

Under One Cover: Traditional & Hybrid Woodwind Études

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Abstract

This study presents original, traditional, and experimental compositions placed together in a single volume for performers and students of post-traditional music. The template of this research is made up of complete étude compositions which generate the specific technical focus for each chapter. These woodwind-centric compositions are stylistically diverse and suitable for performance, as well as study. Micro-focused details are marked in the music notation, with symbols and abbreviations denoting the stylistic details and techniques presented, so they may be excerpted, practiced and developed creatively. These études may either serve as a launching point into latent areas rich with deeper classical or traditional nuance, or conversely, spark creative directions based on hybridized permutations on various woodwind traditions. This thesis is aimed at contemporaneous woodwind players as well as other musicians, composers, artists or thinkers who seek to reconcile the pursuit of traditional depth with that of fearless and joyful innovation.

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Many thanks, to Michael Coghlan for agreeing to direct my thesis. Prof. Coghlan's versatile attitude, towards the expression of structure and content, is steeped in broad experience as per a gamut of musical practices, upon which I could safely preserve and convey, my ideas. I am also grateful to Prof. William Thomas for agreeing to act as a supervising second reader and in the process helping me to communicate more precisely.

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I dedicate this, in memoriam, to Ernő Tollar, my father who was barred from post-secondary education upon the new regime of post-war Budapest.

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Chapter 1 – Theory and Concepts

Introduction

This study presents a diversity of original, traditional and experimental compositions placed together in a single volume for performers of post-traditional music. It is built on complete, diverse woodwind-centric pieces, which are presented as études, suitable for performance. Though they could be attempted on other instruments, the woodwinds which are central to the genres at hand include Irish D flute, Arabic neys on C Rast, and D Rast, Indian venu or bansuri flutes which use two fingers for the tonic on the pitch G, as well as a Bb soprano sax (ideally curved) and an Eb alto sax. Each chapter, (starting in Chapter 2), is structured as follows:

All chapters, (starting on chapter 2), begin with a brief introduction, followed by music notation for one single composition, in one genre, which defines that entire chapter. Various, stylistic and technical considerations are detailed, using symbols, abbreviations, and text. Many micro-focused technical and aesthetic aspects are highlighted with the aim of enriching the woodwind artist's practice sessions while inspiring creative directions. These études may either serve as a launching point into deeper classical or traditional study, or conversely, spark hybridized permutations of contrasting woodwind traditions.

Iconic Gateway Material

Any musical style has iconic characteristics which bring it to life. Genres of traditional music are built on emblematic phrases which are performed with characteristic ornamentation, lilt, or other distinguishing features. These defining phrases are often somewhat easy to render at a recognizable 'ballpark' level. A performer may soon progress from the stage of little or no stylistic capability, to being able to conjure up a considerable amount of defining characteristics with a relatively small number of gateway phrases. The journey becomes more complex and

subtle as the researcher goes deeper and discovers performance practices and content that could enrich the creative palette of the woodwind performer, composer, or collaborator.

Intuitive versus Analytical Approaches

There are countless musicians who perform masterfully yet have never bothered with ardent, analytical practice regiments. For this sort of musician rudiments were already contained in the repertoire that they learned. Nuanced phrasing, accurate technique, and everything essential can be learned by mimicking tradition, using only one's own intuition, thus making a strong case that there is no need to break-down already happy conventions into components and systems. To be honest and fair, we must the concept analysis can sometimes take joy out of musical pursuits. If a performer *needed* to choose only one approach it would probably be this intuitive one. However, analysis, creativity, and methodology may help master a musical system as we more fully delve inside its details. Systems and pedagogies that have been honed over many years and lifetimes set standards of technical precision, essential vocabulary, and style. Once de-constructed, a musical system may be more systematically be honed according to its distinct components. These components help build and define styles and idioms, but they can also can be re-purposed creatively and consciously, thus becoming liberating tools. Creativity which is solely based on time tested traditional formulas may produce endless variation – though the changes will not in the space of one lifetime, produce radical departures similar to those of Igor Stravinsky, or John Coltrane. One's personal approach may lean more towards either the intuitive, or, the analytical and it is each individual's will which decides their preferred personal blend of the two.

Interaction between Whole Compositions and Smaller Components

On its macro-level, this study is built on complete pieces. On its micro-level, it delves into the smaller stylistic details, which when honed beautify the pieces - ultimately enriching the final performance. Conversely, the full compositions provide a meaningful setting to which the smaller phrases belong. In looking at the complete pieces alone, we may forgo certain nuance, while conversely, when entranced in the smaller details of the excerpts, we may overlook the balance and shape of the bigger picture. This research aims for development of both the macro and the micro as two inseparable sides of the same coin.

Spacing and Balance in the Big Picture

Once ornamental details are well honed, the performer's judgement applies them to the big picture. Economy, density, content and placement are key factors which give well-mastered phrases their due effectiveness in context. A rendition which is packed full of perfectly formed phrases doesn't automatically deliver a compelling or unified story if it is too cluttered or poorly balanced. Details will be more compelling when highlighted by adequate space and distance - rather than eclipsed by competing or redundant sonic information. This is not a testament to an overall statement of sparser music over denser music, but a general concept that each artist must take to heart and apply as they see fit. Miles Davis, once instructed Herbie Hancock, to avoid the 'butter-notes'. Hancock's oft told anecdote, serves as a testament to discovering, honing and highlighting key musical ideas so they may ring out directly to the listener's ear.¹ Many prototypical, beloved recordings by masters often prove to be easier to emulate than we had expected. Why is this?! Masterful performers seek a simplicity which is natural, effective, and

¹ YouTube excerpt "Don't Play the Butter Notes." Accessed Aug. 26, 2020. Also, Harvard Lecture #1: "The Wisdom Of Miles Davis"

appealing to the ear. For them, hours of practice are better not wasted on the austere pursuit of perceived correctness, completeness or comprehensiveness. The well-balanced renditions are beloved recipes worth re-creating.

Economy in Kinetic Techniques

Kinetic techniques as they exist on musical instruments, are physical movements which are honed to achieve a specific desired technical control. When mastered, ergonomic, efficient and seemingly effortless movement becomes familiar and gives the performer sufficient power, speed, accuracy. Our hours of practice, are aimed ultimately towards a particular technique becoming rather effortless. The greats who ‘make it look easy’, typically have mastered these economies. When they ‘make it look easy’ they in fact *have* found the kinetic technique which actually *does* make execution easy. Ardent focused persistence definitely has its useful place, but trying too hard can be counterproductive and can have a negative lasting imprint on our muscle memory. Toil as an emotional state may often get less-positive results than a joyful effortless approach. There is an all-too-common occurrence where strenuous musical pursuits sadly result in the music being less enjoyable to the listener.

A Non-Comprehensive Approach - Following the Ear, not the Mind

Musical composition and structure, balance many types of content, however, in the end it is the performer’s touch in phrasing, timbre and ornamentation which *voices* the music. Based on my experience, the performer need not obsess over quotas, completeness, comprehensiveness, or in some instances, even correctness! Listening, above all, for what sounds appealing and pleasing is ultimately what matters, and such fine details can only be felt and adjusted and then balanced by ear. In general, a *non-comprehensive* approach is favored throughout this research, avoiding the

obligation to complete the full gamut of patterns and possibilities, but rather, aiming for beauty where it is effective and can be obtained with a natural simplicity. Many beautiful idiomatic techniques are unique to specific instruments, specific ranges, notes or fingerings, and for this reason do not lend themselves to sequential transposition though such transpositions may be technically possible. Sometimes, a better alternative to transposing a given technique, is re-interpreting with other techniques. A classic, idiomatic example of this, is found in chapter 1. While certainly possible on the Irish flute, a roll (turn/grupetto), is not aesthetically plausible on the note ‘D’ which is at the register break of the instrument with all six finger holes covered. In this case, a *crann*, using the third, fourth, and fifth fingers in rapid succession would usually be a more natural and effective ornament. Exercises presented usually lean in favor of the most fitting and effective options for a specific phrase in its context. The mere technical ability to play many beautiful phrases all over the instrument does not alone make music. Mastery of a technique/phrase is as much about sensing how, when, and where it can be used most effectively. Again, the complete performance pieces give us context to try-out techniques. As one’s mastery expands, each new performance of these pieces, increasingly allows for variety in ornamentation and interpretation.

Points of Similarity, Contrasts, Intersection and Creative Extrapolation

The material here spans a diversity of musical styles from Irish, maqam, raga and jazz, to original hybrids. This study, aims for depth in micro-details, however, rather than a comprehensive, purely idiomatic presentation of its techniques and inflections, it will point to similarities, contrasts, and points of intersection between the chapters. Accordingly, terminologies may be referenced, compared or interchanged. Terms for Irish ornamentation, may, for example, be borrowed whenever fitting, in spite of the fact that their effect and aesthetic

function will change on another instrument or in another musical tradition. For example, on a note in which four finger holes are covered, the top finger could lift quickly up and down. This is what an Irish flute player calls a ‘cut’. As the term ‘cut’ may well suggest, the technique imparts a clean rippling articulation as well as an embellishing character. An Arabic end-blown (Ney) player flute can easily perform a ‘cut’, however, the instrument’s response and the traditional aesthetics of Arabic music would tend to convey more of a ghosted sighing effect, sometimes thought of as a tail (appendage) which bounces out of its principal note. Mostly such details are found inside the etude-compositions, which are to be found starting at chapters 2-7. In fewer instances, short, isolated exercises, which are not extracted from the main pieces are also presented. Such exercises, rather than belonging to a particular composition, present techniques which may readily be considered in a generic, universal or limitless way and therefore could be potentially used in many instances. Freed from the context of a tune or idiom, these exercises can also be applied non-traditionally. Stylistic hybrids often create unfamiliar results and innovations. Building on ideas without presumed goals or expectations has, for time immemorial, produced innovation in all areas of human invention – art or otherwise. There are many commonalities and contrasts across the chapters which can spawn endless hybrids and permutations. This work aims for specificity and depth – but not limitation. Consider that, *more* material can be extrapolated from this study than from its actual contents verbatim. Although the chapters do seek to define essential stylistic concepts, they at the same time can provoke whimsical free association, extemporization and creativity. Our world has become smaller and is often viewed as a “global village.” This paper defines traditions which bring useful depth to our present-day musical contexts, yet in the *here and now* we should feel free to follow our creative

imagination when it is sparked, beyond convention and our reverence towards the traditional masters.

Fingering Abbreviations

The fingers are indicated as follows:

L1 = left index finger

L2 = left middle finger

L3 = left ring finger

R1 = right index finger

R2 = right middle finger

R3 = right ring finger

Parentheses (.), the ‘x’ or a smaller sized notehead denote ghosted note. They are given less weight and occur between two stronger notes. In some musical cultures ghosted notes are called ‘tails’ - the most common of which rises up in pitch from given a note as it descends to towards the following note a step below.

T – Thumb hole (uncovered) – Many flutes do not have thumb holes and function as if the thumb hole was permanently covered. My own modified bansuri design, (which features a drilled thumb hole) uses the abbreviation ‘T’ marking when the thumb is raised.

Non-sequential Fingerings - Often when ornamenting, ‘false’ fingerings, are often favoured for their more compelling character over the unnecessarily regular sequential fingerings. The abbreviations above are used to specify which fingering is used.

Although the above listed fingering abbreviations may be denoted sufficiently by the abbreviations above, taps, cuts, rolls and cranns will often be marked with ‘T’, ‘C’, ‘R’, and ‘CR’ respectively.

Auto-ethnography En route to this Thesis

The music of my childhood in the 1960’s was musically occupied with unsurprising popular music, playing melodies on recorder, and light classics on the organ. Immersion in The Royal Conservatory of Music’s Euro-Classical saxophone curriculum during my teenage years eventually gave way and led me towards the freedom of expression found in jazz. Ron Allen taught me about the John Coltrane era and beyond, showing how traditions could be extrapolated and how their music theory could help generate new vocabulary and ultimately shape how one develops a personal ‘sound’. Coltrane’s work had produced new melody, harmony and tone colours for the saxophone. Before the Coltrane era, Charlie Parker and Dizzy Gillespie jotted down phrases on manuscript paper which were quickly and directly incorporated on the bandstand. While I can’t remember, or trace² where I may have heard this account, such is a creative work-flow for the improvising instrumentalist, who integrates pedagogics *directly* into real-life applications. This became my personal template, inspiring the directions of this thesis.

A dozen vinyl L.P.’s from the public library each week introduced me to the jazz masters of early swing, bebop, on to Coltrane and his contemporaries. In addition to emulating those recordings, I started a manuscript binder in which I would scribble out phrases and pitch

² There are many stories and myths shared among performing musicians in the jazz tradition that are difficult if not impossible to trace. This is but one such “folk tale.”

combinations of my own. Some of these were simply permutations based on things I'd picked up, while others came through following my own creative whims. It seems now, that in my naiveté, it was easy to love every harmonic, scalar or intervallic possibility for its unique beauty. So, what to some would be a pointless distraction from the great masters, was to me a treasured experience – as I was able to feel out a path using youthful unschooled intuitions – in a sense, without the 'constraints' of maturity. By the time I had actually begun to gain some command over the essentials of the jazz saxophone tradition, I also had a good bit of *my own* material under my fingers which found its way into playing and composing. Perhaps what was of unique value, was not so much that I was discovering anything *truly* new, but rather, that it *felt to me as if I had*. The jazz pianist, Bill Evans once lamented that as a teacher he felt as if he sometimes deprived his students of such important naive moments of self-guided discovery.³

A few years later, as a young professional musician in Toronto, Canada, the melodicism of Indian ragas, and Near Eastern maqam presented opportunities to learn, perform, and study with masters in the culturally diverse city of Toronto and abroad. These master musicians include Prof. Trichy Sankaran, who I studied South Indian music with, and Dr. George Sawa and Bassam Bishara, with whom I studied Arabic maqam, ornamentation and repertoire. Over the years, these new paradigms began to influence my personal template.

That template lies underneath the concept of this study. The études presented here are borne through the singular lens of my own life's journey, at a time, when great traditions from around our global village are easily accessible as abundant fuel for creativity and blending.

³ Evans, Bill. The Universal Mind of Bill Evans, Documentary Film. (1966 Documentary. Posted on The Bill Evans Archive YouTube.)

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My Many Teachers

Over many years, my teachers (listed below) served as masterful research sources and exponents of their specific traditions. In some cases, they also authored some of the books indicated in my reference list at the conclusion of this paper. In other instances, they have served as principal teachers to students who in turn authored significant books - a case in point is Dr. Alfred Gamil who, on a daily basis for over a year in Cairo, taught Sami Abu Shmays, thereby directly influencing the book written by Abu Shmays.

An influential teacher was Spencer Murray of Toronto, who holds an MA in Irish flute performance from the University of Limerick, Ireland. He studied with leading exponents

including Michael Crawford. In my lessons with Murray, I learned many of the most archetypal stylistics on a handful of tunes on the Irish flute.

Dr. Alfred Gamil, an alumni of Egypt's Arab Music Institute graduated with distinction in 1975, and again in 1983 from the High Institute for Arabic Music with an honors MA of the first-degree. His PhD thesis was on Arabic Maqamat of the Turkish Sazenda. He was a violin student of the late Abdou Dagher. I was fortunate to have a dozen Arabic music lessons with Gamil at his Cairo apartment. Topics ranged from taqsims to free improvisations, repertoire and theory lessons based on the areas from our duet improvisations. Additionally, I co-lead at least three projects which brought Alfred to Toronto, Canada. This resulted in learning opportunities in rehearsals, concerts, and many other impromptu moments.

Bassam Bishara was born in Palestine and taught music privately, at the Middle Eastern Music Academy, and at universities in Toronto. Bishara taught me Arabic music ornamentation and maqam development in the context of a well-known samai (composition).

Dr. George Sawa is a master qanun (Arabic zither) player and published scholar-author in medieval Arabic music. In addition to private music performance lessons with George, I attended ongoing repertoire development classes which focussed on Mowashahat—a vast genre within Arabic music today that has Andalusian origins.

Dr. Ali Jihad Racy was born in Lebanon and is professor of ethnomusicology at UCLA. He is known for mastery of the ney (reed flute) and the buzuq (the long-necked lute). He has authored numerous award-winning books including *Making Music in the Arab World*. Lessons and

ensemble classes with Racy occurred at week-long Arabic music retreats over several summers at Mt. Holyoke College in Massachusetts, USA.

Ibrahim Kawala (Ibrahim Shahin) offered several private lessons in Cairo, Egypt on the Kawala flute. He is a leading exponent and a conduit for Egyptian musical soul.

Dr. N. Ramani, the most influential South Indian venu (flute) player of our time, is the leading disciple of T. R. Mahalingam who revolutionized the Carnatic flute style. During a three month stay in Chennai, Ramani taught me a half dozen Carnatic ragas.

Pat LaBarbara is an internationally known saxophonist who teaches jazz saxophone from the swing era to the post-Coltrane era, including all relevant archetypal theory.

I studied jazz saxophone and theory during my mid-teens with Ron Allen who came to prominence as a prodigious exponent of Pat LaBarbara, John Coltrane, Jan Garbarek, and Ted Moses.

Ted Moses was an active multi-instrumentalist jazz-composer who has published several notable, innovative jazz theory books. Moses was known for many advanced jazz theory applications including intervallic systems. He taught many top Canadian musicians before joining the jazz faculty at Berklee College of Music, Boston, USA. The one single very long lesson looked broadly at various concepts and methods for jazz theory from traditional applications to possibilities worth consideration.

I also took a few private ney lessons with Michael Ibrahim when he visited Toronto as a special guest. We covered Arab ney performance essentials. He is an adjunct professor at the Arabic Music Retreat, Massachusetts, USA.

Chapter 2: Irish Flute Concept and Definitions – As Heard on a traditional Reel

Introduction

One of the most universal flute designs is that of the Irish flute. It naturally plays a major scale from its bottom note, and in that sense is like other woodwinds from around the world like the Indian bansuri flute or the Hungarian-Romanian tarogato which is essentially a wooden, partially keyed saxophone. Irish flute playing consists of contiguous streams of notes articulated mostly by fingers and the throat with little or no tonguing. Such articulation originated on the bagpipes (notably the Irish Uilleann pipes). The Irish flutist looks to generate a lilting, but strong unflagging forward motion, especially in song-forms like the reel which are mostly locked in tempo and groove. Such pieces must be played spritely. This chapter presents and details a traditional Irish single reel incorporating archetypal ornamental techniques.

In The Hen House

Musical score for "In The Hen House" in G major, 4/4 time. The score consists of four staves of music with various annotations for articulation and performance.

Staff 1 (Measures 1-4):

- Measure 1: L1,L3
- Measure 2: CT, L1
- Measure 3: L1,L3
- Measure 4: L1,L3

Staff 2 (Measures 5-8):

- Measure 5: L1,L3
- Measure 6: L1,L3
- Measure 7: opt. breath, L1,L3
- Measure 8: glottal...., L1

Staff 3 (Measures 9-12):

- Measure 9: L2 (scissors icon)
- Measure 10: L1

Staff 4 (Measures 13-16):

- Measure 13: CR
- Measure 14: R1,R2 (L3,R1,R2)
- Measure 15: L1,L3, opt.R1 held (flatter)
- Measure 16: bounce, R1

Irish Ornamentations and their Abbreviations

Though not totally standardized, terms for Irish ornamentation are described in several common terms which refer either to the aesthetic being imparted (i.e. roll) and or the kinetic technique (i.e. tap). Ornaments generally work best in Irish music when they are succinct. Crisp finger ornamentation is needed to avoid flagging the momentum and achieve levity.

Cuts: A ‘cut’(denoted as CT or C) and a ‘grace note from above are analogous, however their aesthetics and physical execution differ. More than adding ornamentation, a cut (like most ornaments in Irish music) must add an accent or push - propelling the rhythm rather than interrupting it. The cut is achieved when one of the already covered finger holes is opened for only a few milliseconds. The motion is quick and light, and its character re-articulates a pitch, with little or no sense of the auxiliary pitch (grace note) above.

Taps: A tap (denoted T) is another light, quickly flicked finger articulation however unlike the cut it employs the additional finger-hole below the principal note.

Rolls: A roll (denoted R) is a turn or grupetto. While it may be played with regular sequential fingerings of the notes immediately above and below the main note, traditional techniques often use ‘false’ fingerings (out of sequence) for the light ghosted pitch above the central note. A ‘long’ roll starts on the main (fundamental) note whereas a ‘short’ roll skips the first note and begins immediately above the main note.

Slides: The most common Irish slide, scoops upward in pitch, from the diatonic note below. It is denoted with the thin line slanting into a note as in western/European music) It could be characterized as a smudged grace note. It must be one singular uninterrupted sonic event- the

tone should not hiccup or cease during the scoop. There is an optimum balance and timing of the airstream and finger trajectory required to achieve an effective slide. With optimum timing the slide is easily noticeable, yet fits inside the phrase without sacrificing forward momentum. Such succinctness is especially important when playing rhythmic song-forms like reels or jigs. Slides often are made beautifully effective when preceded with a quick volume dip, going immediately into an accented push-crescendo into the target note. An additional option is to add a roll immediately after sliding into the target note.

Crann: An Irish crann (denoted CR) comes from the Uilleann bagpipe tradition where one note is played and immediately ornamented by a series of quick cuts. Each of the cuts uses a different finger, and each finger must be quickly lifted and returned to the tone-hole before the next finger in the series is activated. All of this typically happens on a single quarter note. Since multiple finger lifts are involved, cranns occur on notes where several fingers are already in use. Quite commonly it is on the note D which uses all six fingers. While the lowest note (D) can't allow a roll (turn) as there is no lower pitch on the instrument, a crann creates for a squelchy, rippled or rolling effect using a series of higher pitched fingers to embellish the principal note.

Glottal Stop Articulation (Throat articulation): This is a controlled, light cough-like action (denoted with the word 'glottal'), which is favored over tonguing as it adds weight or emphasis, helping to create a danceable groove. Throat articulation can be learned effectively on various pieces (such as "John McKenna's" Jig) which have several repetitions on the same pitch, but not necessarily much ornamentation. It is often found defining the beginning of phrases in Irish music. The hyphen in "Uh-oh" nicely produces this throat articulation.

Breaths: Breath spots are generally obvious, so need not be marked when notating traditional Irish music. However, *optional* or *extra* breaths *are sometimes* worth noting, by using the common apostrophe symbol ('), when they are optional, add variety. Choices in breath spot, open up possibilities for new phrasing and ornamentation. Breaths can be quick, and partial or fuller. The importance of the quick breath is perhaps more often overlooked, as it can avoid a flagging effect of a desperate, overdue long breath, as well as they punctuate a sense of the melodic development from subsequent phrases.

Irish Flute B-C-D Flam Triplet

Known as the B-C-D triplet it is usually closer in rhythm to two sixteenths and an eighth note. It is specific to the notes B-C-D on a standard Irish flute. The B is fingered normally; the C is fingered with L2 and L3, however L2 and L3 are placed in advance of the C to create a flam. The effect happens for a fleeting moment because the note G is fingered as L1, L2, L3 are all down. The D pops out in a punchy way because the L2 and L3 fingers are already down, causing the airstream to explode out. The L2 + L3 fingering for C can be sharper than in equal temperament, but more importantly, in the B-C-D triplet, the L2 + L3 fingering has a slightly muted quality in contrast to strong popping accent D that follows when R1, R2 and R3 are added.

Flam Fingerings on Other Woodwinds

Though a known technique on the Irish flute, there are many possible similar fingering combinations which can produce similar, interesting results on other pitches, instruments or genres. A more general name might be: **Timbral Flam Note Groupings**.

When re-purposing this technique, there are a few concepts to look for: Interesting timbres are achieved via alternate fingerings, which change a note's timbre, and also a change in the attack of the following notes. The possibilities are endless. We may discover similar new variations like the B-C-D triplet where the 3rd pitch 'pops out', or we may use more or less than 3 notes in our grouping, or we may play the same pitch more than once, using different fingerings. The element of flam adds a lilt, or jutting character to an otherwise predictable phrase. When practicing the grouping slowly the flam may become a little too obvious -even a bit clunky. Played at tempo, there should truly be no additional kinetic effort required. The Post Coltrane Saxophone tradition uses various enharmonic fingerings to create timbre changes on pitches. Saxophonists like Evan Parker, John Butcher and David Mott, and flutist Robert Dick have explored and implemented similar timbral fingering and effects in their performance and composition. Experimentation on similar techniques will likely produce creative hybrids, across various instruments, phrases and genres.

Effective Ornamentation

With ornamentation, *less is often more*. Spaciousness can frame ornamentation which otherwise would be less significant. While jigs and reels are made of constant streams of quarter and eighth notes with many opportunities to ‘plug in’ rolls, cuts, taps, slides and cranns, masterful players do not use every opportunity but rather have a knack at finding optimum spots, where the ornaments ring out most compellingly. Examining and learning a master’s rendition of a tune verbatim will present unique, tricky bits, but surprisingly much of it will be plainer (and easier) than initially perceived. The ornamentation presented here for the traditional reel “In the Hen House” and is fairly mainstream. The same could be said of the Irish *sounding*, original composition “Spencer’s Kitchen” in Chapter 3, in spite of the fact that it introduces an unconventional hybrid in its use of South Indian music pulse modulation.

Summary of Abbreviations for Irish Ornaments

Roll (grupetto). = **R or T**. **LR and SR** denote short roll and long roll

Bounce or Tap (or pat) = **B or T**

B-C-D ‘Triplet’ = **B-C-D**

Crann = **CR**

Cut = **C or CT**

Summary of Ornaments for ‘In the Hen House’

BCD Triplet or reversed BCD Triplet

Cut On B

B Roll with dip and slide

Short D Crann R1, R2

Roll on E L1, R3

F# Roll–L1&L3

Rolls: *Note that on rolls no fingering is specified for the lower note. This, is because it is obvious - a given. Fingerings will be specified for the upper note – when and where a special desired character, beyond that which the basic fingering produces.

Exercise in Transferring Idiomatic Techniques

This is an experiential exercise which aims to challenge one’s ability to employ stylistic techniques without the help of pre-existing examples. Such a challenge could be applied in any context or idiom. In one example, the above etude-piece “In the Hen House presents stylistic Irish flute techniques which should prove easy enough to use on other melodies. As a challenge, pick a random tune and try out those techniques. On one hand there is something to be said for attempting this without pre-conceptions or pre-judgements, while on the other, the result will likely inform which techniques work happily in particular spots. Experimentation and repetition are key, as is adjusting to style and taste. Such choices may be inspired according to either idiom or personal whims. The goal for this exercise, if we are working out of “In the Hen House”, is to play and impart the Irish flute/bagpiping style onto unlikely, non-Irish tunes which of course do not come gift-wrapped in traditional renditions stylistics to emulate. This therefore presents a fresh, less prescribed challenge in interpretation.

In the case of the Irish style, the key ingredients which we should remember are contiguous airstream, finger articulation and ornamentation, as well as glottal stop articulation as per this chapter. While potentially a silly exercise, the success and value achieved is, subjective, though

it is also dependent on how musically the stylistics are imparted. Such transference of techniques is often useful in today's musical collaborations where an original piece is brought to a cross cultural setting.

Some pieces and settings, are perhaps a more natural fit than others, when it comes to employing stylistics. Jesu Joy of Man's Desiring by J.S. Bach, for example, in 9/8 meter, might be a fitting candidate for treatment as an Irish slip Jig with its 3 groups of contiguous eighth notes (essentially triplets) per bar.

A contemporary commercial woodwind player may be required to improvise at recording sessions, employing requested a particular fusion of musical genres, perhaps to better align with film scoring considerations etc. This often is done without notation or a prescribed recipe and the performer must stylize on his own accord.

In such experimentation there are archetypal techniques which the player should be able to employ. While such techniques would not be likely written down, but rather exist in the performers short term memory and consciousness, a list inspired by 'In the Hen House' could include the following:

- The Finger Pop articulation using an internal finger such as L3 or R1 can forcefully a low D which would begin a phrase.
- When the note A is of medium duration (quarter note) it may become two eighth notes by the use of a tap using L3, or perhaps, a roll using L1.
- Pending sufficient time allowances inherent in the melody, a D crann may work nicely on either the middle, or, the low D.

- Rolls (turns or grupettos) are subject to time allowances and various fingering, rather than the closest, sequential fingerings may provide a more compelling color. For instance, the fingerings used on an F# roll could be L1, L3-L1.
- The note C, when it occurs en route to a D can be often be replaced entirely with the “B-C-D triplet”, or as I have called it, “flam triplet”. Used in this way, it is as a melodic variation.
- Scooping into B naturals is effective when the B is at least a quarter note in duration and is coloured nicely with characteristic diminuendo/crescendo.
- Long duration notes especially at the end of a piece or phrase could accommodate finger vibrato. Such finger vibrato uses an audible, but non-sequential fingering such as R2 on a G note.

Chapter 3. Irish Reel using South Indian Pulse Modulation

Introduction

Chapter 3 presents an original composition called “Spencer’s Kitchen.”

<https://www.youtube.com/watch?v=yPgIc9s1rvI&t=21s>

The piece itself is essentially an Irish reel, but implements South Indian (Carnatic) ‘Tri-kalam.’

Among other things, this is a study in *not* discarding the viability of what to some might seem an unlikely fusion experiment. Tri-kalam is a pulse modulation in which given melodic subject is performed three times with different pulse subdivisions on each repetition. Tri-kalam is a classical compositional device and is often referred to also as ‘three-speeds.’ These three ‘speeds’ are different pulse divisions known as ‘Chatusra,’ ‘Tisra,’ and ‘Double Tisra,’ and are visible in the notation below, and explained in the text which follows:

Spencer's Kitchen in Trikalam

$\text{♩} = 76$

Ernie Tollar

[illegible]

Trikalam Pulse Modulation System in South Indian Music

In the ‘first speed’, which is known as *Chatusra*, the subject is rendered in duplet subdivisions with four pulses per beat, which would most typically be notated in eighth and quarter notes. I chose to convert the eight notes to sixteenths, to better accommodate the pulse modulations which follow. See the first twelve bars of “Spencer’s Kitchen” for an example.

In the second speed *Tisra* the identical subject material is rendered in triplet subdivisions. It typically sounds slower than the first speed although the tempo is unchanged. *The illusion of a* slower tempo results when the identical melody is rendered in subdivisions of 3 instead of 4. The gearing down on the *Tisra* section is a change in the exact ratio of 3:4. The phrases which were originally subdivided in fours, would then get ‘subdivided’ in triplets. See Bar 13 A1 in the “Spencer’s Kitchen” example.

The third speed called *Doubled Tisra* is exactly twice as fast as the *Tisra* section. This means we must feel the subdivisions of the triplet grid now as sextuplets. So, material previously written as quarter-note triplets would then become sixteenth-triplets. A2 in Bar 23 in notation of “Spencer’s Kitchen” (p.22) indicates the start of the third speed.

It is worth noting, that by the almost poetic math of Trikalam, the total number of bars will be identical - whether the subject is performed three times in either: the original duplet pulse divisions, or, when employing the pulse divisions of Trikalam. For example, Spencer’s Kitchen, with a single reel form of AB, takes eight bars when played once - so played three times would total 24 bars. When played three times in Trikalam, the total duration will be unchanged – still at exactly 24 bars! What might take eight beats to perform in duple subdivisions in the ‘Chatusra’

would take 10 and $\frac{2}{3}$ beats in 'tisra' and then 5 and $\frac{1}{3}$ beats in doubled tisra. The math shows that the total beat count remains the same at 24 beats. The original phrase is played three times and the result is $8 + 8 + 8 = 24$ beats. The phrase played in trikalam's three-speeds is as follows $8 + 10 \frac{2}{3} + 5 \frac{1}{3} = 24$ beats. The first two bars of the familiar melodic subject "Twinkle, Twinkle", the well-known folk tune used by composers such as Mozart and Dohnanyi to produce a set of variations, is presented to demonstrate the system of trikalam. See example following.

Twinkle Twinkle in Trikalam

The musical notation is presented on two staves. The first staff is labeled 'Chatusra' and 'Tisra slow'. It shows a melodic phrase starting with a treble clef and a key signature of one flat. The first four notes are beamed together and marked with an accent (>). Below the staff, the notation '1234'' is written. The second staff is labeled 'Double Tisra'. It shows the same melodic phrase repeated, with the first four notes beamed together and marked with an accent (>). Below the staff, the notation '1234'' is written. The notation '1234'' appears twice on the second staff, indicating the first four notes of the phrase.

* Accents are used to phrase structure

* '1234' indicates notes lasting 4 pulses

Hearing Phrases According to Their Inner Proportions Rather Than Against Meter

Some may encounter a challenge executing a given melodic subject in Trikalam, especially at the point of metric modulation. The ability to navigate the situation depends on one's musical background, and other abilities. The ability to hear and render a phrase according to its inner proportions is an important key to performing Trikalam pulse modulations, or any other type of phrase displacement. Its interior pulses determine the note values, rests and where all its notes occur in time, relative to one another. Most typically, in most traditional musics, repeated phrases would begin at the same spot in the metric cycle, so keeping one's place is based on a consistent target beat. In Trikalam however, there is a great need to feel the phrase according to its internal pulse sub-divisions. This is essential because each repetition of the phrase in Trikalam falls on a different location within the meter. One needs to develop the ability to feel the characteristics of the given phrase well enough so that it may be applied to the new pulse division. The change in pulse division feels much like the effect of a bicycle changing gears. When the phrase has been mastered with attention to its inner pulses – the notes *and rests*- it will be much easier to render it according to new subdivisions. When one tries to employ Trikalam on a familiar melody, the melody may have to be effectively re-learned with an awareness of the internal pulses within phrases. The new awareness will make the conversion of the melody much easier.

Chapter 4. Taqsim Maqam Bayati - by Ibrahim Kawala - Arabic Ney Flute

Introduction

This chapter contains a transcribed and notated *taqsim*.

[Ernie Tollar performing Ibrahim Kawala Bayati Ney Taqsim Transcription – \(click to hear\)](#)

The taqsim is a traditional, instrumental, unmetered melodic instrumental form of modal music, which is essentially improvised, but follows a traditional development and musical syntax. The phrasing, is unmetered somewhat like that of oratorical speech, chants, or any mode of expression which carries forward motion, in discrete phrases, without aligning to metric cycles.

Bayati is one of the 9 most common tetrachords or *Jins* in Arabic music. This transcribed performance is in Bayati with C as the tonic. The bayati jins/tetrachord uses the notes C, D half flat, E flat, and F. Jins are mostly such 4 note fragments though certain other Jins are sometimes formed by 3, 5, or 6 stepwise pitches. The taqsim, as an improvised form, has evolved over centuries. The opening phrases introduce only the Bayati Jins/tetrachord. Subsequent phrases gradually and logically highlight new pitch focal points, but these new pitches hover on the gravity of the original four notes of Bayati. It is such vocabulary and syntax that this chapter's example aims to foster. The taqsim given here is predominantly a modal example which remains on the principal 7 or 8 notes of maqam bayati. Bayati, when it is constructed over a full octave, uses 7 pitches, with the following intervals ascending from the tonic: $\frac{3}{4}$ tone, $\frac{3}{4}$ tone, whole tone, whole tone, $\frac{1}{2}$ tone, whole tone, whole tone. Note, that the $\frac{1}{2}$ tone interval between the 5th and 6th degree is also commonly played as a $\frac{3}{4}$ tone interval. Variants (accidentals) beyond the main 7 or 8 notes, are common in modern day practice, especially in instances such as longer taqsims which are sometimes featured as main item of a concert. The chapter after this one is built on an instrumental form called *Samai*, which will display elaborate modulations from the main maqam

of this chapter (*which is Bayati*). Any modal taqsim such as the one here in chapter 4, could quite naturally be expanded to incorporate modulations such as those presented in the Samai (Chapter 5).

See ‘Taqsim Bayati’ below:

Taqsim Bayati

Part I - Opening tetrachord

Ibrahim Kawała

Tutuh
Torarinn Kjalvald

Long Pause

T T T

R1

R1 R1

R1 R1 R1 R1 R1

4/4

Part II - Higher tetrachord(s)

vib.

(vib.)

R1

R1

2

Thumb

Slow Head vib

Thumb...

3

gliss.

T T

5 5

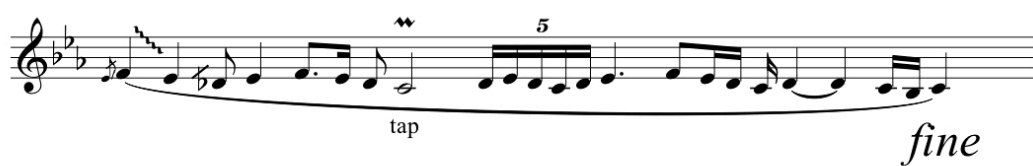
10

3

3

9

3



Arabic Ney Flute Timbres (5 Options)

There are three principal timbres possible on the ney flute, which include, the pure fundamental, the overtones as isolated notes (the octave, 12th etc.), and split-tone blends of these first two timbres (which most commonly would blend the fundamental and its octave). Within these three distinct tones, infinite blends are possible. I have presented one possible mode of practicing the Ney which takes aim at 5 specific timbres. The aim is precise control of tone, as well a greater expressive tonal palette and expressive freedom. The fourth and fifth timbres are more specific blends than described above. The fourth timbre, adds a subtle, but noticeable, hint of the upper octave to the pure fundamental, just enough to put some ‘edge’ on the sound. The fifth, uses mainly the pure upper octave with the added hint of the lower octave, enough to add a little grittiness. Such expressive choices can be rendered from either the attack of a note or be introduced gradually during sustain. These timbres may be effective during solo playing such as in taqsim, or, such manipulation of overtones may add projection to low notes for ensemble contexts. When practicing these five distinct gradations, one should aim for the ability to steadily hold a desired timbre. More unusually, this timbre ‘splitting’ can emphasize other harmonics (e.g., 12th). The following exercise covers the instrument’s range however we may be better off trying these techniques in the context of a particular tune instead of in an abstracted pure exercise.

Ney Flute Vibrato - Technical Methods

Different vibratos are characterized by more than depth and speed such that the possibilities are endless. There may be many points where the concepts of vibrato, melody and ornamentation meld or overlap. For example, vibrato occurring on the 5th scale degree with a movement

towards the flatted 6th begins to take on melodic and rhythmic function (and in fact the pitch of the flatted sixth is lower when rendered in such a way as the vibrato is born out of the 5th reaching, or even yearning, for the nearest pitch above, as is notated at the bottom page 28).

Head vibrato is usually accomplished by nodding, in either vertical yes-like movement, or a more horizontal movement. Head vibrato is a technique, where often, the individual pulses are individually *countable*, which is unlike a faster, relentless steady vibrato. Head vibrato could be perceived as a sighing gesture, especially on *shorter* notes like the 5th degree of Bayati where the only hole which is partially covered, is by the top thumb, which makes the instrument's response more sensitive to head movement than it would be on *longer* notes where more finger holes are covered. Sometimes *vibrato-ish* movements, whether imparted with head or hand, may *reach* up – or *yearn* - towards neighbouring tones. For example, the 5th degree may reach up towards the flatted 6th. The thumb itself can be used to generate a similar effect. A line from a Rumi poem which may inspire, translates to “the ney cries to return to the reed bed from which it was cut.”

Hand vibrato technique is based on alternating movement of the flute towards-and-away from the lips. Some players favor this technique for certain depth and speeds, (though this preference is a personal choice, varying widely based on what works for the individual).

Air Push undulations from the diaphragm or throat characterize a vibrato which adds volume (amplitude) in tandem with pitch fluctuation as the air speed is increased and decreased. The result may often be more dramatic, and can resemble a European orchestral flute vibrato, which explains why it is commonly used by ney players in Arab orchestras.

Lip movement also can produce vibrato. It is accomplished by lifting and relaxing one corner of the lips. This technique is more common in Persian and Turkish than Arabic ney styles.

Usage. All of these different vibratos will have situations where they are more or less effective situations. Finding these preferences is best contextualized in melodic compositions, or at least within melodic phrases, rather than long tone exercises. Many artists use their own personal blend of these techniques. Practicing vibrato out of context may have its place when the technique is new, or needs to be isolated, however, we must realize in that case, that we are producing a sound which we which may likely have no clear intended use in actual performance. Observing, and copying favourite masters in live performance or video is a useful method towards *emulating* a desired vibrato, however we all have to be search over time to find which technique is *physically suited* for ourselves. *We will quite possibly have more of a 'knack' for some techniques over others.* Two individuals could potentially produce an identical effect by using two quite different techniques. Such choices are ultimately for the individual.

Vibrato - Conceptual Possibilities

The pitch of vibrato may either move above, and/or below the principal pitch (three possibilities therein), and also may vary in speed and rhythm. Vibrato may start at the beginning of a note, or after the note has been initiated. Vibrato may start slowly and accelerate, and when the vibrato is as such, undulations would actually be countable to the careful listener, or one who is looking to emulate or transcribe from a master. Vibrato may also occur during a glissando. Honing various vibratos can work towards emulating a specific style or it may open a creative journey towards personal style. The above, is not comprehensive, but rather some possibilities for the creative

palette. We become what we practice and every note and every phrase we play is not only a vehicle to hone our already existing vocabularies, but to explore, and forge new ones.

Hand and Finger Re-assignment Techniques, Trill Fingerings

Woodwind players generally assign each finger predominantly to one specific hole. Less commonly, in specific instances, the regular finger assignments may be changed to facilitate what would otherwise be impossible. Examples include extending the break of a register for smoother pitch glide, or facilitating fast trill speed by re-assigning an index finger to what would have otherwise been a slower ring finger. In “Taqsım Bayatı”, the opening phrase, requires a very fast trill. R1 is substituted for L3 – relocating the R1 finger to trill on the L3 finger hole. Next, mid-phrase, at an opportune moment when only the left hand is required, normal finger assignment resumes. With repetition this unusual manoeuvre soon becomes effortless, as it uses the typically quicker index finger over the ring finger

Finger Re-Assignment Beyond this Particular Example

This research also aims to present hand and finger re-assignment as broader technical concept with unknown potential uses, ranging from the discovery of ‘far-out’ extended techniques, to practical techniques which facilitate already existing demands.

Keyless instruments lack the obstacle of keywork and other hardware which virtually dictate hand assignment. In one of many such examples, on a saxophone, the right index finger cannot be re-assigned to where the left ring finger usually rests. A saxophone’s keywork dictates that the left hand is at the top and the right hand at the bottom. An exception to the saxophone’s keywork dictating finger assignment, is presented in the double saxophone technique presented in the last chapter of this thesis, although it is somewhat of an unusual extended technique as the alto

saxophone's top half is played with the right hand. On symmetric, open holed instruments, the right-hand and left-hand locations are interchangeable, whereas this is problematic, and in many instances impossible on a clarinet or saxophone. The keywork of instruments like saxophones or clarinet, though can still offer interesting extended technique possibilities worth exploring beyond the conventional left-right hand assignments offering a vast range of possible finger re-assignments as well as fingerings which are irregular, non-contiguous, oddly forked and suited for the exploration of extended saxophone multi-phonics.

Traditional Instruments such as an Armenian Duduk, and the South Indian Venu are designed with 8 finger holes (not counting the thumb hole on duduk). The 8 holes allow for two common finger assignments. The principal finger assignment uses three fingers of the first hand and 4 fingers of the second hand. Alternately, there is a secondary assignment where it can be played with 4 fingers of the first hand and 4 fingers with the second hand. These instruments are thus able to optionally move the register- break by about a full tone when certain melisma is desired. In the case of the small South Indian transverse venu (flute), glissandi become possible where the instrument's register break would otherwise not allow.

Chapter 5. Modal Variants – Samai Bayati

Introduction

The Samai is a classical instrumental song-form which is widely played in Arabic music. Its origins are Ottoman. This chapter's samai follows the traditional compositional form.

[Link to Samai Bayati Click Here](#)

Its standard musical form, includes four sections known as *Khanne*, each showing its own modal variants on the central Bayati maqam. Each *Khanne* is followed by a return to the refrain known as the *taslim*. The Samai is widely regarded as a fine study of various modal variants which are possible on a given maqam. The Samai is performed at Arabic/Maqam music concerts to bring about a contemplative, slow, winding melodic subtlety. When properly composed, a Samai, displays various un-jarring, but effective 'modulations' from the chosen principal maqam, which present options for the improvising artist for other genres like the Taqsim, Tahmila, or at any moments where a departure from a basic modality is desired. Such 'modulations' are shifts in tetrachord / Jins. (The plural of Jins is Ajnas.) In modal composition, or in improvisation the artist can create interesting, yet graceful melodic shifts that naturally return back to the principal tonality. Like successive tiers of tree branches, the first modulations spring out of the trunk, while secondary modulations may spring out of other modulations, just as branches of a tree give birth to sub-branches. Such progressions provide movement within tonal music. 'Fasila,' is the Arabic word referring to branch or family, and is a metaphor used to describe the system of modulations used by masterful maqam players and composers. Such modular stacking, is a lot

like the stacking of IKEA® type furniture, in that smaller components can be stacked against each other in a modular way.

Such tonal progressions, have endured the changing tastes of centuries. I would posit an analogy between European Renaissance and Baroque harmonic chord progressions which include secondary dominants, and the modal variants found in Arabic/ Maqam music, as both create *progressions*, and are effectively similar in their smooth departure from a starting tonality and a seemingly inevitable return to it, all in spite of the fact one employs chords, and the other a melodic - heterophonic model. The modulations contained in “Samai Bayati” will not be discussed in detail, however the modulatory tetrachords/ajnas are simply marked by section headers where they occur in the notation. Suffice it to say, they are built on the Fasila. These Arabic Jins (ajnas) are native to instruments found in Arabic or Near- Eastern music, and are the building blocks of hundreds of Arabic scales (Maqamet), and the progressions which are possible.

See Samai Bayati Below:

SAMAI BAYATI

Ernie Tollar

KHANNE 1



TASLIM



KHANNE 2 -SIGA



TO TASLIM

Hijaz KHANNE III



2

TO TASLIM

Khanne IV

3

$\text{♩} = \text{♩}$
 3
 hijaz 1.
 hijaz 2.
 hijaz 3
 RUBATO
 $\text{♩} = \text{♩}$ FINAL TASLIM
 10
 3 3 3
 Fine

The Iqa

Thus far, this chapter has looked into modal variants via the instrumental form Samai. Unlike the previous chapter it is set to tempo and meter. This meter is rendered specifically in **an Iqa. Iqa** is an infra-rhythm (principal rhythmic pattern upon which compositions are built), typically characterized by two main drum strokes, namely the bass tone “dom” and treble tone “tak.” The Samai Bayati of this chapter uses an Iqa called *Iqa Samai Thaqil* which is as follows:

10/4: DOM, rest, rest, TEK, rest, DOM, DOM, TEK, rest, rest.

The Samai as a form, typically changes to a lively ‘Iqa in its penultimate section - most traditionally to a 6/8 - although the Samai here switches to a to what is mostly 9/8 before the final return to 10/4 for the last Taslim (Chorus/Refrain). Meter and rhythm aside, perhaps the Samai presented in this chapter would lend itself to practicing in an unmetered/rubato way, or in fact performed as if it were a taqsim (which was presented in the previous chapter). Though the main difference from the previous chapter though, would be the addition of modal the variants introduced in this chapter.

Chapter 6. Alapana in Raga Kapi: Improvised by Raman Kalyan on Indian Flute

Introduction

Indian classical music is performed according to a melodic system known as Raga. This study attempts to extrapolate the concept of Raga, so that it may be viewed, in a universal, theoretical light, to where it becomes a functional creative tool. Hundreds of ragas already exist, and each is defined by its own particular melodic movements and contoured glissandi. The archetypal melodic phrases, of each raga, are known as *prayogas* in the North Indian (Hindustani) system, or *prayogam* in South Indian (Carnatic) terminology. The specifically contoured ornamental glissandi are called *meends*, which are somewhat analogous to *Jaru* or *Gamakas* in the South. Listening to the repertoire, and emulating performances by masters of the genre, is an essential process which develops the vivid aural image needed to master the details of performance. Perhaps a most distinguishing feature of Indian raga-based melodies, as compared to most other music, lies in the extent of pitch glide and oscillation. The solfege of the European tradition refers to *fixed pitches*, to which, ornamentation is added, while the raga's solfege system is such that a single scale degree often implies a specific, moving pitch contour. The South Indian raga 'Kapi' has been selected for this raga study.

[Raman Kalyan Performs Kapi Alapana](#)

[Ernie Tollar performs Kapi Alapana Transcription](#)

Kapi Alapana

Flute Pitched in Bb

Tonic is written A - Concert pitch G

- Raman Kalyan, Venu

un-ornamented

knee no T R2

3

3

knee

regular L1,2 L1,2 L1

3

3 3 3

andolan

2

andolan micro

flattening komalGA

3 3

3

L3 angled L3 flat

T T

<

andolan

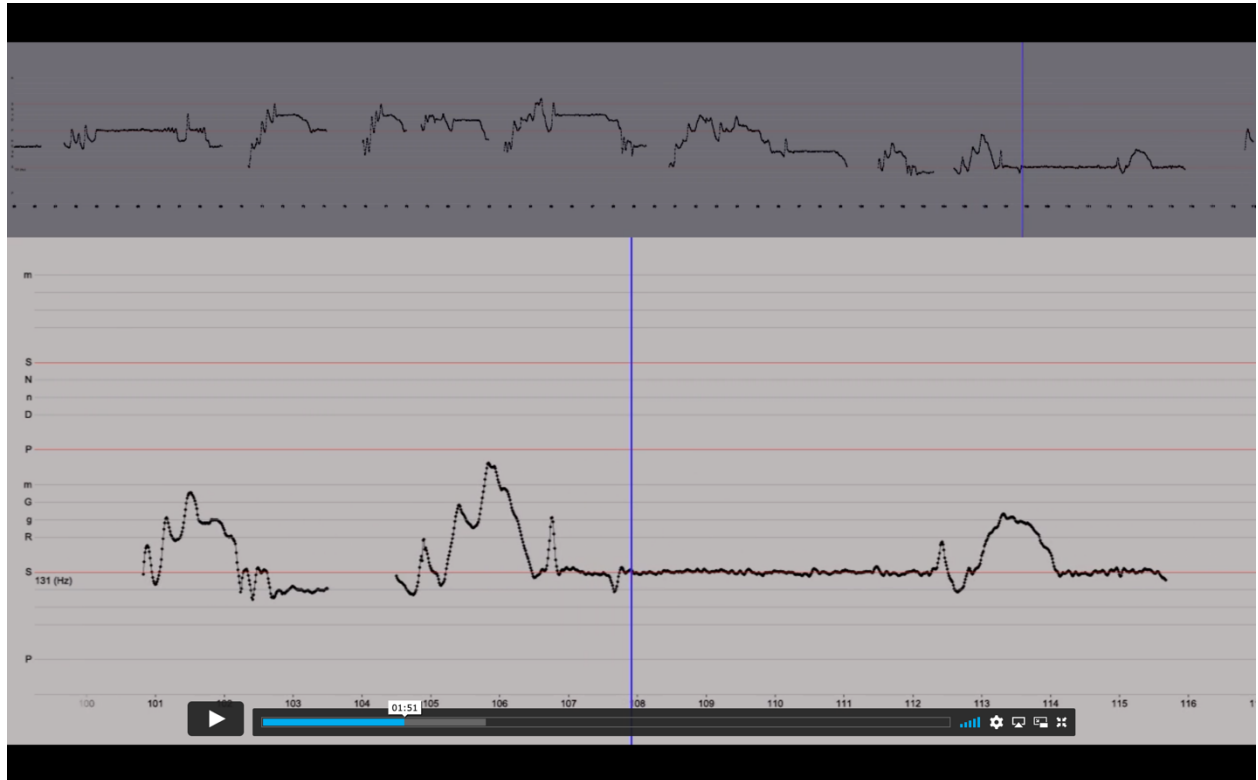
3

*fine*

Notation Style in the Raga Alapana Chapter and Beyond

The notation system used in the “Kapi Raga Alapana Kapi” chapter favors the rhythmic *approximations* of stems, flags, and beams. The notated rhythms, are not to be played with measured metric strictness as alapana is an unmetered rubato form. The alapana presented could alternately have been notated as note heads only, however, the notation employed attempts to clarify aspects of phrasing such as the relative emphasis and timing of various pitches which make up phrases. Alternately again, the alapana could have been notated in Indian solfege (commonly known as Sa-Re-Gam). Sa-re-gam works well for those who have a pre-existing grasp on the raga at hand, as it would imply much with less notation. Another advantage of using the sa-re-gam solfege system is that it better lends itself to the varied ornamentation that an experienced performing artist would bring. Perhaps a well-trained musician of the present-day, or certainly a musician in future decades who is well rounded and informed in global currents in music, would be able to use a hybrid notation, perhaps combining euro-staff-notation with the sa-re-gam. Also, the European baroque composers developed linear symbols to notate possible ornamentation. As melodic concepts such raga and ornamentation seep into the larger global music culture, notation of ornamentation, is in my opinion, a good candidate to be expressed similarly. Currently, there is a computer software programme called PRAAT which was developed to display visual representations of speech analysis (phonetics). Among its many functions, the PRAAT software can vividly display pitch. In the PRAAT generated video ([web-link on following page](#)), pitch is graphed in complete detail. Future research could take inspiration from PRAAT and European symbols creating a hybrid system of linear markings which would efficiently indicate ornamentation alongside notes on the European staff, in sufficient detail without restricting the artist with unnecessarily detailed notation.

- See Praat example as moving pictures [click on the picture](#) below to watch the video.



This example is sung in the North Indian Raag Pilu, which is analogous to the South Indian Raga, Kapi.

All performance strives to transcend notation. Debussy's "Syrinx" has existed as a testament to this, having lived and evolved among countless renditions of European classical silver flutists, using a notation approach which is somewhat similar to the Kapi Alapana presented here, as "Syrinx" has no meter specified, (but Syrinx does use bar-lines).

Raga Based Music Techniques - Meends

Meends are the specifically contoured glissandi in N. Indian music. The reader must make his or her own correlation between the two Kapi audio links above and the notated transcription at the beginning of this chapter. The art of meends is vast and infinite, and its parameters include the range, speed and trajectory when moving from one pitch to another, as well as the volume and tone color which is produced along that trajectory. One exercise presented later in this chapter is entitled ‘Meends in Three Volume Curves.’

Raga Based Music Techniques – Prayogam

Prayogam are phrases which define melodic movements which are iconic to particular ragas. The key phrases in the following Kapi Alapana can be studied as they re-occur often and present archetypal variations which are present in each and every phrase. The approach presents the transcription as a masterful complete example of Kapi raga which includes all of its defining phrases. While notating ragas, as scales, with ascending and descending movements is common as a summary on liner notes, etc. invariably discerning teachers/gurus prefer that such *prayogams* (phrase usages) are absorbed through the repetition of a more detailed and complete example such as the Kapi Alapana recording/transcription/notation itself, rather than by an attempt to crudely summarize in the form of an ascending/descending scale.

Indian Solfege and Gamakas

Indian music has its own seven note solfege equivalent to the non-fixed ‘Do’ (Do-Re-Mi-Sol-Fa-La-Ti-Do) of European solfege. The corresponding Indian solfege, known as SaRiGam, names the seven scale tones Sa-Re-Ga-Ma-Pa-Dha-Ni-Sa. Though this research has favored explicitly

notating details in staff notation, traditionally the SaRiGam could be used to express or imply much of the ornamental pitch detail. As our world's musical paradigms are overlapping more quickly than ever before we are likely to see hybrid forms of notation as all current systems have their appropriate usefulness and limitations which are dictated by the idioms from which they were borne.

Though not used in this thesis, it is worth pointing out that each single Indian solfege syllable encapsulates much more than just a single fixed pitch. For example, in Kapi raga (as well as in several other minor scale ragas), the pitch '*Komal Ga*' (or minor 3rd) of the scale, would typically first oscillate in between the 2nd and 4th scale degrees before arriving at the 3rd. Then, once it has arrived at the 3rd, there is a smaller microtonal oscillation known as Andolan which is like a specifically countable and contoured vibrato. Furthermore, such curves in pitch vary according to contextual aspects which include tempo, ascent or descent, and the mood of the improvising artist. The expressive ornamental sliding has a characteristic timing, which, while not metrically regulated as what we commonly refer to as *rhythm*, is still rather specific in its timing – much like the timing and stress we use in language when speaking syllables. The audio links provided along with the details in the the Kapi Alapana notation illustrate such details fully.

Creativity With One's Acquired Vocabulary

The technique that is learned while honing an iconic phrase belonging to a Raga, Blues, or any style, enrich a player's vocabulary. But then what? Learn more phrases? Learning more phrases increases vocabulary, however, rather than being relegated to repeating the same phrases with the same inflection, surely one wants to *own* the material in preparation for a lifetime of use where endless variations can be built on a smaller number of familiar phrases. Such phrases are

never necessarily the same twice and are easily varied at will according to context and mood. This is an important consideration when learning any masterful example, as accurately performing it by memory is perhaps only the beginning. When it is learned more deeply, to the point where one no longer hears it as a single example, but rather, ‘forgets’ it and moves on to being able to hear it and recreate it with complete freedom and abandon.

Gamakas vs Ornaments

The difference between gamakas and ornaments involves more than semantics. Gamakas are ornaments, which are inherent to the particular ragas to which they belong. Their melodic contour, travels both ascending and descending, often extending above or below a target note. Gamakas technically are ornaments, but as they are inherent to particular ragas, they are best practiced in the context to which they belong. This is somewhat in contrast to European musical paradigms in which the composition proper can exist with, or without the ornaments.

Creative Raga Possibilities Within and Beyond the Tradition

In the Kapi Alapana presented here we will notice a similarity in many phrases and we may sense that the artist has played similar phrases before. These thematic components are the usages (or prayogas) of the raga, and are a testament to how endlessly the artist can develop a small amount of material to endlessly create within the tradition. Below is a link to a longer more expansive performance again by Raman Kalyan on Kapi Raga. It displays familiar phrases, yet, it does not ever repeat exact phrases to the performance which was transcribed again. [Click here to hear Raman Kalyan's expansive concert rendition of Kapi Ragam.](#) Great exponents of other traditions also show this ability to always bring fresh water from the same familiar well.

Thumbhole Addition to Bansuri Flute – An Addition to Conventional Design

Wanting a glissando from the 2nd degree of the scale up to the 4th, as is common in South Indian ragas, I have added a thumb hole to the larger North Indian bansuri flute. Woodwind makers worldwide have always customized and innovated designs according to whatever enables the performer to better render stylistic aspects. My inclination for this design was due to my interest in both North and South Indian flute styles. The gamakas, or melodic ornaments mentioned above have of course been the inspiration in the design of Indian flutes. Two basic traditional flute constructions have evolved around the needs of the two principal categories of Indian Raga music. The smaller bamboo flute of the South Indian Classical music is called Venu. The Venu is built primarily around a tonic – or “Sa” – which is fingered by covering the first two holes, which makes its register break sit between the 3rd, and 4th degrees. The North Indian Bansuri flute is generally larger and deeper pitched, and uses three fingers for the tonic. Neither of these designs typically has a thumbhole drilled.

This chapter focusses on the South Indian Raga *Kapi*, as fingered on the Venu flute’s two fingered tonic. My own custom designed thumb hole system for bansuri flute is presented as an innovative solution to the challenges of unbroken glissandi described above. Note, that in the two audio links above, my performance of the Kapi Alapana Transcription, on my hybrid bansuri, sounds an octave lower than the performance on South Indian venu flute of Raman Kalyan. While, uncommon on bansuri, precedents in the construction of flute thumbholes world-wide include the European recorder and transverse flutes, as well as with the South American Kena.

The additional thumb hole is small. It is only about 1/4 the size of its other finger holes. The thumb hole not only facilitates meends as described, but also serves as a register/vent key, and

can raise pitch to rectify any tendency towards flatness of pitch, particularly the very quiet upper register. Other uses for the thumb hole do exist, but will not be discussed here as they would be more aligned with non-traditional extended techniques.

Meends in Three Volume Curves

Meends are both a technique for the bamboo flutist to master, as well as major component in the art of ragas. This exercise seeks to systematize technique building of three categories of meend (glissandos), which are fixed points along a spectrum.

(Meend #1) – A glissando characterized by a crescendo on-route to the target note.

(Meend #2) – A glissando characterized by an unwavering volume enroute to the target note.

(Meend #3) - – A glissando characterized by a decrescendo enroute to the target note.

Meend #3. Is the first presented here, as the Indian classical style is an acoustic chamber music form, which more often favors the sublime understated gestures of this Meend. This meend is perhaps, somewhat more elusive and hard to master than the other two.

Meend #1, uses a crescendo enroute to the target pitch. The crescendo may be effective in heterophonic or layered ensemble settings, yet for Indian Classical contexts carries an emphatic quality, which could often ring out too much like the gaudy or comic effect of a slide whistle.

Meend #2, is more neutral, and is characterized by a glissando with no crescendo or diminuendo.

Technical control over these three meends, across an instrument's pitch, volume, timbre and range, aims to enable endless shades of expression, fostering both precision and minute, pleasing, expressive nuance

Ultimately, the performer's artistry may draw freely and endlessly across this spectrum so that no two meends need be exactly alike. Whether one's vision lies in traditional playing, or in exploring less discovered expressions, practice in the area of meends is a vast area of musical expression.

Meends with 3 volume Curves



** All crescendo/decrescendos refer to the moment of glissando emphasis, more than the entire phrase.*

Fingering Raga Pitch Oscillations on Indian Open Hole Flute

Raga pitch oscillations are performed in accordance to the scale degree which is being played.

Most commonly these movements (whether small or large, up or down, across one, two or more scale degrees) are activated largely by finger technique.

Raga-prescribed movements are indirect and asymmetric, often moving across one, two, or more scale degrees at a time. The Indian flutist's finger techniques are used in tandem with the airstream and embouchure to control volume, timbre, as well as pitch tendencies inherent to the instrument. These various kinetic techniques counterbalance each other, cradling the notes. That the open holes of the Indian flute are large and allow the fingers a wide range of movement and hole coverage facilitates this cradling and shaping of tone color and pitch.

Categorically speaking, the flute's fingerings are either fully closed, or partially closed – the partially closed fingerings are often referred to as 'half-holed'. If one wished to practice and master the full gamut of possibilities that would include phrases starting and ending on both fully closed hole fingerings, as well as 'half-hole' fingerings.

Microtonal Finger Oscillation (Andolan) on Komal Ga (the -3rd degree) in Kapi

A pitch that features a small slow countable undulation is a common gesture in raga-based music known as *andolan*. Andolan is executed primarily with small movements by the fingers imparting microtonal undulations. It focusses on pitch more so than the amplitude in contrast to what vibrato may often do. The reach of a note which employs andolan typically spans a few cents above the pitch's centre and a few cents below. Andolan also displays pitch dips somewhat resembling a small microtonal inverted mordent. The *andolan* movement in *kapi* is an important characteristic on the scale tone *komal ga*, or minor-third degree.

Chapter 7 Kapi Gat and Korvi

Introduction

‘Kapi Gat and Korvi’ is an original melodic theme and variations on the South Indian Raga Kapi set to a metric cycle. The melodic theme and variations used here, will resemble the logical sequences of graduating complexity, which In South Indian music are known as *sangatis*. *Gat* refers to the main metered theme in the Hindustani style, which usually has percussion accompaniment. Kapi Gat and Korvi, as presented here, is loosely speaking a hybrid on North and South Indian metered melodic theme.

The melodic ‘Korvi’ presented is the melodic version of said Carnatic compositional rhythmic form. A korvi strings together rhythmic phrases of varying lengths which create a climactic cadence. A melodic *korvi*, is built on permutations of previous melodic themes.

Notating Korvis in European notation is done appropriately with phrases and beaming which crosses beats and bar lines. Though this system may present a challenge at first, it better prioritizes phrase lengths and shape, over their placement in the meter. The time signature (meter) is of course notated where a composition starts and a circled number will show the where in the cycle the first note begins. Indian musicians develop a mastery of hearing a wide variety of phrases according to the internal pulse subdivisions as they relate to a wide variety of meters. A system of poetic recited syllables called *solkatu*, though not detailed here, is the traditional system underlying the phrases, which delineates rhythmic groupings and subdivisions, in an intuitive manner. The beaming method described above helps make sense of rhythmic structures

as there are no ties across the bar lines as in the conventional European system of beaming. This phrase centric notation can be seen in the third page of ‘Kapi Gat & Korvi’ on the next page.

Various Indian classical traditions have cultured extensive pedagogies (referred to by terms including, Solkatu / Konnakal in the South, or Bols in the North). While the types of syllables vary between the traditions of the North and South, and from artists to artist, it is with only the vocabulary of less than a dozen phrases, endless rhythmic phrases and permutations become possible! Indian masters display facility that is remarkable and aesthetically aligned with the music as well as with the reflex consonants and linguistic characteristics of Indian languages. The power of phrase vocabulary and its endless permutations, I believe, is something each artist can conceive of on their own according musical culture.

Around the world, rhythms are communicated through syllables which either mimic drums or linguistics. Jazz bassist Dave Holland created an Indian-esque system of rhythmic morphing and displacement, which he called ‘Gamala-Taki’ which uses ‘ga-ma-la’ as its three-syllable phrase and ta-ki for its two-syllable phrase. With 2’s and 3’s the possibilities quickly become vast. Bill Douglas, a creative American bassoonist created a series of funky sounding “Rock-Etudes” which have an American vernacular sound and aesthetic.

The sequential melodic variations found in ‘Kapi Gat and Korvi’ are known as *sangatis* in South Indian (Carnatic) music. While at first glance the notation may appear somewhat detailed and complex, however, it is simply composed of variations and ornaments which are all built on a couple of simple themes - mainly the first 4 ascending pick-up notes which lead to the fifth degree of the scale.

Flute pitched in Eb

Kapi Gat & Korvi

Themes and Variations

(Tonic is written A - sounding concert C)

Pallavi - A section

(variation 2nd X) (variation 2nd X)

5

9

ST

pallavi - A section 2nd phrase

13

Stop

Drum cadence...

17

cadenza short rubato

21

Drum Cadence

Stop

rubato improv to SA sets up drum Cadence

Anupallavi

25

fermatas first x only

29

3

R1/2 R1/2

2

33

Korvi

Tisra

tan.. ta. ka tan.. ta. ka tan.. ta. ka ta ka di mi ta ka di mi di ri ki ta ta ka tan.. taka tan.. taka tan.. taka ta ka di mi taka

Double Tisra

cadenza / qafila

37

di mi di ri ki ta ta ka tan.. ta. ka tan.. ta. ka tan.. tan..

freely

41

Pallavi

Finale Tihai

45

short
cadenza

Fine

Korvi (Kapi) Beamed to Phrases

Duration: 24 Beats (6 x 4/4)

(chatusra)

4/4

(tisra)

(double tisra)

(downbeat)

Chapter 8 Double Saxophone Configuration

Introduction

“Double saxophone” as presented here uses a Bb Soprano sax in the left hand and Eb alto sax in the right. I use a curved soprano sax, which easily aligns side by side with the alto sax, and both mouthpieces can easily be positioned close together at a somewhat similar angle. I use the so-called double-embouchure (no pun intended), where teeth do not touch the mouthpiece, as was the standard European classical clarinet embouchure in the 18th and much of the 19th centuries. While it may be regarded as a party trick, multiple piped instruments have long been found worldwide. Notably, double piped instruments worldwide, include the Arghool from the Middle East and the Italian multiple piped Launeddas. The “Double Sax Etudes” clip below may bear a resemblance to such double piped instruments.

While hoping to avoid semantics, I would contend that the double saxophones, when played together, are *actually functioning as one instrument*. Because of this, I prefer to use the term ‘Double Saxophone’ (singular). The embouchure is a two-sided affair, in which hopes of tuning both horns successfully are by adjusting tension on the left and right sides of the mouth. The diad-voicings are achieved by combined postures, where the fingers of both hands voice our harmonic intentions. As the range of each horn is limited, compromises – or perhaps better put – *substitutions* are necessary. With only one hand on both instruments the realm of possibilities from which the player must draw is limited. Speaking in concert pitch, the easily fingered pitches, given that only one hand plays each horn are: Bb (below middle C) to E a tritone higher on the the alto, and F-B (above middle C) for the soprano, making the range an easily accessible

an octave with the complete 12 tones of the chromatic scale. Drone, melody, or two voiced movement, parallel harmony, or diads are possible. Vibrato and tone on the paired instruments have a blend which is unique to double pipe/single player instrument. The sound showcases the character of one person's single airstream, and is quite different than what we would hear when two players each play single saxophone. Some characteristics may be effective in one context, while sounding coarse in another. In any case the simple sounding etudes heard in the clip below feature the basic range and technique which is possible and hopefully hints at other compositional possibilities for this instrument in the future.

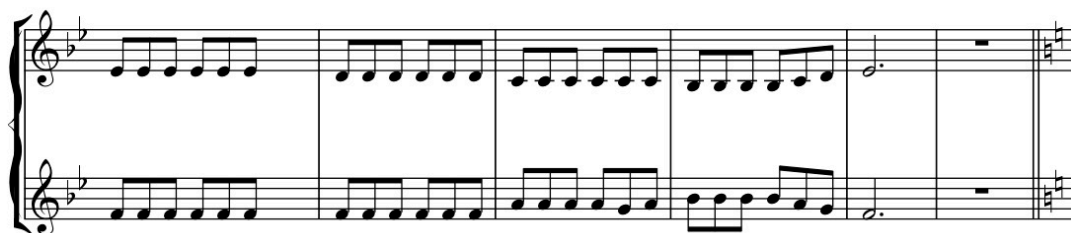
[Click here to hear Double Sax Etudes](#)

DOUBLE SAX ETUDES

Chopsticks Original Piano

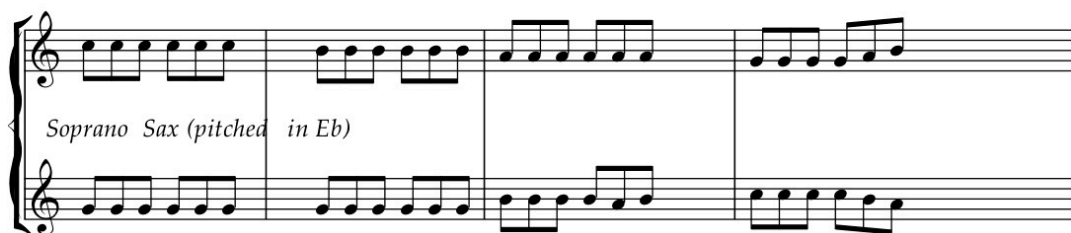


Chopsticks for Two Saxes Bb major - in Concert Pitch

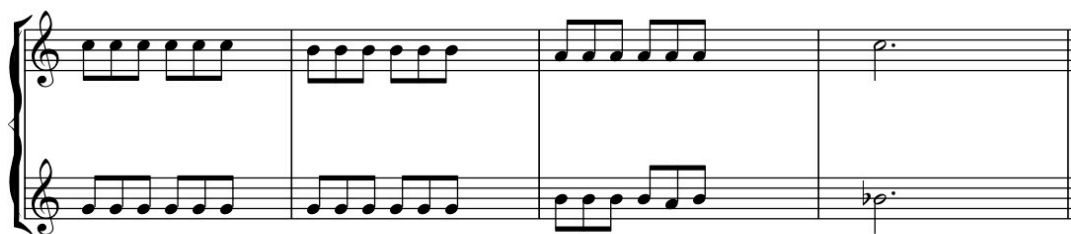


Alto Sax (pitched in Eb)

Chopsticks for Two Saxes Bb major



Soprano Sax (pitched in Eb)



2

G major Vamp

Soprano Sax in concert pitch

Alto Sax | in concert pitch

Bb Bluesette-Counterpoint

Alto Sax Concert Pitch

Sop. Sax Concert Pitch

A musical score for the song 'The Rose Tree'. It consists of two staves. The top staff is for the vocal melody, and the bottom staff is for the piano accompaniment. The key signature has one flat (B-flat), and the time signature is 4/4. The melody is written in a soprano range, and the piano accompaniment is in a lower range. The score includes a key signature change from B-flat to A-flat in the final measure.

[illegible]

Well You Needn't - Thelonius Monk (Based off of Fake Book Chord Changes)

First system of musical notation. The treble and bass staves are shown. The treble staff has a key signature of one flat (Bb) and a common time signature. The bass staff has a key signature of one flat (Bb) and a common time signature. The first four measures are marked with chords: F, Gb, F, Gb. The notes are written in a simple, rhythmic style.

Second system of musical notation. The treble and bass staves are shown. The treble staff has a key signature of one flat (Bb) and a common time signature. The bass staff has a key signature of one flat (Bb) and a common time signature. The first four measures are marked with chords: F, Gb, F, F. The next two measures are marked with chords: F, Gb. The notes are written in a simple, rhythmic style.

Third system of musical notation. The treble and bass staves are shown. The treble staff has a key signature of one flat (Bb) and a common time signature. The bass staff has a key signature of one flat (Bb) and a common time signature. The first four measures are marked with chords: F, Gb, F, Gb. The next two measures are marked with chords: F, G7Ab. The notes are written in a simple, rhythmic style.

Fourth system of musical notation. The treble and bass staves are shown. The treble staff has a key signature of one flat (Bb) and a common time signature. The bass staff has a key signature of one flat (Bb) and a common time signature. The first four measures are marked with chords: Ab7, A7 Bb7, B7 Bb7, A7 Ab7. The next two measures are marked with chords: G7 F#7. The notes are written in a simple, rhythmic style.

Fifth system of musical notation. The treble and bass staves are shown. The treble staff has a key signature of one flat (Bb) and a common time signature. The bass staff has a key signature of one flat (Bb) and a common time signature. The first four measures are marked with chords: F, Gb, F, Gb. The notes are written in a simple, rhythmic style.

4

A musical score for piano, measures 4 through 7. The score is written for two staves, treble and bass clef, with a key signature of one flat (B-flat). The time signature is 4/4. The notes are grouped by measure and chord quality.

Measure	Staff	Notes	Chord
4	Treble	F4, A4, C5	F
4	Bass	F3, A2, C3	F
5	Treble	G4, Bb4, D5	Gb
5	Bass	G3, Bb2, D3	Gb
6	Treble	F4, A4, C5	F
6	Bass	F3, A2, C3	F
7	Treble	F4, A4, C5	F
7	Bass	F3, A2, C3	F

‘Chopsticks’ as a model for Alto-Soprano Double Sax Voicing

Euphemia Allen’s well-known piano ditty “Chopsticks” assigns a similar range to double-saxophone as to the layout on piano for both left and right hands within an octave. Also, the piece uses two voices in contrary motion and diadic voicings to play tonic and dominant chords. It seems to utilize and illustrate the double-saxophones’ registers and possibilities perfectly.

Using the ‘chopsticks’ voicing template, the above Vignettes show the possibilities and the charming limitations of double sax.

Another area of exploration for future worth considering, is the concept of two (Bb) soprano saxophones, where one instrument has the left-hand key-work propped shut leaving its right-hand key-work to play the notes) concert pitch) Bb below middle C, upwards to F, while the second soprano sax, plays its left hand keywork from middle F upwards to B natural. Yet another possibility would be to prop shut, the desired keys on one saxophone, so it’ll play a selected drone pitch, freeing up both hands to play the second saxophone.

Chapter 9

Author's Ideas on Future Extrapolation

With the future in mind, we could consider that the ideas contained in this research, although varied and numerous, are few and limited when compared with the infinite number of possibilities that can be extrapolated from it. *Under One Cover: Traditional & Hybrid Woodwind Etudes* is not presented solely for the academic pursuit of defining its various musical styles and making a scholarly objective comparison, although that is part of it, but more so, my intent lies in the practical application of a post-traditional contemporaneous approach, with which, one can freely approach various woodwind traditions and let the chips fall where they may. It's about pursuing aesthetic beauty which has been handed down by generations and finding a **freedom** to access all of that without feeling *necessarily* bound or confined by it.

It is a method which aims to develop or hone woodwind 'chops', or technique, which come from great traditions, but also, seeks to extrapolate those techniques and aesthetics from their traditions with a sense of freedom.

Why is the sense of freedom important? I contend that no matter how vast a tradition is, it is small and limited, when compared to what can possibly be extrapolated from it. And it's not that I want to find every possibility in existence – of course not - but rather, that I want to etch out my own personalized expressions. I believe that the pursuits we may have as devout students of a tradition are not degraded by the realization that traditional formulas are *not* finite or absolute.

With this enlightenment, or attitude change, comes the courage and freedom to create, re-interpret or hybridize. And I believe that this attitude works well for various pursuits. This open-mindedness, for example, could be useful to those creating a through-composed piece where the creative process might be somewhat analytical or deliberate, or conversely, such an attitude could benefit a woodwind player who might want to interpret or improvise spontaneously without feeling confined by traditional rights and wrongs or hindered by judgment.

Furthermore, these discoveries are, actually, often not all that obscure or hard to find! They are pre-existing possibilities, which often in hindsight, may well appear to have been sitting there latently all along waiting for us. I believe that this sense of freedom can be transformative when present during our time in the practice room, which is where much of our attentive, deliberate and repetitious practicing goes down, and it is the setting where we forge many of the smallest incremental details of our musical vocabulary and abilities.

Reference List

Books:

- Barks, Coleman, John Moyne, Jalal al-Din Rumi, Maulana. 2004. *The Essential Rumi: Translation by Coleman Barks*. New York: Harper Collins Publishers.
- Bor, Joep and Vidyadhar, Vyas, Shruti Sadolikar-Katkar, Buddhadev Das Gupta, Hariprasad Chaurasia. 1999. *The Raga Guide: A compilation of 74 Hindustani Ragas*. (Includes CD's) The Rotterdam Conservatory of Music. Published Nimbus Records.
- Darwin, Charles. 1839/1845. *The Voyage of the HMS Beagle*. 1845. Original Publisher John Murray
- Dick, Robert. 2008. *Tone Development Through Extended Techniques Flute Etudes*. St. Louis. Lauren Keiser Music Publishing.
- Dick, Robert. 1989. *The Other Flute: A Performance Manual of Contemporary Techniques*. St. Louis. Lauren Keiser Music Publishing.
- Douglas, Bill. 1997. *Vocal Rhythm Etudes*. Boulder, Colorado. Publisher Bill Douglas.
- Farraj, Johnny, and Sami Abu Shmays. 2019. *Inside Arabic Music: Arabic Maqam Performance and Theory in the 20th Century*. New York. Oxford University Press.
- Ferriss, Timothy. 2011. *The 4 Hour Workweek: Escape the 9-5, Live Anywhere and Join the New Rich*. London, UK. Ebury Press Penguin Books.
- Gilliam, Dona. 2015. *Complete Irish Flute Book*. Missouri: Mel Bay Publications.
- Hancock, Herbie. 2017. *Reaching Beyond: Improvisations on Jazz, Buddhism, and a Joyful Life*. California. Middleway Press.
- Kippen, James. 1988. *The Tabla of Lucknow: A cultural analysis of a musical tradition*. Cambridge. Cambridge University Press.
- Krishna, T.M. 2016. *A southern Music: The Karnatik Story*. New York. HarperCollins.
- , T.M. 2018. *Reshaping Art: Harnessing Art for Social Change*. New Delhi. Aleph Book Company.
- , T.M. 2020 *Sebastian and Sons: A Brief History of Mrdangam Makers*. Mississippi. Context Publisher.

Larsen, Grey. 2016. *Essential Guide to Irish Flute and Tin Whistle*. Missouri. Mel Bay Publications.

Moses, Ted. 1986. *Creative Improvisation*. Toronto. Mother Necessity Music.

Muallem, David and Dilek Kocal. 2010. *The Maqam Book - A Doorway to Arab Scales and Modes* Music Publications. Israel. OR-TAV.

Ó'Gráda, Conal. 2011. *An Fheadóg Mhór Irish Traditional Flute Technique*. Ireland. Daoria Publications.

Pradham, Aneesh. 2019. *Chasing the Raag Dream: A look into the World of Hindustani Classical Music*. Uttar Pradesh. HarperCollins Publishers India.

Racy, Ali Jihad. 2004. *Making Music in the Arab World: The Culture and Artistry of Tarab* Cambridge: Cambridge University Press.

Sankaran, Trichy. 2003. *South Indian Drumming*. Toronto. Lalith Publisher.

———, Trichy. 2010. *The Art of Konnakol (Solkatu)*. Toronto. Lalith Publisher.

Vallely, Fintan. 2000. *The Irish Flute Book*. Ireland: Waltons Publishing.

Verchomic, Laurie. 2011. *The Big Love: Life & Death with Bill Evans*. South Carolina. CreateSpace Independent Publishing Platform.

Video and Film on YouTube:

Cavrell, Louis. 1966. "The Universal Mind of Bill Evans." posted feb 28, 2016. <https://www.youtube.com/watch?v=QwXAqIaUahI> ,

Hancock, Herbie. 2014. Harvard Lecture #1: "The Wisdom of Miles Davis." Filmed March 24, 2014 at Sanders Theatre. 45 Quincy Street Cambridge MA Video, 1:10:12. <https://www.youtube.com/watch?v=awboZv5liTE>

Kalyan, Raman. 2020. "Indian Raagas :Raaga Kapi - Grand Canyon - Flute Lesson CL35." YouTube video posted Dec 22. 2021. <https://www.youtube.com/watch?v=ur0iRLkBe7o>

Maurice, Ashley. 2021. "Maurice Ashley Interviews Tim Ferris – Part 1." YouTube Video, Posted Jun 22, 2021. https://www.youtube.com/watch?v=PIkj7yNx_hw

Online Academy of Irish Music. n.d. Filmed at the University of Limerick, Graduate and Professional Studies. www.oaim.ie

Sapolsky, Robert 2011. "Introduction to Human Behavioral Biology"
<https://www.youtube.com/watch?v=NNnIGh9g6fA> Filmed March 29, 2010 Stanford University.

Shahin, Ibrahim. 2009. "Joseph Tawadros & Ibrahim Kawala in taksim." Videotaped, Jan 09
2001. YouTube video in Cairo, Egypt. <https://www.youtube.com/watch?v=SFWptHCnWaE>