

## **Bridging the gap: problematizing declarative and imperative communication in jazz improvisation**

### **Introduction**

There has been much work published surrounding the forms of communication that appear to be involved in creative musical interactions. Within this body of literature, an increasing volume has emanated from the scientific community, where scholars and researchers have aimed for an increased cognitive-psychologically oriented understanding of listening, creating, performing, memorising and analysing music. In doing so, they have also enhanced the credibility in today's evidence-based culture in the domains of music education and music therapy, by achieving a scientific understanding of the positive educational, rehabilitative and therapeutic effects that music can give.

An understanding of this body of work is pivotal to a holistic view of music making as a creative process, and within this body is some important research and emerging theories surrounding communication in a creative musical context. It is not, however, merely experimental trials in this body of writing that are of significant worth to our comprehension of music cognition: methodological, epistemological and ontological frameworks (and our continued problematizing of these frameworks) to an extent will determine our understanding of, and approaches towards, the communicative musical process. These initial standpoints are pivotal to hypothesis and experimental formulation, to interpretations of the data obtained through experimentation, and to conclusions made with this data. To reiterate, our theories towards the nature of a process will inform and to an extent determine the approach we take to investigate them, and will frame our understanding of the outcomes.

However well the current literature takes into account aspects of interaction in music, there is always a danger that it may fall short in addressing and explaining some of the more concrete forms of communication that can be achieved in creative musical disciplines by not explaining or misrepresenting aspects of that practice, thereby

misshaping our understanding when it comes to interpreting data sets and drawing concrete conclusions about these. It is for that reason of equal importance to problematize the methodologies, epistemologies and ontologies surrounding the body of any given research. To this end, this paper discusses musical creativity in the specific context of jazz improvisation, in particular looking at some of the more theory-based ‘schools’ of playing, and analyses issues surrounding culture, identity, musical theoretical (melodic, harmonic, rhythmic) function, tradition, empathy, emotion, embodiment; it does this in order to discuss and address a view in some of the literature that music has not the capacity to inform or compel, and rather argues that music in a jazz improvised context can be both declarative and imperative.

Firstly, the paper explores notions of musical creativity in current cognitive-psychological literature, in particular looking into writings on emotion, embodiment, floating intentionality, and empathic creativity. Secondly it analyses the theoretical foundations of jazz improvisation typically practiced by improvising musicians, and explores the culture and role of pedagogy in jazz, also addressing the mistaken notion that jazz improvisation is an unstructured process. Finally, it argues that the systems in jazz improvisation are sufficient for declarative and imperative communication, and discusses the implications this has on behavioural and cognitive psychological studies based around improvised or creative music.

### **On current theories surrounding musical meaning, and music’s social dimensions**

A great deal of recent music scholarship concerns the subject of musical meaning and the social and communicative dimensions of music making. In particular these writings have emanated from the musicological and ethnomusicological fields, along with an ever-growing body of scholarship from the scientific community (e.g. Tan, Pfördresher and Harre 2010; Malloch and Trevarthen 2009), which is the primary focus of this paper. These writings span from Meyer’s (1956) writings on emotion and meaning in music to more recent findings concerning music’s social dimensions, where it seems that music has a “multiplicity of roles which operate at several levels” (Hallam 2008). As is increasingly seen, and as Martin Clayton (2008) writes,

“musical behaviour covers a vast middle ground in which relationships between self and other or between the individual and the collective are played out”, and therefore music’s meaning must be intricately bound with its social and communicative dimensions.

When we say that music has meaning, we say that it signifies towards, or “infers the existence” of something other than itself (Cross et al, 2008); however the degree of specificity that we are able to infer as to a particular musical meaning in any given situation is very broad – and this is no wonder when one considers the vast number of physical, physiological, biochemical, neural and social-dynamic variables that come into play within different forms of musical participation. A paper by Donald Hodges (2008) highlights varying bodily responses to music, ranging from its effects on heart rate to hormonal and other biochemical changes; from effects on respiration to its effects on blood volume; and physical responses from ankle jerk to various specific activations in the brain (including in the auditory cortex, the frontal regions, the mesolimbic system, the cerebellum and the basal ganglia to name a few). The field of music therapy has also begun to highlight some of music’s social and communicative dimensions from a therapeutic and rehabilitative perspective: Joel Swaine (2014) writes on the regulation of emotion in musical communication and sensory processing; Jorg Fachner (2014) discusses the light that can be shed on therapeutic practises of verbal reflection and improvisation by research into music’s effects on neural processing; Felicity North (2014) reflects on the therapeutic value of music for contributing to the process of learning intentional communication; Tessa Watson (2014) writes on the communicative power of music; and Spiro et al (2014) discuss the importance of music when attempting to understand perceptual, communicative and emotional processes.

There has also been much written on the processes underlying, and by implication the meanings implicit in, musical creativity: studies on embodied cognition (Shapiro 2011; Krueger 2009; De Jaegher, Di Paolo 2007), an emerging theory which goes some way to explaining the neural processes underlying both performance and perception, show how dynamic patterns of brain activity cut across brain-body-world divisions rather than being brain-bound neural events (Thompson, Varela 2001), thereby reformulating the perspectives on what we had assumed to be musical

creativity. Other valuable studies surrounding musical creativity in a jazz improvised context include those by Seddon (2005), Seddon and Biasutti (2009) and then by Cross, Laurence and Rabinowitch (2012) on empathic creativity, or the idea that types of non-verbal interaction exhibited by members of jazz ensembles whilst playing display a kind of empathic attunement. Another recent aspect that has been postulated by Cross (2009, 2014; also Hawkins, Cross, Ogden 2013) is that of floating intentionality, or the notion that music can communicate an “aboutness” without conveying a uniformly articulated or identical emotional experience across a social group, and can therefore promote accord between groups of musicians (Cross 2012).

It should at this point be made clear that the purpose of this paper is not to denigrate these insightful and very important theories regarding interaction, communication and meaning in creative music participation, but rather to explore other background aspects that may have been overlooked or neglected when considering communicative musical behaviour, so as best to “retain context while studying detail” (Pavlecevic 2014). The majority of recent studies concerning communication in music are to do with less easily quantifiable, or more ‘floating’ aspects such as affect, empathy and intention, and some are based on the assumption that musical communication does not convey explicit notions and is rarely declarative in nature: however, if this is not the case, there is a danger that these unbalanced ontological and epistemological frameworks have shaped the methodology leading to the postulation of these theories, which in turn would bias scholarship on the nature of the subject, regardless of the validity of the theories in question. As Gary Ansdell (2014) comments, “(pre)deciding *how* to explore something is necessarily coupled with judging and defining *what* to explore in the first place (or, perhaps even more confusingly, what the *what* is)[... T]here’s always a tendency for methodology to predetermine or trump both epistemology and ontology” (Ansdell 2014). It is therefore the aim of this paper to highlight more explicit forms of musical communication in order to more fully understand the spectrum of communicative behaviours that occur in this setting, and to problematize the notion that transactions in music are not declarative or imperative: to this end, the following section looks at several aspects of jazz improvisation, including learning methods and pedagogy, in an attempt to later show that declarative knowledge is shared across communities of jazz musicians.

## On jazz improvisation

The term *improvisation* is to an extent an ambiguous one in music scholarship: there has been, and still is, a certain amount of confusion and uncertainty provoked by it, and puzzlement as to what exactly a musician is doing when he or she improvises. And the term is not particularly etymologically suited to give us a great deal of clarification: the word *improvisation* is from the Latin *improvisus*, meaning literally *unforeseen*<sup>1</sup> (Etymonline 2015). Based on this, and on definitions such as that from the Oxford Online English Dictionary, where it states that improvisation is to “create or perform [...] spontaneously or without preparation”<sup>2</sup> (Oxford Dictionaries 2015), improvisation would seem to be a random act largely consigned to little more than chance, with very little structure involved on either very small or large scales with reference to melody, harmony, rhythm or form.

The problem is perhaps further confounded when searching selected quotes from some of the more recent and most famous jazz improvisers of the 20<sup>th</sup> century, many of which can be broadly conceptual or esoteric in nature, and therefore fail to convey an impression of the rigor and structure involved in building their improvisational principles. For example, Miles Davis’ “do not fear mistakes – there are none”<sup>3</sup> (Goodreads 2015), John Coltrane’s “over all, I think the main thing a musician would like to do is give a picture to the listener of the many wonderful things that he knows of and senses in the universe”<sup>4</sup> (Jazz-quotes 2015), or “that’s my way of preparation – to not be prepared. And that takes a lot of preparation” (Hamilton 2007) in the foreword to Lee Konitz’s biography, are all representative of the general broad-brush conceptual statements musicians sometimes make about improvisation, whilst also giving a very vague, at best opaque, idea of what it is exactly that they are doing when they improvise.

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<sup>1</sup> <http://www.etymonline.com/index.php?term=improvisation>

<sup>2</sup> <http://www.oxforddictionaries.com/definition/english/improvise>

<sup>3</sup> [http://www.goodreads.com/author/quotes/54761.Miles\\_Davis](http://www.goodreads.com/author/quotes/54761.Miles_Davis)

<sup>4</sup> <http://www.oxforddictionaries.com/definition/english/improvise>

<sup>3</sup> [http://www.goodreads.com/author/quotes/54761.Miles\\_Davis](http://www.goodreads.com/author/quotes/54761.Miles_Davis)

<sup>4</sup> <http://jazz-quotes.com/artist/john-coltrane/>

Of course, the assumption of improvisation as lacking in coherent structural principles is largely a misconception: in a great many forms of improvisation there are high levels of structure and rules around which the improvisations are based. One needs only a short introduction to the improvised organ tradition, or a brief read of organist Naji Hakim's *The Improvisation Companion*, to see the complexity involved in developing improvisational technique on highly intricate harmonic and large-scale forms and structures, including fugues and improvised counterpoint (Hakim 2000): and other world musics have also evolved very developed systems for improvisation, including Indian raga (Viswanathan and Cormack, 1998), African talking drum music (Carrington 1971) and Javanese gamelan music (Sutton 1998).

For the most part musicians from the jazz tradition (excluding free-jazz traditions and other branches deliberately incorporating more aleatoric methods) have over time developed a kind of musical 'language', to an extent handed down from one musician to another in a traceable lineage: according to pedagogue and pianist Mark Levine, in his seminal textbook *The Jazz Theory Book*, there is a

"...thread that has evolved logically from the earliest days of jazz through Louis Armstrong, James P. Johnson, Duke Ellington, Art Tatum, Lester Young, Charlie Parker, Thelonious Monk, John Coltrane, Bobby Hutcherson, Wayne Shorter, McCoy Tyner, Joe Henderson, to Mulgrew Miller and beyond. All these musicians could have played with each other and understood one another, even though their terminology may have differed." (Levine 1995)

Levine's 'thread' refers to the assimilation and transmission of melodic, harmonic and rhythmic principles, in addition to more of a personified or embodied imitation (such as the copying of phrasing style, sound quality and use of space between phrases) by more recent generations of jazz musicians, commonly assimilated from past influential and highly accomplished improvisers through both pedagogical means and through personal aural transcription, or embodied transmission. As new generations of musicians practice, embody and develop the linguistic and manneristic aspects of the previous generation, abstracting rules and methods and developing these as part of their own practice agendas and performance repertoires, so the 'language' becomes more streamlined, developed, and referential.

As an example, the author has included a personally transcribed solo transcription (transposed for tenor saxophone) from Sonny Rollins' *A Night In Tunisia* solo from *A Night At The Village Vanguard* (Appendix I, i-ii), and in addition an analysis of the solo that was used to teach a class at the Birmingham Conservatoire Junior Jazz Department, and was also used for a Cambridge University analysis class presentation, in March 2015 (Appendix II, i-iv). As can be seen from the lead sheet for *A Night In Tunisia* in Fig. I (which details the basic melodic and harmonic structures, in addition to the structure of the piece, or song form), the solo transcription in Appendix I begins the bar before the coda and continues through the form (discounting the coda on every other repetition) four times.

A very detailed note-for-note version of the recorded solo has been written out in the solo transcription; there is however no mention of dynamic levels, inflections such as vibrato, accents, etc. The only notes that have been made on the score are parentheses to suggest ghosted notes, occasional lines to suggest vibrato (all without quantification), very occasional marks for approximate dynamics over short durations, and a single phrase marking. This highlights the dual nature of a transcription (Greatrex 2011) as a source of formal music-theoretical material, but also as the most efficient and effective way of embodying the style of a musician and parts of the solo that are less conducive to regular notation, including very detailed aspects of phrasing, intonation, dynamics, vibrato, sound quality and control – aspects not usually notated but learned aurally.

The image shows a transposed (Bb) lead sheet for the jazz standard "A Night In Tunisia". The title "A NIGHT IN TUNISIA" is at the top. The music is written on two staves. The bottom staff is a bass line with notes and rests. The top staff is a treble line with notes and rests. Various chords are labeled along the treble staff, including F7, E-, F7, E-, F#-7b5, B7b5, E-, E-, B-7b5, E7b5, A-, A7, D7, A-7b5, D7b5, G, F#-7b5, B7b5, D5, E-, (implied), F#-7b5, F7b5, E-, A7#11, A-(#7), A7, A7b5, and G4. The page number "7." is in the top right corner.

Fig.I Transposed (Bb) lead sheet for *A Night In Tunisia*

The opposite can be said about the four-page solo analysis, which gives great depth of information about the functions in the solo under headings such as ‘Sound/Feel’, ‘Vocab’, ‘Time/Phrase’ and ‘Harmony’, all of which are abstracted from the solo, explored and developed under the heading ‘Practice Ideas’. These practice ideas are

all very explicit: from specific practices developed from Sonny Rollins' solo<sup>5</sup>, such as that in Fig. II-i, which explores the upper structures of a II-V-I chord progression with descending semitones outlining melodic minor mode I or IV (depending on the bass note) and suspensions in the minor and dominant chords respectively, to more generalised practices based on a rhythmic feel template as in Fig. II-ii.

Fig. II-i      Harmonic practice from Sonny Rollins' *Night in Tunisia* solo

Fig. II-ii      Rhythmic practice from Sonny Rollins' *Night in Tunisia* solo

A similar process of observation, abstraction and practice can be seen in the solo analysis in Appendix II. These methods are common practice in the jazz community, and are used extensively as both personal practice tools and as the basis for pedagogical methods. The notes in Appendix III, i-viii, show the pass requirements for a second year musicianship assessment at Birmingham Conservatoire in 2008, and highlight the extent to which these building blocks, originating from song forms and improvised solo transcriptions, are abstracted, manipulated and practiced in a variety of harmonic, melodic and rhythmic settings across all keys. This allows the improviser to increase their physical (instrumental) and mental (thinking of chords, patterns, harmony, song forms) communicative proficiency, and develops, entrenches

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<sup>5</sup> As an aside, and in order to highlight jazz music's 'evolutionary thread', Sonny Rollins states in an online interview<sup>5</sup>, and in a great many other sources, that "Charlie Parker was [his] favourite for a while", and if one compares Appendix IV, a page from Parker's *Donna Lee* solo, with Rollins' solo in Fig. I, the development of devices as in the dorian stack (line 10, bar 1; line 11, bar 1; line 18, bar 1, bar 3), similar use of diminished over dominant (line 11, bar 4; line 13, bar 2; line 14, bar 1, bar 4), use of descending tones to imply melodic minor and suspensions (line 15, bar 2, bar 3), use of triplet arpeggios (line 11, bar 1; line 14, bar 1; line 16, bar 1, bar 3, bar 4), and other devices signal towards Rollins having studied, abstracted and developed harmonic, melodic and rhythmic aspects that appear first in Parker's playing.

and speeds up the kinds of knowledge they have access to in a real improvised performance context.

### **On declarative and imperative meaning in jazz improvisation**

Various models for the postulated forms of referential signification and knowledge that are manifest or transmitted in jazz improvisation are discussed in the preceding two sections of this paper. These highlight the varying and complex levels of communication that arise in this kind of musical participation, going some way to dispelling the suggestion that the preparation and performance of jazz improvisation does not adhere to complex formal and structural frameworks, and describe some of the more and less complex systems that the musicians in this improvised discipline put in place to learn, assimilate, innovate and communicate.

However, the purpose of this paper is to address and problematize the notion in some of the existing scientific writings on creative musical communication that music, and in this paper jazz improvisation, is not or cannot be explicit or exhortative. To take an example from a paper by Ian Cross, Felicity Laurence and Tal-Chen Rabinowitch entitled *Empathy and Creativity in Group Musical Practices: Towards a Concept of Empathic Creativity*, music is described as “lacking in the capacity to inform or compel – it can be neither declarative nor imperative”. The authors go on to propose that music has a phatic functionality (or as in the Oxford Online Dictionary’s (2015) definition “language used for general purposes of social interaction, rather than to convey information or ask questions”<sup>6</sup>) that is achieved “not through processes of rational transaction, though these play a role, but rather through embodied and affective – emotional – interaction” (Cross et al, 2012).

In order to discuss this and come to a full appreciation of what is meant by this quote, we must first understand standardised definitions for the two terms. Firstly, in The Oxford Dictionary of Psychology, declarative knowledge is defined as:

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<sup>6</sup> <http://www.oxforddictionaries.com/definition/english/phatic>

### **declarative knowledge (n.)**

Awareness and understanding of factual information about the world – *knowing that* in contrast to *knowing how*. Its necessary and sufficient conditions are that the information must be true, that the person must believe it to be true, and that the person must be in a position to know it. (Colman 2001)

and imperative is defined in The Concise Oxford Dictionary of Linguistics as the following:

### **imperative (IMP)**

(Construction, form of verb) whose primary role is in giving orders. E.g. *Get out!* is an imperative sentence; in Latin, *i ‘go!’* is an imperative form of the verb.

Sometimes used in the sense of ‘order’. E.g. in Latin, a subjunctive such as eat ‘go-SUBJ-3SG’ could have the function of what is traditionally called a third-person imperative (‘May that person go’). But, like declarative and interrogative, the term is in principle one in syntax and morphology; the semantic role of an order, or an order as one kind of speech act, is one that sentences other than imperatives may have also. E.g. *The rearguard will fight to the last man*, though declarative, could be an order in appropriate circumstances. (Matthews 1997)

Furthermore, declarative knowledge is contrasted to non-declarative or procedural knowledge, defined in The Oxford Dictionary of Psychology as:

### **procedural knowledge (n.)**

Information about how to carry out sequences of operations – *knowing how* in contrast to *knowing that* – sometimes lacking awareness and understanding of how to perform certain tasks and therefore being a form of non-declarative knowledge. The English philosopher Gilbert Ryle argued [...] that it cannot be reduced to declarative knowledge of facts. (Colman 2001)

From the above definitions we can infer Cross et al’s suggestion as consisting that, in the majority of cases, musicians cannot through music transmit or communicate

known factual information, and cannot effect a response from another musician in an exhortative or authoritative-instructive way through this means; but rather are in the great majority of cases limited to communication through music's procedural (or sequential), performative, phatic and emotion-driven (affective) dimensions.

However, this view is problematic in that it is dependant on a questionable view of the nature of the knowledge in question: in order to be incapable of transmitting declarative knowledge, it relies on a view of the process and product of the musical improvisation as an unstructured thing on a lexical and grammatical level, using principally procedural (sequential or sentential) and embodied knowledge (perhaps learnt through much repetition, but rarely cross-sectioned or analysed in depth) with the predominant goals of affective entrainment and empathic affinity dwarfing aspects of declarative or imperative interaction amongst social groups and other performers. Epistemologically speaking, if jazz improvisers were capable of more detailed structural coherence, and were able to be very referentially specific, it would clearly be possible for them to convey declarative and imperative meaning.

A brief detour to consider the building blocks of what we consider to be meaning may also be of use: as already mentioned above, when we say something has meaning, we in fact say that it signifies something beyond itself. Systems of meaning emerge upon there being sufficient learnt associations for a categorisation to take place. A somewhat lengthy but relevant quote from Gary Tomlinson's *Evolutionary Studies in the Humanities: The Case of Music* describes the process whereby the learnt signification of one thing toward another is systematised to form that which he defines as *symbolism*:

As associative indices multiply and accumulate through learning, there occurs something like a phase transition in cognition... [A] categorical change in semiosis occurs whereby the accumulated indices form and circulate in a system of their own. The elements in this system – symbols – point to one another in the manner of indices; words, for instance, take their meanings from a system of differences marking them off from other words. This self-sustaining systematicity of symbols governs their semiosis, opening a mediating distance between sign (within the system) and object (outside it) that marks a kind of reference new in the biome. The

distance is filled in, again, by indexicality, which pins the whole symbolic system to aspects of reality external to it. In language, for example, the *reference* of any word, however clear its *meaning*, remains ambiguous until some form of deixis (which can be linguistic or extralinguistic) points it toward something outside language. (Tomlinson 2013)

Here Tomlinson uses language to highlight his point, but the author argues that this explanation also extends to the domain of jazz improvisation: the learning methods applied by jazz pedagogues and by creative jazz performers alike, as seen above, involve a systematic process of information reduction from recorded jazz solos through a rigorous analysis of harmonic, melodic and rhythmic building blocks (or ‘lexicon’). In the reduction process, the context of the lexicon’s usage is analysed, and rules and frameworks (‘grammar’) governing potential future application and treatment of the lexicon are abstracted, equipping the improviser with a system for understanding and generating probabilistic “expectancies, facilitating the perception of expected events, and facilitating memory for events that fit the cognitive frameworks of the domain” (Dowling 1993).

To give an example, a musician may transcribe the phrase in Fig. III-i from Sonny Rollins’ *Night in Tunisia* solo. They may well practice this phrase in all keys as a procedural exercise, but they are also likely to reduce the phrase to its constituent parts (Fig. III-ii); they will then observe the possible melodic, harmonic and rhythmic applications of this framework; the constitutive parts will be practiced in both isolation and conjunction, in all likelihood through all keys, and will be reapplied to a performance setting after having been tested in a great many drills modelling possible contextual applications of this lexical information, as in Appendix III. Jazz saxophonist Lee Konitz reflects this when he implies that the best types of improvisation in a jazz context occur when the improviser goes beyond mere procedural expression (Hamilton 2007). We could say that, given sufficient technical expertise and experience, a jazz improviser could achieve Tomlinson’s ‘change in semiosis’, whereby the indices or lexicon systematically accumulate around a musico-grammatical framework, thereby allowing a more explicit and less procedural meaning to be expressed.

Fig. III-i Excerpt from Sonny Rollins' *A Night in Tunisia* solo

Fig. III-ii Harmonic explanation from Sonny Rollins' *A Night in Tunisia* solo

At this point meaning has been systematised into a symbolic framework: it is yet, however, to be communicated. The word ‘communication’ implies a two- or multi-party interaction of some kind for a successful transference of information, requiring a mutual understanding for the communicative frames of reference (Hawkins 2014). However, unlike language that is often referring to an explicit object as its declarative knowledge base (e.g. mug, road or ball), within the shared symbolic system of jazz improvisation the constituent elements of signification comprise the melodic, harmonic and rhythmic lexicon, and the implied grammatical context of the phrase: whether a phrase implies a triad pairing; a dorian stack; flat nine over the dominant; a tritone substitution, etc. If we refer to our definition of declarative knowledge (*knowing that* instead of *knowing how*), the aforementioned kind of knowledge is certainly factual, a known thing; and, in the context of a saxophonist performing together with a pianist, an upright bass player and a drummer, all of whom are not only attempting to produce music together, but are participants of a shared cultural approach towards improvisation, and products of a pedagogical system designed to teach each of them common lexical information and grammatical frameworks in the manner outlined above, this factual information will have a shared overt meaning, and therefore each of these musical statements will be a declarative communication, despite the differing instrumentations and their differing roles in the ensemble.

It is therefore clear how declarative musical information can be transmitted in a musical community and understood by other participants in the interaction due to common and shared definitions. However, it follows that this declarative knowledge can be used for more than mere statement of fact: as Dennis Mumby of the University

of North Carolina writes in his 1989 paper *Ideology and the social construction of meaning: a communication perspective*, “meaning serves to reproduce and resist relations of domination” (Mumby 1989). In a jazz improvised context, perhaps domination is a strong word and is not the goal of the interaction: after all, there are numerous studies that discuss empathy, entrainment, and the positive communicative properties engaging in music can bring. However, in any interaction there are complex social dynamics underlying communication, including passive and active roles, and some of these fluctuations involve a degree of exhortative or imperative behaviour: if we theorise declarative communication in music, then it follows that this information can be used by interacting participants in an imperative manner.

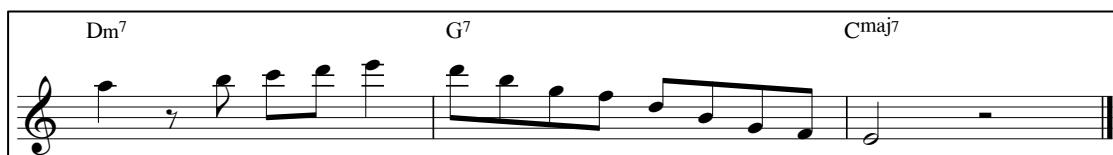


Fig. III-i Excerpt from Sonny Rollins' *A Night in Tunisia* solo

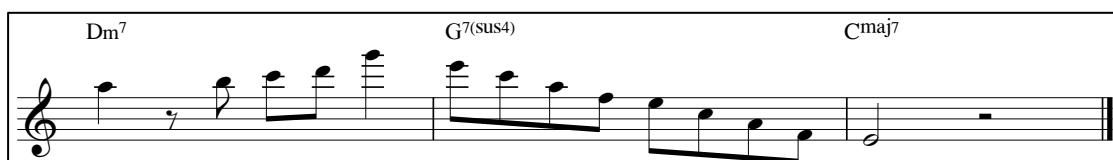


Fig. III-i Excerpt from Sonny Rollins' *A Night in Tunisia* solo

To show how this does occur in a real improvised context, the commonly used cadence ii-v-i refers to a commonplace prepared perfect cadence using chords from modes of the major scale<sup>7</sup>. A saxophonist may typically play something from Fig IV-i over this cadence, with a particular outlining of chord tones to emphasise the G7 chord. However, if the saxophonist were to play a slightly different diatonic phrase over the dominant outlining the 9<sup>th</sup>, 11<sup>th</sup> and 13<sup>th</sup> (Fig. IV-ii) this would imply G7sus, and would be recognised and responded to by the pianist and bass player accordingly, with different chordal voicings and root notes. As we can see, a simple re-ordering of the notes can convey such declarative meaning as to specify an entirely different harmonic context, and elicit a desired response from other band members. Similarly,

<sup>7</sup> Namely chord ii minor 7 (dorian), chord v dominant (mixolydian) and chord i major (ionian). Therefore to cadence in C using a ii-v-i would involve the chords D minor 7 (Dm7), G dominant (G7), and C major (CM7).

the pianist may substitute the G7 chord for a Db7 chord (also commonly known as a tritone substitution), and upon hearing and understanding this the saxophonist would react accordingly and change the notes they were playing to fit the harmonic context. Both are examples of explicit declarative harmonic information being superimposed by a band member onto a structure being adhered to by an ensemble, in order to exhort or influence the other musicians into adhering to this new structural idea, and are therefore examples of how imperative communication functions in a creative musical context.

## **Summary**

In brief summary, here we have seen that although occurring in a different manner to that in speech and language, it is entirely possible for jazz musicians to communicate across music with one another in a declarative and imperative manner, and that this occurs because the jazz community shares a common musico-lexical and grammatical structure. This is encouraged by systems of embodied-transmissive learning, and by the systematic teaching of jazz pedagogues. When viewed in context, this example serves to show that the revaluation and problematisation of epistemology and ontology is crucial where epistemological definitions and ontological frameworks are central to determining and understanding the nature of a given process and the methodologies employed to understand that process; as in this case where currently established theories, and future avenues of research, are guided by the assumption that music does not communicate declaratively or imperatively. It is important that these assumptions are reconsidered and take into account the fullest spectra of communicative occurrences in creative musical interactions in order to fit within an updated and more balanced epistemological, ontological and methodological framework with a fuller representation of the communicative processes occurring in improvised music, lest they lead causally towards biased theory and experimentation.

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## Appendix I

- i      – Page one, Sonny Rollins transcribed solo on *A Night In Tunisia*
- ii     – Page two, Sonny Rollins transcribed solo on *A Night In Tunisia*

## Appendix I-i

Promulgated, 24th June, 1953.

Laws of the Indian Council (for India)

This image shows a handwritten musical score for a string quartet, consisting of four staves. The music is written in common time and includes various dynamics such as  $f$ ,  $p$ , and  $ff$ . The score features complex rhythmic patterns, including sixteenth-note figures and sustained notes. The manuscript is dated 24th June, 1953, and is titled "Laws of the Indian Council (for India)". The title is enclosed in a rectangular box at the top left. The score is divided into measures by vertical bar lines and includes several rehearsal marks (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 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33111111111111111111111111110, 33111111111111111111111111111, 33111111111111111111111111112, 331

## Appendix I-ii

This page contains five staves of handwritten musical notation. The notation is rhythmic, using vertical stems with short horizontal strokes for note heads. It includes various rests and dynamic markings such as  $Fz$ ,  $F2$ , and  $F3$ . There are several arrows and a bracket pointing to specific parts of the music, likely indicating performance techniques or specific notes of interest.

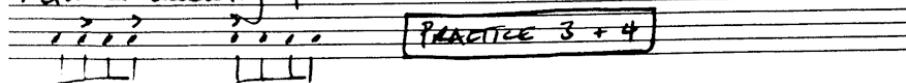
## **Appendix II**

- i – Page one, Analysis from Sonny Rollins' *A Night In Tunisia*
- ii – Page two, Analysis from Sonny Rollins' *A Night In Tunisia*
- iii – Page three, Analysis from Sonny Rollins' *A Night In Tunisia*
- iv – Page four, Analysis from Sonny Rollins' *A Night In Tunisia*

## Appendix II-i

### Sound / Feel.

- Hard, abrasive sound - thin and piercing (soft reed + hard blowy)
- As a result lots of notes break in the solo.
- Hard fingering
- Electric vib! Jet heavily on the end of some long notes.
- Quaver accented patterns.



### Vocals (Soltions)

- Use of diminished (line 3 bar 6, also line 5 bar 1 etc) PRACTICE 5
- Extended II- $\sqrt{7}$  line (line 5 last bar)  
 $\left[ \text{II}^{\text{-}} / \text{II}^{\text{=}} \text{ or } \sqrt{7}^{\text{+}} / \sqrt{7}^{\text{sus}} / \sqrt{7} / \text{I}^{\text{=}} \right]$  PRACTICE 6
- Minor II- $\sqrt{7}$   $\text{I}^{\text{=}}$  PRACTICE 7
- Use of upper structures (orian) PRACTICE 8 + 9
  - line 5 bar 5 + 6
  - line 17 bar 7
- 'Blues' patterns, use of B $\flat$ , (discusses) (B $\flat$ -A-G)
  - eg - line 3 bar 2.      - line 10 bar 6      - line 18.
  - line 4 bar 6      - line 11
  - line 7 bar 1      - line 12
  - line 8 bar 2 + 5      - line 15 bar 4
- fragments quoting or referencing melody-
  - line 4 bar 2
  - line 7 bar 4
  - line 9 bar 8
- Enclosures - uses two main types - sensitive + scale tone.  
 eg line 1 bar 1 and line 3 bar 5.  
 also constructs these around triads. eg. line 14 bar 8. PRACTICE 10
- and extended approaches eg bar 4 of Sublime + line 9 bar 1 (113 b)
- Whole-tone / augmented patterns (line 4 bar 3, line 6 bar 4) PRACTICE 11

## Appendix II-ii

Song Lines - Solo on Night in Tunisia.

Time/Phrase

- 3 over 4
  - see line 10, bar 8 = line 11 bar 3
  - also line 13, bar 4 = line 14 bar 1
  - and line 17, bar 5

PRACTICE 1

- Use of rubato + brief back phrasing
  - line 8, bar 6 →
  - line 8, bars 4-6
  - line 9, bars 3-7
  - line 15, bars 8-9
  - line 17, bar 10.

(This is very characteristic of Sonny's playing in other albums).

PRACTICE 2

- Sectional note patterns
  - line 3, bar 8 = line 4 bar 1
  - line 5, bars 3-5 (also 1. groupings)
  - line 8, bar 7 = line 9 bar 2
  - line 16

Also e.g. line 13 bar 5 }  
and line 18 bar 8 } similar run up to target note.

- Slurs and rhythmic oddities

- line 3, bars 1+2  
 - line 12, bar 6  
 - line 15, bar 7

→ Grace notes and timing

Very characteristic of Sonny's playing, found throughout solo.

Also, sometimes phrases artifacts as grace notes.  
 (e.g. line 1 bar 9  
 line 12 bar 2)

- Rhythmic calendar + development.

- line 9 last bar = line 10 bar 5  
 - bar 7 bars 4-8.

and 'hook'!

- 2 bar phrases at line 1 bar 8
- line 11 bar 4 (2 times)

- No strategic use of space.
- Rhythmic flow - very much like a drummer.

## Appendix II-iii

### Harmony

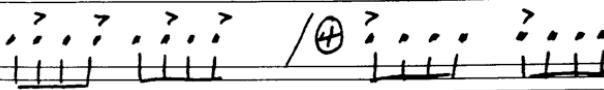
- Tritone substitution  
( $b\text{F}^+$  for  $\#-\text{C}^+$ ) line 6 bar 8
- Use of triads (particularly over  $\text{F}^+$ )
- Diminished over  $\text{F}^+/\text{C}^+$  (becomes  $\text{F}^+\text{b9}\text{c9}\text{e9}$ )
  - line 5 bar 1
- also use of  $\text{b9}$  diminished over  $\text{C}^+$ 
  - line 5 bar 4
  - line 14 bar 2.
- Implies  $b\text{F}^+\text{F}^{\#11}$  I $\equiv$  with whole tone
  - line 4 bar 3
  - line 6 bar 4
- ⇒  $\text{VII}^a$  I - triads bar 1 bar 9.
- $\text{C}^+$  alt in line 4 bar 4 and line 18 bar 8.

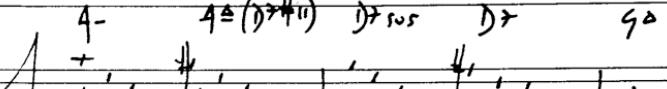
## Appendix II-iv

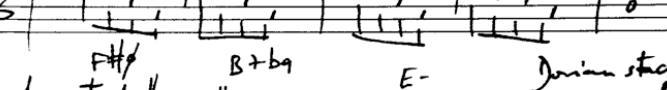
Practice Ideas.

① Playing Groupings of three groups/contests over 4..  
Articulating phrases/patterns in groupings of 3.

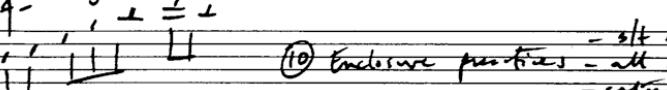
② Playing rhythmically 'free' Phrases over metronome 2+4.

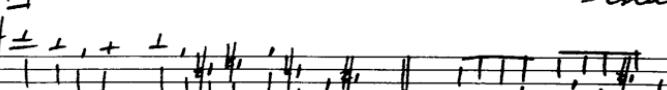
③ 

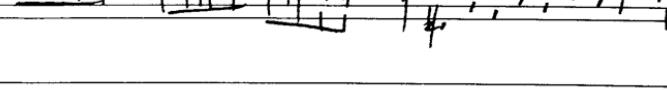
④ 

⑤ 

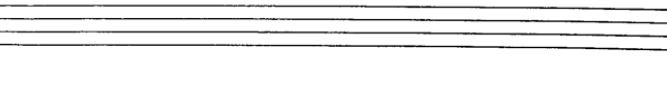
⑥ 

⑦ 

⑧ 

⑨ 

⑩ Enclosure practices - all uses of third - slt enclosure of stack - alt uses of third - extended enclosure.

⑪ 

### **Appendix III**

- i – Page one, Syllabus notes from BCU Musicianship Exam, 2008
- ii – Page two, Syllabus notes from BCU Musicianship Exam, 2008
- iii – Page three, Syllabus notes from BCU Musicianship Exam, 2008
- iv – Page four, Syllabus notes from BCU Musicianship Exam, 2008
- v – Page five, Syllabus notes from BCU Musicianship Exam, 2008
- vi – Page six, Syllabus notes from BCU Musicianship Exam, 2008
- vii – Page seven, Syllabus notes from BCU Musicianship Exam, 2008
- viii – Page eight, Syllabus notes from BCU Musicianship Exam, 2008

### Appendix III-i

#### 2<sup>ND</sup> YEAR MUSICIANSHIP PRACTICAL ASSESSMENT

- ✓ 1) V7's round the cycle (4 bars on each dominant)  
(Sweet Georgia)
- ✓ 2) 11mi V7 's round the cycle eg Dmi G7 Cmi F7  
Bflat mi Eflat 7 Aflat mi Dflat 7F#mi B7 Emi A7  
(Straight Street)
- ✓ 3) 2<sup>nd</sup> x bar of Green Dolphin st through all keys: eg  
Dmi Dmi/C Bmi7 flat 5<sup>th</sup> E7alt Ami Ami/G  
F#mi7flat5 B7 alt Emi Emi/D C#mi7flat 5<sup>th</sup> F#7  
alt Bmi and continuing through all keys
- 4) 1maj Vmi 17 modulating to chord 1Vmaj eg  
Cma Gmi C7 Fma Cmi F7 Bflat ma Fmi  
Bflat7 Eflat maj and continuing round the cycle  
(1<sup>st</sup> 3 bars of Misty / Portrait of Jenny / without a  
song etc
- 5) four bars on each chord over a pedal: V7sus  
V7sus flat 9 V7 sus V7#11 V7sus C7flat 6 V7  
sus V7 alt modulating to next dominant in the  
cycle where exercise repeats: ie C7sus C7sus flat  
9( 11 of Bflat melodic minor ) C7 sus C7#11 (1V  
of Gmelodic minor )C7 sus C7 flat 6 (V of  
Fmelodic minor) C7sus C7alt (V11 of C#melodic  
minor) modulating to the same colours on F7
- 6) 11 V7 1maj modulating through all interval  
possibilities ie semitones in either direction eg  
Dmi G7 Cma Ebmi Ab7 Dbmaj Emi A7 Dma  
etc(12 keys) tones in either direction eg Dmi G7  
Cma Emi A7 Dma F#mi B7 Emaj etc (6 keys)  
minor thirds in either direction eg Dmi G7 Cma

### Appendix III-ii

Bmi E7 Ama G# mi C#7 F#ma Fmi Bb7 Eb maj  
(4 keys) major thirds in either direction eg Dmi  
G7 Cma Bbmi Eb7 Abma F#mi B7 Ema (3 keys)  
fourths in either direction, eg Dmi G7 Cma Ami  
D7 Gma Emi A7 Dma etc (12 keys) tri tones Eg  
Dmi G7 Cma Abmi Db7 Gbmaj Dmi G7 Cma (2  
keys)

- 7) As no6 in minor 11mi7b5 V7 1mi cadences
- 8) I V17 11mi V7 as a loop (in a major key of your choice)
- 9) As no8 in minor contexts in a key of your choice  
ie Imi V1mi7b5 11mi7b5 V7 alt
- 10) 11mi ///bV1mi b117 1maj. Tonics descending in  
tones ie Dmi ///Abmi Db7 Cma ///Cmi F#mi B7  
Bbmaj///Bbmi Emi A7 Abmaj

### Appendix III-iii

Study 1 Major triads in

- a) tone relationship
- b) dom: tone "
- c) Tri-tone apart

Any triads a) in tones

- b) in dom: tones.

Study 2

Diminished triad a VII to

Tone in B<sub>o</sub> - C

all major Rags.

Minor triads a) in tones

- b) tri-tone

Study 2 - Arpeggiata exercises:

from Rachmaninoff's Preludes (as a treat)

Major - & Melodic minor modes

only for

assessment purposes

### Appendix III-iv

Shapes & Patterns:

Dorian or mina/raga Stacks

- a) tri tones.
- b) maj Tnds
- c) min Tnds.
- d) tones.

Min trial measures:

- 1) St $\downarrow$  Sct $\uparrow$  - min trial in bisection.
- 2) Sct $\downarrow$  " "
- 3) ASt St $\downarrow$  Mi trial " "
- 4) CN CN St $\downarrow$  " "

## Appendix III-v

### NOTES ON MELODIC MINOR

Major scale with a Flat 3<sup>rd</sup> = parallel melodic minor scale (we use conventionally speaking only the ascending version)

Generates the following harmonic colours or shadings on each degree eg Cmelodic minor (C D Eb F G A B) Produces:

1<sup>st</sup> degree:

Cmin maj7 (can be applied to 11mi in Bbmaj and Cmi when it occurs as a tonic)

2<sup>nd</sup> degree: D7 sus b9 (Ami7b5natural9/D)(apply as a sound in V7 situations)

3<sup>rd</sup> degree: Eb maj #4#5 (apply in tonic and sub dominant situations) can be spelt as 111/1 eg G/Eb

4<sup>th</sup> degree: F7#11 (apply to V7 and 1V7 situations or when F7 is a tonic such as a blues in F)

5<sup>th</sup> degree: G7 b6 (apply to V7 situations)

6<sup>th</sup> degree: Ami7b5 natural 9 apply in minor cadences

7<sup>th</sup> degree: V7 alt (b9#9#11b13)

Therefore the mode generates 4 x V7 sounds:

1 2<sup>nd</sup> degree V7 sus b9

2 4<sup>th</sup> degree V7#11

3 5<sup>th</sup> degree V7 b6

4 7<sup>th</sup> degree V7 alt

1x major sounds:

3<sup>rd</sup> degree: major 7<sup>th</sup> #4#5

2x minor sounds:

1<sup>st</sup> degree minor major 7:

6<sup>th</sup> degree minor 7b5 natural 9

### Appendix III-vi

G7alt is 7 of Ab mel min so we can apply B maj7#5  
Cmi maj is 1 of Cmel min so we can apply Ebmaj7#5  
In each case the maj7#5 shape is the 3<sup>rd</sup> degree of the relevant melodic minor  
The same applications can be practiced with the appropriate min maj7 (9) shapes

The melodic minor scale is an excellent context for practicing triad pairs as its construction lends itself to this usage. For example Cmel minor produces the following triads on successive degrees: Cmi Dmi (parallel min triads or min triads in tone relationship) Eb aug Fmaj Gmaj (maj triads in tone relationship) Ao and Bo (diminished triads in tone relationship)

These Hexatonic or triad pairs generate possibilities in any harmonic situations derived from the mode, for instance B7 alt (7<sup>th</sup> degree) provides a situation to apply Fmaj and Gmaj triads independently or in conjunction. The same applies to any of the other possible pairings mentioned ie Cmi Dmi triads or Ao and Bo triads.

This Hexatonic or Triad pairs approach is an excellent technical development in itself and produces 'loads' of melodic material

### Appendix III-vii

Descriptive shapes or templates from the mode:

1 use the 'stack' of the mode in thirds

2 apply the minor maj7 (9) (11) as 'melodic spelling' or 'voicing' in the various harmonic situations related to the mode eg Ab mi maj7 (9) (11) applied to G7 alt going to cmaj or Cmi or Fmi7b5 natural 9 in a cadence in Eb min or. Eb 7 b6 as v7 going to Ab mi or Abmaj or Db 7 #11 going to Cma or Cmi or Gb ma or Gbmi or as bV117 #11 to 1 ma going to Eb maj or Bmaj #4#5 as a tonic or as a 1Vmaj chord or Bb 7sus b9 as a V7 in Eb maj or min or Amaj or Ami or Ab mi maj 7 in either 11mi situations in Gb maj or where Abmi is a tonic

3 explore similar applications of the maj 7 #5(9)

4 explore applications of mi7b5 chord off the 3<sup>rd</sup> of the V7 #11 and the 7<sup>th</sup> of the V7alt (practice this shape moving through the cycle and moving down in semi tones eg Fmi7b5 over G7alt Emi7b5 over C7 Ebmi7b5 over F7alt etc)

Therefore the strong descriptive shapes occur on the 1st 3rd and 6<sup>th</sup> degrees of the melodic minor mode and have parallel connections to the strong shapes in the major mode:  
I.e. in Cmaj for instance the strong descriptive melodic materials occur on the 2<sup>nd</sup> degree ie the Dorian stack  
On the 1<sup>st</sup> and 4<sup>th</sup> degrees where Cmaj and Fmaj #11 occur.  
On the 7<sup>th</sup> degree where Bmi 7b5 occurs.

Therefore the major mode contains the maj7 (9) (#11) shapes the minor stack and the minor 7b5 shape and the melodic minor contains these shapes with alterations ie the maj7#5(3<sup>rd</sup>

### Appendix III-viii

degree) the minor maj7 stack (1<sup>st</sup> degree) and the mi7b5 natural 9 (6<sup>th</sup> degree)

Using transpositions of the same shape to describe major and minor cadences:

Major cadences:

Applying diatonic descriptive shapes:

Dmi G7 apply Fma 7 shape Cma apply Cmaj 7 shape and or,  
Dmi apply shapes from dorian stack, G7 apply Bmi7b5 Cma  
apply Emi7 shape

Applying melodic minor shapes to each aspect of the chord:

Dmi apply Dmi ma7 stack (1 of Dmel min) G7 apply Ab mi ma7  
stack (1 of Ab mel min) Cma (#5) apply Cma#79 shape (3 of  
Amel min)

NB The following mel minors can be applied to G7

Fmel min generates G7 sus b9 Dmel min generates G7 #11

Cmel min generates G7 b6 Ab mel min generates G7 alt

Minor Cadences:

Eg 11mi7 flat5 V7 alt 1mi

eg Dmi7b5 natural 9 G7 alt Cmi

Therefore Dmi7b5natural 9 (6<sup>th</sup> degree of Fmel min)

G7alt (7<sup>th</sup> degree of Ab mel min)

Cmi maj (1<sup>st</sup> degree of C mel min)

Here we can apply the maj 7 #5 shape to each chord in the  
cadence;

I.e. Dmi7b5natural 9 is 6 of Fmel min so we can apply Abmaj7  
#5

## **Appendix IV**

Page 2 of Charlie Parker's solo over *Donna Lee*

## Appendix IV

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F 2ND CHORUS

9 G7 G7

10 C7 C7 F C- B7

11 Bb Eb7 F D7

12 G7 G7 C7 C7

13 F D7 G7 G7

14 C7 A7 D- A7

15 D- A7 D- G#<sup>0</sup>

16 A- D7 G- C7 F G- C7

F 3RD CHORUS

17 D7 G7 G7

18 G- C7 F C- B7

TURN PAGE