable gear changes and wide-ranging consciousness of Zone influenced melodic sophistication.

11.10 ‘Equinox’ [Take 2 Reprise] (J. Coltrane, 1960)

[Sean Coffin (Tenor Saxophone) Aaron Blakey (Piano) Nick Jansen (Bass) Alex Young (Drums)]

Notation 5.22 Example 1

Audio 5.10 https://youtu.be/dasQ88_VeiQ

[Audio Timestamp: 0.02 – 0.29]

The following improvisational excerpt is the first three choruses of a minor blues.

The musical notation is presented in four staves, each representing a chorus of a minor blues. The first staff begins with a boxed '1' and a D-7 chord, followed by a triplet of eighth notes and an Eb minor pentatonic scale. The second staff features a D7alt chord, a C# minor pentatonic scale, a G-7 chord, and a D-7 chord. The third staff includes a D-7 chord, a Bb7 chord, a ZK (Zone Key) chord, and an A7b9 chord. The fourth staff shows a D-7 chord, a C# minor pentatonic scale, and a 6 (sixteenth) note. The notation is annotated with rhythmic and harmonic markings: ACC (Accented), BKN (Broken), DEC (Decelerated), and ZK (Zone Key).

Bars 1 – 12 (first chorus)

This improvisation starts with a rhythmical double motif of broken triplet gears. The next phrase accelerates with sixteenth gears and mimics the rhythmical motif starting on the third sixteenth partial of beat 2 and resolving on the third partial of beat 4. This phrase and the notes in Bar 4 represent a return to Poly-Pentatonic Fifth Cycle harmonic improvisation (see Chapter 2) in opposition to the harmonic setting of D minor. They ultimately demonstrate the highest level of dissonance that can be achieved through the presentation of pentatonics. As the C# minor pentatonic approaches, the G minor chord it could be concluded that it is a Poly-Pentatonic Sixth Cycle in anticipation of G minor which decelerates and resolves with broken sixteenth and dotted quarter notes to an inside resolution in Bar 8 (F). Bars 9 – 11 change gear with a sixteenth gear line playing through the changes and Zone material with three 4NS which

present mostly inside note choices. Bar 12 is Catalytic Gear accelerative set up for the second chorus.

Notation 5.23 Example 2

[Audio Timestamp: 0.30 – 0.56]

The notation consists of four staves of music. The first staff begins with a box labeled '2' and contains a D7+ chord with a sextuplet (BKN) and a deceleration (DEC). The second staff features a D7alt chord, a ZK-ZT transition, a G-7+ chord, and a Dmin6 pent chord. The third staff includes a D-7 chord, an Ebmin pent chord, a Bb7 chord, and an A7alt chord. The fourth staff shows an Ebmin pent chord and a Dmin6 pent chord. Various rhythmic markings such as '3' (triplet) and '6' (sextuplet) are present throughout the notation.

Bars 1 – 12 (second chorus)

Bar 12 is Catalytic Gear accelerative burst of notes setting up the second chorus with a Poly-Pentatonic Fifth Cycle (C# minor pentatonic superimposed over the D minor harmony), extending in a broken fashion into Bar 13 where the dissonance created resolves on (E) on the last sextuplet partial in anticipation of beat 3 Bar 1. Essentially two bars of rest reignite the perception of an acceleration to sixteenth gears containing a Zone X 5NS (E Ab G Eb D) leading into a predominately inside D7 altered chord in Bar 4. This phrase sets up two 5NS, the first Zone K (Bb A E Ab G) and decelerating to triplet gears with Zone T descending Linear Mode (Ab G F# Eb D) on beat 1 of Bar 5 which sets up a strong beat dissonance and juxtaposition of the consonance for the remainder of the phrase. Bar 7 starts a series of accelerated broken triplet gears and Zone 4NS and 3NS played the Poly-Pentatonic Fifth Cycle substitutions: D minor pentatonic to Eb minor pentatonic and harmonically extending into the Bb7 chord in Bar 9. Bar 10 has an acceleration of sixteenth gears employing inside 3NS (C# G B) and a 4NS (A Bb Db C) inside Zone material over (A7) decelerating into triplet gears superimposing Eb minor pentatonic generating harmonic dissonance and expectation of resolution which occurs in Bar 12 on (D).

Notation 5.24 Example 3

[Audio Timestamp: 0.57 – 1.30]

The notation consists of seven staves of music, each with a key signature of one flat (Bb) and a 4/4 time signature. The notation includes various chords, scales, and rhythmic markings. The first staff is labeled '3' in a box, 'D-7', and 'Amajb6 pent'. It features an 'ACC' (acceleration) marking and a 'DEC' (deceleration) marking. The second staff is labeled 'D7alt' and 'Amin pent'. It features a 'BKN' (break) marking and a 'DEC' marking. The third staff is labeled 'G-7' and 'Amajb6 pent'. It features a 'DEC' marking and an 'ACC' marking. The fourth staff is labeled 'D-7' and 'Amajb6 pent'. It features an 'ACC' marking and a 'DEC/BKN' marking. The fifth staff is labeled 'Bb7' and 'A7b9'. It features a 'BKN' marking and a 'DEC' marking. The sixth staff is labeled 'D-7'. It features an 'ACC' marking and a 'DEC' marking. The seventh staff is labeled 'G-7'. It features a 'ZK' (zero key) marking and a 'DEC' marking. The notation includes various rhythmic markings such as '3' (triplet), '6' (sextuplet), and '3NS' (three notes per staff).

Bars 1- 4

Employs A Major b6 pentatonic over D minor an alternate pentatonic substitution which produces a harmonically ambiguous sound that focuses on the major sixth and major seventh. This is creatively phrased, firstly with an acceleration of sixteenth gears and a deceleration of sustained melodic minor scale properties (C# and B) then with a slight accelerates into a series of broken triplet gears. A sextuplet Catalytic Gear variation and acceleration of an A minor pentatonic into G minor, itself an inside substitution and a pivot pentatonic belonging to both D minor and G minor. Bars 5 – 8 decelerate into a sixteenth gear phrase that comprises of three 3NS mostly inside the harmonic structures. The final phrase of this chorus decelerates into broken triplets with two 3NS and a 4NS that crosses over into and sextuplet gear acceleration immediately decelerating into broken sixteenth gear. One beat rest and this dense chromatic

phrase accelerates using a sextuplet gear variation decelerates into eighth notes and accelerating into sixteenth gear in Bar 12's resolution. Bar 13 shows the beginning of the fourth chorus with a Zone X harmonically ambiguous statement.

Notation 5.25 Example 4

[Audio Timestamp: 1.49 – 2.05]

Bars 1 - 4

This excerpt demonstrates the motivic and elastic extrapolations of Zone X linear modes (D D# E G Ab) in a few different melodic sequences. These broken rhythmic phrases create a high level of dissonance but keep returning to the notes (D) and finishing on (G) or (Ab) creating harmonic ambiguity and rhythmic tension and release. This is a real-time practise to performance scenario.

Bars 5 - 7

The second phrase of this excerpt starts with an acceleration into triplet gears with a 4NS that misses the Zone X mark but another immediate acceleration into sixteenth gears outlining Zone X in its Linear Mode (F# G G# B C) which is a transposition up a minor third of Zone X in Bar 1 – 4. Halfway through this Zone X there is a Catalytic Gear change to sextuplet gears move the phrase into an accelerated motion connecting a 3NS (Eb D G) a return to the Zone X Linear Mode starting on (D) and moving chromatically and with harmonic ambiguity with a Zone K 5NS (Bb A Ab G E) cell resolving into the notes (F and D).

11.11 ‘Lonnie’s Lament’ (J. Coltrane, 1964)

[Sean Coffin (Tenor Saxophone) Aaron Blakey (Piano) Nick Jansen (Bass) Alex Young (Drums)]

Notation 5.26 Example 1

Audio 5.11 <https://youtu.be/fvy5UpmY7yA>

[Audio Timestamp: 0.09 – 0.54]

D-11

DEC-----

D-11

D-11

D-11

D-11

D-11

ACC--- ACC----- DEC--- ACC-----

D-11

DEC----- ACC--- BKN----- DEC----- BKN----- ACC---

D-11

ACC----- DEC-----

Bars 1 – 20

The first thirteen bars of the solo focuses deliberately on more dissonance than consonance creating prolonged tension and a harmonically ambiguous atmosphere with numerous combinations and contours of chromaticism and Zone 4NS and 3NS material which resolves with inside lines from Bars 14 – 20. The broken rhythmic style of improvisation also creates tension on another level which resolves in Bars 14 – 20 with continuous eighth note linear phrases.

Bars 21 – 30

Starting on the (3+) an accelerated triplet gear propels into an accelerated sixteenth gear two beat run temporarily resolving on a dissonant (C#) which relaxes harmonically and decelerates rhythmically for two bars where on beat 3 of Bar 24 an accelerated triplet gear phrase resolves and decelerates into two consonant quarter notes (G and E) in Bar 25. The final phrase of this excerpt begins on beat 4 with broken triplet gears, sounding (short long) which continues this pattern until beat 3 of Bar 27 where the broken triplet gear variates to a (long short) articulation altering the time-feel. The last part of the phrase accelerates in flowing triplet gears with a decelerating consonant phrase resolution.

Notation 5.27 Example 2

[Audio Timestamp: 1.24 – 1.46]

The notation consists of five staves of music, each labeled 'D-11' at the beginning. The music is written in 4/4 time and features a variety of rhythmic patterns and articulations. Key annotations include:

- Staff 1:** Features a triplet of eighth notes circled in blue. Below the staff, there are blue dashed lines labeled 'ACC' and 'DEC'.
- Staff 2:** Features a triplet of eighth notes circled in blue. Below the staff, there are blue dashed lines labeled 'DEC' and 'ACC'.
- Staff 3:** Features a triplet of eighth notes circled in blue. Below the staff, there are blue dashed lines labeled 'ACC' and 'DEC'.
- Staff 4:** Features a triplet of eighth notes circled in blue. Below the staff, there are blue dashed lines labeled 'ACC' and 'DEC'.
- Staff 5:** Features a triplet of eighth notes circled in blue. Below the staff, there are blue dashed lines labeled 'ACC' and 'ACC'.

Other annotations include red dashed lines labeled 'ZT' and 'ZX', and blue dashed lines labeled 'ACC' and 'DEC'.

Bars 1 – 5

Bars 1 and 2 begin with an accelerated five beat triplet gear phrase (a) ascending through two consonant D minor 3NS (F A E and B G C). The triplet gear phrase extends from Bars 3 – 5 with a 3NS (A E F) deceleration and inside resolution (F).

Bars 5 -11

Starts a series of collective phrases on 3+ with an acceleration of sixteenth gears starting outside (F# C#) then into a Zone 4NS (F# C G B) creating harmonic ambiguity then consonance and a decelerated outside resolution to (F#). Bars 7 – 8 see accelerated densely chromatic sixteenth gear lines decelerating into a conventional eighth-note inside line resolving in Bar 11 on (E).

Bars 12-15

This phrase Zonal Elastics demonstrates three Zone T Poly-Zonal Cycles (Second Cycle) creating harmonic ambiguity by shifting between inside and outside notes which resolve in Bar 13. The final phrase accelerates with a broken triplet and accelerates into sixteenth gears with a Zone X 5NS (G# C# G C F#) then chromatically descending and ending the phrase on the second sixteenth partial on a dissonant (Eb).

Notation 5.28 Example 3

[Audio Timestamp: 2.11 – 2.29]

The musical notation consists of four staves, each labeled 'D-11' at the beginning. The notation includes various musical symbols such as notes, rests, and accidentals. Key annotations include:

- Staff 1:** Starts with '8va-----' and a '+' sign. A triplet of eighth notes is marked with a '3'.
- Staff 2:** Continues the melodic line with a '+' sign and a circled note at the end.
- Staff 3:** Features a triplet of eighth notes marked with a '3' and 'ACC'. A circled note is followed by a '3' and 'DEC'. A circled note is followed by a '3' and 'ACC'. A circled note is followed by a '3' and 'ZX'.
- Staff 4:** Continues the melodic line with a '+' sign and a circled note at the end.

Bars 1 – 9

These bars are conventional in their jazz line construction, high altissimo scalar runs, some chromatic and some Zone material, 3NS (C F#B) connected to a 4NS (C A# B F#) which have more outside notes opposing the harmony finish the phrase on a dissonance (F#).

Bars 10 – 12

This phrase accelerates with triplet gears with broken sequences where the melodic content consists of two Zone 4NS (C A# B F#) and (Bb A E Ab) connected by a pivot 3NS (B F# Bb) and then followed by Zone X (Ab G E Eb D) in a descending Linear Mode sequence. The first 4NS is a repeat of the final notes in Bar 9 but with a gear change and rhythmically contracted. The duration of the notes in this phrase with more emphasis on the (F#) in Bar 10 create harmonic ambiguity, especially with the resolution note in Bar 11 (D).

The last phrase begins with an accelerated gear change to triplets starting on the second partial leading into another accelerated gear change to sixteenth notes with an almost even balance of consonant and dissonant note choices including two differently contoured Zone 3NS towards the end of this phrase resulting in an inside resolution (F)

Notation 5.29 Example 4

[Audio Timestamp: 2.44 – 2.59]

The image displays four staves of musical notation in 4/4 time, representing a jazz improvisation. The notation includes various rhythmic markings such as triplets (indicated by '3' and bracketed groups) and accents (marked with '+' signs). Above the staves, several annotations are present: 'ZK' (Zonal K) in red above the first staff, 'ZT' (Zonal T) in red above the second staff, and 'ZX' (Zonal X) in red above the third and fourth staves. Below the staves, there are blue dashed lines with labels: 'ACC' (Accented) and 'DEC' (Decelerated) in blue, and 'BKN' (Broken K) in purple. The first staff is labeled 'D-11' at the beginning. The second staff has a blue oval highlighting a specific triplet. The third staff has a blue box highlighting a triplet. The fourth staff is labeled 'D-11' at the beginning. The notation is complex, with many notes and accidentals, and the annotations provide additional context for the improvisation.

Bars 1 – 7

This solo starts on a (4+) with a Zone K cell (C Eb D C# C) with the (Eb) on beat 1 of Bar 2 emphasizing the dissonance which momentarily resolves on beat 3 (C) and chromatically moving to a harmonically ambiguous resolution on (B) the major sixth. The next phase accelerates starting on beat 2 with two Zone K Poly-Zonal Cycles (Fourth Cycle) creating harmonic ambiguity with these notes (G Bb A G# E) and (Eb Gb F E C).

Bars 8 – 12

This phrase begins with a series of motific broken triplet gears articulating the high points of each triplet cell which descend chromatically from high (C#) connecting and accelerating to a Zone X 5NS (F# G B C G#) resolving momentarily into (A) with tinges of harmonic dissonance. The final phrase begins with the same Zone X cell starting on beat 4 which decelerates with a broken triplet and then accelerates into chromatically dense sixteenth gears resolving on beat 2 on (B).

Part 6: Zonal Elastics Conclusions

Chapter 12 Zonal Elastics Conclusion

The entire process of my thesis has been the improvised practise and creation of intricate grouping designs of pentatonic cells, called Zones. Through practise-led improvisation three Zones: Zone K, Zone T and Zone X have been distilled and synthesised through conventionally adapted methodological practices which were then assimilated and synthesised through rhythmic concepts of elasticity strengthening their presence and vitality. The intervallic and chromatic properties of Zones have yielded unique shapes and sounds. The breakdown of Zone conceptual elements throughout Part 3, Chapter 5 were specifically designed as improvisational practise techniques. This led to a deeper knowledge of their melodic and harmonic properties and functionality for organic improvisation.

The consistency of the real-time performances in Part 5 exhibit new learning, growth and development, enhancing improvisational and saxophone creative techniques and rhythmic elasticity and spatial acuity. This has led to a complete transformation in my creative philosophies and ideologies as a musician. What I have experienced and learnt from the philosophy of Zonal Elastics, through the art of improvisation over different harmonic and formal landscapes, is that a holistic understanding and conception of all musical facets need to be prepared, technically available, and innate for Zonal Elastics to be a success. On behalf of the jazz musician's pursuit of individuality, Nissenson reflects upon Sonny Rollins' influential contributions to creating a personal identity in music:

The creational of a personal sound – and all the elements that go into the production of that sound – defines the individuality of musician, particularly jazz musician...Their greatness lies in their ability to project that core of their being into their music and in their development of an idiosyncratic technique to do that. In other words, each musician in jazz is his own academy – or at least, every major player is. The rhythmic, melodic, and harmonic features of music are secondary to the sound itself, that wail from the jazzman's heart, that stylized noise which reflects his innermost soul. (Nissenson, 2000: 54)

Zonal Elastics has now been fundamentally embedded in my creative practice, and now is time for extending its application in all facets of my continual development as jazz musician, composer and educator.

The improvisation and visual analysis below (Notation 6.1) was one of my final performances on my Zoning Laws tour which exemplifies and summarises through real-time performance, motion, and sound, the holistic reality of this new ideological state of improvisation.

Notation 6.1 Zoning Laws (S. Coffin, 2023)

Audio 6.1 https://youtu.be/aALGcGi_Bzs

[Sean Coffin (Tenor Saxophone) Nic Cecire (Drums) Tom Botting (Bass) Peter Koopman (Guitar)]

The musical notation is presented in six staves, each beginning with a measure number. The first staff starts with a boxed '1' and a D-7 chord. The second staff starts with a '7' and a D-7 chord. The third staff starts with a boxed '2' and a D-7 chord. The fourth staff starts with a '20' and a D-7 chord. The fifth staff starts with a boxed '3' and a D-7 chord. The sixth staff starts with a '31' and a D-7 chord. The notation includes various chords (D-7, Bb7, A7, G-7), melodic lines with slurs, ties, and accents, and specific annotations like 'BKN-----' and '(Lazy-----)'. There are also some circled notes and a blue box around a group of notes in the fifth staff.

The image displays a musical score for the song "The Sound of Silence" by Simon & Garfunkel. It consists of two staves: a guitar staff (top) and a piano staff (bottom). The score is divided into measures, with measure numbers 41, 48, 53, 57, 61, 65, 68, 71, and 74 indicated. The guitar staff includes various chords (D-7, G-7, Bb7, A7) and annotations such as "BKN", "ZT", "G-7", "D-7", "ACC-- BKN", "DEC", "ACC-- BKN", "ACC--", "DEC", "ACC-- BKN", "ACC--", "ZX", "8va", "D-7", "ZX", and "3". The piano staff includes annotations such as "ACC-- BKN", "DEC", "ACC--", "ZX", "8va", "D-7", "ZX", and "3". The score is written in treble clef and includes various musical notations such as notes, rests, and accidentals.

114 **10** D-7

118 G-7 3 ZK----- ACC----- ACC----- BKN-----

121 ACC----- Bb7

123 A7 D-7 ACC----- DEC-----

11 D-7 3 3 G-7 8va----- DEC----- DEC----- ACC-----

133 8va----- Bb7 ZK----- A7 3 ACC----- DEC----- AC--

136 ZT----- D-7 ACC-----

137 ZK----- 6 ACC----- DEC-----

12 D-7 3 3 ACC-----

145 BKN----- G-7 ACC-----

147 D-7 6 DEC----- ACC- DEC-----

150 Bb7 A7 D-7

This improvisation is evidence of the practise to performance synthesis of an originally forged ideology upon reflection of one's innermost desires and personality. Ten years of effort and all twelve choruses of this improvisation reflect the chronological and intuitively cumulative practices and creative practises and synthesis of Zonal Elastics. Zonal Elastics is a state of intuitive performance that enhances the symbiosis of all conventional improvisational dogma whilst encapsulating and engaging a new language of personal expression, whilst achieving musical freedom.

A unique language has been founded, bringing my music to life with fresh new sounds and interesting shapes pushing tonal and rhythmic boundaries in the way in which I have always heard and intended. Zonal Elastics has altered my musical language by bringing a continuity, consistency and my true personality to each improvisation and composition. Ricker's comments describe my Zonal Elastics process eloquently, "Perhaps the most important point a student must remember when using this or any other improvisation method is to learn it, master it, then forget it. Do not let the 'rules' get in the way of your music." (Ricker, 1976). Bergonzi also states "Who plays strictly pentatonics? I can't think of anyone who plays only pentatonics but many of the modern players have pentatonics at their command and melodic disposal." (Bergonzi, 1994: 8) learn new approaches, but be sure to implement your own ideas, your own conceptions, and use what you have at your disposal.

Conceptional decision through practise-led inquiry throughout this research has established parameters and therefore stylised an original design. This has generated new pentatonic sounds, shapes and new *Zonal* melodic and rhythmically elastic pathways of phrasing in improvisation. Ludmila Ulehla, who was one of my teachers at Manhattan School of Music describes the process of creation, intuition, and performance:

Inspiration and creative ingenuity produce the music, the notes themselves are incidental. Each composer may have his own secret plans for selecting the notes. What matters is, whether they have expressed an artistic entity.
(Ulehla, 1994: 1)

Zonal Elastics has demonstrated how the fundamental musical elements of pentatonic melodies combine with chromaticism and rhythmic elasticity transform and work in symbiosis with conventional improvisational language whilst transcending harmonic boundaries with qualities of harmonic ambiguity. However, these outcomes are never finite. The personal drive to grow

and excel every day, along with the unlimited will of the creative process, mean Zonal Elastics boundaries will infinitely expand.

As part of my Zoning Laws International Tour (September/October 2023), I presented a masterclass on Zonal Elastics conceptions and philosophy at Auckland University, New Zealand. The last question I was asked was: “How would you describe Zonal Elastics?” What a simple and an incredibly insightful question. I answered: “Zonal Elastics is my creative language of melodic organisation and rhythmic sophistication. A sound that is a true reflection of my personality and a natural extension of my creativity as a composer and improviser. It has enhanced my technique on the saxophone for jazz improvisation and transformed my perceptions, abilities and choices via the challenges imagined, created, and performed. It has inspired new compositional techniques, inspired new compositions and new pathways of improvisation.”

Sonny Rollins responded to a letter I wrote to him whilst living in New York in 1997:

We live in apocalyptic times and music must be used to address ecocide, economic disparity, tribalism, hedonism and all of the problems they filter down to us. I don't mean being preachy through the music but being socially aware and then letting your music speak with its own voice.

My music now speaks in the voice of Zonal Elastics.

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Appendix

Appendix A

A1 Zone Improvisation Demonstration

Notation 3.46 Zone Improvisation Demonstration 3

Audio 3.45 <https://youtu.be/fXcdQoYdu7E>

The musical notation is presented in eight staves, each with a key signature of one sharp (F#) and a 4/4 time signature. The notation includes various chords and melodic lines, with specific patterns highlighted by blue circles and boxes, and red dashed lines indicating zonal elasticities.

- Staff 1:** Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 2:** Chord: D7alt. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: G-7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 3:** Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: Bb7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 4:** Chord: A7. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 5:** Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: Bb7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 6:** Chord: D7alt. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: G-7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 7:** Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: Bb7. Melody: Quarter notes G, A, B, C, D, E, F#, G.
- Staff 8:** Chord: A7. Melody: Quarter notes G, A, B, C, D, E, F#, G. Chord: D-7. Melody: Quarter notes G, A, B, C, D, E, F#, G.

Blue circles and boxes highlight specific melodic patterns, and red dashed lines with labels 'ZT' and 'ZK' indicate zonal elasticities.

A2 Zone Improvisation Demonstration 4

Notation 3.47 Zone Improvisation Demonstration 4

Audio 3.46 <https://youtu.be/vtskFlwV-jE>

The musical notation is presented in eight staves, each containing a melodic line in 4/4 time. The notation includes various chords and melodic phrases, with blue annotations highlighting specific areas of interest.

- Staff 1:** Starts with a D-7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 2:** Starts with a D7alt chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 3:** Starts with a D-7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 4:** Starts with an A7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 5:** Starts with a D-7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 6:** Starts with a D7alt chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 7:** Starts with a D-7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.
- Staff 8:** Starts with an A7 chord. The first measure contains a melodic phrase with a blue oval around it. The second measure has a blue oval around a phrase. The third measure has a blue oval around a phrase. The fourth measure has a blue oval around a phrase.

A3 Zone Improvisation Demonstration 5

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 3.48 Zone Improvisation Demonstration 5

Audio 3.47 <https://youtu.be/RoQO7j59R6s>

The musical notation consists of ten staves, each representing a line of music. The notation includes various chords and improvisational markings:

- Staff 1:** Chord: D-7. Markings: Blue circles around the notes G and A in the second measure, and B and C in the third measure. A blue box highlights the notes G and A in the fourth measure.
- Staff 2:** Chords: D7alt, G-7. Markings: Blue circles around the notes G and A in the first measure, and B and C in the second measure.
- Staff 3:** Chords: D-7, Bb7. Markings: Red dashed line labeled "ZK" above the first measure. Blue circles around the notes G and A in the second measure, and B and C in the third measure. A blue box highlights the notes G and A in the fourth measure.
- Staff 4:** Chords: A7, D-7. Markings: Red dashed line labeled "ZK" above the first measure. Blue circles around the notes G and A in the first measure, and B and C in the second measure. A blue box highlights the notes G and A in the third measure.
- Staff 5:** Chord: D-7. Markings: Blue circles around the notes G and A in the first measure, and B and C in the second measure.
- Staff 6:** Chords: D7alt, G-7. Markings: Red dashed line labeled "ZX" above the first measure. Blue circles around the notes G and A in the first measure, and B and C in the second measure.
- Staff 7:** Chords: D-7, Bb7. Markings: Blue circles around the notes G and A in the first measure, and B and C in the second measure. A blue box highlights the notes G and A in the third measure.
- Staff 8:** Chords: A7, D-7. Markings: Blue circles around the notes G and A in the first measure, and B and C in the second measure.

Appendix B

D1 Zone Elastic Improvisation Demonstration

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.49 Elasticity Improvisation Demo 3

Audio 4.37 <https://youtu.be/fxDlCe-0w2E>

The musical notation consists of ten staves, each representing a different improvisation line. The notation includes various musical symbols such as notes, rests, and accidentals. Key annotations include:

- Chords:** D-7, D7alt, G-7, A7, Bb7, and 8va are indicated above the staves.
- Triplets:** Marked with a '3' and a bracket, often circled in blue.
- Zonal Elastics:** Indicated by red dashed lines labeled 'ZK'.
- ACC (Accented):** Indicated by blue dashed lines labeled 'ACC'.
- DEC (Decelerated):** Indicated by blue dashed lines labeled 'DEC'.
- Other markings:** Blue boxes highlight specific groups of notes, and blue circles highlight individual notes or small groups.

D2 Zone Elastic Improvisation Demonstration

[Sean Coffin - Tenor Saxophone and Electric Piano and Pete Drummond – Drums]

Notation 4.50 Elasticity Improvisation Demo 4

Audio 4.38 <https://youtu.be/2MjxIjb208>

The notation consists of eight staves of music in 4/4 time, featuring various chords and rhythmic patterns. The notation includes several zonal elastic markings and annotations:

- Staff 1:** Starts with a D-7 chord. A red dashed line labeled "ZK" spans the first few notes. Below the staff, "ACC-----" and "DEC-----" are marked. The staff contains triplets and various accidentals.
- Staff 2:** Features a D7alt chord. Below the staff, "ACC-----", "DEC---", and "ACC-----" are marked. The staff contains triplets and various accidentals.
- Staff 3:** Features a D-7 chord. Below the staff, "BKN-----" and "ACC-----" are marked. The staff contains triplets and various accidentals.
- Staff 4:** Features an A7 chord. Below the staff, "ACC-----", "DEC-----", and "BKN-----" are marked. The staff contains triplets and various accidentals.
- Staff 5:** Features a D-7 chord. Below the staff, "ACC-----", "DEC-----", and "ACC-----" are marked. The staff contains triplets and various accidentals.
- Staff 6:** Features a D7alt chord. Below the staff, "ACC-----" and "DEC-----" are marked. The staff contains triplets and various accidentals.
- Staff 7:** Features a D-7 chord. Below the staff, "ACC-----", "DEC-----", and "ACC-----" are marked. The staff contains triplets and various accidentals.
- Staff 8:** Features a D-7 chord. Below the staff, "DEC-----" and "ACC-----" are marked. The staff contains triplets and various accidentals.