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THE BARITONE CHRONOLOGY
a study of the baritone saxophone evolution in jazz history

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Degree Project, Master of Fine Arts in Music,
Improvisation
Spring Semester 2015

Degree Project, 30 higher education credits
Master of Fine Arts in Music, Improvisation
Academy of Music and Drama, University of Gothenburg
Spring Semester 2015

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Title: *The baritone chronology – a study of the baritone saxophone evolution in jazz history*

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ABSTRACT

This project investigates the history of the baritone saxophone. The role of the baritone saxophone as a soloist instrument has historically often been overshadowed by the tenor or the alto saxophone. Even if important innovations have been made by many great baritonists during the years, no extensive literature regarding the baritone saxophone is to be found. My aim with this Masters' thesis is to trace the history of the baritone saxophone from its invention until the modern era, around the 80's. My research questions are: which innovations have been done on the baritone saxophone in the previous century regarding sound, phrasing and articulation? Is there a relation between the first baritone players in jazz history and the modern ones? My purpose is to contribute to the literature regarding the baritone saxophone, creating a chronology of the most influential soloists in jazz music. My aim is also to find methods that could be helpful in a correct approach to the instrument. In addition to this, I have analyzed the ways in which the greatest baritonists have influenced my personal musical background, thus creating a link to my own artistic profile. The material chosen for my study has been studio and live recordings made by some of the most influential jazz baritone saxophonists throughout the 20th century, musicians that all have made important contributions in expanding the technical possibilities of the instrument. I have also been analyzing some of my own solos extracted from live recordings from different periods of time. The method used in my analysis has been transcribing and comparing the material in order to trace an evolution of the instrument, mainly focusing on technical aspects. I consider this Master's thesis as a beginning of a personal journey that hopefully will be expanded and enriched over the years. Suggestions for further research could be the analysis of contemporary baritone saxophone players and the definition of the instruments current stylistic conditions, regarding technical as well as artistic aspects.

Key words: jazz, history of jazz, wind instruments, baritone saxophone, technical aspects, improvisation

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1. INTRODUCTION

1.1 *Problem statement*

My aim with this Master's thesis is to trace the history of the evolution of the baritone saxophone in jazz music and to define which important innovations during the years have given the instrument the characteristics that we know today. By writing this history, I would like to give the baritone saxophone the importance that throughout the history has been given to other saxophones. In jazz, as we know, and in particular among saxophones, the tenor saxophone (closely followed by the alto saxophone), has been the instrument that to the highest degree has represented and incarnated the invention of Adolphe Sax. The following arguments are highlighted in my thesis:

1. The soloist aspect of some of the most important baritone saxophonists in the US and in Europe since the 1930's and onwards. The overall goal with my research is to relate the findings of my study to my own musical development as a soloist, and to in a concrete manner show how these musicians have influenced my musical language.
2. The relationship between the body and the instrument. The choice of a particular instrument as the baritone saxophone exposes, in my opinion, the executor to several problems to be solved: first of all the weight of the instrument, which just like other wind instruments like the tuba, the bass saxophone or the double bass in the string family, requires the performer to have a more robust posture and to pay greater attention in order to avoid physical problems very common among musicians.
3. The emission of the sound, the use of vibrato, the use of bending and the "growling" effect on the baritone saxophone. This argument requires a very careful study especially with regards to the management of the air column and the optimization of the air, given the significant amount of air required for playing the baritone saxophone.
4. Historical contextualizing. Since I have been dedicating many years to the specialization on the baritone saxophone, I would now like to complete my knowledge by adding an historical aspect, focusing on the importance and influence the baritone saxophone has had on jazz music since its origin until our days. During my research I have followed the evolution of the instrument starting from its creation throughout all the musical styles that it has come into contact with. Apart from the fact that I have chosen this instrument as a channel for expressing my musical ideas, the story of the baritone saxophone is in my opinion a very interesting one since, even though often not being considered the primarily instrument for soloists, it has had an important evolution: in the beginning used mainly as a backing up instrument it has during time earned an increasing importance.
5. The psychological/emotional profile of the performer. I have tried to enter into the relationship created between musician and instrument.

1.2 Structure of the thesis

The course of study that I have followed starts with an American musician with Italian origin called Adrian Rollini (1903-1956), multi-instrumentalist that played piano, xylophone and bass saxophone, very active during the 20's and 30's and very well renowned for his collaboration with Bix Beiderbecke and Red Nichols. Adrian Rollini was one of the first to adopt the bass saxophone as a substitute to bass tuba for the accompaniment in Dixieland style, and was at the same time one of the first to develop it as a soloist instrument, creating a phrasing and a soloist architecture comparable to that of other instruments used during that era (such as cornet, trumpet or clarinet). I choose to use Adrian Rollini as my starting point for my course of study because of the fact that the first important and universally celebrated baritone saxophone soloist in history, Harry Carney, active in the Duke Ellington Orchestra, was directly inspired by Rollini. Carney, in order to find a particular imprint on baritone saxophone, developed a very personal improvisational language, departing from Rollini's innovations. The analysis of the solos of Harry Carney in Ellington's Orchestra and in small combos, could reveal the evolution of his jazzistic language. Starting out from a strong "Rollinian" imprint from the middle of the 20's, Carney developed an own independent voice on baritone saxophone.

After Harry Carney I have continued my study on the evolution of jazz language on baritone saxophone analysing solos from the 50's, with Gerry Mulligan as one of the front figures, and the harmonic innovations brought by the "Cool Jazz School" movement; during this era I have opened up an european parenthesis of big importance regarding the, in my opinion, greatest representative of baritone saxophone that Europe ever had: Lars Gullin. Through Gullin I have analyzed important innovations on the harmonic and instrumental level, as well as the interesting fusion between the swing language of the 50's and Swedish folk music. I have given attention to Gullin's improvisations on saxophone, trying to find connections in his solos between influences from european music and american swing. Another equally important aspect of my research has been the study of Pepper Adams, whom I consider the founder of the modern school of baritone saxophone and who has left a great contribution to the growth of the instrument on a technical as well as on a harmonical level. His improvisations in small groups named by him, or with the Thad Jones Orchestra, are some of the most used examples in my research.

I have also examined the way in which the baritone saxophone has developed during the so called "Avant Garde" era, analysing work from musicians such as Hamiet Bluiett, which through their experimental projects pushed the technical possibilities of the instrument even further ahead.

During my research I have followed the evolution of the instrument starting from its creation throughout all the musical styles that it has come into contact with. I have also clarified some of the innovations made by these musicians, analyzing them in detail. In the analysis I have been emphasizing some of the most particular aspects regarding the baritone saxophone such as the sound, the phrasing, the articulation and the breathing technique, in order to better understand the evolution of this instrument in the history of jazz.

1.3 Method of research

The method used in the thesis is similar to the one I mainly have used for my private musical studies, namely: listening to and transcribing solos and comparing and analysing their particularities. Parallell to the listening exercises I have studied in detail the historical context of the above mentioned musicians in order to get a greater understanding of their ideas and development.

Another fundamental part of my method of research consists of the “reenacted” performance, which means putting into practice some fragments of the solos and focusing on particular details that have been studied. In my attached recording there are some technical examples which demonstrate the particularities of different styles of the analysed soloists. These recorded performances offer a deeper understanding of the stylistic differences between one soloist and another, why I have tried to pay special attention to the characteristic sound of each musician, on the articulation used in the musical phrases, on the volume of the sound, on the speed of the performance and on the level of difficulty and complexity in each one of these. These recorded examples also demonstrate the possible common thread between the analysed soloists, from a technical perspective as well as a creative perspective. My aim has been to show the most particular innovations on the baritone saxophone and to put them in a chronological order to obtain a vision as clear as possible of the evolution of the instrument. I have included a recording of all the tunes that I have analyzed during the research. The selected tunes are extracted from the original released albums and performed directly by the players that I have analysed. Some of the tunes were recorded in studio sessions and others in live recording sessions.

2. RELATED AND EARLIER RESEARCH

At the moment there is not a great amount of literature available focusing mainly on the baritone saxophone. I would like to give my contribution to the story-writing by creating a sort of brief, but somehow exhaustive, historiography of the instrument, investigating the various aspects listed above. Of big help will be the books written by the American author Gunther Schuller on the story of jazz divided in eras: *The early jazz* and *The swing era*¹ in particular. In these books, Schuller's research method is oriented towards the direct analysis and comparison of the great soloists in the history of jazz; instrumentalists and singers but also directors of orchestras. The author presents a great range of historical-biographical documentation and refined and detailed technical references, alternating personal events and professional contexts of many active protagonists of the swing era between the 30's and 40's. The transcriptions of entire wellknown solos and of small fragments inserted in solos will be used to outline the personality and the background of each single musician examined in the best possible way. The constant comparison will enable the understanding of the harmonic and rhythmic evolution that each one of these musicians has had over the years.

Another project that has been used as a starting point for the method of the research is a book, *Antologia del jazz* (1958).², written by Livio Cerri (an Italian writer from the beginning of the 19th century), which presents a wide story of jazz from the origins until the 50's, the years in which the book was published. Cerri's research method is except for on the transcription also based on the study of the historical and sociological context that has generated the musical language of the analysed musicians, thereby making it more clear to the reader why the evolutions that we know of have been taking place. I have started from a similar investigation method that has been used by these two great authors, in order to develop my own personal method of study which hopefully can allow me to draw a picture as complete and clear as possible of the history of the baritone saxophone.

¹ Gunther Schuller, *Early jazz: its roots and musical development* (New York, Oxford University Press, 1986)

² Livio Cerri, *Antologia del jazz*. (Pisa: Nistri-Lischi, 1958)

3. ANALYSIS

3.1 Transcribing

During my training I focused my attention in particular on the transcriptions of solos of the musicians whom I considered my main influences. While transcribing and analyzing the jazz solos I often noticed that a transcription can be effective both for setting a solo on paper “note by note” and for memorizing without the solo transcription on paper. Both methods are very efficient in order to save what has been done by other musicians regarding the phrasing and articulation. However, a distinction is needed: the transcriptions on paper are purely intended for an archival purpose because if someone wants to fix a particular musical phrase or an entire solo content in a piece, in order not to forget it, this is probably the best method. All the jazz musicians eventually create a kind of personal archive of solos performed by other musicians, transcribed from records or from live performances. But transcribing, as the author of "Transcribing is not transcribing" on Jazzadvice.com rightly said, means primarily to play and learn "by ear" what has been played by other musicians on the record, in order to learn inflections, phrasing, and especially to manage the sound and create a new and personal sound idea. Since jazz is a language to learn, the basic and the most important thing to do is to develop the listening of its features and then eventually fix them on paper and read them; in other words, to internalize them. This is why in this thesis I intend to highlight both the transcriptions on paper, for example when I need to analyze the harmonic innovations made by baritone players such as Pepper Adams and Lars Gullin, and also the music transcribed "by ear", performed directly on the instrument. Transcribing by ear can allow us to analyze the most important innovations regarding the sound, the articulation and the jazz inflections as in the case of Harry Carney or Hamiet Bluiett. Here's an excerpt from the article on Jazzadvice.com "Transcribing is NOT transcribing":

It's not what you're transcribing, but how you transcribe it. The one aspect of transcription that vastly improves your musicianship is the process of figuring out the solo by ear. Truly hearing the intervals, chords, and articulation of a solo and internalizing them. Instead of figuring out a line note by note and going directly to the paper, You should sing the line and play it on your instrument repeatedly. Not only will you immediately begin to memorize the solo, but you'll begin to improve your ears; learning to hear chord tones, intervals and progressions along the way. Essentially, developing a skill necessary to all improvisers: learning how to play what you're hearing.[...]The goal of a transcription assignment being: to see what the masters are playing over the changes, to see how they're navigating ii-V's, to see what they do a when they're playing" outside, etc. All actions that involve visually interacting with the solo, seeing the notes written out on paper. While informative, this is merely a surface level analysis and understanding of the solo; you've got the solo written out, but can you play it? Because of this mindset, we expect immediate results from writing out the solo and seeing it on a piece of paper, when, in reality, the true benefit comes through the process of learning that only by ear [...] ³

Therefore the most important jazz teachers, such as Barry Harris with whom I studied in master classes, insists much on learning "by ear" the jazz language rather than mechanically read it by the score.

The single most important reason to transcribe is to learn the jazz language, from its structure and phrases to its inflection and articulation. Hear it, imitate it, internalize it, and eventually innovate upon it. [...] When you initially learned a language, you did not write it down or read it from a piece of paper. We learned by hearing phonetic syllables slowly, repeating them, expanding them into words, and eventually

³ Jazz advice, inspiration for improvisors <http://jazzadvice.com/transcribing-is-not-transcribing-how-this-misnomer-has-led-you-astray/> [2014-04-02]

expressing ourselves through this medium of spoken syllables. In short, taking in information through our ears and recreating it with our voices. Gradually we mastered this technique and were able to create our own phrases and communicate with this language. It's not until we're already speaking it fluently, That we see this language written down. Learning the jazz language should be approached in the same way. Jazz is essentially a second language that you are learning to improvise with. The most effective way to learn a new language, whether it's a musical language or a spoken one, is to listen to it and repeat it. ⁴

Therefore, the transcription is an extremely good educational tool which can be creative and function as a great support in developing the artistic personality:

Transcribing should be a process that stokes the fires of our creativity rather than a process that limits our options. By learning and internalizing only with instruments and our ears, not our eyes, we're inviting the possibility of innovation and personalization; making our own personal vocabulary from what we've absorbed [...] From studying with many great teachers, they've stressed the important thing is that jazz is a language. Language is living a when it's spoken, being used to communicate ideas, evolving daily to reflect the emotions and thoughts of the people speaking it. When language exists only in writing it can not evolve, it's set in stone, losing the visceral meaning had it once. We must remind ourselves that jazz is still a living language, one of the few "oral traditions" that's left in our worry about! ⁵

3.2 *Playing the Baritone*

3.2.1 Technique

The baritone saxophone belongs to the saxophone family therefore the study of the technique is exactly the same as the one used for other saxophones, i.e. soprano, alto, tenor and bass saxophone. During the learning process there are no substantial differences regarding the position of the keys on the instrument, the breathing technique, the posture while playing, the use of the mouthpiece and the reed and the tone in which you play. The methods of study, for example, are the same as for all other saxophones. But in classical music, methods were originally adaptations from oboe studies later written for alto saxophone since the alto saxophone was one of the first saxophones used by classical composers in symphonic music and the most popular one in conservatories. However, practicing on baritone saxophone methods originally written for higher instruments can create some problems. Even if all the saxophones have the same fundamental physical characteristics, the baritone can be considered particular because of its weight, the size of the keys, the posture and the position of the hands needed to hold, the size of the mouthpiece, the reed and the amount of air required for playing. The study of the technique on baritone saxophone requires a big lung capacity and strength in order to support the instrument. It also requires a solid embouchure with the mouthpiece. In detail, the study of the basic techniques of the instrument regarding aspects such as the emission of the sound, the intonation, the fingering, and the phrasing, is very similar to the study used for other saxophones.

My experience has led me to consider the baritone saxophone as an instrument halfway between an instrument belonging to the saxophone family and an instrument belonging to the brass family. In my opinion, when specializing in the study of the baritone saxophone as a main instrument, the approach to the instrument becomes more and more similar to the one used for a brass instrument like the trombone or tuba. The amount of air required is bigger than the one needed for other saxophones,

⁴ Ibid.

⁵ Ibid.

and the diaphragmatic thrust required is very similar to the one used among brass players. Considering the role of the baritone saxophone in the big band, for example, the baritone player should have a considerable lung capacity in order to support long phrases, often in sync with other saxophones. The use of *staccato* is another substantial difference between the baritone and the other saxophones, since the hit of the tongue obviously acts differently on a bigger mouthpiece. In fact, it is much easier to obtain an efficient *staccato* from a small size mouthpiece with a small size reed and on a small instrument. Much more effort is needed from the tongue when hitting the reed and the consequent air displacement takes longer to fill the entire body of the instrument.

One of the most difficult steps I encountered during my course of studies was the deepening of the jazz language and the transcriptions of jazz solos. Since my early listenings of jazz soloists were mostly focused on alto saxophonists, tenor saxophonists and trumpeters (the most widespread wind instruments in early jazz music), I started to transcribe their solos and to adapt them on baritone saxophone. In order to transcribe solos performed by other instruments, such as those mentioned above, on the baritone, a remarkable adaptation of the technique is required. For instance, the first solos I transcribed were mainly performed by alto saxophonists such as Charlie Parker and Sonny Stitt, and this has led me to learn a sort of extended technique on baritone saxophone in terms of sound and articulation. I had to adapt the alto saxophone technique (which is faster, more agile in fingering and in articulation) on baritone saxophone. Obviously, if on one hand this adaptation increases the technical potential on the baritone saxophone in terms of speed of execution and articulation in order to “emulate” more agile instruments, on the other hand the speed of execution could penalize the emission of the sound, which then will be less focused and projective. The fullness of the sound and the projection are indeed the hallmarks of the baritone saxophone, enhancing the physics of the instrument and highlighting its strengths.

After having transcribed solos from other instruments, I started to transcribe solos directly from baritone players. The adaptation to my technique in terms of sound, articulation and emission of sound, was more immediate. I essentially benefited greatly from transcribing solos from other baritone saxophonists and it allowed me to explore different aspects of my instrument and thus to extend the technical possibilities. Every musician analyzed in this research project has made a valuable contribution to my personal knowledge both from an artistic and from a technical point of view. Each of these musicians has significantly influenced my musical profile and has contributed to the development of my musical identity. From these teachers I have learnt different approaches to the study of the baritone saxophone.

3.2.2 Overtones on saxophone

An overtone is any frequency higher than the fundamental frequency of a given sound. It means that for example when we play a low C on the saxophone there are other notes being produced at the same time. Even if these other “extraneous” pitches sound slightly muted compared to the fundamental note, the low C, they can play an effective role on the definition of the sound. When a low C is played on the saxophone it is possible to perceive the entire series of harmonics, but what we really hear is just the fundamental note. With a proper technique it is possible to play all the notes in the harmonics series one at a time, starting from the bottom note and maintaining the same fingering all the way up to the upper note. This allows the performer to expand the limit of the playable notes on the horn with ca two octaves compared to the ordinary fingering.

Even if the overtones technique always has been well known among saxophone players, the early jazz saxophone players did not make a large use of it during their solos. In most cases they simply preferred to use the available notes from the ordinary fingering.

The use of overtones on baritone saxophone has been deepened by many musicians, especially since the early 60's when for stylistic needs the musicians preferred to privilege the expressive aspect of the music rather than the harmonic aspect. For example, the free jazz and the experimental music of the early 60's in the US and soon after in Europe, started a new path regarding this new kind of experimentation. After the eras of the Hard-bop and Be-bop were gone, in which the harmonic possibilities of improvisation had been completely gutted, a new period in the musical landscape of jazz started to develop. As I mentioned earlier, the main characteristic of this kind of music was to focus on the executive/instrumental and compositional aspect and on the sound and rhythm. It favored the expressiveness of the instruments by pushing the physical and the timbric possibilities of the instruments to the extreme. Free jazz was the music that had to transmit and then to transform the social and cultural anxiety and restlessness of those years and therefore it had to be almost violent and without any filters. It went beyond the concept of the pure sound of the instrument. What mattered mostly was the ability to convey a particular mood and emotional tension rather than to caress the ears with a nice sound and a flawless execution. From the purely instrumental standpoint, the study of the technique took another direction: its purpose was not to be a support for the execution but instead to become music itself. The extended technique became a necessary step for all those musicians who wanted to experiment with this "new" genre. Musicians such as Albert Ayler, Ornette Coleman, Anthony Braxton and Hamiet Bluiett (already mentioned earlier) created a new musical trend in the 60's and 70's. All these musicians strongly extended the expressive possibilities of the saxophone, creating a new musical language.

A method that I consider very valuable for the development of the sound of the saxophone is one of the books written by Sigurd Rascher entitled "Top Tones for saxophones" from 1941.⁶ Sigurd Rascher's treatise on the high register is a classic in the field of technical instruction saxophone. In this book very detailed exercises and fingering charts reveal the secrets of extending the saxophone another full octave range. A large portion of the book focuses on playing overtones from the harmonic series, an essential exercise for tone development, embouchure control, and high playing. What you may notice when dealing with the study of the saxophone, and baritone saxophone in particular, is that the instrument needs to be "opened", that it is to be explored in overtones in order to have the absolute control of all registers in all dynamics. In fact, starting the study of harmonics and at the same time the development of the ear and intonation, are basic requirements for a good performer .

Sample exercises based on "Top tones on the saxophone". A Bflat major scale (Dflat concert key) played with the overtones obtained only from three different fingerings. Performed by Piersimone Crinelli (Audio 1)

3.2.3 The vibrato

The use of *vibrato* on saxophone has been, and is still, the subject of study and debate among musicians and teachers in general. This is a technique used by all the wind instruments as well as

⁶ Sigurd Rascher, *Top Tones for saxophone* (USA: Carl Fischer, 1941)

string instruments and human voices which could add a great expressiveness to a musical phrase. The vibrato can be described as a musical effect obtained by the periodical variation of the height of a played note. The vibrato can be achieved easily with string as well as brass instruments. Where a single note held in a static way could be experienced as disturbing, the vibrato can offer a specific meaning to the supported/maintained, making it more pleasant to listen to. The vibrato effect should not be used in order to hide defects in pitch of the voice and the sound level of the strings. The saxophone certainly enriches its already rich palette of sound through the use of vibrato. Many saxophonists in history, from different musical genres, have created a truly distinctive mark of personality through the use of vibrato. Examples are Ben Webster in jazz, Marcel Mule in classical music, and David Sanborn in rock music.

The vibrato, when performed with control and moderately, can be an added value to a saxophonist and it can greatly increase the expressive possibilities of the instrument.

Just as for the string instruments, the saxophone vibrato confers on all its expressive intensity, to appear natural, and to give to the sound all its nobility. The saxophonist must always seek to take his inspiration from the string instruments. The saxophone, is the cello of the brasses ⁷

This famous quote belongs to Marcel Mule, one of the greatest saxophonists ever in classical music, and it says a lot about the inspiration that can be achieved from the saxophone by string instruments. In particular, the factors that is actually possible to achieve are: a fluent articulation, a rich vibrato and a warm and harmonious sound that can be controlled and variable in many dynamics at the same time. As noted by Thomas Liley in his article on "Clarinet & Saxophone magazine, the official publication of the Clarinet & Saxophone Society of Great Britain. "vibrato is a tool to be used with caution in music; and this is definitely a fundamental aspect of research of the artistic personality of a musician".⁸

Vibrato is an enrichment of the tone which must be used carefully. It enhances the sound and can add a wonderful expressive quality to the music. If not produced correctly, however, it can be a detriment and, if used thoughtlessly, can detract from the music. The saxophone is a singing instrument; the appropriate use of vibrato is an important part of it and it requires sound and careful study [...] ⁹

The vibrato can be obtained with different techniques but surely the one suggested in the article by Thomas Liley is the one that has been used by the most of the saxophonists and probably the most effective in its use:

The most common way to create a saxophone vibrato is by moving the jaw down and then up (not up and then down), similar to whispering the syllables "vah-vah." Be certain to keep a strong tone while making this motion. This jaw movement is almost invisible but initially it may feel like a huge physical gesture. There may be some slight change of pitch below (but not above); more important is the relatively great change in the intensity of the air as the jaw pressure on the reed is modified. The recommended vibrato speed is four undulations (or "vahs") at quarter-note equals 80. Not only is this a very satisfactory vibrato speed but a player can use it as a reference point from which occasionally to create a faster or slower

⁷ Thomas Liley, *Enhancing the sound*, from "Clarinet and Saxophone magazine Society of Great Britain", 2007

<http://www.thomas-liley.com/Vibrato-EnhancingThe%20SaxophoneSound-Liley.pdf>

[2014-11-02]

⁸ Ibid.

⁹ Ibid.

vibrato. Sometimes an inexperienced player will have difficulty producing four undulations to the beat. A simple solution is to have the player produce three "vabs" at quarter-note equals 80. As soon as this is comfortable, the player can usually move to four "vabs" with little trouble. The important concern at this point isn't the number of undulations but rather the feeling of moving the jaw smoothly and evenly. In any event, don't be discouraged if success is not immediate.¹⁰

Example on how to play vibrato according to the method written by Eugene Rousseau. Alternation of two long tones with and without vibrato. Performed by Piersimone Crinelli (Audio 2)

The use I made of the vibrato in "Agra" 's theme and also later in "Sophisticated Lady" certainly reflects the influence of classical music in my musical education. This vibrato is a fast and subtle one, very similar to the one in use among the classical saxophonists. As Marcel Mule commented during an interview with Claude Delangle, a good vibrato should have about 300 waves per minute:

I imposed something that I would continue to impose if I would still teach, that is, that the normal correct speed is around 300 undulations for a minute. Considering that the vibrato is made of a high note and a note a little flatter, it is necessary to lower a little, not too much, and at a certain speed. I taught to play a note without vibrato, then with a lower note with the same fingering and same embouchure. Then I suggested acceleration and an undulation occurred for work at 300 undulations per minute. This is how work starts, without being a prisoner to counting. Setting the metronome at 75 gives four vibrations per beat. If one sets it at 100, it gives 3 vibrations, if one sets it at 150, it will be 2 vibrations. If one sets it at 60, it is a little more difficult, that would give 5 vibrations.¹¹

3.2.4 The bending

Another effect that I used extensively in the execution of slow tempo tunes like "Agra" and "Sophisticated Lady" is the use of the *bending*, which adds a "grotesque" flavour to the execution. The effect of bending is a kind of glissando and its aim is to alter the pitch of a note, starting from a certain pitch and bringing it to an higher pitch without changing the fingering at all. The range of the interval between two notes which is possible to get with the bending could often be around a half tone, and it depends on the physical limitations of the instrument in use. During the exposition of the theme of "Agra" I use the bending to create even more mystical and oriental nuances. This effect is obtained by fast movement of the jaw from the bottom upwards maintaining a solid embouchure of the mouthpiece of the saxophone, to make it possible to get an accentuated variation of the pitch. The distance between the starting and the ending note that is possible to obtain, can be very subjective. Generally speaking by slightly changing the embouchure, it is possible to achieve a range of about half a tone from the starting note. Obviously, it is almost impossible to use this effect in speed, so it is preferably and most efficiently used within the medium/slow tempos. Many jazz tenor saxophonists of the swing era like Ben Webster, alto sax players like Willie "the Lion" Smith and baritone sax players like Harry Carney, made extensive use of glissandos and bendings in order to extend the range of colors available on the instrument, and at the same time they allowed the composers to use new and interesting tools in their compositions. I am referring for instance to the

¹⁰ Ibid.

¹¹ Ibid.

execution of "Agra" and "Sophisticated Lady" made by Harry Carney with the Duke Ellington Orchestra, already analyzed in this thesis.

Example of bending on baritone saxophone. Changing the pitch of one note with the bending. Performed by Piersimone Crinelli (Audio 3)

In my performance of "Agra" and "Sophisticated Lady" I wanted to emphasize the contrasts of dynamics present in my style of playing on the baritone. In fact, I tried to emphasize the significant differences of sounds that belong to the instrument. I found it interesting to play the first notes during the incipit of Agra on the lower register with a full, rich and powerful sound and then to improvise on the theme of the same song with a cello sound, almost like a chamber music improvisation. I often use these contrasts during my improvisations in slow tempos in order to achieve an unexpected change in the timbre of the instrument.

3.2.5 The growling and the subtone on the baritone saxophone

Another rich contrast that I expressed in the performance of the theme of "Agra", analysed at page 33, is the use of *growling* in the high register and the use of *subtone* in the low one. The growling is a very special effect that you can obtain on the saxophones and on other wind instruments as well, and it is widely used by saxophonists. In order to achieve the growling effect on the saxophone you have to sing a note at the same time as playing it. This note does not necessarily have to be the note you play on the fingering and does not have to be a note in the scale in use, or even a note in tune. This effect has been widely used in the past in jazz swing and a lot of times in Rhythm'n blues. The growling is a vocal effect derived from the blues, in which the sound of the note has to be performed in a very scratchy and hoarse way exactly as the voice of an afroamerican bluesman from the '30s (such as Son House, Howlin' Wolf or Bessie Smith).

In my improvisations the growling plays a very important role, especially during a free improvisation, because of its potential to widen the tonal possibilities of the baritone saxophone, and making it very similar to the human voice. In contrast to the growling I intended to get a very sweet and mellow sound in the low register to create a wider variety of resources in my personal timbre. Therefore, I used the technique of the subtone which is another largely used effect in the older and in the modern way of playing the saxophone. Through the subtone it is possible to get a very smooth sound especially in the low register, a very powerful and almost a "fat" sound. This effect is achieved with a strong push of diaphragmatic breathing in relation to the rapid movement of the jaw, which is slightly set back from the usual position, using less of the mouthpiece, almost playing it at the tip. It is a technique that requires a lot of practice and, in particular, if applied on the baritone, can be really difficult to obtain due to the extension of the instrument and the significant amount of air required. In the song "Agra" and "Sophisticated Lady" I played notes with subtone up to low B-flat, which is almost the lowest note of the instrument, to be able to obtain a windy sound effect. During the improvisation on the theme of "Sophisticated Lady" I often used sixteenth notes short phrases, which run very fast in contrast to the long notes of the opening theme. In particular, I used patterns of sextuplets of sixteenth notes and thirty second-notes patterns on the chords of the song, in almost the same way as they were played by pre-bop saxophonists such as Coleman Hawkins and be-bop saxophonists as Sonny Stitt. The effect is patterns running so fast that they create an unexpected reaction in the listener, especially if used in a medium/slow tempo as in this case. In my

improvisations I often use harmonic patterns that can be played on chords and often alternating with improvised phrases, rhythmically uneven, in order to create a particular effect.

Example of growling on a high G fingering position on the saxophone (Bflat concert key) (Audio 4) Performed by Piersimone Crinelli

Example of a subtone on a low G, low F, low E, low D and low C fingering position on the saxophone (Bflat, Aflat, G, F and Eflat concert key) (Audio 5) Performed by Piersimone Crinelli

3.2.6 Low A vs. low B-flat baritone saxophone

Having extended my expressive possibilities on the saxophone stimulated me already from the beginning of my study experience, in the production of unusual sounds and the discovering of alternative fingerings on the instrument. Infact on some wind instruments like saxophone and clarinet there are “extra” notes that are possible to obtain in addition to the ordinary fingering given on the instrument. For example, adding some side keys and the octave key on an ordinary fingering for low C on saxophone can give the possibility to obtain unusual sounds. The timbre research has become a key aspect of my musical journey; in fact, the baritone saxophone is perfectly suited for exploring new sounds and alternative fingerings. This especially if it is equipped with Low A, a note that is additional to the usual standard of construction of the saxophone, since adding one more note makes the bell even longer than that of the ordinary saxophone and therefore enables the production of more overtones.

The choice of a baritone saxophone equipped with the low A extended note instead of the ordinary one is a subject that frequently creates discussions among baritone saxophonists. In fact, as many baritone saxophone players observe, the ordinary baritone saxophone without the extra note has more projection and brightness in the sound than the Low A due to the fact that it has a shorter bell. The low A extended note on the baritone was introduced in the 50's by the Selmer company in order to expand the possibilities of the instrument for supporting the saxophone section. For example after that technical innovation many composers started to write arrangements with a special use of that extra note on baritone saxophone in order to have a more complete and massive sound in the horn section.

Here is a technical explanation made by Andrew Hadro in an article regarding the choice of a baritone saxophone:

Some swear by low A horns and some swear against them. The way I see it, everyone who uses a Low A essentially just wants that extra note. I have not come across too many players that play a Low A because of the way it sounds. I don't think the Low Bb players dislike having an extra note, they are simply not willing to sacrifice anything for it. The Low A definitely weakens the power of the low end of the horn.[...]The Low A horn is not a bad idea in theory. *However*, they don't seem well thought out. When designing a Low A horn the bell is generally just extended and another tone hole is drilled. If you look at any saxophone the opening at the neck is the smallest in diameter and the bell is the largest. Small to big. When they add a Low A they stop expanding the size of the tube so that the diameter at the Bb tone hole is the same as that at the Low A tone hole. Not that I blame them, to make a bell large enough to be in correct proportion it would have to be huge. But that doesn't nullify the fact that the bell on Low A horns is just not big enough to account for all of the notes. To build a Low A horn you must design it *from the neck*

down! Modern Low A baritones don't resemble any of the other saxophones, just as straight soprano's do not. the shape of the horn, bore dimensions, and bell size all vastly affect the sound of the entire instrument. [...] Low end aside, the extra hunk of metal on the end of the bell affects the resonance, timbre, and overall sound of the rest of the horn. ¹²

3.2.7 The breathing and the Hara

I immediately noticed that it was necessary to develop a more efficient kind of breathing than the "normal", in order to support the issuance of the airstream into the instrument in order to make it vibrate effectively. Thus I began a series of exercises aimed at developing a diaphragmatic breathing. After years of practice, I now realize that these exercises are fundamental for improving the timbre and the issue of the instrument. Even today these exercises are a part of my daily workout routine and I often use some of these techniques in live performances to get a faster air pressure especially when I need to reach the high register (overtones) in a short time. After having completed the study of the technique of diaphragmatic breathing, which was completed thanks to the study of the art of *Hara*, I realized I could have a more efficient technique than the usual one, in order to achieve special results on the baritone saxophone. Because of the size of the baritone saxophone, it is extremely important to have a proper breathing in order to support it and to create a rich variety of sounds. With a normal and controlled emission of breath you can play the instrument in a very delicate and velvety way, very similar to the sound of Gerry Mulligan and Bob Gordon and other baritone saxophone players from the "cool jazz era", never exceeding in the strong dynamics. In this way it is possible to emphasize one of the most particular characteristic of the baritone saxophone: a very dark and mellow sound surprisingly similar to the cello. However, if I want to obtain a contrast to this kind of sound I should use a "lower" breathing to create a greater thrust of air stream to fill the entire instrument. I have previously talked about Hamiet Bluiett and his way of approaching the instrument: an extremely powerful sound in contrast to the typical dark and "cellish" sound.

The aspects on which I focused my attention during the first months of study of the instrument were sound and breathing. As I have already had occasion to explain in the beginning of this thesis, the baritone saxophone requires an emission of breath slightly deeper than the other instruments of the saxophone family and therefore of course a great lung capacity and a very effective control of the abdominal belt is needed. After beginning studying the instrument as a self-taught, I immediately realized that I needed a very deep preparation of my breathing technique in order to sustain a strong and clear sound in all registers and to be able to control all the dynamics. I therefor attended a course of study based on a breathing technique used in some Eastern disciplines such as Aikido and Karate, namely *the Hara*. This breathing technique can be very helpful to the wind instrument player in order to expand the amount of air in the body and the resistance during the performance. Here is an excerpt from the article "Hara: the body's centre" written by Covey Masami:

Becoming Friends with Your Hara (Tanden, Lower Dantian)

The 'hara' region of the body is generally located in the abdomen between the bottom of the ribs and the top of the pelvic crest, centered about three finger widths below the navel. It is known by many names: Tanden or Lower Dantian in China, the center of being, the energy center, or the 'Sea of Ki', and it is considered by the Japanese, Chinese, and other East Asian cultures to be the seat of internal awareness and the energy. In essence, Hara considered is the center of one's personal connectedness, physically,

¹² JazzBariSax, <http://jazzbarisax.com/articles/brands-and-horns/> [2014-04-05]

emotionally, and spiritually. [...] Martial arts, such as Aikido, Judo, Kendo, Karate, and Tae Kwan Do, as well as moving meditations like qigong and taichi, also emphasize movement and concentration of one's action from the hara, as do zazen and other sitting meditations. In any of these practices, hara is often used to focus one's mind and breath, and it is also where practitioners can find their seat of consciousness. [...] Breathing is more complicated than it seems, and it actually takes constant awareness and practice to do it well. It isn't about belly breathing or chest breathing. It is about learning to work with your patterns and once in a while introduce something different to trigger conscious action—just like a workout routine, it is better to mix things around and introduce your body to new forms of exercise.¹³

3.2.8 The diaphragmatic breathing and the balance

The control of the air column is a very important aspect to focus on since the baritone saxophone primarily needs a constant emission of air, especially in the low register. These techniques have also a psychological aspect as I mentioned before; the study of Hara allows a better balance of the body and gives an exceptional stability. In fact, you will learn to bear your whole body weight with the legs and find the center of gravity. This allows you to put all the tensions that has been created before and during the execution on a single point of the body and therefore to optimize the energy. According to the techniques described by Michel Ricquiers¹⁴, there are some breathing exercises that can be useful in order to gain a correct posture while playing. The baritone saxophone by its nature needs a light approach, and the weight of the instrument should be dumped as much as possible on a single and controlled body part, possibly not the neck and the shoulder. Putting all the tension on the neck, which unfortunately is very common among players of wind instruments, might create many problems for the performer: inflating the neck reduces the ability to inhale air (and thus there is less air to be entered into the instrument) and after some years the result could be muscle problems. It may seem like a coincidence, but many baritone players in the history of jazz were not very tall in stature (of course there have been exceptions); this maybe because the players preferred an instrument whose weight you could easily dump on the legs rather than the back, while people of high stature could face problems if an instrument were to weigh on the back only.

Having discovered and developed the use of the air column has opened the way for the study of the sound, the vibrato and the bending. The sound was one of the most difficult aspect to study on the baritone saxophone and indeed it still requires many hours of study to maintain it since there are many factors to consider when producing a sound: the choice of the mouthpiece, the choice of an adequate reed and the choice of the instrument.

3.3 From Adrian Rollini to Hamiet Bluiett

I have tried to draw a logical line starting from the 30s ' until the present days, taking as an example three of the most important baritone players that in my opinion could represent the innovations regarding both the instrumental technique and the language of improvisation made in different eras of the 20th century. We can define the history of the instrument roughly in three periods: the 30s', the 50s' and the 70s'. For each of these eras I have been using as an example a musician who has helped

¹³ Masami Covey. *Hara: the body's center. Zenshin method*. [http://www.masamicovey.com/Zenshin Defined/hara-body-center](http://www.masamicovey.com/Zenshin%20Defined/hara-body-center) [2014-04-02]

¹⁴ Michel Ricquiers, *Traité méthodique de pédagogie instrumentale: principes physiologiques et psychologiques de la colonne d'air, décontraction, relaxation, respiration, maîtrise de soi, utilisation du mental* (Paris: Gérard Billaudot, 1982)

to raise the status of the baritone from an ensemble instrument into a solo instrument. Each of these musicians lived in different historical periods in the United States, and of course their way of playing and improvising was heavily influenced by the styles and clichés of that period: Harry Carney during the Big Band era, Pepper Adams during the Hard-bop era and Hamiet Bluiett during the free-jazz era. These three musicians on which I have been focusing have many aspects in common regarding both technical details and improvisation. In particular, what these three specialists have in common is the timbre of the sound of which in my opinion Carney was the creator and modeller.

In summary, my search for an improvisational original language has mainly (but not only) been based on the study and analysis of these three baritonists. What I have found most interesting: the search of a solid sound, powerful and full of harmonics, the lyricism of Carney, the technique of harmonic improvisation and projection of sound of Adams and the extended technique and search for alternative fingerings of Bluiett. These musicians have had a crucial influence on my artistic growth, especially because of the very different ideas of sound they had. In my improvisations the sound and the search for different timbres play a fundamental role.

3.3.1 Harry Carney

The first major baritone sax specialist that I have analyzed is Harry Carney. I believe it is important to start with this musician since he is perhaps the first innovator of the baritone saxophone, although he was not the first to use it permanently. In the history of the baritone saxophone it is possible to trace a path of style and sound that starts with the innovations of Harry Carney and continues in the trials of Hamiet Bluiett in the early 60s'.

Harry Carney was born in 1910 in Boston. He began studying music at the age of 6 and when he was 13 years old he started to play the clarinet adding the alto sax a few years later. The first musician to deeply influence his style was Johnny Hodges who was a member of the historic Duke Ellington Orchestra for decades. Other influences on his musical style worth mentioning is Buster Bayley, Don Murray, Coleman Hawkins and in my opinion especially Adrian Rollini, on which I shall return shortly. Carney joined the Ellington orchestra at the age of 17 as alto saxophone player, and later on, because of the departure of the official baritone player Otto Hardwick, he switched to baritone, becoming the official baritone player in the orchestra for 45 years, alternating the baritone and the bass clarinet in which he also was a pioneer. The ability of Duke Ellington to give prominence to the voices of the soloists in his orchestra is demonstrated in the case of Harry Carney in many compositions for baritone saxophone and orchestra. The most famous is undoubtedly "Sophisticated Lady", a historical piece from 1932 initially written for other instruments then entrusted to Carney's baritone. In this composition the baritone saxophone plays the main role since it exposes the melody of the song and adorns it with small improvisations on the theme. The voice of the baritone is solid and powerful, this due primarily to his personal emission of sound, the choice of instrument and the opening of the mouthpiece. Carney as many other baritone saxophone specialists used a particular saxophone type of the American brand Conn, known to have a very large bore and therefore a more powerful and dark timbre than other brands such as Selmer for example; moreover he used a very open mouthpiece, similar to a bass saxophone mouthpiece, in order to give the sound a more powerful volume.

Listening to "Sophisticated Lady" (Audio 6)

In the tune "Sophisticated Lady"¹⁵ it is possible to hear already from the exposure of the melody how Carney changes the dynamics frequently, going from *piano* of the incipit to a *forte* of subsequent measures. The sound is full-bodied, slightly husky voiced and dark. Carney uses a fast *vibrato* that was typical of saxophonists of his period, both in the high register and the low one. Even the change of dynamics is a characteristic of saxophone players of this era, the ability to move from a pianissimo to a forte during the presentation of the theme was a widespread practice and the absolute master was Coleman Hawkins, another great influence of Carney. The control of the instrument is one of the most interesting aspects of Carney's style. In *Sophisticated Lady* we notice that the use of the glissando is functional to the melody. By varying the pitch of notes it is possible to create a great tension during the exposition of the theme, something that requires a huge control on the baritone since one must work on the reed increasing and decreasing the pressure of the lips on the mouthpiece and keeping the air column constant.

3.3.2 Circular breathing

Circular breathing is another important feature of Carney. He was among the first to apply it to the saxophone and certainly the first to apply it to the baritone. This is a complex breathing technique that allows you to inhale air from the nose without using the mouth while you play; in this way you can maintain a sound endlessly using the air blown into the nose. This is a very ancient technique widely used for example in the Arab world and also in Italy (in Sardinia with *launeddas*, a traditional wind instrument made of cane reed), where for reasons related to the duration of the rituals in which music is required, the horn player must continue playing and never stop in order not to interrupt the dance participants. The way in which Carney uses circular breathing to finish the piece creates an interesting effect on the listener. He also holds the last note, Ab in the medium register, for more than a minute while the orchestra concludes the song and the listener is brought into a hypnotic atmosphere, surreal and circular. Many other saxophonists after Carney will use the same technique of circular breathing to achieve similar effects.

Listening to "Sophisticated Lady", circular breathing at the end (Audio 7)

In the main theme of "Sophisticated Lady" we notice Carney's ability to play tenderly and to blow part of the melody in the high register and scratch vigorously with a clean and sharp sound in the low register. The *staccato* is powerful and the equity and the notes of the lower register are perceived almost as belonging to another instrument: the bass saxophone. This is due to a fundamental influence on the music of Carney: the bass saxophonist Adrian Rollini (1903-1956). He was one of the first bass saxophonists to have a leading role in orchestras and small ensembles. Rollini, who lived in the period of the so-called "Dixieland", a form of jazz characterized by very danceable and frenetic rhythms, was an excellent accompanist and replaced the tuba with the bass saxophone in Dixieland groups, but mainly he was a great soloist.

¹⁵ Live recording in Denmark (1965) of Duke Ellington & his orchestra
<http://www.youtube.com/watch?v=brqxEdwsTQs>

3.3.3 Adrian Rollini's influence on Harry Carney

With Rollini we immediately notice a mature style of improvisation, very rhythmic and solidly based on the harmony. His *staccato* is definite and every note seems to have been selected with care, surely thanks to his deep knowledge of harmony as a pianist and vibraphonist. Carney was inspired by this short improvisation to create a new timbre on baritone saxophone. What he did was to conceive the baritone as a bass saxophone, an experience that gave him a unique and recognizable sound. It is definitely "Agra", another famous composition by Ellington and Billy Strayhorn from the album *Far East Suite* (1966), which I think best represents the influences of Carney and the full maturity of his style.

Listening to "Davenport Blues" ¹⁶ (Audio 8)

***Listening and Transcription of "Crazy words, crazy tune" 1927 ¹⁷
(see Annex, musical notes, Audio 9)***

Listening to and transcription of "Agra" ¹⁸ (see Annex, musical notes, Audio 10)

In this composition, the baritone saxophone is the main voice and exposes the melody. As we can hear in the introduction of the melody the sound is dark and throaty, typical of the bass saxophone. The whole first part of the introduction is played with a dynamic that goes from *fortissimo* and then slowly decreasing on the low Db, whereafter the main theme characterized by more stable dynamics, begins. "Agra" is definitely the song that puts more focus on the musical personality of Carney and denotes its main features: the control on the high register, the extreme lyricism, the powerful attack and the quick change in the dynamics. In the space of a measure he passes easily from the low register (the lowest note of the instrument Bb) to the last highest note on the instrument (the F#) with ease and consistency. His continued use of trills gives a even more mystical and oriental taste to it.

3.3.4 Harry Carney's influences on my musical expression

Carney has definitely influenced the way I approach the baritone saxophone. What has influenced me the most is the control of the instrument, in particular, the middle register and the high one. In my improvisations I give much prominence to the high register almost treating the instrument as a contralto, in a similar way as Carney did. With the use of a *pianissimo* dynamic in the high register and with a fast and continuous *vibrato* you can get the sound effect of a cello on the baritone, and this the effect I would like to obtain when I play the melodies.

Another great influence Carney has had on me is how he used the low register and in particular the attack of the low notes, something that can be very difficult because of the articulation with the tongue and the coordination with the fingering. In my improvisations I try to alternate the use of the

¹⁶ Adrian Rollini and his orchestra, recording of *Davenport blues* by Bix Beiderbecke, (Decca 3862, 1934)

¹⁷ Milton Ager, *Crazy word, crazy tune* (California Ramblers, 1927)

¹⁸ Duke Ellington & his orchestra, *Agra*, from the record *Far east suite*, (RCA Victor, 1966)

registers, using the upper register with more softness and lyricism and the low one as a support for this.

Listening to my improvisation on the tune “I saw the grey beyond the trees”¹⁹ (Audio 11) Performed by Piersimone Crinelli, Roberto Bonati, Jonas Leppanen, Per Gunnar Juliusson, John Holmström

Some notes of the instrument have a greater projection than others (it depends on the physics of the instrument) and the use of these notes in certain contexts can have great effect.

3.4 Pepper Adams

The second baritone saxophone player that have analyzed is Pepper Adams (United States 1930-1986), which was certainly one of the most influential musicians in the history of modern jazz. We can consider Adams as a direct descendent of Carney both regarding the emission of the sound and the control of the instrument. The influence from Carney is located in the well projected sound and in the strong attack without hesitation, the homogeneous articulation of the notes, the frequent use of the lower register and the brilliance of the high register. In Adams playing, however, the use of *vibrato* is totally absent.

Comparison of listening to “It had to be you” played by Harry Carney²⁰ and “Now in our lives” played by Pepper Adams²¹ (Audio 12 and 13)

The absence of *vibrato* is probably due to the fact that in the age in which Adams lived, the so-called Hard-bop era, the improvisation became much more characterized by complicated and fast harmonic progressions, so it was not necessary to give prominence to the lyricism and to the *vibrato* which is an essential component for a wind instruments player. His style became very personal and recognizable, and thanks to its powerful attack and the solidity of the sound he earned the nickname “the knife”. The strength of Pepper Adams was certainly his clever use of harmony. We can see that the phrasing is clear and harmonically accurate on both the upper register...:

¹⁹ Roberto Bonati, *I saw the grey beyond the trees*. Performed live at *Högskolan för scen och musik* in Göteborg, 2014

²⁰ Harry Carney, recording of *It had to be you* by Isham Jones (Clef Records, 195-)


²¹ Pepper Adams, *Now in our lives* from the record *The Adams effect* (Uptown Records, 1985)

3.4.1 Transcription of example “Chelsea Bridge” bar 16

Transcriptions in E-flat:


EXAMPLE N 1 PEPPER ADAMS SOLO ON “CHELSEA BRIDGE” (BILLY STRAYHORN) BAR 16

D7 b9



...and in the low register, bar 20:

EXAMPLE N 2 PEPPER ADAMS SOLO ON “CHELSEA BRIDGE” BAR 20




The use of the high register denotes a great influence that Adams has received from Carney, in particular the use of the high F and the F# that are very important because they are the last notes (which allows the use of the ordinary fingering on the instrument) that can be played on saxophone and therefore the ultimate register that Adams often used to finish or start a musical period.

3.4.2 Comparison of transcription of “Agra” bar 2 with “Chelsea Bridge” bar 31


Transcriptions in E-flat:

EXAMPLE N 3

COMPARISON OF TRANSCRIPTIONS
HARRY CARNEY'S SOLO ON "AGRA" BAR 2



PEPPER ADAMS SOLO ON "CHELSEA BRIDGE" BAR 30-31




The attack he uses is clear especially on the low notes which are the most difficult to attack.

3.4.3 Transcriptions of “Chelsea Bridge” bar 20

Transcription in E-flat:

EXAMPLE N 4

PEPPER ADAMS SOLO ON "CHELSEA BRIDGE" BAR 20



Adams was certainly more advanced than Carney in terms of harmony and rhythm, thanks to the innovations made by the Be-bop jazz in the 40s ' that broke with the swing style of the past and created a new more modern style. From now on we can notice a new, rhythmic approach on the baritone saxophone. The short sentences and the use of trills in Carney become long sentences and complex metrical figures with Adams. The use of the thirty-second notes is frequent with Adams:

3.4.4 Transcription of “Rue Serpente” bar 95

Transcriptions in E-flat:



of sextuplets: **Transcription bar 98**



quintuplets and septuplets: **Transcription bar 99**



Even the use of the harmony was of course affected by the era in which the two musicians lived and worked. Carney used improvisations based mostly on simple triads, we could say almost "vertical" (such as Coleman Hawkins), working more on keynotes of the scale and using sometimes passing notes belonging to the scale, while Adams, thanks to the innovations of Be-bop, often used colours and tensions of the notes on the chords. Adams improvised on the harmonic progressions in a horizontal direction, I would say less rhythmic, using all or almost all melodic possibilities contained in the chords:

3.4.5 Transcription of “Chelsea bridge” from bar 21 to bar 27

3.4.6 Pepper Adams' influence on my way of playing

Pepper Adams has definitely been another strong influence on my way of playing the baritone saxophone. I immediately admired the use of his powerful and direct sound, the clear and precise attack of the notes and the absence of *vibrato*. In his long improvisations Adams uses the articulation of the notes in an excellent way, despite the technical difficulties on his instrument.

During the improvisation, in fact, you have to have the concept of harmony very clear in order to perform certain phrases and passages and then articulate the notes and give accents on the most important notes in the chord progression.

Example of articulation on Pepper Adams' solo (Audio 14) Performed by Piersimone Crinelli

Adams' approach to harmony is something that I have focused on a lot during my studies on baritone saxophone. His melodic lines are cleverly constructed melodic modern jazz harmonies, really advanced for that time. The use of certain scales in Adams' improvisations has certainly been an important step in the development of my musical aesthetics. Adams made a wise use of diminished scales on all or most of the minor seventh chords creating real patterns based on these scales...

Example of C diminished (Eflat concert key) ascending scale pattern used by Pepper Adams (Audio 15) Performed by Piersimone Crinelli

...but he also used less usual scales as Lydian dominant on a G7 chord:

3.4.7 Transcription of “Chelsea Bridge” bar 55

Transcription in E-flat:



or Superlocrian scale on a F7 chord:

3.4.8 Transcription of “Chelsea Bridge” bar 28

Transcription in E-flat:



Adams music had a big influence on my artistic personality. He was a great innovator of the baritone saxophone (as Carney in the 30s') and he has certainly expanded the potential of this instrument. I believe that Adams represents a crucial point of transition between ancient and modern times of the baritone; he has innovated in deep respect of tradition. In my improvisations I try to combine the two main aspects of these two baritonists. I recognize their direct influences: the lyricism of Carney and the intellectualism of Adams. What I like to achieve is a fusion between these two very different approaches to the instrument. In my musical style I emphasize the lyricism of Carney and improvisational frenzy of Adams.

3.5 Hamiet Bluiett

The third baritone saxophone player that I have examined is Hamiet Bluiett (United States 1940-). This musician is considered one of the greatest living baritone players, both from a technical point and improvisational point of view. Multi-instrumentalist, he has performed and recorded with bass saxophone, clarinets and wooden flutes. His musical journey begins with the baritone saxophone that he embraced at the tender age of 10. We can consider him a real natural baritone player, something that is rare among specialists of this instrument, since it is more common to first begin with the apprenticeship of other saxophones such as the alto or tenor saxophone. This aspect has aroused my interest in this musician. In him and in his way of improvising I see not only an excellent and

unpredictable improviser and technician but a natural baritone player, and his adaptation to the instrument is perfect. He seems perfectly at ease on every register of the instrument, and his blowing is as natural as breathing. I also began my musical adventure with the baritone sax, and therefore I can recognize this naturalness and how the body adjusts to the instrument. Bluiett has also been heavily influenced by Carney as he himself says that he was stunned when he listened to a concert in Boston and has ever since devoted himself to the baritone saxophone as a solo instrument.

Bluiett belongs to a generation (born in 1940) of black Americans who lived through particular historical events in the U.S. During the 60s' there were many movements for the emancipation of black African Americans, hampered for decades by white dominant culture. These movements were expressed not only in politics but also in literature, in the visual arts and in music with the birth of a new free- improvised music called free jazz. Bluiett founded the Black Artists' group with the intention to innovate the traditional jazz language with which he grew up, and later on he founded the Bluiett Baritone Nation, an interesting project based on music composed for and performed only by baritone saxophones. From now on, his attention turned to free improvisation on baritone saxophone, becoming the greatest representative of this instrument in modern jazz.

3.5.1 Extended Technique on the baritone saxophone

The major innovations concern the extended technique on the instrument.

Bluiett is superbly mastering the instrument, he pushes the potential of the baritone even further, for example working a lot on the use of overtones, often obtained by harmonic sounds and particular pressure on the reed and on the mouthpiece.

Examples on overtones on baritone saxophone. A short improvisation on overtones (Audio 16) Performed by Piersimone Crinelli

This technique requires a lot of air pressure and a very thorough understanding of the fingering.

Listening to a "A night in Tunisia" ²² (Audio 17)

The use of the low register, with a very full sound, solid and dark and similar to that used by Carney, is definitely another feature of Bluiett.

Listening to "Happy Spirit" ²³ (Audio 18)

The brilliance of its sound on the high register and the use of alternative fingerings make Bluiett an innovator of the first order.

Listening to "Settegast Strut" ²⁴ (Audio 19)

²² Hamiet Bluiett, recording of *A night in Tunisia* by Dizzy Gillespie & Frank Paparelli, from the record *EBO*, (Milano : Soul Note, 1984)

²³ Hamiet Bluiett, *Happy spirit* from the record *Resolution* (U.S.A. : Black saint, 1977)

²⁴ Hamiet Bluiett, *Settegast strut* from the record *Libation for the baritone nation*, (Montréal, Québec, Canada: Justin Time, 1998)

The middle register of the instrument is also very rich in sounds and you can get an even richer sound with the use of alternative fingerings (not respecting the ordinary position of the keys on the instrument). The use of these alternative positions sometimes produces sounds not exactly in tune and definable but they can be full of harmonics and full of particular colours

***Listening to Alberto Pinton's "Glassbaren"*²⁵ (Audio 20)**

In this baritone saxophone solo performed by Alberto Pinton, you can hear the use of overtones during his improvisation. As I have already mentioned the study of the overtones should be a milestone in the study of sound and the extension of the instrument; this kind of study is a very complex area that requires a lot of dedication and accuracy, in fact, as fully described in the above-mentioned writing by Sigurd Rascher, you can start to master the use of the first overtones only after many weeks of practicing. This due to the fact that the higher one moves upward in the register in the study of the overtones, the greater pressure is needed on the mouthpiece and on the reed and even greater the pressure that must be used with help of the column of air. To support sound on so high notes on baritone saxophone, a constant control of these three elements is needed. The pitch is certainly very difficult to keep because producing these high sounds requires the maintenance of the firmness of the lips on the mouthpiece; in fact when we produce sounds on the saxophone in conventional octaves we don't need lot of commitment and firm muscles. In addition, executing a series of overtones during a solo in a jazz composition and even more on a predetermined chord progression, can be more difficult because obviously there are more aspects to consider: the keeping of a perfect pitch when other instruments like piano or bass are playing in the background, the length of a solo, the choice of tempo with which to perform the overtones and the volume of the execution.

The solo that I have analyzed is the climax of the tune. The solo takes place on a Bb pedal (key of G for the baritone saxophone) and begins with an exposition of notes deriving from the relative scale. With the increasing of the intensity the soloist slowly moves away from the conventional notes of the G scale and starts exploring overtones. With the use of alternative fingerings even higher notes are achievable, seemingly distant from the main scale but always, when paying close attention, noticeable in the background. You can always perceive the atmosphere of Bb in spite of the use of overtones increasingly acute in the register. After the climax with a dense execution of overtones, the soloist "falls" back into the harmony and returns to play the notes related to the Bb chord, almost creating the feeling of "coming home" after a long and exciting exploration of unknown places. The overtones for baritone saxophone are an extremely rich ground to explore and can increase the expressiveness of the instrument, an expressiveness that otherwise sometimes is limited in the use of the conventional three octaves. As proved by Pinton, the color palette of this instrument can be enriched and can certainly both give a lot of freedom of expression to the performer and many stimuli to the composer, who in the baritone saxophone can find an instrument with exceptional expressive qualities.

3.5.2 Multiple sounds

The use of alternative fingerings can also help in the production of more sounds simultaneously. This effect has been widely used in experimental jazz, but also before that era by for example John

²⁵ Alberto Pinton, *Motionemotion*. (Sweden: Moserobie Music Production, 2005)

Coltrane in his composition "Fifth house" (1961) from the record *Coltrane Jazz*. Some critics renamed this technique *multiphonics*, referring to the way of obtaining multiple sounds with just one fingering position, different from the ordinary one. Thanks to the combination of these fingerings it is possible to create unusual sounds that sometimes are difficult to identify and to define in common scales.

***Listening to "Fifth house" played by John Coltrane* ²⁶(Audio 21)**

Since the extension of the baritone saxophone is low, this instrument has a wider range of sounds, something which is definitely an advantage in the study of harmonics. From the study of harmonic sounds, as mentioned earlier, it is possible to proceed to another aspect that we have already explored with Hamiet Bluiett, namely the overtones. In my free improvisations I often try to give much prominence to the upper register of the instrument, trying to create fragments of sound that are acoustically difficult to place precisely because they are created through an unconventional use of the mouthpiece; for example, it is possible to obtain some of those sounds squeezing the reed on the mouthpiece or by changing the position of the lips onto the mouthpiece and strongly pushing out the air column, faster than we usually do during a normal emission of sound.

3.6 Lars Gullin and Gerry Mulligan

One of the baritone sax players that certainly has had a major influence on my way of playing is Lars Gullin (Visby 1928 – Vissefjärda 1976). Gullin is without any doubt the musician who more than anyone in Europe has made the baritone saxophone famous and who has helped to expand its musical possibilities. Gullin had a brilliant career both in Europe and in the United States where he, strangely enough being a foreigner and despite the fact that he had never been there, was given a prize by the country's most famous jazz magazine *Down Beat* as "the best newcomer in 1954". With a solid musical background, Gullin devoted himself to the study of piano first and then of clarinet before switching to baritone saxophone which became his favorite instrument until his premature death due to health related problems, at the early age of 48.

Gullin first became a professional musician as a classical pianist at the age of 20 after he had moved to Stockholm and studied with Sven Brandel. But he changed his mind, while continuing to practice the piano and compose music on this instrument, and embraced the baritone saxophone in 1949 when he was called to replace the official baritone player in Seymour Österwall 's band. From that moment he decided that the baritone saxophone would become his main instrument.²⁷ He was immediately fascinated by the expressive possibilities of the instrument, so close to the tenor saxophone (definitely the most used instrument in jazz in those years), but also very close to the instruments used in classical music but not in jazz music like bassoon for example. The major influence on Gullin regarding the baritone saxophone came without any doubt from Gerry Mulligan, who was at the height of his career in those years.

²⁶ John Coltrane, *Coltrane Jazz*. (USA: Atlantic Record, 1961)

²⁷ Keith Knox, *Jazz amour affair*. (Stockholm: Svensk Musik, 1982)

Listening to “My Funny Valentine” played by Gerry Mulligan quartet with Chet Baker
²⁸ (Audio 22)

It was in the beginning of the 50’s and the “Cool jazz” style was extremely popular in the US; this kind of jazz was a kind of softer version of the Be-bop and Hard-bop. The rhythms were not as frenzied as in Be-bop and the melodic lines were not so harsh and difficult to sing. In Cool Jazz the most important aspect of the musical performance was the lyricism and the voices of the instruments. The purpose was to sing together with the instruments and actively involve the audience, an approach which was very different from the one of the Be-bop. Also Gerry Mulligan has had a profound influence on my way of playing and thanks to him I learned how to build a melodic line always emphasizing the sound of the baritone saxophone.

Listening to “Moonlight in Vermont” played by Acud quartet ²⁹ (Video 1)

Furthermore, this new kind of jazz was strongly influenced by the classical music; many jazz musicians often used harmonic solutions derived from classical compositions. It was easy for Gullin to face this new type of jazz since he had all the characteristics of a perfect cool jazz musician: excellent improvisational skills, penchant for lyricism, solid knowledge of harmony and classical music. During his brilliant career he had illustrious collaborations with the most famous musicians of that time such as Arne Domnerus, Georg Riedel, Bengt Hallberg and many Americans like Chet Baker, Stan Getz and others.

After I moved to Sweden I had the honour to work with some of the most important Swedish musicians in activity: Gunnar Eriksson, Georg Riedel, Erik Norström and Jan Allan. All of them have worked at different times with Lars Gullin, some since the early 50’s like Georg Riedel, Jan Allan and Erik Norström, and some at the end of his career, like Gunnar Eriksson. I have had the possibility to play a few songs with Gunnar Eriksson (Bengtsfors, 1936-) during a concert directed by him for choir and baritone sax, including two compositions written by Lars Gullin and rearranged by him: “Bossa på tå” and “Jag såg”. During my tour with the *Bohuslän Big Band* and Georg Riedel (Czech Republic, 1934-) in a tribute to Bengt Hallberg, I took the opportunity to ask Georg Riedel some questions about Gullin’s way of playing, something he knows very much about since he has worked with him since the early 50’s as a bass player. Riedel was also present in a famous recording session where Lars Gullin played “Danny’s Dream”, a song that brought much fame to Gullin not only in Europe but also overseas.

Listening to “Danny’s dream” played by Lars Gullin ³⁰ (Audio 23)

Danny’s dream is in my opinion is the song that best represents Lars Gullin’s characteristics both as a composer and as an instrumentalist. From a composition point of view this song is strongly influenced by Swedish folk music and European classical music. The execution of the melody, which is in a minor key, is very close to the style of Swedish folk ballads and the movement of the harmony is surely influenced by the classical composers. In fact Gullin, since the early years of his career, showed an extraordinary interest for modernist composers such as Stravinsky, Bartok as well as

²⁸ Chet Baker/Gerry Mulligan quartet, recording. (USA: Pacific Records 1952)

²⁹ Acud Quartet, recorded live in 2012 at Gregory’s Jazz club in Rome, Italy

³⁰ Lars Gullin quartet. (Stockholm, Metronome Records, 1954)

Swedish romantics such as Peterson-Berger and Alfvén. For this reason it was normal for him to focus his attention on their way of composing and combine these advanced conceptions with the easier harmonic ideas of the American Songbook. All the aforementioned Swedish musicians with whom I collaborated, confirmed Gullin's predilection for classical composers.

Exclusively speaking from an instrumental point of view, all these musicians that I met described his sound as very personal, light and extremely lyrical. His way of improvising was mostly based on chords, like many other improvisers active in those years. Gullin was in contact with some of the greatest post-war American instrumentalists such as Stan Getz, Zoot Sims and Chet Baker, so he had the chance to apply their improvisational styles on his way of conceiving the improvisation. His way of improvising shows how much he was influenced by the stylistic characteristics of the Cool Jazz: the sound of his instrument was controlled and at the same time very relaxed, never nervous and almost never stronger than *mezzoforte*; very lyrical improvisations and careful selection of the notes; distance from the extreme virtuosity that was widespread in the previous genres of jazz such as Be-bop and Hard-bop.

3.6.1 Transcription of “Danny’s dream” (see Annex, musical notes)

The thing that in my opinion made the improvisations of Gullin so special was that touch of Swedish folk music that he used to add in his solos. Gullin was, just like many Swedes of the older generation, an excellent player of accordion already at an early age and he was familiar with the vast repertoire of Swedish folk tunes; influences that are very easy to trace in his solos. His way of playing the baritone saxophone is extremely lyrical, light but solid at the same time and it is possible to perceive an extremely sad, or maybe tragic, note in his music.

As I wrote earlier, the approach to the baritone saxophone of Lars Gullin had a very profound impact on me and also thanks to listening his recordings I started to focus my attention more on the lyrical aspects of improvisation, privileging the melodic lyricism and paying maximum attention to the sound. The use of the high register of the baritone saxophone makes Gullin a leading expert in treating the instrument almost like a tenor saxophone, thanks to the influence from working with musicians such as Stan Getz, Zoot Sims and Dexter Gordon.

3.6.2 Transcription of “Chelsea Bridge”³¹ played by Gerry Mulligan compared with “Danny’s dream” (see Annex, musical notes, Audio 24)

In these two solos it is possible to notice a very similar approach to the instrument. In fact the sound that Lars Gullin and Gerry Mulligan obtain from the baritone saxophone is in some aspects very similar: relaxed, very controlled on all the registers and never ever stronger than *mezzoforte*. The sound on the high register is thin and sharp but never shrill, more similar to that of a tenor saxophone. The sound that Mulligan obtained is slightly darker and deeper than Gullin's one which instead has a clearer sound, subtle but pervasive at the same time. These differences in the sound may depend on the choice of the set-up of the musicians. As I mentioned earlier, the choice of an instrument could determine a different emission of sound: for example the American saxophone brand Conn, still in use among many modern musicians, is well known to have a greater fullness of

³¹ Gerry Mulligan & Ben Webster, *Chelsea Bridge* from the record *Gerry Mulligan meets Ben Webster*. (USA: Verve Records, 1959)

sound because of its larger bore and because of the longer dimensions of the neck, while the French brand Selmer saxophone gives the sound more depth, less full-bodied but extremely bright. Both the baritone players prefer the mid-high register of the instrument, whereas Harry Carney and Pepper Adams favored the middle low register of the saxophone. This stylistic choice might depend on the more lyrical approach that the musicians wanted to give to this kind of jazz; the use of the high register of the baritone saxophone allows better control of the sound and to attack the notes with a small amount of air, while the lower register very often requires the use of the tongue in order to attack the notes and to clearly distinguish them, something that certainly makes the melodic lines less fluid and lyrical.

From an harmonic point of view both of the two musicians use a certain kind of improvisation that is purely based on the chords; the use of the tensions of the chords is controlled and there are no “out of harmony notes” in the improvisations. In conclusion the improvisations are extremely melodic and easy to sing and it is always possible to trace the main melody of the song.

3.6.3 Lars Gullin’s influence on my way of playing

During the tour with Georg Riedel and Bohuslän Big Band I had the chance to play an original composition by Bengt Hallberg titled "Valsette" arranged by Georg Riedel. This ballad in $\frac{3}{4}$ stems from the vast repertoire of Swedish folk music; in fact, the main melody is in a minor key and has the characteristics of a typical Swedish folk melody. In my solo I tried to focus on the lyrical aspect of improvisation, keeping the length of the long notes, never playing more than *mezzoforte* and playing exactly in $\frac{3}{4}$ time trying to create the least possible rhythmic variations. I also tried to emphasize the lyrical aspect of the high register of the instrument instead of the low one, and through this I think it is possible to trace Gullin’s strong influence on my approach to the instrument.

Listening of my solo on “Valsette” played with Bohuslän Big Band and Georg Riedel
³² (Video 2)

3.7 Analysis of a concert: Baritone saxophone solo performance from the concert “Masters on their own”

During my concert, which was part of the exhibition "Masters on Their Own", performed in November the 25th, 2013 at the University of Gothenburg, I tried to investigate these sonic contrasts achievable on baritone saxophone. I entitled my concert "Carneyval in Bluiett" just to mark the continuity that exists between these two masters of the instrument, Harry Carney and Hamiet Bluiett, already extensively analyzed in this Master’s project. What I wanted to achieve with this exhibition was a kind of tribute to two of my biggest influences on my artistic personality,

³² Piersimone Crinelli and Bohuslän Big Band performing *Valsette* by Bengt Hallberg, at Göteborgs Konserthus 21/03/2014. Available online: <https://www.youtube.com/watch?v=HFrQiWfAH4g>

drawing a self portrait of my musical style. Between these two strong musical references I have tried to trace the outline of my style on the baritone saxophone.

Listening to the recording “Carneyval in Bluiett” from the concert “Masters on their own”³³

This concert is an improvised suite for baritone saxophone that lasts about 15 minutes without a break, in which there are three distinguishable parts characterized by completely different styles. As I said earlier in this thesis, I tried to draw a line of continuity of style that departs from Harry Carney, then passes through Pepper Adams and ends with Hamiet Bluiett. I had no intention of making a performance intended as a simple tribute to these great specialists of baritone saxophone, instead I tried to turn the pages of history through my own vision of it. I tried to bring out my personality and expose my creative process starting from the models on which I have been doing my research.

The concert begins with the presentation of the theme of the song "Agra" written by Duke Ellington. Even though I had drawn inspiration from the famous version of the tune played by Harry Carney, I tried to enrich the theme with the hallmarks of my instrumental style. I performed the main melody alternating different dynamics of sound. I alternated the use of dynamics passing quickly from *pianissimo* to *fortissimo*. This is a frequent aspect of my style of playing which I was able to improve by time. Using this kind of quick changes of dynamics very often allow us to give the song an unexpected and unpredictable proceeding. In this way it creates a "surprise" effect both in the listener and in me at the same time. Changing the dynamics quickly and in unexpected places can effect our conception of the tune enabling us to open new doors and explore new areas in the sound. The change of the dynamics in a melody allows us to move the attention of the listeners who very often expect to be surprised in predetermined points of a tune. For example, making a change in the bridge of a song, which is usually considered the highest point of tension in the composition, with a dynamic *mezzo piano*, in contrast to the *forte* of the main theme, can create an amazing effect. In this performance, it is possible to notice my predilection for a classical way of obtaining the *vibrato* on the baritone saxophone.

The solo on "Sophisticated Lady" is a melodic improvisation, which means that is mainly based on a paraphrase of the main theme. During this solo I tried to alternate melodic improvisation with short phases of harmonic improvisation, which are instead based on phrases built on scales derived from chords. These two types of improvisation are used in a complementary way. They are both widely used by jazz musicians and can really define the characteristics of a jazz musician. Improvising on the chords allows you to explore the harmonic possibilities of a song: the use of all the available scales, the choice of the tensions on the chords, the selection of the passing notes, the use of substitutions of certain chords, as if it was a "vertical" approach to music. Instead, improvising on the melody allows you to create endless variations on the theme: it allows you to explore the possible variations around the original shape of the melody, letting you "play in" the pauses and the steadily changing paraphrases, and it also allows you to create different dynamics all the time. It can be considered a "horizontal" approach to music. Both ways of improvising can definitely enrich the

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Masters on their own, Performance at Högskolan för scen och musik, Göteborg, 2013. Available at: <http://filemaker-vir-5.it.gu.se/artisten/detalj.php?id=1381>

possibilities of the performer and they can give to him/her a lot of freedom of choice. Pepper Adams was a great harmonic improviser, and Hamiet Bluiett is an excellent melodic improviser.

Very often the two approaches are mixed during the improvisation and it is quite difficult to determine where one starts and where the other ends. Sonny Rollins, one of the top saxophonists in jazz improvisation, was one of the first to create a real melodic style, modernizing the discoveries made by earlier musicians like Lester Young, Ben Webster, and many others who used this style since the early 30s'. "Sophisticated Lady" ends with the execution of a pattern based on the diminished scale downwards and creates a bridge between this song and the next one "Just One of Those Things." "Just One of Those Things" begins with a brief introduction based on a riff built on the scale of D harmonic minor and connects the intro to the main melody, which was also built on a D minor scale.

Example of intro on “Just one of those things” 34 (Audio 25) Performed by Piersimone Crinelli

After the execution of the theme in a very fast tempo (about 300 bpm) there is a short break introducing the solo and then the solo itself starts. In this improvisation, I wanted to get away from the melodic improvisation of the previous song and move into harmonic improvisation, trying to respect as much as possible the use of the scales of the chords. Since the chosen tempo was very fast, I mainly used a Be-bop way of phrasing, and therefore there are many sixteenth note patterns that create quite a “flat” architecture of the solo, in other words very horizontal with no breaks. For this type of improvisation, I used several licks and patterns, i.e. fragments of sentences already known that can be used in different contexts and in different chords progressions. Many jazz musicians constantly make use of patterns and licks while improvising, especially if they are playing on complex harmonic progressions in order to have a solid and trustable flow during the solo. The pattern can often be considered a lifeline for the improviser, but at the same time, if treated with creativity it can be an incentive to invent new phrases.

Example of three be-bop licks on “Just one of those things”. The patterns are played on a D minor scale, D major scale and C major scale (F minor, F major and Eflat major concert key) (Audio 26) Performed by Piersimone Crinelli

After the final execution of the theme of "Just One of Those Things" the suite continues with a short quote from a song written by Billy Strayhorn, called "Chelsea Bridge," in which I expose the main theme. In this composition I performed the theme in a very expressive way, with a special emphasis to the lyricism of the melody. This is a tune with a very special mystical flavour, especially in section A and C, thanks to the alternation of the major seventh chords that are often repeated. I intended to play this melody in a very delicate and smooth way in the first section and then to increase the volume of the sound in the B section where the melody and the chords become less enigmatic and more decisive. The type of improvisation that I used here is a kind of melodic improvisation, similar to the one I used in some parts of "Sophisticated Lady". I felt that the complexity of the piece could very strongly suggest a huge possibility of variations, in fact, these two sections of the tune have a really strong identity regarding the chord progression and the melody as well, as often happens in

³⁴ Cole Porter, *Just one of those things* from the musical “Jubilee”, 1935

Billy Strayhorn's compositions. I preferred in other words to be led by the melody during the improvisation rather than creating an entirely new one and moving far from the main melody.

The final piece of the suite is "A Night in Tunisia" written by Dizzy Gillespie. This song is very popular among jazz musicians, it was one of the "piece de resistance" of the Parker/Gillespie quintet during the Be-bop era in the 40s' and 50s' and is still one of the most played jazz compositions in the jazz communities worldwide. This tune is a revolutionary piece in itself because it was very advanced for its time, both harmonically and rhythmically speaking. It is characterized by an Afro beat accompaniment during the intro section, with a very innovative introductory riff for its time. The harmony is made only by the alternation of two minor chords in Section A and this was probably intended to stimulate the musicians to be more daring in their improvisations while earlier they very often had been "forced" to play over well defined chord progressions (the ubiquitous chord progression II-V-I in jazz music) often used in bebop and swing. "A Night in Tunisia" definitely marked an important development in the transition from "old" to the "modern" jazz, and it definitely increased the harmonic and rhythmic possibilities in jazz soloing. It is really interesting and explanatory to listen to the improvisations of the boppers of that time on this tune, in fact it is possible to feel a great sense of harmonic freedom during the solos. The alto saxophonist Charlie Parker, who certainly had no trouble performing on the most difficult chord changes, seems to find a new verve during those daring improvisations. The same can be said about Dizzy Gillespie, Fats Navarro and many others who first have grappled with this style. The tune begins with the exposure of the intro in *tempo rubato*.

I played the intro riff, which is usually performed by a doublebass in the low register of the instrument, trying to create a sound that differed from the doublebass through the use of alternative sounds obtainable on baritone saxophone. Emulating the sound of the doublebass on baritone saxophone would have been quite easy, thanks to the obtainable "cello" sound. Here, however, I wanted to get a dirty sound, metallic, halfway between a cello and an unorthodox percussion instrument. I wanted to create the feeling of playing a string instrument, rubbing a metal object on it. I obtained this sound through the use of alternative fingerings on the instrument and the use of modifying the embouchure of the mouthpiece. Using these two techniques at the same time allows you to create unusual, unexpected and grotesque effects on the baritone saxophone. In particular, the introductory riff of "A Night in Tunisia" suited this very well because the melody is mainly based on very low notes (C, B and Bb) on which you can create many natural overtone sounds, simply changing the column air and properly setting the embouchure. All this was entirely done in tempo rubato and with many irregular pauses, to give to the song an even more hypnotic and hallucinatory taste.

***Example of the first riff on "A night in Tunisia" with alternative fingerings.
(Audio 27) Performed by Piersimone Crinelli***

After the exposure of the introductory riff I started to play the intermediate riff that was originally played by a horn section, but with in slightly faster tempo. In this simple riff, based on notes of Eb minor and D minor chords, the same chords of the song in the A section, I used a similar technique to the one I used in the intro. In fact, to create an even more hypnotic effect on the listener, I slightly modified the sound of the notes with alternative fingerings to the usual ones. With this technique I tried to disguise the usual sounds on the instrument and I also wanted to create a distortion of the fundamental tones.

Example of the second riff on “A night in tunisia” with alternative fingerings. (Audio 28) Performed by Piersimone Crinelli

The theme of the composition that I performed is almost in a regular tempo with the use of irregular pauses. I wanted to create an alteration of the perception of time, to give the impression of an expansion of the original timing. By alternating the use of a full sound to a subtone, I wanted to create a preview of what was to come later with the interlude and create the basis for a surprise to the listener. Alternating the extremely soft sound of the subtone and the full and powerful sound of the middle register, I wanted to prepare the listener to something unexpected that was going to happen. In the *intermezzo*, the crucial moment of the tune that has the function of “kicking in” the soloist in the solo, I wanted to create the tension that is produced by a sudden acceleration of the tempo, with approximately 400 bpm. In order to make this interlude I drew inspiration from a recording session version of Hamiet Bluiett. I found it interesting to combine such different moments in terms of sound, tempo and volume in order to create a accentuated tension and a climax as well. I played the interlude without the help of alternative fingerings respecting the notes of the original theme, and despite of the very fast tempo I tried to define all the notes with the use of a heavy articulation and strong tonguing.

Example of interlude on “A night in Tunisia” (Audio 29) Performed by Piersimone Crinelli

After the interlude begins the solo. In the solo that I played here I made an extensive use of alternative fingerings on the instrument, in combination with an "unorthodox" embouchure of the mouthpiece in the mouth, and the use of natural overtones. The combination of these elements have created a series of high pitched sounds, that could be quite difficult to classify: the use of overtones is a very efficient resource to expand the palette of expressivity in the baritone saxophone. The overtones are obtained by a particular pressure of the lips on the mouthpiece and a strong push of the air column. Reaching these really high notes all depends on the skill of the performer and I have been practicing over the years to reach an increasing number of overtones. In this solo I almost reached the D overtone one octave above the one obtainable with the ordinary position.

3.7.1 Overtones from the note D (F concert key) played on baritone saxophone

With the help of a strong pressure of the reed on the mouthpiece it is possible to get very sharp and short sounds similar to rubbing two metal objects. This effect, in combination to the overtones, can give the solo even more colors and expression. Since the tempo of the tune was very fast I decided to get rid of distinguishable notes during the solo, but to use "disguised" notes obtained by alternative fingerings and I preferred to use a kind of thematic improvisation. What I wanted to achieve was a musical flow, an understandable melodic line made of unconventional sounds. I tried to sing in my mind the main melody of the song, then to keep the original architecture of it and finally paraphrasing it with other kinds of sounds. As if I was using conventional notes during a solo. This is a technique that many of the free jazz improvisers have used over the years, and it is certainly very efficient if you want to create a continuity between a well-defined melody and a totally free improvisation. Playing such unconventional sounds, often at the limit of hearing, in a logical

architecture of a solo, and making the listener perceiving the melody line below, creates a truly surreal and grotesque atmosphere. With this solo I wanted to get away from the conventional way of improvising, while respecting the structure of the piece. Performing thematic improvisation with the technique that I used on a complex theme like "A Night in Tunisia" or on a more conventional melody like "Sophisticated lady", can create a grotesque and "expressionistic" atmosphere. The suite ends with a very lyrical *cadenza* played in a very slow tempo with a classical "cello" sound, in contrast to the hectic atmosphere created during the previous solo. I conclude the concert by playing three notes simultaneously, using the technique of *multiple sounds*. With the use of this technique it is possible to get more sounds at once, almost like playing a chord. It is a combination of natural harmonics and alternate fingerings used at the same time. I obtained this last sound using the fingering described below with a special pressure of the column of air. The quality of these sounds played at the same time is very variable, it is not a perfectly clear and audible chord and often some notes are weaker than others, because of the technical difficulties and the unorthodox way in which they are obtained. The desired effect is a kind of ending chord, that creates an interrogative and a strongly mystical character.

***Example of multiple sound on the last chord on "A night in Tunisia" (Audio 30)
Performed by Piersimone Crinelli***

3.8 Psychological profile of the performer. The relationship between the instrument and the musician

The choice of the baritone saxophone originates from my late teenage years. The baritone is the instrument on which I decided to start my musical career and to which I came to devote the majority of my adult life. The choice of the baritone saxophone with its special characteristics has been the object of reflection for me throughout my life as a musician. It is very difficult to determine the precise causes of my adoption of a similar instrument. The first instrument on which I focused since early adolescence was, as for many others, the guitar. Since the guitar, especially the electric, was very popular in rock and pop music from the 80s' onward it was natural for me to start with that instrument. The figure of the "guitar hero" in the 90s' rock has definitely influenced my approach to music during that period. That kind of rock was very focused on the role of the lead guitarist who had to show all his skills and his virtuosity on the instrument; very often the songs were a mere display of technical virtuosity. I noticed already back then that I had a natural predisposition for the low register of the instrument; in fact, I preferred the solid bass lines on the low register of the instrument to the virtuosity on the high register of the guitar. After I quit listening to that kind of rock, I started listening to blues, in particular the kind of blues called "rural blues" (mostly played in the rural areas of the South of the United States and very popular since the early 20's in African American communities.) This kind of music was mostly performed by one voice and a guitar. The guitar, which was also a very widespread instrument in the south of the United States thanks to the influence of the european communities, was replaced by another type of acoustic guitar mainly made of metal, called a "resonator" or "Dobro"³⁵. The inventor of the instrument was John Dopyera who, together with his brother, patented this prototype in the late 20's (DOPYERA BROTHERS, Dobro).

³⁵ Wikipedia, <http://en.wikipedia.org/wiki/Dobro> [2014-11-02]

In the early decades of the 20th century, a new trend of playing music started to spread out and many musicians started to play in "ensembles". The diffusion of this kind of guitars corresponded to the increasing need for the guitar players to compete, in terms of volume of sound, with other instruments such as banjos and mandolins and later with the horns. This particular model of guitar was increasingly adopted by African-American blues singers because it responded perfectly to the needs of an accompaniment instrument that was more powerful than the guitar, but with the same possibilities of the latter. The early blues singers were mainly performing outdoor in front of the audience, very often in makeshift spaces, but if they had the opportunity to perform indoors most of the venues didn't have any kind of amplification and thus in both cases they needed an instrument with a projective sound audible to everyone. There were, however, numerous side effects that gave the instrument a very strong character, creating a sound tones very "metallic" (high-mid-intense), characterized by a large "attack" (initial power of the notes) and a very low sustain (ie, the length of the notes) and with a surprisingly long natural reverb. The blues musician had to play the bass lines or riffs on the guitar to be able to improvise his lyrics. I can honestly admit that thanks to this music I really started to listen to the music deeply. In fact, the sound of this guitar, used both as a harmonic and as a percussion instrument, has probably left a very deep impression in my artistic personality. Listening to musicians like Son House and other African-American bluesmen led me to reconsider the music not as a display of virtuosity, as I mainly consider the rock, but as a support for human expression.

Listening of "Death letter blues" played by Son House ³⁶(Audio 31)

The sound of this kind of guitar has had a very strong impact on my approach to an instrument and my way of obtaining certain sounds from it. I can easily see an analogy between this particular instrument, the resonator guitar, and the baritone saxophone. Although they belong to two completely different families of instruments regarding physical and acoustic aspects, I believe I can trace the similarities between these instruments:

- Both come with a very powerful and "metallic" tone due to the fact that they are mainly built of metal. The timbre may vary from being very dark, as in the low register, to being very bright in the upper register.
- Both instruments are conceived mainly to "serve" other instruments rather than to be lead voices: the guitar as support for voice and baritone saxophone as a support for the saxophone section.
- Both have a very wide range of colors and can easily vary from a dark and powerful sound in the low register to a very bright and projective sound. For instance, with the overtones of the baritone saxophone it is, as I mentioned before, possible to obtain extremely thin and shrill sounds.

The characteristics of the baritone saxophone and the Dobro guitar, apparently so different, have a lot in common. These two instruments are born in different eras and in completely different historical and cultural contexts; the Dobro guitar was introduced in the early 20s' in the United States, while the baritone saxophone was created in 1846 in Europe. Both instruments were created to meet specific needs of the musicians and composers of that particular historical period.

³⁶ Son House. *Death letter blues* from From the Vestapol DVD "Legends of Country Blues Guitar, Vol. One."

Another analogy that can be noticed is that both instruments responded to a precise acoustic need: to make a performance more efficient and to create a valid support for other instruments or voices. The Dobro guitar facilitated public performances where there was no amplification at all, being in fact made of metal and having an extraordinary resonance.

The baritone saxophone was conceived as a support for the saxophone section (or, more generally, for a section composed by wind instruments) being equipped with a powerful voice and register. The conditions for the invention of these two instruments, seemingly so different from each other, can be found and validated in the concept of "affordances" introduced by James Gibson in his book "The ecological approach to visual perception" (1986).³⁷ With affordance it is possible to define an object that suggests to a human being appropriate actions to manipulate it. Each object has its affordances, as well as the surfaces, events and places. For example, the appearance of a pitcher of water - with side handle and spout - allows the user to intuitively infer functionality, without ever having seen it before. This concept does not belong to the object itself or its user, but is created by the relationship that develops between them. The higher is the affordance, the more automatic and intuitive the use of a device or an instrument will be. As noted by Per Anders Nilsson in his PhD thesis "A Field of Possibilities: Designing and Playing Digital Musical Instruments", it is also possible to apply the concept of affordances to the musical context and in particular to improvised music. An instrument indeed "invites" the performer to get a certain attitude and behavior towards it. These rules can automatically invite to a specific interaction between the musicians themselves. Improvisation, especially free form improvisation, can definitely extend the possibilities of an instrumental performer.

However, based on their construction, offer a range of different instruments playing behaviors that are inherent in the instrument in question: a trombone affords sliding, a guitar or a harp affords strumming, a saxophone affords growling, etc.³⁸

As often happened in the evolution of musical instruments, the performers were of primary importance in making improvements to the instruments created in the past. These improvements and changes have had a very long and complex process, but they almost always responded to the practical needs regarding the live performances. Many instruments have been modified with time in order to expand both their potential regarding the harmonic possibilities and the timbre, for example, increasing the number of the available notes on the instrument such as on the flute, which originally had less available notes than the modern one that we know today.

Many of these changes to the instruments with time have been the result of complex efforts, studies and research by performers.

By experimenting the so-called extended techniques, musicians tried to expand the available sonic palette of their instrument. It may be increasing the pitch range, inventing new excitation techniques, or experimenting with new excitation and sound altering objects, among other possibilities.³⁹

³⁷ James Gibson, *The ecological approach to visual perception* (Houghton Mifflin, Boston, 1986)

³⁸ Per Anders Nilsson, *A field of possibilities Designing and Playing Digital Musical Instruments*. (Göteborgs universitet. Högskolan för scen och musik, 2011) p. pag.127.

³⁹ Ibid.

The relationship between a performer and his instrument may be the subject of many discussions and as I noted earlier, it can definitely have a decisive influence on the artistic evolution of the musician himself. The musical instrument is inherently modifiable and expandable in its original nature and it must meet the needs of the musician who constantly changes, according to the historical context in which he or she operates.

An acoustic instrument is a physical object, and it is not possible to completely limit it to certain properties, such as just one way of producing sound.⁴⁰

Therefore, the similarities between the Dobro guitar and baritone saxophone become more apparent; The Dobro guitar is used by African-American bluesmen with the technique of "Bottleneck" (also called "Slide technique") obtained by sliding the neck of a bottle on the handle instead of using the usual fingering to get an even more sharp and projective sound, suitable for outdoor performances and for venues with no amplification at all. In the course of its evolution even the baritone saxophone began to be used in a more "unorthodox" manner. The extended technique allowed the performers to expand the already available sonic palette and to go beyond the limits imposed by the original construction of the instrument in order to respond to the new needs regarding the performances. After a careful research among the various possibilities offered by all of the available instruments and their use in different types of music, I realized that the baritone saxophone was suitable for me and that it perfectly responded to my needs as an artist. In the baritone saxophone I found the percussive power and the lyricism at the same time, as well as a "scratchy" and a sweet sound. Before starting the study of the instrument under the guidance of a teacher at the Conservatory in Italy, I devoted myself to the study of the baritone sax as a self-taught for a short time. I simply started with the physical approach to the instrument only by lifting it up and moving the keys, due to the significant weight of the instrument. After becoming acquainted with the physicality of the instrument I started trying to make a sound in order to let the entire body of the instrument vibrate in the proper way from the lower register until the higher one.

Since I currently also work as a saxophone teacher, I constantly encourage the students to focus their attention, especially if they are beginners, on the relationship between the instrument and their body and the sensations that they feel in approaching it. The first physical sensation that is felt during the approach of a new instrument is very important and implicitly suggests the player to a first possible way to play it. The concept of affordances returns very efficient in relation to musical instruments; an instrument "invites" the player to use his/her body (meaning the muscles, breathing, movement coordination, vocals), sometimes in a completely new and unexpected way.

⁴⁰ Ibid.

4. PERSONAL REFLECTIONS

Thanks to the study of the baritone saxophone I can conclude that I have been able to undertake a very rich and complex journey into the field of music. The extreme versatility of this instrument has given me the opportunity to approach very different kinds of music but at the same time with relevant contact points. Through the study of the baritone saxophone I have had the chance to approach the study of classical music, the study of jazz during different eras; from big bands to experimental and improvised music. I have been able to explore the instrument from a solistic point of view but also in broader contexts such as the classical quartet of saxophones or the jazz big band. In fact, the instrument has been my *instrument*, meaning tool, allowing me to explore the world of music across a broad spectrum.

As pointed out earlier in this thesis, the study of the timbre and the sound on baritone saxophone required, and still requires from me, a considerable physical effort, because of the difficulties of the instrument. Its weight and size can often limit the projection of the sound, and a young musician at the beginning of his course of study can easily cease from continuing the practice when encountering these challenges. Finding a timbre and a personal sound and at the same time developing a proper technique with which it is possible to express ones musical ideas, requires lifelong studies. Many of the masters of the baritone that I have analyzed in my thesis have dedicated their entire lives to the study of this instrument, leaving to posterity the possibility of having a valuable archive of memory to use in the future. The lesson that I have learned over the years of study and analysis of influential baritone players, is the need to find a recognizable voice on the instrument and to use it properly in order to express ones musical ideas. The extended technique is a tool that Hamiet Bluiett for instance has used to express his creativity; other musicians like Pepper Adams privileged the harmonic exploration; Lars Gullin focused more on the sound while Gerry Mulligan dedicated himself to the articulation and timing.

With this research, I intended to take a journey as deep as possible into the study of the baritone saxophone, trying to bring out the most important aspects of its evolution throughout the 20th century. I considered it appropriate to give importance to the chronological analysis of the evolution of the instrument in order to delineate an as accurate profile as possible. I believe that the knowledge of the history of the instrument from its origins to the contemporary era can be helpful in shaping a well defined identity of the instrument. Since my analysis is limited to a time span of about 80 years of history, I believe that it can be expanded by future studies that focusing mainly on the baritone saxophone in later, more experimental music.

During recent decades, the baritone saxophone has been experiencing a period of great popularity and many saxophonists are approaching the instrument in a different way compared to in the past. Compared to earlier, in some cases musicians now start to practice directly on the baritone saxophone instead of starting with the alto saxophone. In my opinion this is due to several reasons: first of all, in the history of jazz and especially in recent decades, there has been a big dominance of the tenor saxophone as a solo instrument which is why many saxophonists are looking for new and less common tools of expression to be explored among saxophones; the second reason is probably that through the increasing amount of educational materials online and the increasing accessibility of recordings of music in general, the technical level has grown considerably and thus the study of a complicated and challenging instrument such as the baritone saxophone has become more reachable.

Whereas the baritone saxophone is also an instrument used mainly in big bands, many arrangers are stimulated to write more solo parts for baritone, resulting in an increased curiosity for the instrument.

Many specialists of the baritone are putting this instrument on the world map of jazz and beyond. Some of these specialists, while remaining rooted in tradition with a firm knowledge of the instrument, are exploring new paths of improvisation, extending even further the innovations made by some of the masters analyzed in this research. It might therefore be interesting in the future to try to trace the development of the baritone saxophone in order to understand how it evolved from now on. With the passing of time and musical styles, the musicians needs are also changing and it could be interesting to analyze how these factors can change the approach to the instrument in a few years. The technique with which the baritone saxophone players of the future will express themselves will probably be influenced by the musical genres in which they will operate. Electronic music for example, even if it has already been explored and enriched since the 70s', could make an important contribution to the evolution of the baritone saxophone in the future, bringing the executors of this instrument to broaden even further the technical and expressive aspects. Another aspect that could be analyzed is whether and how the role of the solo baritone saxophone in the context of small and large ensembles will change since, as mentioned earlier, this is a figure that gradually is gaining more and more importance within the context of jazz improvisation.

My purpose with this Master's thesis has been to give a small contribution to the literature on the baritone saxophone and its history through personal reflection on my studies. I have tried to put a magnifying glass on my personal knowledge and to draw a logical line throughout my studies during the recent years. The research that I have made has been mainly technical and aimed to analyze the characteristics and peculiarities of some of, in my opinion, the biggest baritone players in the history of jazz. I consider this Master's thesis as a beginning of a personal research about the baritone saxophone that I hope will continue to be expanded and enriched over the years. The opportunity I have had in this thesis to analyze some of my favorite soloists, as well as my own music, has allowed me to make an important work of introspection in order to understand my artistic journey. I believe that a deep reflection on our personal artistic development, the analysis of its limitations and the possible solutions to its problems, are essential components in the evolution of our creativity.

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6. ANNEX

6.1 Musical notes

Transcription in C:

CRAZY WORD, CRAZY TUNE

JACK YELLEN MILTON AGE?
SOLO BY ADRIAN ROLLINI (BASS SAXOPHONE)

FAST *GLISS.*

The musical notation is written in 4/4 time and consists of two staves. The first staff begins with a treble clef and a key signature of one flat (Bb). The tempo is marked 'FAST'. The melody features several accents (^) and a glissando (GLISS.) instruction. The second staff starts with a measure rest (6) and continues the melodic line with various rhythmic patterns and accents.

Transcription in E-flat:

AGRA

(FROM "FAR EAST SUITE")

Duke Ellington and Billy Strayhorn

MELODY PLAYED BY HARRY CARNEY (BARITONE SAXOPHONE)

The musical score for "AGRA" is written in 4/4 time and E-flat major. It consists of several staves of music for the baritone saxophone. The score includes various musical notations such as triplets, glissandos, and dynamic markings like "RUBATO" and "ORCHESTRA".

Key features of the score include:

- Staff 1:** Measures 1-4. Includes a triplet of eighth notes and a glissando.
- Staff 2:** Measures 5-8. Includes a first ending bracket and a "RUBATO" marking.
- Staff 3:** Measures 9-12. Includes triplets and a "RUBATO" marking.
- Staff 4:** Measures 13-16. Includes triplets and a "RUBATO" marking.
- Staff 5:** Measures 17-20. Includes a "RUBATO" marking and a section labeled "ORCHESTRA".
- Staff 6:** Measures 21-24. Includes a second ending bracket, triplets, and glissandos.
- Staff 7:** Measures 25-28. Includes triplets, glissandos, and a "RUBATO" marking.
- Staff 8:** Measures 29-32. Includes a "RUBATO" marking and a final glissando.

Transcription in E-flat:

DANNY'S DREAM

BARITONE SAXOPHONE

SOLO PLAYED BY LARS GULLIN

LARS GULLIN

Musical score for Baritone Saxophone, titled "DANNY'S DREAM" by Lars Gullin. The score is in 4/4 time and E-flat major. It consists of six staves of music. The first staff begins with a measure rest followed by a triplet of eighth notes with an accent (^). The second staff contains a triplet of eighth notes with a slur. The third staff starts with a measure rest, followed by a triplet of eighth notes with a slur, and then a triplet of eighth notes with an accent (^). The fourth staff begins with a measure rest, followed by a triplet of eighth notes with a slur, and then a triplet of eighth notes with an accent (^). The fifth staff starts with a measure rest, followed by a triplet of eighth notes with a slur, and then a triplet of eighth notes with an accent (^). The sixth staff begins with a measure rest, followed by a triplet of eighth notes with a slur, and then a triplet of eighth notes with an accent (^). The score includes various musical notations such as accents (^), slurs, and triplets. The piece concludes with a measure rest followed by a whole rest, with the instruction "SOLO CONTINUES" above the staff.

Transcription in E-flat:

CHELSEA BRIDGE

BARITONE SAXOPHONE

SOLO PLAYED BY GERRY MULLIGAN

BILLY STRAYHORN

5

9

13

17

21

25

29

33

SOLO CONTINUES

6.2 Audio/Video files

Audio 1 Bflat major scale with overtones, performed by Piersimone Crinelli

Audio 2 Vibrato exercise according to the method written by Eugene Rousseau, performed by Piersimone Crinelli

Audio 3 Bending on baritone saxophone, performed by Piersimone Crinelli

Audio 4 Growling on baritone saxophone, performed by Piersimone Crinelli

Audio 5 Subtone on baritone saxophone, performed by Piersimone Crinelli

Audio 6 Duke Ellington and his orchestra - Sophisticated Lady

Audio 7 Duke Ellington and his orchestra - Sophisticated Lady - circular breathing performed by Harry Carney

Audio 8 Adrian Rollini - Davenport Blues (1934)

Audio 9 California Ramblers - Crazy Words, Crazy Tune (1927)

Audio 10 Duke Ellington - Far East Suite- Agra

Audio 11 I saw the grey beyond the trees, performed by Piersimone Crinelli, Roberto Bonati, Jonas Leppanen, Per Gunnar Juliusson, John Holmström

Audio 12 Harry Carney - It Had to Be You

Audio 13 Pepper Adams, Baritone Sax - Now In Our Lives [Alternate Take] (The Adams Effect - 1985)

Audio 14 Articulation on a Pepper Adams' solo, performed by Piersimone Crinelli

Audio 15 C diminished scale ascending pattern, performed by Piersimone Crinelli

Audio 16 A short improvisation on overtones, performed by Piersimone Crinelli

Audio 17 Hamiet Bluiett - A Night in Tunisia

Audio 18 Hamiet Bluiett - Happy Spirit

Audio 19 Hamiet Bluiett, (Bluiett Baritone Nation)-Settegast Strut

Audio 20 Alberto Pinton- Glassbaren

Audio 21 John Coltrane - Fifth House (Coltrane Jazz)

Audio 22 Gerry Mulligan Quartet with Chet Baker - My Funny Valentine

Audio 23 Lars Gullin - Danny's Dream

Audio 24 Ben Webster & Gerry Mulligan - Chelsea Bridge

Audio 25 Intro on Just one of those things, performed by Piersimone Crinelli

Audio 26 Be bop licks on different scales, performed by Piersimone Crinelli

Audio 27 First riff on A night in Tunisia with alternative fingerings, performed by Piersimone Crinelli

Audio 28 Second riff on A night in Tunisia with alternative fingerings, performed by Piersimone Crinelli

Audio 29 Interlude on A night in Tunisia, performed by Piersimone Crinelli

Audio 30 Multiple sounds on the last chord on A night in Tunisia, performed by Piersimone Crinelli

Audio 31 Son House - Death Letter Blues

Video 1 Acud quartet - Moonlight in Vermont, performed by Acud Quartet

Video 2 Valsette played by Piersimone Crinelli with Bohuslän big band and Georg Riedel, solos performed by Jan Lundgren and Piersimone Crinelli