Paralanguage and The Beatles

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Declaration

I declare that this thesis has not been submitted as an exercise for a degree at this, or any other University, and that the thesis is entirely my own work.

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Summary

Chapter 1 gives the subject and topic of this study: The Beatles and paralanguage. Following a theoretical review of nonverbal communication in relation to existing popular song theories, methods, and practices, The Beatles are evaluated as a research topic. Questions arising from this study are given alongside related methods for analysis. This is a general framework and specific methods are given in the relevant chapters.

In Chapter 2 The Beatles’ engagement with cover songs, from across the Atlantic, is highlighted as a major influence on their early vocal style. Examples from the ‘Golden Era’ and early 1950s rock’n’roll artists contextualise certain features of paralanguage. The influence of African-American music comes to the forefront and continues to arise in sociology and historical studies of popular song. Whilst introducing the cover song as a learning tool, it simultaneously gives a study of select artists who influenced The Beatles. The influence of these artists contributes to their use of paralanguage, alongside harmonies, melodies, rhythms, and lyrics.

Chapter 3 analyses primary voice qualities in relation to The Beatles’ vocal style. These person-identifying features are shown to contribute to expression in their songs. By approaching the recording as a soundscape, and focusing on arch-shaped intonation, the analysis gives examples from their songs and cover songs. Terminology, derived from architecture, is employed for clarity in subsequent chapters. It is proposed that pitch bends, characteristic of arch-shaped intonation, probably stemmed from a country-western influence.

Chapter 4 examines the content of voice, that is vocal qualifiers alongside tone-colour. Building on Barthes’ ‘Grain of the voice’, the physiological process of vocal-fry, falsetto, and head voice are examined alongside a narrative interpretation. The qualifiers are
shown to date back to early American song with an Afro-Arabian influence. The types of qualifier are further explored through themes of despair, gender, and mockery.

Chapter 5 takes a parallel path and analyses the process of stop time and pause in interaction through vocal alternants. Stop time, a centuries old technique, is shown to communicate beyond pitches and words in song. The types of alternants developed from The Beatles’ emulation of their predecessors, are developed into narrative markers in their own songs.

Chapter 6 synthesises the previous three chapters in terms of differentiators. These are the emotional characteristics of speech, which carry psychological states of mind. They not only show the presence and function of paralanguage in The Beatles’ songs and cover songs, they are developed alongside their song-writing. It suggests that the soundscape, arising from paralinguistic primary qualities, qualifiers, and alternants, may be understood through Tensegrity.

Chapter 7 gives an interpretation of differentiators, modified by the expressive tropes from Chapters 3-5, and introduces dialect as a differentiator in performance. The Beatles’ mid-late period and solo albums are compared alongside examples from their demos and outtakes. The combination of paralanguage and persona gives rise to multiple interpretations of The Beatles’ songs and their solo output.

The final chapter draws together the expressive tropes explored throughout the study in terms of paralanguage as expressive devices. The importance of these tropes, giving rise to personae, are evaluated in the broader study of performance and learning theory. This builds toward several avenues for further research in popular song.
Paralanguage and The Beatles

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Chapter 1
Introduction

In songs words are the signs of a voice. A song is always a performance and song words are always spoken out – vehicles for the voice [...] structures of sound that are direct signs of emotion and marks of character [...] Pop songs celebrate not the articulate but the inarticulate, and the evaluation of pop singers depends not on words but on sounds – on the noises around the words.¹

Simon Frith

1.1 Overview
The central tenet of this thesis is that it is not what but how something is said or played, which can reveal deeper understanding of expression. This is apparent in everyday communication but is elevated in song. The popular song has been studied in many disparate ways, both from musical and cultural positions, but has not received a close study oriented through paralanguage – the nonverbal characteristics of speech that can alter meaning, add nuance of expression, or convey emotion.²

Paralanguage is the category of sound that accompanies speech. The prefix, ‘para’ is derived from Greek, meaning alongside, beside, or near. It is not unlike our understanding of the paranormal – the energy that emanates beyond our normal realm of communication. Paralanguage is a subsection of nonverbal communication, initially studied by George L. Trager in the 1950s. It gained popularity in linguistics in the 1970s and 1980s, before becoming a field of study in subjects such as business, literature, nursing, and psychology. In literature, the novel, drama, and comic rely on paralinguistic constructs for greater nuance of character and expression.

For greater transparency, let me outline the features of song that are not paralanguage. It is not melody, harmony, or rhythm, for which we have centuries-old theories for analysis. It is not the texture, for which we have theories for description, and it does not reside solely in the lyrics, that are formed through phonetic constructs.

Music has a specialised language, grammar and syntax of its own, useful for music theory, but not the nonverbal. This problem is emphasised by Edward T. Cone, who cannot see how ‘an attempt to interpret nonverbal and unverbalizable phenomena can proceed otherwise than by metaphor and analogy’. 3 Roland Barthes, in ‘Grain of the voice’, discusses the encounter between language and a voice.

Something is there, manifest and stubborn (one hears only that), beyond (or before) the meaning of the words, their form (the litany), the melisma, and even the style of execution. Something which is directly the cantor’s body, brought to your ears in one and the same movement from deep down in the Slavonic language, as though a single skin lined the inner flesh of the performer and the music he sings. 4

For Barthes, this something resides in ‘that apex (or that depth) of production where the melody really works at the language’. 5 He explains that this is the diction of language.

Frith believes that ‘voice can also use nonverbal devices to make its points – accents, sighs, emphases, hesitations, changes of tone’. 6 This is supported by Robert Walser and Susan McClary: ‘music relies on events and inflections occurring on many interdependent levels (melody, rhythm, harmony, timbre, texture, etc.) simultaneously’. 7 Antoine Hennion refers to ‘the voice, the sound, the “colours”, and the effects of volume

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6 Frith, Sound Effects, 35.
and density’. Albin Zak suggests that records represent a transferral of aura, and Henry Pleasants notes the following:

> It is not merely a matter of timbre, of the quality, colour or size of the voice as it is heard on any single pitch [...] The sound becomes fully alive and distinctive only in the articulation of the musical phrase as shaped by the text and by the singer’s identification with language.

Analysing paralanguage marks a point of juncture between speech, music, and sound. This is what Barthes, Frith, McClary, Walser, Zak, Hennion and Pleasants are getting at when they say ‘something’, ‘inarticulate’, ‘aura’, or ‘colour’. They hear these features, acknowledge their presence, but do not explicitly address the sounds.

> The difficulty with analysing voice is that it is, by definition, communicated aurally. It does not depend on the page or pen to convey the totality of its intent and traditional theory cannot address all features of the voice. McClary and Walser note the following when it comes to analysing these sounds in relation to Barthes:

> How does one deal with what Roland Barthes calls ‘the grain of the voice’ in Janis Joplin’s singing? [...] for these other parameters resist – or have not thus far been subjected to – intellectual control [...] the musicologist, who wishes to make sense of this music must come to terms with these uncharted areas for which there is no shared critical apparatus or language.

This is apparent in literature, where authors often recourse to adjectives such as ‘harsh’ or ‘shrill’ for description. Take the following line from Agatha Christie’s ‘The Edge’: ‘Clare heard her own voice, a little hoarse in timbre, saying the appropriate things [...] And then suddenly Clare laughed – a hoarse, raucous laugh that echoed along the cliff’. ‘Hoarse’ and ‘raucous’ are the author’s attempt to convey Clare’s vocal, that

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reveals her mental state. This not only evokes meaning, it exposes the murderer, and concludes the plot. Why would Agatha Christie use adjectives to describe the ‘hoarse, raucous’ laugh if it was not central to the narrative? When put in this form, it reinforces the tenet that it is not what, but how something is said that gives greater expression.

In music, Cone labels the use of these words as simulated utterances, because they address, but cannot reveal, the subtleties of what is heard.13 Studies in classical music have faced similar struggles: for voice, in Carolyn Abbate’s understanding, is ‘not literally vocal performance, but rather a sense of certain isolated and rare gestures in music, whether vocal or non-vocal, that may be perceived as modes of subjects’ enunciations’.14 These isolated points of non-vocal, ubiquitous in speech, function to modify or enhance communication. From these points, the question is raised as to how to analyse these nonverbal characteristics in song.

Taking The Beatles as a case study, this chapter will give an overview of their output and The Beatles as a research topic. This is followed by theories in popular song analysis, with a more detailed approach to voice, sound studies, and the recording. To maintain focus, I do not call The Beatles the Quarrymen prior to 1962, because after 1958, John Lennon, Paul McCartney and George Harrison are consistent members. With this, I explain the scarce analysis on Ringo Starr. He was not as present in this early period and does not engage with vocal performance to the same extent as the other members.

The recordings in this study are taken from the 2009 Beatles’ mono CDs, unless otherwise stated.15 Other recordings, such as The Beatles’ Bootleg Recordings, The Beatles Live at the BBC, The Beatles Live! At the Star-Club, The Beatles Sessionography

Volumes 1-4, *The Nagra Reels* and *Esher demos*, give an insight into The Beatles’ compositional process. The bootlegs, session tapes, demos, and outtakes offer an intimate insight into the group’s song-writing process, whilst the *Star-Club* recordings give details of their early performance style.

When it comes to transcriptions, I found the Hal Leonard *Beatles Complete Scores* to be the most reliable.\(^{16}\) They transcribe the lyrics, instruments, and melodic and harmonic structures of every song recorded by The Beatles. In contrast, *The Beatles’ Song Book* offers a reduction arranged for piano and keyboard.\(^{17}\) Whilst the Hal Leonard transcriptions are a useful starting point, I did find the need to provide my own transcriptions. This was because transcriptions give an impression of a song and do not always account for the variances in repeated sections.

The methodology has been developed through linguistics, sound production, and music analysis. This hybrid approach has proved to be the most effective way to represent nuances of tone that are heard but not easily analysed. This is emphasised by McClary and Walser: ‘the studies of popular music that try to locate meaning and value exclusively in pitch relationships are products of traditional musicological training, and they tend to make the music they deal with seem very poor stuff indeed’.\(^{18}\)

Frith supports such an interdisciplinary approach to the study of music, for ‘in the end, sociological, political, and semiotic arguments cannot be disentangled from one another’.\(^{19}\) Whilst focus remains on The Beatles’ use of paralinguistic voice qualities and the musicians who influenced them, there are references to historical events. Overall, the study has raised several research questions that were continually shaped and expanded.


Central Research Questions
Initial questions probe the source of these sounds: what physiological apparatus are required for vocal production? How do articulatory apparatus, that reside in the skull, contribute to the vocal? With knowledge of vocal production, we can explore nonverbal features. The question is raised as to where these features came from, were they learned, and if so from where? The hypothesis is that The Beatles learned aspects of paralanguage through their performance of cover songs (Chapter 2).

Analytical questions probe at how to address these sounds: how are Fernando Poyatos’ primary voice qualities (Chapter 3), qualifiers (Chapter 4), and alternants (Chapter 5) identified and analysed in popular song? What function do these features have on expression within and across songs? How do The Beatles develop aspects of paralanguage throughout their song-writing careers? Does dialect function as a differentiator in song? If so, does it give rise to affect? Finally, can music theory and analysis contribute to our understanding of these categories?

Certain features of paralanguage reside on a physiological or instinctive level; these are biological or probably learned through social and cultural contexts. Although these sounds are connected to instinctive types of vocal production, they are aspects that The Beatles could hear in their mostly American sources of inspiration and imitate.

This marks the beginning of a larger project that would pay close attention to the encoding- decoding process to which the voice is subjected to in popular song. These vocal communicators may be time, pitch or lyric specific and can be traced back to early songs. This raises the question of whether paralinguistic voice qualities are generic across

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popular songs, or are they group and type specific? Before an analysis, it is worth looking at the field of nonverbal communication to contextualise paralanguage.

1.2 Theoretical Review
The study of nonverbal communication entered academic research less than fifty years ago and has continued to offer meaningful insight into many subjects.21 Albert Mehrabian, author of Silent Messages, noted that only 7% of communication is verbal, leaving 38% as vocal elements and 55% as nonverbal.22 This is broad, and cannot be taken verbatim for all communicative situations, but it provides a starting point.

Nonverbal communication is subdivided into chronemics, haptics, kinesics, oculesics, proxemics, and paralanguage. Proxemics examine spatial relations and chronemics examines time. Live performances inform oculesics: for a song gives rise to visual imagery through physical gestures, alongside lyrics and melodies. It might be thought that haptics is absent in recorded popular song, but it occurs on deeper levels. An example would be the suggestion of a specific body language that may be implied through lyrics: ‘I want to hold your hand’ or ‘lean on me’.23

Interpretations of the nonverbal vary between specific studies. In this study it is taken as the sounds and movements beyond the verbal. These are types of sounds that may qualify or contradict verbal articulation, for example, the remorseful ‘I am sorry’ is

accepted as an apology depending on tone. ‘I am sorry’, articulated with sarcasm, implies that the expression is a contradiction of the verbal content. The sarcastic tone is the paralanguage and it functions as a contradictory modifier that affects communication. The key texts for analysing paralanguage were completed by Fernando Poyatos, from 1975-2002.

In 1983, Poyatos explained that the term nonverbal has proven difficult for scholars and is reluctantly accepted in linguistics. But he notes that the term has been adopted into the academic world because it signifies

many of the things we utter beyond words, our “body language” […] and whatever seems to form part of our corporeal or next-to-corporeal ways of emitting messages in daily interaction is, by excluding lexical language, nonverbal.24

Thomas A. Sebeok believes that it is the most ill-defined and poorly represented in semiotics. For ‘nonverbal surpasses the sphere of bodily communication to subsume “the entire range of culture exclusive of language” but overlapping ethology’.25

Poyatos reinforces Sebeok’s argument that the formula ‘communication minus language = nonverbal communication is clumsily negative, simplistic, and obscurest’.26 For John Lyons, language is made up of verbal (lexical) and nonverbal components (prosodic).27 Michael Argyle broadens his definition to include kinesics and proxemics ‘as well as what he refers to as nonverbal aspects of speech, or paralanguage’.28 For Winfried Nöth, ‘the boundary between language and paralanguage lies in the field of

25 Ibid., 67.
26 Ibid., 67.
27 Ibid., 67.
28 Ibid., 68.
prosody. Suprasegmentals, such as stress, pitch or length, can be both linguistic and paralinguistic’.29

Paralanguage is divided into four categories: primary voice qualities, qualifiers, alternants, and differentiators. Primary voice qualities enable speaker identification without a visual aid. Qualifiers are the varied voice types used in interaction. Alternants are non-lexical sounds that occur beyond lexicon. These three qualities are combined as differentiators – the physiological reactions that characterise psychological states.30

Popular song is a strong candidate for a paralinguistic analysis, because it is plurimedial – that is, it comprises of several means of expression. Plurimedial is a term coined by David Nicholls in his study of progressive rock.31 It addresses multiple connected media such as lyrics, music, packaging and notes. For Nicholls, these provide an entry point for a narrative analysis.32 Narrative is not the central focus of this thesis, but the study of paralanguage, in relation to narrative, often reinforces an interpretation.

The introduction gave examples of musicologists who acknowledge the nonverbal, but do not always engage critically. When discussing Louis Armstrong’s playing and singing, Pleasants notes the limitations of notation, which ‘cannot reflect the myriad shadings of attack, colour, vibrato, release and so on that distinguish Louis Armstrong’s playing and singing’.33 He elaborates by explaining the limitations of notation when it comes to transcribing the nuance of intonation and rhythms in music:34

32 Plurimediality is explored by Alexander C. Harden in ‘Narrativity, Worldmaking, and Recorded Popular Song’ (PhD thesis, University of Surrey, 2018), 40–42.
[notation cannot document] the slight deviations from pitch and their harmonic and melodic connotations. Nor can it reproduce, visually, rhythmic subtleties so foreign to the fractional subdivisions of units of time in the rhythmic organisation of European music.\(^{35}\n
Studies, such as Moore’s ‘soundbox’ theory, have broached aspects of the nonverbal in popular song. The ‘soundbox’ gives the sounds of a recording in an aural space. Noting his deliberation in defining a concept of the soundbox, he settles on the following, but addresses other conceptual definitions later: ‘the soundbox provides a way of conceptualising the textural space that a recording inhabits’.\(^{36}\n
This approach maps the sounds heard in a recording in a virtual textural space. Moore’s soundbox transcription of Donovan’s ‘Mellow yellow’ is given below:\(^{37}\n
This informs microphone placement and textural space in mono and stereo recordings but does not address the spatial relationship between individual sounds. The sound box tells us the position of vocal, guitar, bass, and drums in a mix, at a given point in time, but it does not engage with the way the sounds are played or sung.

Anne Danielsen and Mark Butler have completed rigorous studies on time, or chronemics, in popular song and electronic dance music.\(^{38}\) Danielsen’s ‘beat bin’ model, a term coined by Eric Clarke, abandons the notion that the beat is a series of points in

\(^{35}\) Pleasants, The Great American Popular Singers, 108.


\(^{37}\) Ibid., 33.

time. Instead, Danielsen ascribes both shape and duration to beats individually.\textsuperscript{39} Whilst this addresses the impact of chronemics it does not engage with paralanguage. But Serge Lacasse investigated proxemics and paralanguage through his study of vocal staging.\textsuperscript{40} He examined the treatment of the vocal in record production to analyse one song, Alanis Morissette’s 1998 ‘Front Row’. He supports his analysis through listener surveys but does not engage with the expressive significance of paralinguistic voice qualities.

From the account given so far, it appears that this is a relatively new field of research in popular song, with studies in proxemics and chronemics by Lacasse, Moore, and Danielsen closing in on the subject. Before broaching an analysis, the subject of this study, The Beatles, must be presented in greater detail.

\textbf{1.3 The Beatles as Research Topic}

The Beatles have been chosen because of their extensive career and diverse style, which still resonate within society. They are removed from their contemporaries in so far as their musical output was both eclectic, vast and obtained consistent success. With twenty-seven number one songs gaining platinum recognition, their impact on popular song, culture, and society is a fruitful area for research. The range of songs written and performed by the group offers a broader testing of the methodology than other groups from this period. The Kinks and The Animals, for example, did not celebrate the same longevity or offer the vast range of vocal styles that The Beatles did. Using a famous and well documented group in this research means that biographical details, which have been readily explored, can be referred to for an interpretation of songs.\textsuperscript{41}

\textsuperscript{39} Anne Danielsen, ‘Here, there and everywhere’ (\textit{Musical Rhythm in the Age of Digital Reproduction}, New York: Routledge, 2016), 19-35.


The Beatles were autodidactic, that is they were self-taught musicians, composers and performers. Their vibrant personalities, interests and styles were synthesised to produce a range of songs. Their determination to perform and write their own songs enabled them to grow from a cover group, to a group that was covered. This is supported by the Rolling Stones’ cover of ‘I wanna be your man’ in 1963 or, according to Guinness World Records, ‘Yesterday’ was the most covered song in the twentieth century.\(^{42}\)

In the twenty-first century, The Beatles continue to resonate within the aural landscape of popular culture, as the 2019 release of the film Yesterday illustrates. With a budget of $26 million, its gross worldwide is at $151.3 million.\(^{43}\) Following a fictional blackout, the film presents a world where only a struggling musician can remember The Beatles. Initially, he performs their songs as his own and rapidly rises to stardom. The storyline serves to amplify their global influence and aural appeal.

Musicians across the globe have credited their inspiration to The Beatles. In 1967, when Brian Wilson, from the Beach Boys, first heard ‘Strawberry Fields Forever’ he pulled over, cried, and said ‘they got there first’.\(^{44}\) The song inspired Wilson to write ‘God only knows’. Robin Gibb from the Bee Gees said: ‘they were a great influence to us because they were songwriters, they broke a lot of rules and they created an artistic credibility in the pop music business, which was never there before’.\(^{45}\) For Keith Richards of The Rolling Stones: ‘the Beatles were the first to actually find that middle path between

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\(^{42}\) ‘Most Recorded Song’, Guinness World Records (Guinness World Records Ltd., 2009).
\(^{43}\) These are not final figures, because the film is still in the cinema. They are taken from ‘Box Office Mojo’ (https://www.boxofficemojo.com/movies/?id=untitleddannyboyle.htm, 11 September 2019).
the artistic and the intellectual, and at the same time, still be on the street’. The music of The Beatles had a profound effect on their contemporaries and later artists, but their musical style did not come from nothing.

The Beatles’ debut album *Please Please Me* took the popular music scene by storm. It appeared that the four Liverpudlians were an overnight success, but their musical journey did not begin in 1963. From 1955-1962, Lennon, McCartney and Harrison worked tirelessly to learn their craft. Without formal musical education, the young Liverpudlians learned songs by ear and performed them in long sets in Liverpool and Hamburg. These songs were performed in their lunchtime concerts at the Cavern, Liverpool (February 1961-August 1963). The concerts demonstrate part of their performance tenure, which relied almost entirely on cover songs.

The 1962 recordings of The Beatles performing at the Star-Club, for example, are all cover songs except for ‘I saw her standing there’. This album not only gives an insight into their live performances, it highlights their individual engagement with cover songs. In ‘Roll over Beethoven’, for example, Harrison sings the lead vocal, but it is given to Lennon for *With the Beatles*. But their musical growth, through cover songs, goes back further than 1961.

In early 1956, Lennon formed a skiffle group called The Quarrymen. They mainly performed covers of skiffle, country-western, and American songs. Their

47 It is evident that the fab four effected those who preceded them, but their influence was not limited to musicians. Robin Williams, comedian, said ‘their songs are in my memory banks. I think they’re actually in my genetic material’. Kurt Vonnegut said ‘that the plausible mission of artists is to make people appreciate being alive, at least a little bit. I am then asked if I know of any artists who pulled that off. I reply, The Beatles did’.
50 It is noted that The Quarrymen had changing group members from 1956-1961, with Paul joining in 1957 and George in 1958.
performance sets contained songs by Frank Sinatra, Little Richard, Lonnie Donegan, Hank Williams, Carl Perkins, Chuck Berry, Fats Domino, and Ray Charles. With artists such as the Everly Brothers and Gene Vincent being introduced in late 1956.

On 6 July 1957, Paul McCartney saw the Quarrymen perform Lonnie Donegan’s ‘Puttin’ on the style’, Elvis Presley’s ‘Baby, let's play house’ and the Del Vikings’ ‘Come go with me’ at the Woolton Village Fete, Liverpool. Lennon’s performance of ‘Come go with me’ impressed McCartney, but his poor knowledge of the lyrics has been noted:

John says that this date was his first attempt to perform the […] song ['Come and go with me'] ‘in public with a real band’, and he hadn’t quite learned the lyrics; reportedly he sang at least one chorus as ‘come love me darlin’, come and go with me / down, down, down to the penitentiary’.  

Following McCartney’s demonstration of the correct lyrics, Lennon invited him to join The Quarrymen. McCartney’s admission to the band in 1957 coincided with several doo-wop songs appearing on their setlist. These were originally performed by The Del Vikings and The Coasters. In 1958, George Harrison joined after performing ‘Raunchy’, an instrumental originally performed by Bill Justis, for Lennon and McCartney.

Not only did cover songs offer social capital, granting the boys admission to the group, they allowed them to learn technique, develop their skill-set, and re-imagine the delivery of a few of these songs. I emphasise few here, because Lennon and McCartney rarely changed the delivery. They generally adhered closely to the originals, with the occasional exception such as ‘Rock’n’roll music’.  

In this study, the cover song is taken as a learning tool (Chapter 2). It enabled them to connect with a variety of musical styles, and engage in performance practices, that informed much of their song-writing careers. Their knowledge of the harmonies, melodies, and lyrics from cover songs, contributed to their musical skillset. This was

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51 Everett, The Quarrymen through Rubber Soul, 24.
52 They modify Chuck Berry’s melodic vocal using a harsh vocal fry in ‘Rock’n’roll music’.
conducive to the formation of the Lennon/McCartney song-writing team. The start of a long and fruitful song-writing career, that demonstrated a broad and varied output over a decade. It is worth evaluating this output and related analyses in greater detail.

**The Beatles’ Output & Academic Scholarship**

The Beatles’ broad spectrum of songs touched on many song styles, including Indian.\(^{53}\) They also recorded in different languages, including French, German, and Spanish.\(^{54}\) Their music synthesises a plethora of trends adopted from their predecessors and contemporaries. This ability to absorb disparate influences can be heard throughout their career, from the Chuck Berry style of early repertoire (1963-1964) to the Ravi Shankar influence in late work (1967-1970).\(^{55}\)

By 1963-1964, they were a well-rehearsed group. This is demonstrated by the recording of *Please Please Me* in one day, probably due to their tenure in Hamburg. But in their late period, their approach changed, and they composed and recorded simultaneously. Demos and outtakes are introduced in the last chapter to heighten our understanding of performance decisions in selected songs. If this were a study of Bob Dylan, it would make continuous recourse to outtakes and different versions, because of Dylan’s inconsistent performance style. But once The Beatles had figured out their interpretation, they tended to stick with it, though some decisions reflect performing conditions including, for example, the abbreviation of ‘Twist and shout’ in live sets.\(^{56}\)

Their studio albums consist of two-hundred and twelve songs. The analysis section will focus primarily on the recordings on these albums and not the American

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53 An Indian influence is heard in the tihai riff in ‘Here Comes the Sun’, on *Abbey Road*, 1967.
54 Selected lyrics in ‘Michelle’ on *Rubber Soul* are in French, for example, “Michelle, ma belle”. ‘Sie Liebt dich’ and ‘Kom, gib mir deine hand’ were recorded in 1964. ‘Besame mucho’, a 1940 song written by Consuelo Velázquez, contains lyrics in Spanish.
55 The Indian influence particularly gains momentum in Harrison’s songs and solo career.
56 This is heard on the *The Beatles Live! At the Star-Club in Hamburg, Germany* vinyl Lingasong Ltd. BLS 5560, 1977.
releases. This is due to the variance in the sequencing of songs and mixing process on the American releases. The Beatles’ studio albums break down into twenty-four cover songs and one-hundred and eighty-seven original songs. Prior to 1960, their set list contained one hundred and ninety-one cover songs, that we know of. This means that the number of songs covered outweighs their original output. Attention to their early studio albums reveals that Please Please Me, Beatles for Sale, and With the Beatles contain a 60:40 division between their own songs and cover songs. Before examining these, it is essential to evaluate existing Beatles scholarship.

The overarching trend has favoured historical and sociological studies. Scholars such as Everett and Moore comprise benchmark analytical contributions to the field. Everett’s two-part study: The Beatles as Musicians: Quarrymen through Rubber Soul and Revolver through the Anthology, is a wide-ranging study with detailed analytical descriptions and historical contexts from the formation of the Quarrymen to The Beatles’ split in 1970.

Moore’s monograph gives voice leading analyses of Sgt. Pepper’s Lonely Hearts Club Band. These graphs not only show the inner structures of their music, Moore relates them to trends in popular music at the time. Both studies use theoretical and methodological frameworks, derived from the study of Western art music, to examine harmonic and melodic structures. The result is that notable nonverbal features of the vocal have been acknowledged but not analysed. This continues with recent scholarly work.

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59 Moore, Sgt Pepper’s Lonely Hearts Club Band.
Aaron Krerowicz situates himself as an authority on The Beatles’ music. His ‘Beatles minute’ analyses address melody, harmony, structure, rhythm, and instrumentation.60 But similar to Moore and Everett before him, the analyses do not address the nonverbal. Kathryn Cox’s PhD studied trauma through 1960s British popular music, with reference to The Beatles. Cox’s sociological and historical study of their music is given alongside Kenneth Womack in Sgt. Pepper and the Summer of Love.61 Christine Barrett’s forthcoming publication addresses a female history of Beatlemania.62 John Covach’s ‘From “Craft” to “Art”: Formal Structure in the Music of The Beatles’, supports the idea of The Beatles learning through their performance tenure in Hamburg, but does so from the perspective of formal structure.63 These studies provide insights into psychological, sociological, and musical aspects of The Beatles, but do not address paralinguistic voice qualities.

In Everett’s evaluation of Beatles scholarship, he lists six topics that require greater academic attention:

(1) a thorough history of The Beatles’ performance practices,
(2) a more complete study of The Beatles’ compositional style,
(3) a closer study of the stylistic forebears of The Beatles,
(4) the need for a definitive Urtext of The Beatles canon,
(5) a start at Beatles sketch study, and
(6) the need for widely available comprehensive indexing, reposition, and/or distribution of both source materials and scholarly work.64

There have been studies on The Beatles since Everett’s observation, but they are primarily sociological, biographical, or historical.65 Krerowicz gives wide-ranging

62 Christine Barrett, Beatlemania and beyond: a women’s history of The Beatles (upcoming publication).
studies of their performance through harmony, melody, lyrics, rhythm and form, with reference to their forbears such as Buddy Holly and Little Richard.66 Whilst he lists songs and historical information that influenced The Beatles, he does not engage critically with their vocal styles. On the other hand, stylometric analyses, the study of linguistic style, usually in writing, has been applied to voice.

A stylometric analysis on The Beatles’ songs, was completed by mathematician Jason Brown and statistician Mark Glickman in 2018.67 Concerned with the authorship of songs, they developed an algorithm to determine whether Lennon or McCartney wrote ‘In my life’ and other songs.68 They divided Beatles’ songs between 1962 and 1966 into five components. These included melody, chords, rhythm, lyrics, and contours. But the contours were marked as up or down and only accounted for four notes.69

Brown and Glickman’s ‘up’ or ‘down’ model of melodic contour is limited, for it cannot account for nuances of pitch or types of voice employed by a performer.70 The performers’ accent, intonation and melody will differ in any given song and are not accounted for. Whilst the algorithm must facilitate a larger data set and faster outcome, a critical engagement with these results is desirable. This is because there are many factors left to chance, such as the reliance on Bayes rule of probability.

This production-based approach addresses the performance as a composition, and not a process, which can obscure the results. This is because, the various vocal styles

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70 Ibid,
giving rise to contours, will differ in individual performances. Brown and Glickman reference Cynthia Whissell, who carried out a stylometric analysis on The Beatles in 1996, in their paper but not their presentation.\(^7\) This computer-based approach highlights the limitations of computational analysis. The need for critical engagement with music is neglected and does not account for the nuance of voice in performance of different songs. Not to mention Brown and Glickman’s negligence of Harrison in their analytical dataset.

This thesis is closely related to the second and third topics outlined by Everett above. Topic 3 is addressed through the analysis of The Beatles’ predecessors in American popular song (Chapter 2). Topic 1 is explored through their vocal performance practices (Chapters 3, 4, and 5). An insight to Topic 2 is offered through the analysis of their demos and outtakes that inform their use of paralanguage (Chapter 7). Before broaching an analysis, it is worth presenting existing theoretical frameworks for the analysis of popular song, cover songs, sound studies and the recording.

### 1.4 Theorising Popular Song

In *Song Means*, Moore’s ideas are delivered through the overall framework of shape, form, delivery, and style. He stresses the relationship between listener and recording and uses proxemics to establish this position (see ‘sound box’ above). For Moore, the recording is unidirectional and has a teleology that may be understood through an interrogative hermeneutic analysis. Whilst his analysis of The Beatles’ songs relies heavily on voice-leading graphs, his writing on singing voice registers and melodic shape of other groups is relevant to this research.

Moore presents the four positional aspects of the singing voice-register as an analytical method. These are the register itself, the resonating cavity, the singer’s attitude

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to rhythm and their attitude to pitch. These aspects are revaluated in relation to the persona and the personic environment.72

Taking the first of Moore’s positional aspects, the singing voice register, he discusses the ‘low’ register, ‘which adds gravity, sexiness or melancholy to a singer’s delivery (and in metal, menace)’.73 Then the comfortable register, which is termed ‘normal register’, and followed by the high register. Moore explains that this can extend into falsetto and may be understood as virtuosic. For Moore, resonance may be in the throat, nasal cavity, or head, which ‘often appears weak, careless, or understated’.74 Whilst he cites Poyatos’ theory of paralanguage in this category, he rejects his theoretical outline, but does not give a definitive explanation. Instead, he continues with his analysis of the four-positional aspects of the singing voice register.

In a brief example, Moore suggests that Lennon and McCartney sing in two registers in ‘She loves you’: ‘a comfortable one for the majority of the song, and a high one to emphasise the particular lyric “She loves you”’.75 He notes that the recurrence of this register on ‘be glad’, at the end of the song, ‘sounds slightly strained, giving emphasis and conveying a sense of sincerity’.76 Whilst Moore’s four positional aspects come closer to the nuance of pitch that give rise to expression in song, they rely heavily on adjectives such as ‘gravity’, ‘melancholy’, ‘weak’, ‘careless’, or ‘strained’.

This builds on Everett’s formalist approach to ‘She loves you’, using voice leading analysis and the study of harmony as expressive devices.77 Whilst this conveys inherent musical structures, it does not address rhythm, lyric, or paralanguage. Everett’s

73 Ibid., 102.
74 Ibid., 102.
75 Ibid., 103.
76 Ibid., 103.
acknowledgement of this is alluded to in his 2009 publication: ‘Anytime at All: The Beatles’ free phrase rhythms’ and his acknowledgment of inarticulate features in ‘Fantastic Remembrance in John Lennon’s “Strawberry Fields Forever” and “Julia”’. In the latter publication, he alludes to the ‘turn figure, [and] varied diminutions in the opening of [‘There’s a place’]’. Everett further notes ‘the roulades in Lennon’s vocal line’, the ‘slithering polyphonic lines played by an electric guitar in ‘I’m only sleeping’ and ‘Rain’, and the ‘tumbling’ descent on the line ‘song of love’ in ‘Julia’.

In recent scholarship, Everett continues to employ a formalist approach using music theory but addresses modern groups. His paper on the Death Cab for Cutie song, ‘I will follow you into the dark’, is given as an exemplar of tonal behaviour in recent rock music. Whilst the subject, the 2005 Indie group, is more recent, his analytical approach is adjacent to the 1999 two-part study on the Beatles. With these studies in mind, it is worth taking a broader perspective of popular song analysis.

Dai Griffiths has developed an interdisciplinary study of popular song lyrics through song and poetry. Keith Negus has studied the sociological, cultural, and historical context of the recording industry in relation to popular song. John Covach has

80 Ibid., 361.
81 Ibid., 365.
83 See Everett The Beatles as Musicians: The Quarrymen through Rubber Soul and The Beatles as Musicians: Revolver through the Anthology.

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developed philosophical theories alongside music analysis. Justin A. Williams has developed theories of imagined communities through his study of musical borrowing in hip-hop. Richard Middleton’s historical study of American popular music is given through ethnography, aesthetics and semiotics. Philip Tagg’s *Everyday Tonality* is a three-part study that consists of five chapters on rudiments: notes, intervals, modes, tuning, and melody. Tagg takes a formal approach but recognises the limitations of existing terminology. He highlights the interdisciplinary nature and analytical potential of popular song, but does not engage with any aspect of nonverbal communication.

Whilst Everett has not given a paralinguistic analysis of popular song in his research, an analytical shift is evinced in his paper on gesture in twenty-first century music. He explores the listener’s consideration of musical representations of harmonic tones, competing tonal centres, and complex harmonic functions. It touches on Gestalt theory and examines the effect of shape in sound using religious art work. Everett concludes that these may be interpreted as underscoring themes within the song’s poetic texts. Whilst he aims to understand the representation of meaning, it is limited to songs of the twenty-first century and relies heavily on voice-leading analyses.

Recent analytical developments include the work of Mark Butler who explores methods for analysing electronic dance music using spectral analysis to study rhythm and

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90 Tagg defines muso as: ‘muso n. colloq. musician or music scholar, more specifically someone who devotes a lot of time and energy to making or talking about music, especially its technical, structural and poïetic aspects; someone with either formal training in music, or who makes music on a professional or semi-professional basis’. Glossary of terms, neologisms, etc. used in writings by Philip Tagg.
Samantha Bennett coins the term ‘tech-processual’. This is a ‘mode of analysis – that being the use of sound-recording syntax – dynamic range, frequency spread, presence of multitracking and/or overdubbing, spatial positioning of instruments within the stereo field, and the gestural decisions of the recordist’. Her aim is to consider ‘recordings as “productions” and to deconstruct the sonically discernible patterns [in the recording]’. Whilst Bennett’s study broaches this topic, it does so from the perspective of production and does not engage with the vocal in the way that this study will.

Production is not the central focus of this thesis, but its relevance in relation to the vocal is not abandoned. In The Beatles’ early period, they were not overly experimental with the production of their vocals, but as they developed, their interest in the recording studio grew and gave rise to greater use of production techniques. This has impacted how we hear some songs, for example, the looping of Lennon’s vocal in ‘Strawberry Fields Forever’ creates an otherworldly feel.

The references to specific production techniques not only inform certain vocal features in this analysis, they are preparatory for future research. The increased use of production techniques in late twentieth-century and twenty-first-century popular song had an impact on how we hear songs and is conducive to how they are studied. This serves to prepare the reader for the accounts of The Beatles’ engagement with the recording studio below.

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92 Mark Butler, Unlocking the Groove (Indiana: Bloomington & Indiana University Press), 2006.
95 Samantha Bennett, ‘Gus Dudgeon’s Super Sonic Signature’, 2.
Popular song analysis has grown rapidly and evolved into a dynamic area of study. In brief, Everett, Covach, Middleton, Moore, Negus, and Tagg must be acknowledged as having established the topic of harmonic and melodic analyses in popular song. Butler, Danielsen, Williams, and Zak have augmented these studies, establishing specialised areas of research. This process has continued in academia. Bennett, for example, builds on Zak’s analytical focus on the theory of the recording and analysing music as sound. Taking the recording as the point of departure, it is worth evaluating the relation between theories in sound studies and popular song analysis.

**Sound Studies**

Sound studies is not understood as a new field of study, rather it is a new way of looking at our respective fields, with sound being the focal point. Sound studies is broadly described as the cultural study of sound and listening. This interdisciplinary field calls on anthropology, linguistics, musicology, philosophy, psychology, sociology, and sound engineering.

According to Jonathan Sterne, sound studies may be defined by the following categories: deafness, hearing, listening, soundscapes, transmission, recording, coupling, aesthetics, experiences, interpretation, and voices. For Trevor Pinch and Karin Bijsterveld, the field involves analysing *how* the sound is produced, the *way* the sound is delivered, and *how* the sound is received:

> Sound studies is an emerging interdisciplinary area that studies the material production and consumption of music, sound, noise, and silence, and how these have changed throughout history and within different societies, but does so from a much broader perspective than standard disciplines such as ethnomusicology, history of music, and sociology of music.\(^{97}\)

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Analysing music as sound is presently termed aural sonology. Lasse Thoressen explains that this is ‘an attempt to analyse music as represented on a phonogram, rather than on a score’. Recent studies in phonomusicology, a term coined by Stephen Cottrell, have made progress in this area. For if the field of popular song analysis is to ever move beyond description, the limitations of transcription must be acknowledged. The need for analyses based on music as represented on a phonogram, rather than a score, is exhibited when the limits of transcription for analysing paralanguage are addressed.

A transcription can notate instrumentation, pitch, harmony, rhythm, and lyric, but it cannot notate the myriad of nonverbal voice qualities heard in song: how does one transcribe a glottal stop? Because of this, an overriding concern is the lack of sufficient terminology to describe what can be heard in an accurate way. As noted, description resides in ambiguous terminology, such as ‘harsh’ or ‘shriII’, or in more visual imagery: she roared like a lion.

For Thoressen ‘it is nearly impossible to escape from the visual. Because of the reliance on images in sound studies, a greater premium is placed upon the language and so the language becomes fundamental’. But Pinch and Bijsterveld emphasise that ‘visual metaphors dominate our language – we see the new vista of sound studies but don’t hear it’. The importance of terminology is emphasised by Pinch and Bijsterveld: ‘if the sounds themselves cannot be reproduced, then an even greater premium is placed upon the language used to describe and represent auditory phenomena’. If a premium is placed on language, analyses must be clear and consistent with terminology for describing these sounds.

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100 Thoressen, ‘Form-building transformations’, 3.1.
101 Pinch and Bijsterveld, ‘Sound Studies’, 637.
Terminology is important, because it will enable greater intertextual and intercontextual comparison. For Sterne, comparison and critique are fundamental:

[This is] an essential ‘critical’ element, in the broadest sense of critique […] But without critique, it is art, technical discourse, science, cultural production or training practices ‘albeit sound’, and not sound studies.  

This is supported by Don Ihde, who discusses the limitations of language by explaining that ‘an inquiry into the auditory is also an inquiry into the invisible. Listening makes the invisible present’. There are many ‘visible’ aspects of this study such as performers, instruments, and record itself, but paralanguage is often invisible to the eye.

It is acknowledged that there are branches of sound studies that do not address any sound, but the common thread views the recording as text. The less visible aspects are pitches, harmonic relationships, and rhythms, and ‘invisible’ aspects include articulation and texture. The ephemeral nature of paralanguage leads toward recordings and The Beatles’ engagement with the recording studio as part of their creative process.

The Recordings
The Beatles demonstrated a preference for the British recording studio by recording all thirteen studio albums in the UK. This sets them apart from their contemporaries, the Rolling Stones, who regularly recorded at Chess records, Chicago. This might seem irrelevant to the contemporary reader, but at the time, recording studios had a specific sound. This was due to the analogue recording equipment and would not be a cause for great concern on a modern digital audio workstation.

This is detailed by Howard Massey, who explains that every studio had a specific sound due to the engineers and equipment onsite. He observes that the 1960s British

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recording studio lacked the ‘the economic and technological advances of their American counterparts’.

Massey cites studio engineer Bob Butterworth, who recalls how ‘clients in the 1960s were constantly asking the staff for an “American drum sound”, something he found impossible to achieve’. These subtle differences, though no longer as great an issue, were of paramount importance at the time.

In 1960s Liverpool, many technological innovations grew out of the recording studio, giving rise to the Mersey Sound. Massey cites Norman Smith, The Beatles’ studio engineer, who explains that the Mersey sound was the result of ‘placing microphones further away or equidistant […] from their instrument and the wall, or the splash-back. In other words, not the great separation on each microphone’. One notes that the Mersey sound is not retained throughout The Beatles’ recordings. Moore cites Jack Kroll’s review of *Sgt. Pepper*, who ‘declared it “useless to lament the simple old days of the Mersey sound […] loss of innocence is increasingly their theme and the theme of more “serious” new art”.’

Not only did The Beatles’ musical development enable them to leave the Mersey sound behind, their interest in the recording studio grew.

The analysis will draw on examples of their engagement with the recording studio. Take, for example, Emerick’s account of McCartney ‘complaining that the bass on The Beatles records wasn’t as loud or as full as the American records he loved to listen to’. Emerick shares that ‘[he and McCartney] would often get together in the mastering room to listen intently to the low end of some new import he had gotten from the States, most often a Motown track’.

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The focus of The Beatles’ early EMI recordings was on capturing the energy of performance and is exemplified in the first four studio albums. Zak notes that the focus at Atlantic records in the 1950s ‘as at all other labels remained on capturing the dynamic energy of complete performance’.¹¹² But in their mid and late period, their approach to recording changed. One example is multitrack recording techniques, that allowed them to layer sounds and vocals. Albums such as *Revolver* and *Sgt. Pepper* mark a notable transition in recording practices. For Zak, this meant that ‘vocal performance on the recording […] was literally edited into existence. That is, it was composed’.¹¹³

The development of the studio engineer’s role, supported by recording techniques, is noted in Moore’s comparison of a range of recordings from early 1960 to present. He indicates that with the development of studio technology, there was a ‘clear tendency towards thinking more in terms of the virtual textural space’.¹¹⁴ These developments encouraged composers to experiment with sound and space in song. Zak has argued for analysing the recording as an autonomous object:

> Recordings quite obviously invite us to think about them in a holistic way, rock criticism has traditionally leaned most heavily on interpretation of lyrics and to a lesser extent, on musical performances, while the growing body of scholarly analysis tends to focus on musical syntax such as harmony, meter, melody, form and so forth.¹¹⁵

For Zak, ‘the Beatles and Martin experimented increasingly with sounds and recording techniques, using the resources of the recording studio to colour and shape their arrangements in unusual ways’.¹¹⁶ His use of ‘colour’ and ‘shape’ not only recall Hennion and Pleasant’s descriptions above, they are suggestive of primary voice qualities and qualifiers to be discussed.

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¹¹³ Ibid., 55.
¹¹⁴ Moore, *Song Means*, 44.
¹¹⁶ Ibid., 34.
Initially, The Beatles were far removed from studio engineers. But as they developed as songwriters, their freedom of use in the recording studio did so too. This altered their compositional style, because they began to test new technologies during the recording process. One such example is the doubled voice – the image of a person singing with himself, as a result of artificial double tracking.\textsuperscript{117}

This not only supported their performance development through paralanguage, its otherworldly function is noted by Zak: ‘records, like scores, can be said to have relational, emotional and metaphysical, or semiotic content’.\textsuperscript{118} This ‘emotional and metaphysical content’ reiterates the focus on paralanguage. For Zak, ‘a rock song assumes the fullness of its meaning only as it is uttered’.\textsuperscript{119} His explicit reference to the essence, character, and expression of song residing in the nonverbal further emphasises this point.

Zak divides his theory of recording into either autographic or allographic. Music represented on a score is allographic, but ‘autographic works are those which carry with them the physical traces of their making’.\textsuperscript{120} This is because ‘an autographic work is by nature a fusion of idea and action’.\textsuperscript{121} In contrast, Zagorski-Thomas argues that ‘a recording, even if it does constitute the musical work itself as opposed to a performance of a composition, is never an autographic work’.\textsuperscript{122} He qualifies this stance through economic consumption of records, CDs and DVDs.

Popular song recordings may be autographic, for they retain aspects of paralanguage, they rely on performance for expression, and records carry the physical

\textsuperscript{117} This is an invention credited to Ken Townsend, using a BTR2 tape machine at Abbey Road in the 1960s. See Massey, \textit{The Great British Recording Studio}, 13.

\textsuperscript{118} Zak, \textit{Poetics of Rock}, 41.

\textsuperscript{119} \textit{Ibid.}, 31.

\textsuperscript{120} \textit{Ibid.}, 21-22.

\textsuperscript{121} \textit{Ibid.}, 22.

traces of their making. This is because the recording is a fusion of idea (lyric, text, image) and action (paralinguistic voice qualities).

This fusion of idea and action, or hearing and motion, is supported by Denis Smalley, Zagorski-Thomas, and Christopher Small. Smalley explores sound and motion through his ‘idea of spectromorphology to motion and thus to energy expenditure’.\(^{123}\) Zagorski-Thomas’ sonic cartoons explore ideas of gesture and hearing motion. He gives the example of the siren on a police car that recalls a specific motion (fast) and sign (danger) in our minds. The central tenet of his study is built on Small’s term ‘Musicking’, the assertion that music is a process and not a thing.\(^{124}\) This argues for the analysis of musical activity as a social process involving people, technology and their environment. These ideas are supported by Frith’s description of songs as ‘vehicles for voice’\(^{125}\) and R.P. Blackmur’s account of language having a gestural as well as a semantic component.\(^{126}\) Sounds can recall an activity or past-experience, but they can also be learned through imitation and mimicry.

Zagorski-Thomas incorporates recording techniques into his theory, and explains that studying the recording, using traditional models of music analysis, is akin to handwriting: ‘In the case of writing, the words are represented but the tempo and rhythm, accents, and stresses, pitch and tone of voice are all lost’.\(^{127}\) He asserts that all representation systems involve the selection of certain features and the loss of others.\(^{128}\)

A further parallel, drawn between recorded sound and music notation, is that ‘a recording is a representation of a performance while notation provides a set of

\(^{123}\) Denis Smalley (1986, 73-80) cited by Zagorski-Thomas in *The Musicology of Record Production*, 58.

\(^{124}\) Zagorski-Thomas, *The Musicology of Record Production*, 5.

\(^{125}\) Frith, *Sound Effects*, 35.


\(^{127}\) Zagorski-Thomas, *The Musicology of Record Production*, 21.

\(^{128}\) Awaiting the publication of Zagorski-Thomas’ paper, ‘Timbre as Text: the cognitive roots of intertextuality’.
instructions for how to create one’. The recording allowed the development and manipulation of sounds that were previously fixed, for example, the relative amplitude of component sounds, double tracking, and editing of tape reels to create loops.

Moore supports the study of record production in popular musicology and aims to integrate it into the body of musicology rather than establish it in parallel. This is because techniques used on the vocal, such as double tracking, panning, band-pass filters, or reverberation, can modify delivery and affect expression. These techniques gave rise to the record no longer as a performance, but rather as the performance.

In the 1960s, engineers pivoted from practical processing to a more creative role. They were working closely with artists in the studio, for example, The Beach Boys’ *Pet Sounds*, The Beatles’ *Sgt. Pepper*, and Queen’s *A Night at The Opera*. George Martin, often referred to as the fifth Beatle, fulfilled this hybrid role of creative producer. The Beatles’ increased interest in recording practices led to them contributing to the mix sessions in mid-1960s. Lewisohn cites Phil McDonald who said that ‘they found that they could get more control of the sound that they wanted by actually being there for a mix’. This is emphasised by George Martin: ‘Beatles songs were quite simple in the early days […] you couldn’t play around with them too much. But by 1967 [they] were building sound pictures and [his] role had changed – it was now to interpret those pictures and work out how best to get them down on tape’. The recording studio became part of their creative process and had a consequent effect on their vocal performance style.

In an analysis of the recording process there lies either a production-based or a reception-based approach. The former may prioritise or organise the sound differently to the latter. The production-based approach is divided into pragmatic and academic

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130 Moore, *Song Means*.
approaches. The pragmatic is ‘based on the idea that knowledge about production will afford a richer listening experience for an audience’ and the academic is ‘a logical progression from ecological perception and embodied cognition’.\textsuperscript{133} The approach taken here is reception-based, but the impact of production is not abandoned.

Zagorski-Thomas summarises this: ‘[as analysts,] we are given a sketch of vocal performance, and through this process of mapping between sound and gesture, and gesture and emotional narrative, we arrive at an interpretation’.\textsuperscript{134} Take, for example, his observation of Britney Spears’ vocal in her (2000) single, ‘Oops!... I did it again’. He observes her ‘pronounced vocal rasp on many of the vowel sounds that is a common signifier of emotional angst’.\textsuperscript{135} The vocal rasp is a paralinguistic voice quality, but it is amplified in this example through recording techniques. The producer ‘Max Martin, decided that the natural rasp in Ms Spears’ voice didn’t convey the sense of angst effectively enough and hit upon a novel way of exaggerating it’.\textsuperscript{136} This was achieved through a guiro scrape. Zagorski-Thomas labels these as sonic cartoons, which are explored in Chapter 7.

Zagorski-Thomas makes a case for the musicology of record production. His theory is supported by an understanding of ecological perception and embodied cognition. His outline suggests an ideological standpoint for the analysis of recording, audience perception, and features of voice as sonic signatures, timbral staging, and gesture. But he does not provide a methodology or series of analyses to demonstrate the presence and function of these sounds. Whilst he addresses this in his analogy of Britney Spears’ vocal above, a physiological or psychological interpretation is not offered.

\textsuperscript{133} Both pragmatic and academic approaches are cited in Zagorski-Thomas, \textit{The Musicology of Record Production}, 28-9.
\textsuperscript{134} Zagorski-Thomas, \textit{The Musicology of Record Production}, 59.
\textsuperscript{135} \textit{Ibid.}, 49.
\textsuperscript{136} \textit{Ibid.}, 49.
This study not only identifies paralinguistic voice qualities in popular songs, it offers an interpretation, and draws an aural thread between groups and eras. This gives rise to a psychological interpretation of paralanguage, whilst offering a methodology for analysis. The next section gives a general outline of the methodology, but there are chapter specific methods.

1.5 Methodological Framework
By developing existing linguistic theory, for analysing nonverbal communication, and building on methods from popular song, the methodology synthesises the theoretical outline and analytical methods addressed above. Whilst the study takes a qualitative approach, it is noted that the computer-based visual representations suggest a quantitative one. But the software is merely an aid to presenting the data.

The approach is concerned with concepts, characteristics, metaphors, symbols and descriptions of paralanguage. Before continuing, a distinction between primary and secondary domains must be introduced. ‘Domain’ is used according to Moore’s definition of the term.137 The primary domain is melody, harmony, rhythm, instrumentation, and lyrics. These are mainly aspects that can be transcribed through existing notation. The secondary domain comprises of texture, timbre, accent, articulation, and in this case, paralanguage.

The data in this study was collected through listening to a broad range of music, with particular attention to 1950s American popular song, The Beatles’ albums, demos, outtakes, and the 1960s British popular song. Following listening, the songs were documented on index cards. These contain notes about key, melody, harmony, lyrics, form, and research relating to the songs. Using notation symbols, specific points of interest heard were recorded.

137 Moore, Song Means, 29.
The next step involved analysing the recording in Sonic Visualiser (SV). Robert Cogan is in favour of using spectral software to better understand the soundscape of a song. This is because ‘it offers the whole sound of musical events, rather than with one, or very few, reductions abstracted from them’.\(^{138}\) This is further exemplified by Daniel Leech-Wilkinson’s study of portamento in relation to infant-directed speech.\(^{139}\) He terms these speech segments, ‘motherese’, and uses SV to evaluate their presence and consequent impact in performance.

The use of SV was challenging initially, because it would confirm or confuse what was heard, for it gives the harmonics of all sounds in a recording. It can highlight specific points of energy that are not foreground sounds. Paralanguage lies between the primary and secondary domains, so its presence is not easily identified through SV. This is negated by taking listening as the point of departure.

Poyatos not only gives a theoretical outline for nonverbal voice qualities, he provides a methodology for analysis. His 1983 article proposes a triadic structure for analysing nonverbal communication in speech, that is, language, paralanguage, and kinesics.\(^{140}\) This model categorises the features of voice into four categories: First, the primary qualities – ‘voice characteristics that are always present in speech and individuate speakers, allowing us to identify a person who may not even be seen or understood’.\(^{141}\) Second, qualifiers ‘modify one’s voice in very noticeable and specific ways’.\(^{142}\) These range from whispers to creaky or harsh falsetto and nasal sounds. Third, alternants are ‘vocal sounds that can only occur on their own and which are generally

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\(^{138}\) Robert Cogan, ‘Reconceiving Theory: The Analysis of Tone-Colour’ (College Music Symposium, 15, 1975), 57.


\(^{140}\) See New Perspectives on Nonverbal Communication for the application of this structure.

\(^{141}\) Lacasse, ‘The Phonographic Voice’, 228.

\(^{142}\) Ibid., 229.
highly codified’. These include sighs, throat clearing, sniffs, grunts, snorts, gasps, etc. Finally, there are differentiators, which are defined in relation to the other three categories. Examples include laughing, crying, shouting, yawning, and throat-clearing. Prior to evaluating the psychological impact of voice, it is necessary to understand its physiology and relationship to language.

Knowledge of the physical production of voice gives rise to greater understanding of sounds produced by singers. This is because some sounds may be the result of the singer’s physiology and not an aspect of paralanguage that may be employed for greater nuance of meaning. This is evident in speech. A lisp, for instance, can be the result of inaccurate placement of the tongue, a large gap in the teeth allowing excess air to escape, or a protruding overbite. With an understanding of the physical process we can better understand the way individual singers alter their vocals in performance.

**Analysing Voice**
Vocal sound is produced by a process called phonation which involves converting air pressure in the lungs into audible vibrations. These vibrations are shaped using the articulatory apparatus that resides in our mouth and throat: the larynx, lips and tongue. These shaped vibrations produce sound waves, and the vibrations are further shaped depending on resonance cavities.

Human speech production is comprised of four resonance cavities, which are the pharynx, nasal cavity, oral cavity, and skull. The oral cavity is an oval shape, separated into the oral vestibule and oral cavity. It is enclosed by the lips anteriorly, the cheeks laterally, the floor of the mouth interiorly, the oropharynx posteriorly, and the palate superiorly. The pharynx and the oral cavity are the most important resonance chambers

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144 I have arranged the Chapters of this thesis in relation to these categories.
for speech and song. The position of the lips, tongue, teeth, and breathing techniques pass air through these cavities, creating lexical and non-lexical sounds. These chambers are subject to change according to types of vowels, for example, ‘a’, ‘i’ and ‘e’. Or consonants, such as ‘t’; the result of the tongue hitting the back of the front teeth.

The resonating sound frequencies are called formants. A formant can be understood as a soundwave created by a sound source. In a musical instrument this would be the sound wave given by the resonating vibration of a string or reed. In speech or song it is the sound wave arising from lip vibration. The sound waves are filtered and dampened by the resonating bodies, such as the body of a guitar.

In acoustics, the study of sound and vibration, a formant differs according to general or phonetic acoustics. In general acoustics, a formant is a broad peak in the maximum spectral envelope of a sound. In phonetic acoustics, a formant is the acoustic resonance itself or the resonance of a filter that can be used to model the vocal tract with F1 and F2 labelling. F1 and F2 labelling refer to the frequency of pitch as calculated in hertz (Hz). The use of formants for the analysis of phonetics, can be applied to song.

Advances in sound technology, with annotation software such as Melodyne, Audacity, Sonic Visualiser and PRAAT, are closing in on the problems faced in analysis. The TaCEM project: Technology and Creativity in Electroacoustic Music, led by Michael Clarke, at the University of Huddersfield, investigates the impact of technology on the creative process of composing electroacoustic music. The project uses software called TIAALS: Tools for Interactive Aural Analysis.

TIAALS will not be used because the SV platform offers greater flexibility and is sufficient for the purpose of this study. SV gives a greater visual and navigation of the sound file than TIAALS. The SV manual states the following:
The spectrogram layer shows audio data in the frequency domain, with the Y axis corresponding to frequency and the power (or phase) of each frequency within a given time frame shown by the brightness or colour of the pixels corresponding to that frequency.\footnote{Sonic Visualiser (http://www.sonicvisualiser.org/doc/reference/1.3/en/#spectrogram), 6.3. spectrogram.}

SV is a computational analysis program that was released for public use in 2010, at the Queen Mary University, London. It was developed by Chris Cannam, Christian Landone and Mark Sandler.\footnote{This study uses version 2.5, not the 2018 released version 3.1, for the following reasons: in version 3.1, the time alignment feature is slightly off, the normalisation is more accurate in 2.5, and the navigation cursor in 3.1 moves independently of the sound file.}

The primary motivations behind SV were to develop a way of delivering music informatics research to the general public and researchers in computational musicology.\footnote{Chris Cannam, Christian Landone, and Mark Sandler, Sonic Visualiser: An Open Source Application for Viewing, Analysing, and Annotating Music Audio Files, in Proceedings of the ACM Multimedia, International Conference, 2010.} Since its release in 2010, many accompanying vamp plug-ins have been developed. They enhance visualisation and annotation of spectral views. The vamp plug-in format has an ‘audio beat tracker’, which allows the annotation of sound files using a keyboard, or MIDI device.\footnote{Cannam, et al., Sonic Visualiser.} Other plug-ins are useful for determining the key, pitch, and annotating characteristics on spectral views. The audio alignment plug-in, for instance, aligns multiple audio files that benefits real-time comparison of specific features in two versions of a song.

The choice of analytical panes and features for this software make it possible to navigate using several tools to scroll through a sound file, for example, ‘the zoom level can be increased or decreased in multiples of \(\sqrt{2}\)’.\footnote{Ibid.} The SV zoom level can show micro-fluctuations in pitch to a millisecond. All of the songs in this analysis are less than an hour in duration and the time stamps are given as minutes:seconds. Take, for example, the opening of ‘Yesterday’, which is 00:01-00:05.
Other tools in Sonic Visualiser can speed a track up, or slow it down, exposing greater detail in the sound files. The audio alignment plug-in benefits from the pane and layer paradigm. This allows different sound files to be stacked and aligned on the time axis. This plug-in enables multiple versions of one song to be presented in different panes for comparison. This has been especially useful when comparing cover songs with original recordings. It is worth giving several plain examples of the different waveform views to act as a control.

The default spectral view in SV is a waveform. This is useful for comparisons in amplitude and can mark breaks in the recording, but it does not give information about frequency content. The spectrogram can depict frequencies in a recording, and SV offers three types: melodic range, peak frequency, and plain spectrogram. The spectrogram gives the frequency on the y-axis and time on the x-axis, and the amplitude is indicated by colour. The green indicates soft, barely audible sound, yellow is a midway amplitude and red designates a higher amplitude than yellow. In the SV guide:

The plain spectrogram option creates a spectrogram that displays the full frequency range up to half of the audio file’s sampling rate, with the vertical Frequency Scale set Linear, with Colour Scale set to dBV, and using the default, fairly gentle green-yellow-red colour scheme.151

Figure 1 gives a spectral view of the first two lyrics in ‘I’ll follow the sun’. We can see that the lower frequencies of 43-430Hz are where the mid-range pitches are heard – indicated in red/orange.

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151 Cannam, et al., *Sonic Visualiser*. 
The plain spectrogram does have its limitations for analysis. It is difficult to extract specific properties of voice or melody and it is challenging to read the detail. It is more useful for analyses of bass sounds and resonating harmonics of single lines. The melodic range spectrogram offers a better representation of voice. It shows ‘a frequency range from approx 40Hz to 1.5KHz, covering around 5.5 octaves that most usually contain melodic content’.\textsuperscript{152} This makes the melodic spectrogram the preferred tool for presenting features of paralanguage.

Figure 2 gives an example of a melodic spectral view. The micro-fluctuations in this example suggest that the sound is ‘wavering’. This may be because the singer is employing vibrato.

The recording in Figure 2 has been normalised, indicated by the red box. The Normalize Visible Columns switch causes ‘the colours in all bins to be adjusted so that the frequency

\textsuperscript{152} Cannam, et al., \textit{Sonic Visualiser}. 
bin with the highest value within the visible region of the spectrogram receives the brightest available colour.\textsuperscript{153}

Whilst SV is useful, it can show misleading features, for example, points of ‘energy’ that are beyond the audible range of a human can be highlighted. It is sometimes the case that the displacement of a sound implies more than one result. The analyst must be wary of misrepresentations and compare the information given on SV alongside listening. This highlights some of the problems of computational-based analyses versus the human analyst, and further supports the need for a critical approach to computational based analyses of music in general. Whilst the risks involved in using SV are minimal, it is necessary to be aware of them before presenting the data.

The discussion of sound files raises another question of the best terminology for description. ‘Gravelly’, ‘harsh’, ‘husky’, ‘strident’, and ‘smooth’, are relative adjectives, but they are not precise enough to be awarded as clear descriptors. Further attempts have been made with ‘daring, bellowing, wistful, weeping, voices’, but a void remains for a lexicon to describe paralanguage in song. One approach is binarism, a subject which influenced many philosophers, from Plato to Hegel, but its descriptive potential for paralanguage is limited to adjectives.

Binaries are opposing yet mutually attractive forces, which are the basis for much of our understanding of the world. They may be understood as transitions, for each component is always transforming towards its opposite.\textsuperscript{154} Megan Lavengood used binaries to analyse the texture of the Yamaha DX7 synthesiser in 1980s popular music. She references the empirical support for the use of binaries in studies of music perception

\textsuperscript{153} Cannam, et al., \textit{Sonic Visualiser}.
\textsuperscript{154} This is not unlike the Japanese philosophy of yin and yang. The two opposing forces exist in a state of mutual dependency, with one informing the other.
from Stephen Mc Adams’ 1999 article. According to Lavengood, it ‘deals with the perception of musical timbre and his experiments demonstrate that binaries might be an effective way to categorise [timbral features in music]’. For Lavengood, ‘binaries still prove an effective starting point for discussion as long as binaries are contextually and not rigidly defined’. The analysis of texture and paralanguage face similar challenges. Binaries are useful for a basic description of types of voice, but this theory will not be used throughout, for binaries highlight the lack of terminology rather than act as concise terms. It is worth exploring aspects of the singer’s vocal, as represented on a spectrogram, in greater detail.

The following figures give samples of an unaccompanied solo voice singing vowels and consonants. Further examples of singing techniques such as vibrato, legato, and staccato show how they might appear in the analysis. Figure 3 gives ‘a’ alongside a spectral view. We can see that ‘a’ gives rise to a low frequency 1 value (yellow), 904Hz, and a high frequency 2 value (purple), 2,454Hz.

Figure 3: Spectrogram of vowel ‘a’ alongside Jürgen Handke’s formant characteristic of [a]

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‘a’ indicates that the tongue is low in the mouth, forming a large oral cavity for air to resonate. The wide space, given by the low frequency 1 value, is due to the large resonance cavity in the mouth (yellow). The high frequency 2 value is the result of the small resonance space at the front of the mouth (purple). The sustained vowel causes the vocal to quiver as the singer begins to run out of breath. This is indicated by the microfluctuations in pitch.

Figure 4 gives the sound ‘cah’. It gives a similar frequency 1 and 2 value to the previous example, but this time, ‘c’ causes more vertical energy to occur in the zone of vocal fricatives and sibilants. The lateral view gives similar frequencies, but the vertical impression gives a different spectral view.

Figure 4: Sample Spectrogram of four statements of ‘cah’

The spectral view shows that the sound of a consonant or vowel changes according to the singer’s pronunciation and the respective resonance cavities. These sounds occur in the ADSR envelope, that is the attack, decay, sustain, and release of a sound. It is within and beyond this envelope that paralanguage is heard.

McAdams would apply the binaries steady and wavering, to juxtapose vibrato against an undulating melody line. This is supported by Lavengood, who notes that ‘a sound is wavering if there are microfluctuations in the sound, as in vibrato. Otherwise, it is steady’. Megan Lavengood, ‘A New Approach to the Analysis of Timbre’, 22.
microfluctuations, as indicated by Figure 5. Naturally, not all such vocal lines are straight, but these extreme examples have been chosen to not only highlight the limitations of binaries, but to familiarise the reader with spectral views.\textsuperscript{159}

Figure 5: Steady vocal, 00:02-00:08

Wavering is a relative term, because, what one considers steady in popular song might be considered wavering in opera. Studies by Leech-Wilkinson, for example, measure vibrato using spectral views, and they can use the timeline to detail how rapid the variations are. They can further detail whether the vibrato oscillates equally on either side of the ‘true’ pitch or favours the sharp or flat side. Studies in electronic music have given rise to detailed descriptions of these hertz values.

Curtis Roads offers a detailed categorisation of the frequency ranges. The most prominent ranges are between 200 and 2000Hz. Roads explains that 200-500Hz is the ‘important range of mid-range pitches and formants [and that] Middle C is usually posited as 261.63Hz’.\textsuperscript{160} It is in this range that we expect to hear most singing voices. In the 500-800Hz frequency range, the ‘expressive nasal pitches and formants’ can be heard.\textsuperscript{161} 800-1200Hz is the ‘zone of mid-frequency harsh formants.’\textsuperscript{162} 1200-1800Hz is the ‘zone of

\textsuperscript{159} This is where it is also worth reemphasising the importance of context. This is all in relation to popular song. It is acknowledged that if these examples were analysed in Classical terms, the samples might not be as clear.


\textsuperscript{161} Ibid., 380.

\textsuperscript{162} Ibid., 380.
mid-frequency harsh formants to be attenuated’. Finally, the zone of 2400-4400Hz is the ‘zone of transient articulation. The vocal fricatives and sibilants f, k, p, t, s, sh and z have energy that falls within this zone’. Roads’ categorisation of frequency ranges will be used to read the spectral views in the analyses.

This introduction has outlined the qualitative methodology for this study. The approach will call on traditional music notation, SV, vocal analyses, linguistics, and theoretical binaries. The methodology will develop alongside the introduction of various types of paralinguistic voice qualities. Anyone with a good ear will be able to hear the examples presented. This is not ‘eye music’: these features can be heard; this thesis will identify what these features are and how they impact on how we hear songs.

The next chapter offers a synopsis of 1950s American popular song, a brief history of the context it grew out of, and The Beatles’ engagement through cover songs. Select influences are given in greater detail because of The Beatles’ continued engagement with their songs and singing styles. One might observe that the chapter is void of spectral views, but it is intended to contextualise the process of learning through covering. This is conducive to an understanding of the vocal styles of The Beatles’ predecessors, and highlight the long-ranging effect on their singing careers.

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Chapter 2
Context, Cover Songs, and Key Figures in American Popular Song

Popular music has helped itself to various folk styles, taken hints from classical music, and combined existing styles in all sorts of ways. It has strived to maintain a sense of breathless novelty. But it has come up with nothing that, fundamentally, cannot be traced back to 1900 or earlier.¹

Peter van Der Merwe

2.1 Introduction
American popular song, a complex hybrid, evolved rapidly using styles borrowed from Western art music, rock, folk, jazz, blues, gospel, and Indian classical music. Its development has been traced back as far as 1700s; with influences arriving from East Asia, Arabia, and Africa. Such is the assertion of studies by Peter van Der Merwe, Charles Hamm, Henry Pleasants, Portia Maultsby, Eric Lott, and Samuel A. Floyd, who have explored this historical development.² Their respective studies have provided historical context of harmonies, melodies, lyrics and cultural traditions, but the same level of detail has not been afforded to nonverbal voice qualities that reside in performance.

Building on Barthes description of something in Chapter 1, Pleasants notes that there was ‘something³ in the music of black Americans […] an ineffable quality’.⁴ But as with Barthes, and the other scholars who acknowledge these sounds, we are not told what that something is. In all this research certain questions are seldom, if ever, asked: what are the paralinguistic voice qualities of 1950s American popular song, how are they

³ Italics added.
⁴ Hamm, Yesterdays, 352.
realised in song? and how have they influenced popular song performance? These are not satisfied by the answer ‘something’.

Taking nonverbal voice qualities, realised through performance, this chapter proposes that through a process of emulation, imitation and covering, they are disseminated across cultures and historical periods. Covering and imitation are similar but different, for covering recreates an original version of something, but imitation is more subtle. It resides in nuance of pitch and tone. This process of learning songs, through covering and imitation, is often culturally dependent.

The importance of culture is ever present when studying popular song. Many styles and techniques were learned in historic and cultural contexts. This is especially true when it comes to the connection between African-American music and popular song. The shouts, cries, hollers, and rhythms heard across popular songs have been documented in African cultural traditions such as the ring shout, patting juba or spiritual songs. With this, comparisons between The Beatles, popular song, and African-American singers and performers are made throughout the thesis. Attention is paid to African-American singers, particularly in rhythm and blues, whose voices evolved and travelled into popular song.

This four-part Chapter gives an overview of African-American vocal styles, the cover song as a learning tool, The Beatles engagement with cover songs, and a study of select Beatles influences. This leads to an understanding of the creative practice of the popular song as a series of overlapping influences. In each artist one can use a different set of influences to explain stylistic traits heard in their songs. As the reader can imagine, there is no end to the types and volume of possible influences on any given performer. For once we have an idea of the types of influence in our minds, and once we can mark

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a notable progression from one artist to another, we can begin to evaluate the aural impact of American popular song on The Beatles’ vocal style.

2.2 Beginnings
Van Der Merwe maps American popular song through Arabic, African, Irish, English, and Scottish migration from as far back as the seventeenth century. The Irish plantations and African slave trade become a main point of focus, for he explains that it resulted in a blending of musical styles: ‘for over three and a half centuries black and white Americans have been living, working, and making music together, […] It would be a miracle if there had not been profound mutual influence, and such influence there undoubtedly was’.6

The African influence is attributed to forced mass migration of approximately half a million African slaves arriving over a period of two centuries. From 1619, right through to the mid-nineteenth century, Africans were being brought from Western Africa to Southern Angola and South-East Africa. Once in America, they were divided and scattered across the country. For this reason, van Der Merwe argues that:

[African music] consists of a mosaic of distinct traditions, including some of which are far from the conventional African Stereotype. These traditions are not neatly arranged; they are distributed over the landscape and in an often baffling patchwork. Several writers have remarked on the way near-identical styles turn up at vast distances from one another, sometimes in the absence of any known contact between the groups involved.7

Tracing African musical style, through explicit parameters such as harmony, melody, lyric, and rhythm, can result in multiple interpretations. Take, for example, Erich Moritz von Hornbostel who noted in 1928 that ‘to the African, the upward movement of the hand in beating out a rhythm is the real ‘downbeat’, while the dropping of the hand, to make the actual sound, is the upbeat’.8 Such an interpretation has the potential to re-

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6 Van Der Merwe, *The Origins of the Popular Style*, 40.
8 This is cited by van Der Merwe, in *The Origins of the Popular Style*, 33.
write previous analyses of popular song, which have mainly been completed from a Western perspective.\(^9\) This is amplified in an analysis of paralanguage, which exhibits a dominant influence of African vocal style in the singing voice.

Van Der Merwe characterises an ‘Afro-Arabian influence’, an outdated term, on vocal music by ‘high, tense, nasal delivery, a wavering intonation, and much use of shakes, vibrato, mordents, and turns.\(^{10}\) Another important feature is the ‘passionate lengthening’ as it has been called, of individual notes, particularly high ones at the beginnings of phrases’.\(^{11}\) The passionate lengthening, heard in a number of popular songs, will be discussed in Chapters 3 and 5.

It is worth noting further examples of African speech heard in song. For van Der Merwe, ‘when ordinary speech is so melodious, a little stylisation is enough to make it satisfyingly musical; which helps explain the common use in Africa of recitative styles of singing, and the frequent transitions between a speaking and singing delivery’.\(^{12}\) The transitions between speaking and singing give prominence to the elision of speech and song. Other examples include: ‘the African love of onomatopoeia, in which it is not a matter of voices imitating instruments, but instruments imitating natural sounds – or, more recently, mechanical sounds such as trains […] has been carried over to America’.\(^{13}\)

Prior to the Civil War in America, there were two types of minstrel song: the “nigger”\(^{14}\) song and the “plantation” song. But following the war, a new type emerged known as the minstrel-spiritual. A song-type that informed not only the singing style of Little Richard and Chuck Berry, but also their song-writing. These styles were integrated

\(^9\) Kofi Agawu, for example, gives a contrasting analytical perspective to the dominant Western one.
\(^{10}\) Venturing further back, an Arabian influence arises. The African-Arabian influence has found its way into the popular singing style. Van Der Merwe gives a detailed analysis where the melody, harmony, and rhythm of popular songs are traced from Arab-African lullabies and work songs.
\(^{11}\) Van Der Merwe, *The Origins of the Popular Style*, 30.
\(^{12}\) *Ibid.*, 34.
\(^{13}\) *Ibid.*, 37.
\(^{14}\) Poor terminology used at the time.
into the verse-chorus form that dominated the American music market. Take, for example, William (Will) Shakespeare Hays and Charles A. White, who wrote verse-chorus songs and were particularly well known for their minstrel songs.\textsuperscript{15}

The process of imitation is apparent in African song, and the process was most dominant in the Tin Pan Alley era. Hamm notes this as a centuries old technique whereby ‘elements of black music were skimmed off to give a different and exotic flavour to the sound of songs’.\textsuperscript{16} Tin Pan Alley was founded on artists covering songs performed or written by other artists. Two main types of cover song emerged from this period. That is cover versions which deal with racialisation of genres, white covers of African-American music, and the wider process of covering as practiced in Tin Pan Alley.

In contrast to the African aural tradition, Tin Pan Alley was flooded with professional songwriters, some of which were classically trained. These include, but are not limited to Paul Whiteman, Septimus Winner, and of course the ‘Big Six’: Jerome Kern, Irving Berlin, Cole Porter, George Gershwin, Richard Rogers and Harold Arlen. Between the late eighteenth and early nineteenth centuries, there are some notable changes in the generations of Tin Pan Alley songwriters, particularly the verse-chorus form, and the function of songs.

The verse is given to a solo voice, the verse and chorus are of equal length and the dominant melodic material is in the chorus, not the verse. This is a trend that is maintained in present day popular songs. Take, for example, the verse-chorus form of Bill Haley’s ‘Rock around the clock’. Examples from 1892-1905 include: ‘After the ball’, ‘When you were sweet sixteen’, ‘Meet me in St. Louis’, and ‘My gal Sal’ (covered by The Everly Brothers in 1961).\textsuperscript{17}

\textsuperscript{15} Hamm, \textit{Yesterdays}, 265.
\textsuperscript{16} Ibid., 385.
\textsuperscript{17} Ibid., 291.
Hamm divides Tin Pan Alley songwriters into three categories: the first generation of Tin Pan Alley writers who wrote mainly waltz songs: ‘these invoked the rhythm and flow of this popular song for expressive purposes and were rarely used to accompany actual dancing’.\(^{18}\) For the second and third generations, 1920-55, verse-chorus songs remained popular but with a reduction of verses. The melodic material of most importance was placed in the chorus section.

Hamm pays particular attention to early rock’n’roll of 1955-56 for its influence on the types of songs that were to come:

One has only to listen to Willie Mae “Big Mama” Thornton’s 1953 recording of ‘Hound Dog’, later a best seller for Elvis Presley, to hear how much of the style and substance of the early rock’n’roll style was already present in the black rhythm and blues music.\(^{19}\)

The hypothesis underlying this point of view is an interesting one: that African-American rhythm and blues had a dominant impact on early American rock’n’roll.\(^{20}\) But this impact is not limited to music, the cultural aesthetics and religious practices of African-Americans contributed largely to the style.

To avoid what Jon Cruz calls disengaged engagement, when the cultural values become separated from the analysis, the study pays respect to African-American cultural heritage and references them where possible.\(^{21}\) As Maultsby concurs: ‘the disengaged engagement study of African American music allows investigators to construct an imagined experience with the music in a non-contested environment where the realities

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\(^{18}\) Hamm, *Yesterdays*, 379.

\(^{19}\) Ibid., 408.

\(^{20}\) This is supported by musicologist, Guthrie Ramsey, who argues for the analysis of ‘blackness as practice’ explaining that ‘ethnicity and nearly every other aspect of identity should be considered performance’. Cited in Maultsby, Portia K., ‘The Politics of Race Erasure in Defining Black Popular Music’.

\(^{21}\) [Jon] Cruz contends that disengaged engagement occurs when the ‘cultural aesthetics becomes separated from the larger social, political, and economic conditions in which the culture being observed has taken shape.’ Cited in Maultsby, ‘The Politics of Race Erasure in Defining Black Popular Music’.
of race, culture, and power can be ignored’. Whilst this study focuses on analysing voice, cultural connotations of race and power are not abandoned.

Throughout their respective studies, van Der Merwe, Hamm, and Pleasants refer to the timbre of the vocal, but do not provide an analysis. Hamm notes that songwriters were desperate for specific singers to perform their songs and would treat them very well to do so. An example is Al Jolson’s performance of George Gershwin’s ‘Swanee’. Hamm quotes Robert Kimball and Alfred Simon who explain that ‘if Jolson hadn’t performed it with that great warmth he had, it probably wouldn’t have happened’. Pleasants suggests that it is the ‘vocal ore’ and van Der Merwe notes examples of accent, dialect, and intonation contributing to the expressive quality and character of songs.

Hamm explains that ‘Bill Haley’s voice was grating, nasal, delivered in a style somewhere between shouting and singing – a voice that would have been ludicrous in a Tin Pan alley song’. van Der Merwe offers a description of what he terms the ‘Afro-Arab style’, which possesses several features heard in popular song:

It has the ‘trimmings’, the long phrase on one breath, the humming, and the undulating vocal style, as well as certain other features common to the holler: the ‘passionate lengthening’ of the first note, the breaking up of the same note by explosive pulsations, and the gradual descent of the melody, first to the dominant and then to the tonic.’

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23 This is particularly well presented in the 1946 musical biography, The Al Jolson Story.
24 Italics added
26 This further supports the premise that an analysis of paralinguistic performance practices, in American popular song, awaits further research.
27 Hamm, Yesterdays, 395.
28 Van Der Merwe defines the Afro-Arab style as free melodic variations starting at a high point and meandering toward a ‘tonic’. On its descent, the singer might linger on the fourth of fifth scale degree, the rhythm is free, it follows an end-repeating form, and variations can differ greatly in rhythm, melody, ornaments or length. See Van Der Merwe, The Origins of the Popular Style, 137.
29 Van Der Merwe, The Origins of the Popular Style, 136.
One such example of a ‘passionate lengthening’ of the first note can be heard in ‘Kansas City’. The song opens with the lyric ‘Ah! Kansas City’ and ‘ah!’ is held for three whole beats (discussed in Chapter 4).

Van Der Merwe cites a primary source from the *Survival of African Music in America* that notes the subtle, yet deliberate techniques, of African vocal style. The following quotation critiques the lack of instruction in the *Jubilee and Hampton song books for white singers*:

> For how is he, poor fellow, to know that it is bad form not to break every law of musical phrasing and notation? What is there to show him that he must make his voice exceedingly nasal and undulating; that around every prominent note he must place a variety of small notes, called “trimmings”, and he must sing tones not found in our scale; that he must on no account leave one note until he has the next one well under control? He might be tempted, in the *ignorance* of his twentieth-century education, to take breath whenever he came to the end of a line or verse! But this he should never do. By some mysterious power, to be learned only from the negro. He should carry over his breath from line to line and from verse to verse, even at the risk of bursting a blood-vessel. He must often drop from a high note to a very low one.\(^\text{30}\)

This alludes to several paralinguistic voice qualities. That is, the ‘exceedingly nasal’ sound that is achieved by raising the tongue high to the back of the mouth. Poyatos would describe this as the ‘tip making apicoalveolar click [\(^>\text{tz}\)] – prespeech […] accompanied by voiced lung-air nasalisation’.\(^\text{31}\) Nasalisation added to an oral sound, can be egressive or ingressive in articulation, and lies in the category of paralinguistic alternants.

The ‘variety of small notes’ might be understood as a melisma and the ‘notes not found in the tonal system’ can be the result of dramatic intonation. This is articulated through the oral cavity as ‘eloquent utterances with which at times we can convey the


mental subtleties of a message otherwise impossible to put in words’. The nuance of pitch, through intonation, gives rise to expression. This was alluded to in the opening example of ‘I am sorry’ and will be further explored in the next chapter.

The direction to carry the line from verse to verse requires excellent breathing control. It gives rise to the sensation of tension as the singer hastens to articulate the words within one breath. Little Richard demonstrates this technique in the opening of ‘Long Tall Sally’. He sings the first line with what appears as one breath, giving rise to a feeling of hurriedness and excitement, whilst creating tension. This is because the listener awaits the end of the phrase. Little Richard answers with a rapid slide from a high to low note on ‘woo baby’. This supports the final direction in the above quotation: ‘[a] drop from a high note to a very low one’.

The nasalisation, intonation, breathing control, and rapid slides are characteristic of African vocal style and are features of paralanguage. African singing grew out of everyday speech which means that it naturally adopted paralinguistic utterances. This singing and speaking technique is reliant on two factors: melody and rhythm. For van Der Merwe:

If both are slightly regularised, the result is merely a stylised speech; if both are made completely songlike, the result is song. If one is regular and the other free, the result is a delivery which is either rhythmically strict but melodically free, or melodically strict but rhythmically free. Both these types are found in Africa, and both have passed into black American usage’.33

Howland-Kenny reinforces this by emphasising the contribution made by jazz musicians to new models of popular song, but this was not to their benefit: ‘from 1890 to 1945 […] the best they could manoeuvre was a tension-filled alliance with sharp dealing

32 Poyatos, Paralanguage, 67.
33 Van Der Merwe, The Origins of the Popular Style, 146.
It is noted that ‘this arrangement created a special category of phonograph recordings that came, in 1922, to be called race-records (the companies adopted the more euphemistic phrase “rhythm and blues” at the end of World War II’).35

Race Records, set up in the 1930s, sought to preserve and spread the blues style. This was because blues were gaining rapid popularity and the recording industry was working on a way to monopolise on the music. Howland-Kenny observes that ‘race records might be of the race and for the race, but not fully by the race, and several black musicians and singers […] claimed that despite the rich eclectic variety of black popular music they were allowed to record only blues’.36 For Maultsby:

- the appropriations of the innovations of Black artists and cover versions of rhythm and blues recordings by White artists historically has served to minimise or render invisible the contributions of Black artists in American music development’.37

This disservice to the culture and musical creativity of African-American artists is tentatively avoided in this study. The influence of African-American musicians is noted as a key factor in early American rock’n’roll and The Beatles’ musical growth. With this, it is worth better understanding the context of American popular song.

With the onset of the great depression in the 1930s, instruments were not easily afforded. This rendered individual stylistic nuances of expression on the creativity of the performer and the variations in the vocal became necessary for any performance. The result was a focus on vocal inflection and rhythm to express a song. Singers used stop time, accelerated their vocal, slowed it down and removed it from entire phrases. Their vocal timbre was conducive to evoking interest in otherwise mundane words or phrases.

35 Howland Kenny, Recorded Music in American Life, 110.
36 Ibid., 110.
The textural aspects, such as vibrato and glissando, began to take on a new function. Artists developed these techniques and introduced a series of inarticulate features to sing the lyrics. Some of these were picked up through influence and others were developed through their own practice or physiology. Pleasants notes the importance of articulation for 1950s American popular singers:

All the great American popular singers have had an affinity for words, but their approach to words, to enunciation and articulation, has varied from singer to singer. Al Jolson and Louis Armstrong loved them to pieces, took them apart and did – or did not – put them together again; or they smothered them with affection. Bing Crosby treated them affectionately, too, but gaily and casually. [Frank] Sinatra showed more concern than other singers for their meaning, and was a master at wedding their sentimental implications and associations to an Italiante appreciation of the melodic line.\(^{38}\)

Al Jolson’s success lay primarily in his performance style. It was his vocal that provided songs with a warmth and nuance of expression that contributed to his positive reception. For half a century, he entertained Americans through his singing. His ability to play with words, tease them out cautiously, or shoot them out in rapid succession contributed to his expressive delivery. From stage to screen, he evokes a characteristic style of singing. In his performance of ‘Mammy’ in *The Jazz Singer*, a 1927 film directed by Alan Crosland, he allows his vocal to quiver and shake as he sings ‘mammy’ giving rise to a cry-like expression.\(^{39}\) The importance of Jolson’s voice quality is amplified in the 1946 film, *Al Jolson Story*, directed by Alfred E. Green. Larry Parks mimes the words to Jolson’s vocals. Perhaps a general admittance on the part of Parks, that he could not recreate Jolson’s nuance of vocal expression.

Jolson’s vocalisations are an interesting study in themselves and were probably learned through his early minstrel performances. In ‘I’m sitting on top of the world’, he

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\(^{39}\) Alan Crosland and Samson Raphaelson, *The Jazz Singer* (USA 1927).
juxtaposes long passages of intonation on words with internal vowels alongside short, sharp articulations of words with internal consonants. This is heard on the repetition of ‘sitting’ and ‘top’, which is answered by ‘along’, ‘song’, and ‘world’. The augmentation of words, with an internal vowel, plays with the rhythm of the song. This is because it stalls the return to the chorus sections. On ‘along’ at 02:50, for example, he augments the word to two seconds. This is supported by his performance of ‘Are you lonesome tonight?’, later covered by Elvis Presley. Jolson stalls on almost every second or third word highlighting ‘lonesome’, ‘apart’, ‘heart’, and ‘pain’. This not only delays the delivery of the words the intonation contributes to the sombre narrative.

In contrast to Jolson’s sweet tones, Louis Armstrong’s vocal has been described as ‘hoarse’, ‘rasping’ and ‘gravelly’.\(^\text{40}\) Pleasants suggests that Armstrong’s gravelly voice was the result of years of ‘bad’ singing. ‘Bad, that is, in traditional terms of vocal production […]for] his voice had not always been so rasping, so gravelly’.\(^\text{41}\) Pleasants describes ‘[him] a wailer as a vocalist, too, and no singer can wail in the middle register. So, singing in a manner which came naturally to him, he sang unnaturally high’.\(^\text{42}\) With the gradual deterioration of Armstrong’s technical style and physical ability to produce his harsh vocal, he lapsed into diction.

This is heard in his performance of ‘What a wonderful world’. Armstrong sings slowly with a gravelly vocal. He regularly stalls on words giving rise to momentary breaks and his articulation of the hook line is closer to speech than song. The line is undulating and occasionally, particularly at the end of the song, he augments words such as ‘world’. Otherwise his delivery is closer to speech but characterised through vocal fry. His damaged larynx not only evokes the voice qualifier, it allows excess air to escape

\(^{40}\) Pleasants, \textit{The Great American Popular Singers}, 103.
\(^{41}\) \textit{Ibid.}, 103-4.
\(^{42}\) \textit{Ibid.}, 105.
giving rise to a rasping sound. On words such as ‘how’ at 01:19, he contracts the pharynx, giving rise to a choke-like sound. The effect is one of melancholy because it resembles the choke-like effect that often accompanies crying.

On the other hand, a singer who relied heavily on phrasing was Bing Crosby, who explains: ‘when I’m asked to describe what I do, I say, ‘I’m not a singer; I’m a phraser’. That means that I don’t think of a song in terms of notes; I try to think of what it purports to say lyrically’. This is heard in Bing Crosby’s early recordings, where he sounds similar to Al Jolson because he carries a full voice into the upper part of his range.

For Pleasants, what separates Bing Crosby from Al Jolson is that ‘[Bing’s] slurring, for example, is more appropriate, more expressive, more varied and more musical than Jolson’s, reflecting a jazz as well as a Jolonesque stylistic origin’. Pleasants observes that he overused this expressive quality and was labelled as a ‘groaner’. ‘But it was an important factor in his getting away from the lyrical inhibitions of precise intonation on prescribed pitches’. The performance decisions of Bing Crosby resulted in this idea of him as a groaner, a description that would not go amiss on Little Richard, Brother Joe May, or the blues-like songs of Chuck Berry.

The ‘precise intonation’ supports the voice as the point of interest in his style. Pleasants elaborates by noting that ‘to the slurs he added […] the mordent, which became an early hallmark of his singing’. A mordent is understood as the entrance of a decorative short note adjacent to the note sung. This addition can be above or below the note of destination. For Pleasants, ‘Bing’s mordents were light and fast, and they produced that effect of a slight catch, or choke, or sob which was to remain one of the

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44 Pleasants, The Great American Popular Singers, 141.
45 Ibid., 141.
46 Ibid., 141.
most attractive of his vocal devices’. Bing Crosby initially used the upper mordent and added the lower one in later years. This was articulated slowly to maximise effect.

The reader might find this interesting but is probably wondering how it relates to this study. I have begun with examples of Jolson, Armstrong and Crosby to demonstrate a physiological (Armstrong’s bad singing), and psychological (Jolson and Crosby), influence on singers who influenced The Beatles. This not only reinforces the African-American influence, it reemphasises scholars’ acknowledgement of inarticulate features of voice in popular song, but their lack of analytical engagement. For Hamm, ‘to ears unaccustomed to European-American classical-popular song, the early rock’n’roll stars shouted, screamed, snarled, rasped, whined – did everything, in fact, but sing’. Not only was voice important in early popular song, the practice of covering was on the incline.

Hamm notes that following the recording of a piece, other performers would learn by ‘listening to it enough times to get the melody, lyrics and chord changes in mind, then working it out by ear to fit their own collection of instruments and their own musical style’. This thesis proposes that it was through this process of imitation, and counter-imitation, that these features found their way into The Beatles’ sound palette.

The selections were made for those who seem most vividly to have influenced or reflected the category and subjects of analysis. Some choices are obvious: Chuck Berry or Little Richard, whose songs appear on their studio albums multiple times. Others are not as transparent: Shakespeare’s King Lear in ‘I am the walrus’ or the newspaper in ‘A day in the life’. I should account for passing over the many singers who appeared on The Beatles’ set lists. I have no desire to offend Fats Domino, Frank Sinatra, or The Donays,

47 Pleasants, The Great American Popular Singers, 141.
48 Hamm, Yesterdays, 395.
49 Ibid., 404.
who have influenced The Beatles in one way or another. But due to limited space, I have selected artists who appear the most often on The Beatles’ early set lists.

The first generation rock’n’roll artists to be explored in this chapter are Chuck Berry, Carl Perkins, Little Richard, Elvis Presley, and Buddy Holly. I will acknowledge other artists throughout the process. To provide a deeper understanding of these influences, the next section will open with a brief summation of imitation, followed by theory surrounding the cover song. This will address types, and its importance to The Beatles’ development as singer-songwriters.

2.3 The Cover Song
For Pleasants, imitation is centuries old, and emerged in performance practices before the minstrel show:

There was always an interchange, a process of imitation and counterimitation, or parody. Blacks originally imitated – or parodied – the manners and speech of their white masters. The imperfect result was thought by whites to be so amusing – and so charming – that they parodied the imitation for their own amusement. The phenomenon of imitation breeding imitation is documented in the century-long history of the minstrel show.”

The process of imitation and counterimitation was at the forefront of the early popular music scene in America. Pleasants explains that this involved ‘black imitating white, and white imitating black imitating white – through which, beginning with ragtime and even earlier, African musicality was entering the mainstream of Western music in America’. The process of imitation was further developed through cover song practices.

Pinpointing exactly when the practice of covering began is a slippery task. Hamm believes that this occurred ‘when record producers were looking for fresh material and were at the same time fearful that the success of such country-western stars as Hank

51 Ibid., 57.
Williams would spill over to the “pop” market'. But points out that ‘this tactic was so successful that it was repeated, this time with covers of black music, when rock’n’roll threatened the white market in 1955’. But Maultsby explains that covering was the result of racial segregation. That ‘white artists covered the songs performed and recorded by black artists, imitated their styles, and financially cashed in on the mainstream popularity of their music’.

Middleton explores the cultural construction of the cover song by explaining that musical styles are an assemblage of influences from a variety of sources:

The apparent coherence of most musical styles, and of the relationship they have with the societies in which they exist, is not ‘natural’ but contrived; it is the product of cultural work. Particularly in complex, internally differentiated societies, musical styles are assemblages of elements from a variety of sources, each with a variety of histories and connotations, and these assemblages can, in appropriate circumstances, be prised open and the elements rearticulated in different contexts.

For Maultsby, the practice of covering has served to minimise the contribution of African-Americans to American popular song. This is apparent in some of the scholarly literature surrounding cover songs. Initially Moore believed that the process of covering is thought to have started by accident when the Crew Cuts covered the chords Sh’Boom in 1954. But he concedes later, in the same work, that there was a more racial underpinning to the process.

Moore suggests that the cover song originated in 1950s American record production as a result of racial segregation. This is because performances by African-American musicians were not readily accepted by the influential recording industries:

In the USA, the record industry maintained a policy of racial segregation in their construction of markets. Large companies in the 1950s did not want the connotations of black music attached to their profitable white

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52 Hamm, *Yesterdays*, 411.
53 Ibid., 411.
artists […] however, when black rhythm’n’blues artists began to attract white record-buyers, these companies began the practice of “covering”. Moore elaborates on this by explaining that recording industries preferred to have ‘white artists “tone down” the extremes of black music in offering their own versions, than for black artists, who recorded on small labels, to enter the large, white consumer market’. This is supported by Hamm, noted above, who believes that the practice began in 1950s America with white popular singers performing songs originally recorded by country-western and rhythm-and-blues performers. To counter the threat posed by these country-western stars, record producers recorded songs with the greatest potential using popular singers and Tin Pan Alley arrangements. The success of this process meant that it was repeated with covers of African-American music when rock’n’roll threatened the white market in 1955. The practice, established in American song, was undoubtedly in place, and soon found its way to the young Liverpudlians.

The Beatles were autodidactic and American popular songs were their learning tool. They gained their knowledge of harmonies, melodies, form, and rhythms through the process of covering. Other groups who learned through this method include The Rolling Stones, whose first number 1 in the UK was Howlin’ Wolf’s ‘Little red rooster’ in 1964 and their first single, recorded at Olympic, was Chuck Berry’s ‘Come on’. It was popular at the time for new groups to perform or record existing songs.

The importance of this is two-fold: not only do these musicians learn how to play these songs, they are faced with the choice to repeat the song verbatim or to place their own stamp on them. This is why it is useful to read individual cover practices according to their cultural contexts, rather than treat ‘covering’ as a single, fixed musical technique or tradition. This is because the process of covering differs in various cultures and styles.

57 Moore, Song Means, 134.
58 Ibid., 134.
59 Hamm, Yesterdays, 411.
The cover song as a practice, with racial connotations, warrants deeper analytical insight in popular song. The wider phenomenon of covering is taken in this study, but the racial underpinnings are duly noted.

Arguments about what a cover is and how it should be perceived are ambiguous. In the Oxford English dictionary, a cover is to ‘record or perform a new version of (a song) originally performed by someone else’. In the Collins English Dictionary, ‘to cover a song originally performed by someone else means to record a new version of it’. These definitions are loose and can only be taken as a gateway to an understanding, for they do not address the contextual or cultural dependency of cover songs. The theory of covering presented here is derived from Charles Hamm, Virgil Moorefield, Allan F. Moore, Richard Middleton, and Albin Zak.

Cover version, or cover, refers to a recording, or performance of a song, that was first recorded or performed by another artist. There are two distinct types of covers: there is the cover that adheres strictly to the primary recording: taken from scores, as practised in Tin Pan Alley, or from prior recordings and the cover that radically changes the delivery. The former are demonstrations of mimicry, because the artist uses exact intonation and articulation from existing recordings. There are subtle differences as they may slightly alter the tempo, pitch, or words, but the overall impression of the song should be recognisable to the listener.

An example of the former is Buddy Holly’s cover of Little Richard’s ‘Ready teddy’. An example of the latter is The Beatles’ cover of Chuck Berry’s ‘Rock’n’roll music’, which is sung with vocal fry. This differs from Chuck Berry’s version that is sung with a melodious and articulate vocal. In sum, the 1960s cover song was a dynamic tool

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with two primary purposes: economical and educational. It functioned as a learning tool for musicians and was an economic way of distributing music.

In contrast to Moore, Maultsby, and Hamm, Virgil Moorefield does not discuss the effect of race on the cover song. Instead, he distinguishes between a cover song, a remix, and a mash-up. For Moorefield: ‘a cover is generally a complete re-recording of the original material […] Strictly speaking, a “cover” is created every time someone performs another person’s song’. 62 Moorefield builds on this to argue that what makes a ‘good’ cover is ‘taking a song and making something new out of the familiar’. 63 The Beatles’ covers do not always make something ‘new’ out of the song, yet they are ‘good’ covers, and serve a different purpose. In this study, a cover is achieved every time a song is played by someone other than the original artist. It can be varied slightly, but the essence of the song should be recognisable.

In an analysis of a cover song, it is important to be familiar with the original recording. For Zak, ‘songs may be performed in multiple versions, but their primary identity and their place in the galaxy of rock works is fixed by an original recording’. 64 A cover version may be a re-contextualisation of an original track or it may be a recording that mimics the original. Often musicians, who mimic original versions, not only reproduce the lyrics, melody, and harmonies, they reproduce the paralinguistic voice qualities. This is observed in children, as they attempt to recreate the sound of a song by mimicking the inarticulate nuances of voice. 65

63 Moorefield, ‘Modes of Appropriation’, 295.
64 Zak, The Poetics of Rock, 31.
65 Jacqueline Warwick has carried out research into mimicry and nostalgia in children’s song. see Warwick, ‘Child’s Play: Mimicry, Nostalgia, and Child Musicians’, Ann Arbor Symposium IV, University of Michigan (https://www.youtube.com/watch?v=qTXzBAxXQOE, 20 November 2015).
The cover song is viewed more broadly in this thesis as a learning tool. This is complemented by Mihaly Csikszentmihalyi’s study on learning theory and flow. He studies creativity in art, and evaluates it in terms of the public domain:

The creativity of a work of art emerges against the backdrop of previous art. Which constitutes the domain of art. Past traditions are the background from which a new work emerges, and judged to be worth preserving in the domain – by including it in museums, collections, art books and journals.66

Zagorski-Thomas argues against Csikszentmihalyi’s systems model of creativity because he believes that the ‘problem that this model is meant to address is the fact that an individual’s creativity needs to be examined in relation to others – those that preceded them and influenced them at the very least’.67 He cites the collective practice as a counter argument and explains that an individual’s creativity does not ‘need’ to be evaluated in terms of predecessors.

Analyses without historic knowledge of an artists’ forbears are informative, but knowledge of an artists’ predecessors can inform stylistic tendencies, instrumental use, and lyrical and musical references. These features not only inform our understanding of creative output, they give a deeper insight into the function of these traits in a broader cultural context. Zagorski-Thomas’ counter argument of the collective practice in the recording studio is not the result of the systems model failing to address it but is the result of the lack of attention to the recording as a creative practice.

Whilst the study gives Beatle influences, the subject is also addressed in terms of individual influences, that give rise to the collective. It informs their creative process and prepares the study for an analysis of their solo output. We hear aspects of paralanguage, learned through their emulation of predecessors, contributing to their creative output. It

67 Zagorski-Thomas, The Musicology of Record Production, 131.
would be a grave mistake to dismiss the systems model and bypass the information that can be gained by examining stylistic and cultural forbears.

The historic tradition of imitation and covering contributed to the rise of rock’n’roll and continues to inform popular song.\textsuperscript{68} Whilst there was a racial underpinning in the 1950s, it is worth noting that The Beatles do not differentiate between race and gender in their selection of cover songs. From The Shirelles and Donays, to Little Richard and Smokey Robinson, the songs they covered were often the hits of the time and were probably requested by their audiences. Performance differences are heard in some songs that they chose to record, but these tended to be less well-known B-sides.

With a historical context of the popular song and performance in mind, and knowledge of the context of the cover song and imitation. It becomes possible to better understand the function of the cover song as a learning tool. The next section explores The Beatles and the cover song. This relationship is prominent in their early set lists, performances, and studio recordings.

\textbf{2.4 The Beatles and the Cover Song}

The influence of The Beatles’ predecessors is best exemplified in their early performance sets, which feature one hundred and ninety-one songs originally performed by American popular singers. From 1956-1964, The Quarrymen/Beatles’ set list were primarily made up of songs recorded by Elvis (28), Little Richard (14), Buddy Holly (14) and Chuck Berry (14).\textsuperscript{69} 1956-1960 were the formative years of The Quarrymen, soon to become The Beatles.

Their intense residency in Hamburg is noted as affecting their performance style and standard. Everett explains that they were contracted to a seven-day week comprising

\textsuperscript{68} For example, Ariana Grande’s ‘7 Rings’. A song that covers the melody of ‘My favourite things’ from \textit{The Sound of Music}. Grande has since handed over almost 100\% of the royalties of this song.

\textsuperscript{69} Aaron Krerowicz argues against these numbers on \textit{Flip Side Beatles} (https://www.aaronkrerowicz.com/, 10 April 2017).
a minimum of thirty-four hours. That is, ‘four and a half hours every weeknight and six hours a night on weekends’. But *Anthology zero: The Beatles at their best* notes that they performed for seven hours a day, seven days a week, building an impressive forty-nine hours per week on stage.

During their residency in Hamburg, they were moved from the Indra club to the Kaiserkeller, where their contract was extended. This meant that they had to source extra repertoire to avoid repetition in their performances. As Everett explains:

> [The Beatles] logged 500 hours on stage in three and a half months […] in addition to making vast improvements in The Beatles technique, stamina, and stage presentation, these long sessions required a doubling of repertoire. New material was taken largely from current hits and their B-sides, some discovered in a local pool-hall jukebox.

Everett notes that ‘the artists from whom The Beatles drew at this time continued to be American; the names that reappear are Little Richard, Elvis Presley, Carl Perkins, Chuck Berry, Fats Domino, Eddie Cochran, and the Everlys’. Everett attributes this period to the improvement of The Beatles’ technique, stamina, and stage presentation.

They covered a mixture of doo-wop, jazz standards and twelve-bar-blues. Having learned musical techniques from their performance of cover songs, they were well equipped with routine harmonies, melodies, lyrics, rhythms, and forms to create their own material. Take, for example, the twelve-bar blues harmonic structure in ‘Can’t buy me love’ or the AABA Tin Pan Alley form that appears in approximately one hundred and eleven songs. It is noted that most of the skiffle numbers were dropped before 1960, including ‘Honky tonk blues’, ‘Putting on the style’, and ‘Shake rattle and roll’.

In 1962, The Beatles brought their repertoire of cover songs to the recording studio. Everett notes that even their producer, George Martin, was particularly insistent

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70 Everett, *The Quarrymen through Rubber Soul*, 85.
71 *Anthology Zero: The Beatles at their best*, 06:41.
72 Everett, *The Quarrymen through Rubber Soul*, 85.
73 Ibid., 85.
on copying the songs verbatim: ‘Martin would whistle from the control room, his signal to stop playing, if a wrong note was heard, or if intonation had strayed’. It was not solely the chords and lyrics that were important for covering a song, intonation and notation was given equal attention. Before studying selected songs, it is worth understanding the amount and frequency of cover songs on their UK studio albums.

Taking Table 1, we can note a balance between their early period songs and cover songs from 1963-1964. There are six cover songs on Please Please Me and With The Beatles (1963). With The Beatles features ‘I wanna be your man’, later covered by the Rolling Stones. This balance of cover songs versus their own is entirely interrupted by A Hard Day’s Night (1964), which contains no cover songs. Finally, Beatles for Sale (1964), sees the return of six cover songs. That is a total of eighteen cover songs recorded from 1963-1964.

Table 1: Cover songs versus The Beatles’ originals on the first four Studio albums 1963-1964

Charles Gower Price suggests that this was because George Martin had exhausted many Beatles original compositions in early singles:

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74 Italic added.
75 Everett, The Quarrymen through Rubber Soul, 124.
Following all the successful EMI singles that were produced by George Martin in rapid succession, The Beatles found themselves short of original material to complete their early albums. They naturally fell back on contemporary pop, soul, and the older rock-and-roll and rockabilly covers of Larry Williams, Little Richard, Chuck Berry, Carl Perkins, Buddy Holly, and others to fill the gaps. Much of the group’s early popularity was owed to the fact that Paul McCartney possessed a credible jazz singing voice, which he was able to demonstrate on ‘Till There Was You’ and ‘A Taste of Honey’ on the early Beatle albums.76

But cover songs contributed to the style and iconicity of The Beatles and were not elegant gap fillers as Price suggests. What is worth noting is Price’s belief that the group’s popularity was due to McCartney’s singing voice.

Everett observes that ‘Please please me’, the album title song, is composed of several influencing factors from The Beatles’ emulation of 1950s American popular singers. These include: Bing Crosby, Roy Orbison and Buddy Holly:

‘Please Please Me’ had its origins in [Lennon’s] memories of his relationship with his mother. Julia used to sing Bing Crosby’s ‘Please’ (the #3 U.S. hit of 1932) to her young son. This song featured the line, ‘Please lend your ears to my pleas’, a play on words that had captured young John’s imagination and would be characteristic of much of his adult writing. Lennon built a slow song around this memory, added a touch of falsetto taken from Orbison’s dramatic wide-ranging vocal style,77 possibly took an image from Holly’s ‘Raining in My Heart’ (for the bridge lyrics), and taught ‘Please Please Me’ to the other Beatles.78

Cover songs on Please Please Me include: ‘Anna (go to him)’ originally recorded by Arthur Alexander, sung by Lennon. ‘Chains’, written by Gerry Goffin and Carole King, sung by Harrison. ‘Boys’, written by Luther Dixon and Wes Farrell, sung by Ringo Starr.

On side 2: ‘Baby it’s You’, written by Mack David, Barney Williams and Burt Bacharach, sung by Lennon. ‘A Taste of Honey’, written by Bobby Scott and Ric Marlow, sung by McCartney, and ‘Twist and Shout’, written by Phil Medley and Bert Russell, sung by Lennon. Some of these songs are repeated verbatim, but others are modified.

76 Price, ‘Sources of American Styles in the Music of The Beatles’, 221.
77 Italics added.
78 Everett, The Quarrymen through Rubber Soul, 131.
Other songs draw heavily on the influence of their predecessors. Take, for example, the opening track: ‘I saw her standing there’. The song originally had a working title of ‘Seventeen’ and Everett believes that it is from the first line of The Coasters 1957 hit song ‘Young Blood’, which is, ‘I saw her standing in the corner’. It might be a nod to Chuck Berry’s ‘Little Queenie’, who was ‘too cute to be a minute over seventeen’. ‘Little Queenie’ was performed in early sets in Hamburg, and the Star Club recordings (26 and 27 December). 79

Following their years in Hamburg, the English nightclub circuit, and their first four studio albums, The Beatles declared that they were going to retire the cover song. Everett notes that ‘like Chuck Berry and Buddy Holly before them – they would release only their own compositions as singles’. 80 But the impact of the cover song on The Beatles’ repertoire is not a simple repetition of songs by other artists. They learned harmonic progressions, melodies, bass lines, lyrics, rhythms, and intonation, and did not retire these when it came to their own songs.

The impact of their forbears ranges from direct and indirect examples of covering. Whilst direct covering was abandoned for singles it continued in their albums, see ‘Dizzy Miss Lizzy’ recorded on Help! The inarticulate impact of these songs continues to arise throughout their repertoire. Price insists that ‘A Taste of honey’ and ‘Till there was you’ ‘anticipated McCartney's later ballads such as ‘Michelle,’ ‘Yesterday,’ and ‘Hey Jude,’ which are among the most commercially successful of all The Beatles’ recordings’. 81

Taking Everett’s analysis in Table 2, we can see the chronological progression, early style features and experimental style features, in line with their albums. The table

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79 Everett, The Quarrymen through Rubber Soul, 140-45.
80 Ibid., 82.
81 Price, Sources of American Styles in the Music of The Beatles’, 221.
shows that there is a decline in early style features in 1967 with *Sgt. Pepper*, but an upward trend occurs in their late period.

Table 2: Everett, ‘The Beatles’ Early and Experimental Style Features’.

Their early style features are advanced in 1969 beyond the experimental features. Whilst this may be true to a point, it is not true of the features of paralanguage that they learned. The subtle nuances of pitch, reminiscent of their early cover songs, are heard throughout *Sgt. Pepper*. Everett also marks a decline in their early style features in 1964, but this is refuted by Hamm’s observation of their American releases.

Hamm pays close attention to the week of 4 April 1964, as ‘a historic one in the history of popular song in America: the top five songs on the *Billboard* Top 100 chart were all by The Beatles, who had been almost unknown in America only three months earlier’.

These songs, in order, are ‘Can’t buy me love’, ‘Twist and shout’, ‘She loves you’, ‘I want to hold your hand’, and ‘Please please me’. Also, in this month, The Isley Brothers’ ‘Shout’ was covered by The Beatles at an IBC Studios recording session, London. It is the closing song on the set list that opened with ‘Twist and shout’ amongst

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82 Everett, *The Quarrymen through Rubber Soul*, 311.
83 Hamm, *Yesterdays*, 418.

The selection of songs prioritises cover songs over the introduction of their own material. It might be argued that this was because they were burgeoning artists with limited repertoire, but in 1966 they were continuing to prioritise cover songs. A time when Everett marks a significant decline in early style features (see Table 1 above). This is supported by Lewisohn:

The Beatles’ very last concert tour commenced in Chicago on 12 August 1966. As ludicrous as it may seem by today’s standards – where most artists tour only to promote a new album – The Beatles did not perform a solitary song from Revolver, released just four days earlier in the USA (and just seven days earlier in the UK). ‘Paperback writer’ was included but that was the only concession to 1966, the other songs including ‘I wanna be your man’, ‘Long tall sally’, ‘Baby’s in black’ all mere two or three years old, but an eternity in the history of The Beatles’ recordings.84

‘Long tall Sally’ goes back as far as 1956, making it over a decade old in Lennon’s repertoire and at least nine years in McCartney’s. This leads one to tentatively conclude that The Beatles placed an importance on cover songs. In order to gain a deeper understanding of their exposure and learning of cover songs, it is worth examining The Beatles’ cultural and historical context.

The influence of American popular song stretched far and wide, geographically as well as culturally. In 1950, Liverpool was a port city and migration patterns, particularly between Ireland, Liverpool and America, provided the local music scene with a diverse musical palette. When discussing The Beatles and the cover song, Price observes that:

84 Lewisohn, The Complete Beatles’ recording sessions, 84.
The musically cosmopolitan underground culture of Liverpool, a port city (with seamen bringing in American records unavailable in the music shops), contributed to the diversity of influences available to the young “Liverpudlians” hungry for novel sounds from across the Atlantic.\(^{85}\)

This is reinstated by Everett, who notes that through The Beatles’ appearances at the Cavern, they formed a relationship with Bob Wooler, who would lend the group many American records from his collection.\(^{86}\) They performed these songs in their sets, with the lesser known B-sides, often reimagined in their own style.

Their engagement and appreciation of American popular song is supported by some context of the American popular music scene in 1958 and 1959. In this two-year period, the leading American popular singers were inactive due to economic, sociological, political, and lawful circumstances. Buddy Holly died, Elvis was enlisted into military service, Little Richard went into the ministry, Chuck Berry was serving a prison sentence for violating the Mann Act, and Jerry Lee Lewis was out of the public eye because of scandal. Public absence of the leading artists left a demand for their songs and created a gap for emerging artists who could perform them.

This is further documented by Everett and Hamm. Everett gives a detailed list of The Beatles’ engagement with the material of these artists and their absence from the scene.\(^{87}\) For Hamm, each of the four Beatles has written or spoken about the influence of American Popular song on their own early style.\(^{88}\) He clarifies that even if The Beatles had remained silent on this, the same conclusion could be drawn from their early set-lists.

The technique of covering exhibited in the first generation rock’n’roll artists can be understood as realisations of a dual ideal. These artists sought to write and perform their own songs which led them to develop the foundations for popular song as we know

\(^{86}\) Everett, The Quarrymen through Rubber Soul, 92.
\(^{87}\) Moore, Song Means, 134.
\(^{88}\) Hamm, Yesterdays, 419.
it today. The songs of Chuck Berry, Carl Perkins, Little Richard, Elvis Presley, and Buddy Holly dominated The Beatles’ early set-lists. They, in turn, overlaid songs with their emulation and development of paralinguistic voice qualities. These vocal features not only render them recognisable by ear, they gained expressive significance. It is worth taking time to understand the style of these selected forbears.

2.5 Selected Influences
Chuck Berry (1926-2017), had a long tenure in the popular song circuit. His early output marked an important departure in the development of rock’n’roll. His decision to write and record his own songs, not only made songwriters redundant, it gave rise to his own expressions of interest in his songs. His songs are simple, yet effective, and were received by a broad audience. His span of influence is not limited to The Beatles, for example, The Rolling Stones covered ‘Carol’, ‘Johnny B. Goode’, and more on their early recordings.\(^{89}\)

Table 3 gives the Chuck Berry songs recorded by The Beatles from 1956-1961.

Table 3: Recorded Chuck Berry covers\(^ {90}\)

<table>
<thead>
<tr>
<th>Song Title(^{a})</th>
<th>Berry Recording Date</th>
<th>Beatles Recording Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll Over Beethoven(^{b})</td>
<td>1956</td>
<td>1962</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1964</td>
</tr>
<tr>
<td>Too Much Monkey Business</td>
<td>1956</td>
<td>1963</td>
</tr>
<tr>
<td>Rock and Roll Music(^{b})</td>
<td>1957</td>
<td>1963</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1964</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1966</td>
</tr>
<tr>
<td>Sweet Little Sixteen</td>
<td>1957</td>
<td>1962</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963</td>
</tr>
<tr>
<td>Johnny B. Goode</td>
<td>1958</td>
<td>1964</td>
</tr>
<tr>
<td>Carol</td>
<td>1958</td>
<td>1963</td>
</tr>
<tr>
<td>Little Queenie</td>
<td>1959</td>
<td>1962</td>
</tr>
<tr>
<td>Memphis, Tennessee</td>
<td>1959</td>
<td>1963</td>
</tr>
<tr>
<td>I Got to Find My Baby</td>
<td>1960</td>
<td>1963</td>
</tr>
<tr>
<td>I’m Talking about You</td>
<td>1961</td>
<td>1962</td>
</tr>
</tbody>
</table>

From Everett’s research we note the following songs on their set lists.\(^ {91}\) 1956: ‘Brown-eyed handsome man’, ‘Too much monkey business’, and ‘Roll over Beethoven’.

\(^{89}\) See Rolled Gold: the very best of the Rolling Stones, vinyl The Decca Record Company Ltd. 1975.
\(^{90}\) Price, ‘Sources of American Styles in the Music of The Beatles’, 218.
\(^{91}\) Everett, The Quarrymen through Rubber Soul, 87-90.

In Chuck Berry’s autobiography, he lists many influences and notes that he gained his musical guidance from blues music artists: Muddy Waters, Tampa Red, Big Maceo and Little Walter. He learned their songs aurally and explains that they were easy for him to imitate: ‘when it came to playing tunes by Muddy Waters, Tampa Red, Big Maceo, and Little Walter, I could shine like the sun’. 92 Chuck Berry describes his music as:

The nature and backbone of my music is boogie and the muscle of my music is melodies that are simple. Call it what you may: jive, jazz, jump, swing, soul, rhythm, rock, or even punk, it’s still boogie so far as I’m connected with it. When I can’t connect to it, I have no right to dispute its title. When it’s boogie, but with an alien title, the connection is still boogie and my kind of music. 93

Through his process of imitation, he learned that ‘four out of every ten popular songs were based on the chords of the tune ‘I got rhythm’ and thus were known as songs with rhythm changes’. 94 Examples include: ‘At last’, ‘So long’, ‘Sentimental reasons’, ‘Heart and soul’, and ‘Blue moon’. The influence of these early blues songs naturally contributed to his musical palette. He realised that by learning rhythm changes, and blues progressions, he was prepared to chord almost eighty percent of existing songs. 95 With this knowledge, he worked until he matched over ninety popular songs together with their lyrics and performed them before any available audience. 96

Pleasants notes that Chuck Berry had some American Indian blood in him. 97

Whilst Hamm gives examples of gospel music and jazz in the style of both Chuck Berry

93 Berry, Chuck Berry, 142.
94 Ibid., 42.
95 Ibid., 42-3.
96 Ibid., 42-3.
and Little Richard. Chuck Berry notes in his autobiography that he performed blues and country-western songs in distinct dialect. This was to retain a variety of audiences:

Listening to my idol Nat Cole prompted me to sing sentimental songs with distinct diction. The songs of Muddy Waters impelled me to deliver the down-home blues in the language they came from, Negro dialect. When I played hillbilly songs I stressed my diction so that it was harder and whiter. All in all it was my intention to hold both the black and the white clientele by voicing the different kinds of songs in their customary tongues.

This practice of responding to an audience is noted by Maultsby as ‘an important gauge used by Black artists to determine whether they are meeting the aesthetic expectation of the audience’. The stressed diction is heard in ‘Maybellene’, ‘Thirty days’, ‘No money down’, ‘Roll over Beethoven’, ‘Too much monkey business’, ‘Brown-eyed handsome man’, ‘You can’t catch me’, ‘School days’, ‘Rock and roll music’, ‘Sweet little sixteen’, and ‘Reelin and rockin’. But he adopts a slower, slurred vocal in blues songs such as ‘Wee wee hours’. For Chuck Berry, this song was based on the memorable tears of Joe Turner’s ‘Wee Baby Blue’. But ‘Drifting heart’, ‘Havana moon’, and ‘Deep feeling’ feature deep, low-sounding intonation.

Chuck Berry’s singing style is supported by van Der Merwe’s observation of the melodious African speaking voice noted above. Throughout his repertoire, it is true that only a little stylisation is required to make his songs satisfyingly musical. This is because he regularly transitions between speaking and singing delivery. Whilst this informs his use of diction in song, it is rhythm that arises as a defining feature of his style.

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98 Hamm, *Yesterdays*, 395.
99 Italics added.
100 Berry, *Chuck Berry*, 90.
103 Van Der Merwe, *The Origins of the Popular Style*, 34.
Chuck Berry often juxtaposes pulsing rhythms against smooth passages of melody or the absence of melody or rhythm. His rhythmic interplay gives rise to a feeling of tension and release. He tends to build a pulsing momentum using short, staccato beats that are interrupted by his vocal or stopped suddenly. This is heard in ‘Maybellene’, where he sets up a pulsing train-like rhythm from the onset. In contrast, he sings the lyric ‘Maybellene’ as an augmented falling pitch. This gives rise to the feeling of being in an airplane. The melody is moving at one pace, but the instrumentation below appears to be moving at an entirely different, slower, speed.\textsuperscript{104}

From ‘Thirty days’ pre-1956, to ‘Memphis’ in 1959, his songs were consistently played by The Beatles. This pattern is carried into their studio albums with ‘Roll over Beethoven’ on \textit{With The Beatles} and ‘Rock’n’roll music’ on \textit{Beatles for Sale}. Other less explicit references are heard in the use of stop time marking the refrain in ‘Come together’ on \textit{Abbey Road}.

The relation between ‘Come together’ and Chuck Berry’s ‘You can’t catch me’ led to Lennon being sued by Morris Levy. Lennon’s lyric ‘here come ol’ flat top/ he come groovin’ up slowly’ is similar to Chuck Berry’s opening line: ‘Here come a flattop/ he come movin’ up with me’. Another reference is heard in ‘I saw her standing there’, that features the line ‘she was just seventeen’, a possible nod to Chuck Berry’s ‘Sweet little sixteen’. This might be further connected to James Thornton’s ‘When you were sixteen’; a number one song in America in 1898.

Whilst Chuck Berry altered his diction to suit country-western songs, Carl Perkins (1932-1998), an American rockabilly musician, sings primarily in his natural dialect. In contrast to Chuck Berry, Carl Perkins’ idea to write popular songs for a mass teenage market was not his. This came from his producer, Sam Philips, who saw a clear gap in

\textsuperscript{104} This technique will be discussed in detail in Chapter 5.
the market for singer-songwriters. Hamm observes that, like Jerry Lee Lewis, Carl Perkins sings like the country-western singer he was.\footnote{Hamm, \textit{Yesterday’s}, 395.}

Carl Perkins’ songs feature on The Beatles’ set lists from 1958-1963, but only two are on their studio albums. ‘Honey don’t’ and ‘Everybody’s trying to be my baby’ are on side 2 of \textit{Beatles for Sale}. Other songs, popularised by Carl Perkins, are on The Beatles \textit{Anthologies} and in live performances, for example, ‘Boppin the blues’ in 1956 and ‘Your true love’ in 1957.

Carl Perkins’ rockabilly sound is upbeat and driven with few pauses and progressions. It has a striding rhythm and sharp lyrics, filled with staccato guitar breaks. Price explains that most of Carl Perkins’ songs convey a honky-tonk country sound. This limited his appeal to the mainstream teenage audience of the 1950s. For Price, ‘it was certainly this authenticity that endeared his music to all four of The Beatles’.\footnote{Price, ‘Sources of American Styles in the Music of The Beatles’, 212.} It is noted that neither Lennon, nor McCartney sang the vocals for either Perkins songs on \textit{Beatles for Sale}. Ringo sings the lead vocal for ‘Honey don’t’ and Harrison sings lead vocal for ‘Everybody’s trying to be my baby’. On the other hand, Lennon and McCartney demonstrate vocal dexterity in their covering of Little Richard.

Born in Macon, Georgia, in 1932, Little Richard Penniman’s singing style developed out of an influence of African American vocalists. He brought a folk style of singing from the Gospel tradition with little modification. Little Richard recalls, for example, the singing at his home church in Macon as having ‘no piano or no organ or nothin’, [just] old folks stompin’ their feet and moanin’ and groanin’.\footnote{Little Richard, quoted by Price in ‘Sources of American Styles in the music of The Beatles’, 219.} The influence of church singing is situated in the traditional context of the African ring shout studied by Samuel A. Floyd.\footnote{Floyd, \textit{The Power of Black Music: Interpreting its History from Africa to the United States}.}
Little Richard’s influences include, but are not limited to, Clara Ward, Ruth Brown, Bing Crosby, Ella Fitzgerald and Jackie Vernell. In his own words: ‘I came from a family where my people didn’t like rhythm and blues. Bing Crosby – ‘Pennies from Heaven’ – Ella Fitzgerald, was all I heard. And I know that there was something that could be louder than that, but I didn’t know where to find it. And it was me’. In an interview on the Donny and Marie Osmond Show, he explains that he imitated Brother Joe May’s vocal style. But Brother Joe May does not sing in falsetto head voice, instead, he sings minstrel-spiritual songs with a husky vocal redolent of Louis Armstrong.

Little Richard sings energetic lyrical passages that are comprised of both lexical and non-lexical lyrics. The pace of his vocal is often faster than the accompaniment. To balance this, he tends to pause or augment a single pitch allowing the instrumentation to catch up. In ‘Tutti frutti’ he sings at one pace, but the instrumentation appears to have its own rhythm. When he stops momentarily, or sings a falsetto pitch on ‘woo’, it gives the backing instrumentation time to catch up, if only temporarily.

This is supported by his performance of ‘Lucille’. But in ‘Heebie Jeebie’ both vocals and instrumentation move at the same pace and stop at the same time. In contrast, Little Richard proves to keep up with a softer ballad-like singing style in ‘Slippin’ and slidin’, ‘Every hour’, ‘Lonesome blues’, and ‘Taxi blues’. The blues-like vocal quality in these songs, augments specific words such as ‘goodbye’, ‘hate’, and ‘lonesome’ until they quiver and fade, or he runs out of breath. This reinforces the description from The Jubilee & Hampton Song book above.

Not only was Little Richard sensitive to falsetto, soft vocal lines, and rhythm. He demonstrates excellent laryngeal and pharyngeal control throughout ‘Kansas City’,

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110 This voice type will be discussed in Chapter 3.
‘Long tall Sally’, ‘Miss Ann’, ‘Ready teddy’, and ‘Rip it up’. In these songs, he tears through the lyrics with a coarse vocal that treads dangerously on damaging his vocal cords. This recalls Louis Armstrong who did damage his vocal cords through poor singing technique. But Little Richard’s vocal flexibility is performative. This is supported by ‘Tutti frutti’ and ‘Hey, hey, hey, (going back)’ which demonstrate both a gravelly voice, falsetto, and rhythmic interplays.

Chuck Berry, Little Richard, and Carl Perkins had a dominant effect on The Beatles, but Price notes that the first singer to capture the attention of John Lennon was Elvis Presley with his 1956 hit ‘Heartbreak hotel’. ‘In Lennon’s own words: “nothing really affected me until Elvis”. Paul McCartney also remembers Presley’s early recordings with enthusiasm: “That was the biggest kick. Every time I felt low I just put on an Elvis and I’d feel great”.111 It was Elvis’ voice and lyrics that had the most profound influence on The Beatles. This influence is noted by Lewisohn: ‘Lennon, later admitted that in having to write and record songs so quickly, he would sometimes rely on other records for his initial ideas […] ‘Run for your life’, lifting two lines of lyrics from ‘Baby Let’s Play House’, recorded by Elvis Presley’.112

Elvis’ (1935-1977) deep chest voice naturally lends itself to a low register and the lyrics are articulated with clear diction. Pleasants observes that ‘he has never sung a phrase whose contours were not derived from his own native Southern American speech’.113 Elvis’ native accent is far removed from The Beatles’ Liverpudlian accents. Price backs the idea that Elvis’ influence on The Beatles was due to his vocal, and that he modelled his vocal on blues artists Arthur Crudup and Willie Mae Thornton:

The strong response of Lennon and McCartney to Elvis Presley’s records was likely due to his vibrant and mannered vocal delivery, the earthy energy and power in Presley’s voice which he had emulated from the

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111 Price, ‘Sources of American Styles in the Music of The Beatles’, 210-211.
112 Lewisohn, The Complete Beatles Recording Sessions, 63.
recordings of blues artists like Arthur Crudup and Willie Mae Thornton at the suggestion of Sam Phillips, his first producer at Sun Records. It was that quality of blues vocal delivery, combined with loud and repetitive instrumental accompaniment - that gave the best of early rock and roll its direct and convincing emotional power.\textsuperscript{114}

Elvis openly emulated Roy Hamilton and Mahalia Jackson, both African-American soul singers.\textsuperscript{115} An exemplary comparison can be heard in Hamilton’s performance of ‘Unchained melody’. His deep chest voice is delivered in a slow articulate style. This is notwithstanding his ability to swell upward to hit the climactic points in the song for greater expression. Elvis retains these features in his 1977 performance, just two months before his death.

In general, Elvis’ vocal oscillates between a tenor and a baritone. Throughout his career he demonstrated vocal control in an impressive two octaves and a third. A range from low G ‘Blue moon’, to high tenor B ‘Surrender’, with flurries of falsetto reaching D. He was adventurous with his style of singing, and his collection of recordings, spanning ballads, pop, country-western, jazz, gospel and rock’n’roll. Over time, his deep vocal became an aural signature.

Anyone familiar with his voice, will read ‘Uh-Huh’ and ‘thank you very much’ in this deep earthy tone. Pleasants supports this and suggests that ‘in ballads, he achieves a light, mellow, seductive sound reminiscent of Bing Crosby, if rather breathier, with a wide vibrato that he may have got from Billy Eckstine. Elvis’ vibrato, however, is faster and less conspicuous’.\textsuperscript{116}

\textsuperscript{114} Price, ‘Sources of American Styles in the Music of The Beatles’, 211.
\textsuperscript{115} Henry Pleasants notes that Mahalia Jackson’s singing ‘had a lot in common with Bessie [Smiths]. They had, to begin with, similar voices – big, rich, full-bodied, full-throated contraltos, strengthened and ripened in public places before the days of electronic amplification. Both were belters, or, in their own jargon, shouters, never happier than when pouring it on and out, the breath heavy on the vocal cords, extracting every decibel of chest and head resonance’. Cited in Pleasants, \textit{The Great American Popular Singers}.
\textsuperscript{116} Pleasants, \textit{The Great American Popular Singers}, 275.
Elvis’ ability to emulate the ‘open, hoarse, ecstatic, screaming, shouting, wailing, reckless sound of the black rhythm-and-blues and gospel singers’\textsuperscript{117} is important because he brought an expressive singing style to rock’n’roll. But he was not confined to this style and this is supported by Pleasants who notes that ‘in ballads and country songs he belts out full-voiced high Gs and As that an opera baritone might envy’.\textsuperscript{118} This is heard in his rhythm-and-blues songs, which often feature more breath than voice.\textsuperscript{119}

It is interesting that Elvis’ paralinguistic ‘uh-huh’, does not appear on any Beatles’ recordings, but they do imitate it in interviews. In a press conference at JFK Airport in 1964, The Beatles are asked: ‘what do you think of the comment that you’re nothing but a bunch of British Elvis Presleys?’\textsuperscript{120} Ringo immediately responds by protruding his lips in a slant, giving rise to the Elvis diagonal smile and says ‘it’s not true’ in a deep Southern accent. The others join in mimicking the southern tone.

Inarticulate sounds sung by Elvis include: grunts, hoots, slides, tremolos, and hiccups. He achieves these through falsetto, stop time, legato and vibrato melody lines and by holding words longer than their natural duration (supporting the African-American technique noted above). Further examples are heard in ‘Blue suede shoes’: a song that contains moments of stop time, hiccups, slides at the end of words, and dramatic intonation. Elvis primarily stays within 300-900Hz, but occasionally the harmonics of his vocal increase into the higher end of the 800-1200Hz. This is Curtis Roads’ range of strident harsh pitches, to be discussed in Chapter 4.

Table 4 gives the songs that were recorded by The Beatles in the early sixties. Whilst they covered many Elvis songs in their performances, \textit{The Beatles Live at the BBC} and \textit{The Beatles Live at the Star-club}, they did not record any for their albums.

\begin{itemize}
\item \textsuperscript{117} Pleasants, \textit{The Great American Popular Singers}, 276
\item \textsuperscript{118} \textit{Ibid.}, 276.
\item \textsuperscript{119} The breathy vocal hints at an inarticulate voice quality that will be discussed in Chapter 4.
\item \textsuperscript{120} The Beatles Press Conference at JFK Airport 1964, 02:21-02:24.
\end{itemize}
Table 4: Recorded Elvis Presley covers.\textsuperscript{121}

<table>
<thead>
<tr>
<th>Song Title</th>
<th>Recording Date</th>
<th>Original Artist and Date (Composer)</th>
<th>Beatles Recording Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>That’s All Right</td>
<td>1954</td>
<td>Arthur Crudup (1947)</td>
<td>1963</td>
</tr>
<tr>
<td>I Forgot to Remember to Forget</td>
<td>1955</td>
<td>Kesler-Feathers</td>
<td>1964</td>
</tr>
<tr>
<td>I Got a Woman</td>
<td>1956</td>
<td>Ray Charles (1954)</td>
<td>1963</td>
</tr>
<tr>
<td>I’m Gonna Sit Right Down and Cry</td>
<td>1956</td>
<td>Roy Hamilton (1954)</td>
<td>1962</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Thomas/Biggs)</td>
<td></td>
</tr>
</tbody>
</table>

In Everett’s collection of The Beatles’ cover song repertoire from 1956-1960, Elvis appears as one of the dominant artists. Table 5 gives the songs covered from 1956-1960:

Table 5: Elvis Presley songs covered by The Quarrymen/The Beatles: 1956-1960.\textsuperscript{122}

<table>
<thead>
<tr>
<th>Year:</th>
<th>Songs Covered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>‘That’s All Right (Mama)’</td>
</tr>
<tr>
<td></td>
<td>‘Heartbreak Hotel’</td>
</tr>
<tr>
<td></td>
<td>‘Blue Suede Shoes’</td>
</tr>
<tr>
<td></td>
<td>‘Hound Dog’</td>
</tr>
<tr>
<td></td>
<td>‘Don’t be Cruel’</td>
</tr>
<tr>
<td></td>
<td>‘Love Me Tender’</td>
</tr>
<tr>
<td></td>
<td>‘Don’t Forbid Me’</td>
</tr>
<tr>
<td>The Quarrymen (skiffle group formed by John Lennon)</td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>‘All Shook Up’</td>
</tr>
<tr>
<td></td>
<td>‘That’s When Your Heartache Begins’</td>
</tr>
<tr>
<td></td>
<td>‘Mean Woman Blues’</td>
</tr>
<tr>
<td></td>
<td>‘Let me be your Teddy Bear’</td>
</tr>
<tr>
<td></td>
<td>‘Loving You’</td>
</tr>
<tr>
<td></td>
<td>‘We’re Gonna Move’</td>
</tr>
<tr>
<td></td>
<td>‘Jailhouse Rock’</td>
</tr>
<tr>
<td></td>
<td>‘Lawdy Miss Clawdy’</td>
</tr>
<tr>
<td>Paul McCartney joins The Quarrymen</td>
<td></td>
</tr>
<tr>
<td>1958</td>
<td>‘I Got Stung’</td>
</tr>
<tr>
<td>George joins The Quarrymen</td>
<td></td>
</tr>
<tr>
<td>1959</td>
<td>‘I Need Your Love Tonight’</td>
</tr>
<tr>
<td>Lennon and McCartney form song-writing team</td>
<td></td>
</tr>
<tr>
<td>January 1960</td>
<td>‘Tonight is so Right for Love’</td>
</tr>
<tr>
<td>Stuart Sutcliffe joins group as Bassist</td>
<td></td>
</tr>
<tr>
<td>April 1960</td>
<td>‘It’s Now or Never’</td>
</tr>
<tr>
<td>‘Silver Beetles’ record at Forthlin Road</td>
<td></td>
</tr>
<tr>
<td>2 June 1960</td>
<td>‘The Beatles’ first appears in print</td>
</tr>
</tbody>
</table>

\textsuperscript{121} Price, ‘Sources of American Styles in the Music of The Beatles’, 211.
\textsuperscript{122} Everett, The Quarrymen through Rubber Soul, 86-90.
It is known that they learned and performed nineteen songs over this six-year period. But the number of Presley songs covered is significantly reduced with the arrival of George Harrison in 1958 and the formation of the Lennon/McCartney song writing team in 1959. This might also be due to Elvis being enlisted into military service at the time.

For Paul Willis, Elvis and Buddy Holly were part of the ‘first really authentic and integrated period of rock’n’roll. It marked the first distinctive break between the record as an artefact and the sheet music it was based on’.¹²³ But this process of recording, without sheet music, was already in place in rhythm and blues.¹²⁴ This shift in rock’n’roll, from the Tin Pan Alley style of writing music, changes the primary source material to that of the recording. Buddy Holly quickly learned to write and record his own songs.

Buddy Holly (1936-1959), a Texan rockabilly singer-songwriter, guitarist and lead singer in Buddy Holly and the Crickets, influenced many musicians including The Beatles. Most recordings of the group were produced by Norman Petty, who sought to portray them as a self-accompanied singing group. For Price, ‘Buddy Holly and the Crickets came to represent a paradigm of the singing group that composed original songs and provided their own accompaniments: a forerunner of the quintessential rock group of the sixties’.¹²⁵ Comprising of two guitars, bass, drums and vocals, they have the closest instrumental set-up to The Beatles. This meant that their songs were more easily arranged for Beatles’ performances.

Buddy Holly sang in a middle register and his most characteristic vocal feature was the glottal stop. This hiccup-like vocal interrupts flow, converts monosyllable words into multisyllables, and can give rise to a cry-like sound. It is a technique uncommon to

classical music singing and was probably learned through his emulation of the country-western singer Hank Williams. Pleasants gives an accurate description of Hank Williams’ singing style: one that is lilting, hiccapped, and at times nasal:

One thinks of a man trying to sing with a fishbone stuck somewhere between pharynx and larynx. Then, there is the nasality in such words a down, town, around, want, die, cry, when, then, heart, part, shame, name, etcetera, not to mention a curious and characteristic quiver, not quite vibrato and not quite tremolo, suggesting a kind of feedback from overloaded muscles in the throat, which is probably what it was.126

Not only was Buddy Holly a musical model for The Beatles, their insect-inspired name is further evidence of their emulation. Everett supports the early influence of Buddy Holly on Lennon by noting that the first song that Lennon likely learned to play on the guitar was ‘That’ll be the day’ in 1956. This was recorded at Liverpool’s Kensington Recording Studio following the entrance of Harrison in 1958.

Buddy Holly and the Crickets songs that were performed by The Beatles in 1957 include: ‘I’m gonna love you too’, ‘Maybe baby’, ‘Peggy Sue’, ‘Everyday’, ‘Think it over’, ‘It’s so easy’, and ‘Early in the morning’.127 From Table 6, we can see that The Beatles recorded ‘That’ll be the day’, ‘Words of love’, ‘Crying, waiting, hoping’ and ‘Reminiscing’ between 1958-1964.

Table 6: Recorded Buddy Holly covers on CD 128

<table>
<thead>
<tr>
<th>Song Title</th>
<th>Holly Recording Date</th>
<th>Composer</th>
<th>Beatles Recording Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>That’ll Be the Day (Crickets)</td>
<td>1957</td>
<td>Allison/Holly</td>
<td>1958</td>
</tr>
<tr>
<td>Words of Love</td>
<td>1957</td>
<td>Holly</td>
<td>1964</td>
</tr>
<tr>
<td>Crying, Waiting, Hoping</td>
<td>1959</td>
<td>Holly</td>
<td>1963</td>
</tr>
<tr>
<td>Reminiscing</td>
<td>1959</td>
<td>Curtis</td>
<td>1962</td>
</tr>
</tbody>
</table>

The Beatles were diligent in their emulation of these artists. In ‘Crying, waiting, hoping’, McCartney furnishes a nasal-like swelled vocal and hiccups ‘well’ as though it were notated in guidelines. In contrast, he furnishes every scream, yelp, groan, and hoot in ‘Long tall Sally’. In Lennon’s performance of ‘Rock’n’roll music’ he sings alongside the striding instrumental. He mimics Chuck Berry’s breaks in articulation and sings the fractured ‘just let me hear some of that rock and roll music’ as a staccato line. These features, learned aurally, naturally made their way into The Beatles’ own songs. This leads to The Beatles’ own vocal ranges.

Figure 1 gives Everett’s pitch ranges of Lennon, McCartney, and Harrison throughout 1963. It is not overly informative because Lennon and McCartney, for example, demonstrate a broader vocal range. Lennon’s lowest is a B1 in ‘You know my name (look up the number)’ and highest is A5, heard in ‘Dizzy Miss Lizzy’. McCartney’s lowest note is B1 in ‘nothing too much just out of sight’ and highest is B5 in ‘Money! (That’s what I want)’. Everett provides hairpins of their respective pitch profiles in 1963 but does not engage with the inarticulate properties of their voices.

Figure 1: Lennon, McCartney and Harrison demonstrated vocal range through 1963

2.6 The Cover Song and Vocal Performance

These artists have been presented to give a snapshot of the influence of American popular song on The Beatles’ early style. But their diligent emulation does not cease with the formation of the Lennon/McCartney song-writing team. In fact, this process of gathering influences from external sources shaped much of their song-writing and singing career.

Everett notes that the 1963 ‘I’m a loser’, was the forerunner of a Lennon period of inward-looking songs that were influenced by Bob Dylan:

Lennon began to see his own craft in light of the work of Bob Dylan, whose lyrically moving musical statements about life at many levels had Lennon’s deep admiration. We have seen Lennon coping with his own weaknesses in ‘I’ll Cry Instead,’ but his autobiography comes to the fore in the meditative ‘I’m a Loser,’ in which he admits a negative self-view, concentrating on personal (not merely interpersonal) problems, leading finally to the loud cry for ‘Help!’ in the following year.¹³⁰

This awareness of their contemporaries is supported through McCartney’s account of hearing Pete Townsend from The Who stating on the radio that they’d ‘just made the dirtiest, loudest, filthiest song ever’.¹³¹ McCartney was inspired to write a song that surpassed these descriptors and thus came ‘Helter skelter’.

Alongside their development as musicians and songwriters, their scope of influence blossomed. Songs on Sgt. Pepper take inspiration from Indian classical music, the Beach Boys, Classical musicians such as Bach and Brandenberg, literature, farm animals, newspapers and circus posters.¹³² This was further developed by the influence of the Maharishi in 1967, when they went to transcendental meditation classes in London and a retreat in Wales. In 1968, after their time in India, they wrote over thirty songs

¹³⁰ Everett, The Quarrymen through Rubber Soul, 254.
¹³¹ Paul McCartney breaks down his most iconic songs (https://www.youtube.com/watch?v=u97_iIloBmY, 3 September 2019), 14:28.
¹³² A Beach Boys influence can be heard in ‘Paperback writer’. McCartney’s doubled tracked lead vocal and Harrison and Lennon’s backing vocals, give rise to a Beach Boys style vocal harmony.
between them. These songs mark a development in their writing and singing style; where aspects of paralanguage were either introduced or existing ones were developed.

From migration patterns, to dialect, literature, and politics, the broad scope of influence, in popular song, is in a constant state of flux. This study gives a sample of the lineage of paralinguistic influence in early popular song. This is heard in the impact of African-American music on Al Jolson, who influenced Bing Crosby, who inspired The Beatles. Another example is Louis Armstrong, who influenced Brother Joe May, who inspired Little Richard, who influenced The Beatles.

When analysing their musical influences, three main perspectives emerge. That of the influencer, the influenced, and the perceiver. The influencer is given through the direct covering of a song, such as impersonators. It may be through the performance of a cover song in the style of the original recording, or the influencer arises through the subtle nuances of stylistic features in other songs. As, for example, Chuck Berry’s stop time appearing in many Beatles’ songs. The influenced may imitate a vocal verbatim or might alter the articulation. This may be because they are learning technique, or the performer may wish to enhance expression. The perceiver lies in the analysis, for a vocal feature can differ entirely from one analyst to another. Multiple interpretations are always in the mind of the perceiver, who is cautious about proposing one approach or interpretation.

In a comparative interdisciplinary analysis, one must accept an amount of influence in all types of music from the beginning. It is the process of learning these techniques, forming them in performances, and normalising them that gives rise to the development of popular song. Otherwise there would be no progression, only change.
Chapter 3
Primary Voice Qualities

3.1 Introduction

The preceding chapter proposed that the study of cover songs, within a specific style, is in itself a process of learning the foundations of a style system. Once the distinction between the types of cover song is clear in our minds, and once the cover song is understood as a learning tool, we come to acknowledge a progression of influence. Beginning with paralinguistic primary qualities, this chapter examines how intonation contributes to expression in popular song.

Primary qualities are our personal voice identifying features. They include timbre, resonance, loudness, tempo, pitch, pitch level, pitch range, intonation range, syllabic duration and rhythm. Taking song as heightened speech, these features are often carried into song. In communication, for example, they enable speaker recognition without a visual aid. The function of these qualities in speech is also retained in song, giving rise to speaker identifying features.

This was alluded to in the previous chapter, for we know that Elvis is singing because of his deep, soft vocal that resonates in the pharynx. This is informed by his generally slow tempo, which he often juxtaposes against short staccato passages of song. We are made aware of Elvis’ presence in a song through his primary voice qualities. For we know that he oscillates between a tenor and a baritone, with a range from low G to high B, but it is his signature ‘Uh huh’ that indicates his presence in the building.

The way in which the vocal transitions between one pitch to another becomes the focus of this chapter. For often it is the subtle transition that gives rise to greater expression than the pitch alone. Take, for example, how the enunciation of ‘morning’ reveals a lot about a person’s mood. A sharp, abrupt statement tells you to leave them alone. But a slow, detached, sigh-like, morn-ing, rising upward and falling slowly,
suggests that they may be approached. But the word ‘morning’, spoken with ascending intonation, implies a query. Is it really a ‘good morning?’ Syllabic duration, intonation, rhythm, pitch, accent, and vocal resonance are used in day-to-day interaction. Just as intonation can give rise to meaning in speech, a similar result can occur in song.

The types of primary qualities given in this chapter are not exhaustive. In the interest of clarity, I have focused the analysis on arch-shaped intonation. By arch-shape, I mean the way the subtle intonation of a single pitch, rises or falls through articulation. In contrast, a straight line is the lengthening of a single pitch without arches. The straight line can modify meaning: in ascent it may imply a query, like the opening example of ‘morning’. But in descent, it may express apprehension or despair.

The analysis of arched intonation is evaluated in terms of Meyer’s expectation theory.¹ That is, a primary statement of a word or phrase, establishes an expectation for subsequent statements. When this is not met, tension arises, forming the effect of tension and release. In song, it can prolong the arrival of a climax, emphasise a climactic point, or create interest in an otherwise undulating melodic line.

This chapter is not focussed on the use of characterising influences, derived from their cover songs, but rather on The Beatles’ emulation of primary voice qualities in their performance of cover songs. For once we establish their emulation of nonverbal qualities, we can trace a logical progression into their own songs. But The Beatles, forever discontent with how things were, cannot resist developing these nonverbal features in their mid and late period. In this process, they not only demonstrate the use of primary qualities they develop their function to becoming narrative markers.

The methodology takes theories developed in both musicology and linguistics. Poyatos’ studies in nonverbal communication benefits the theorisation of voice qualities.

Music theory and analysis can assess the connection of pitches and pitch relationships to paralanguage. But before engaging with an analysis, the theoretical framework must be presented. It builds on the study of the recording as an ethnographic text, that is, a soundscape. It is helpful to think of a soundscape as an aural landscape, for they have similar properties.

3.2 Theoretical Overview

In the Oxford English Dictionary (OED), a landscape is the ‘visible features of an area of land, often considered in terms of their visual appeal’.² A large arch may be a mountain, or an inverted arch might be a valley. These arches are context dependent, because in isolation, a large peak is no more than a large peak. But in context, it can be determined as a hill or mountain. The succession of shape, in context, creates an impression in our minds and consequent affect. It is not possible to hold, or possess a landscape, but it undoubtedly exists. This complements our understanding of the recording, where paralanguage generates an intangible soundscape of a performance.

A soundscape, according to OED, is ‘a piece of music considered in terms of its component sounds’.
³ This is vague in comparison to a landscape and yet there are many parallel features. There are arches and straight lines that provide an overall shape, apparent breaks in continuity, and inverted shapes similar to a valley. The obvious difference is that a landscape relies on sight, and the soundscape on hearing. The definition of a soundscape omits that it can be considered in terms of its aural appeal, or that it has aural features that can be considered aesthetically.

The soundscape possesses inarticulate properties that are not easily transcribed by traditional models of notation. This is supported by Zagorski-Thomas, who notes that the

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³ Oxford English Dictionary.
ephemeral aspect of speech resides in a performance process. Like transcribed notation, writing enables the storage of some features of speech, but not all.\(^4\)

Primary voice qualities are indiscernible through traditional models of notation. For Poyatos, ‘our verbal lexicons are extremely poor in comparison with the capacity of the human mind for encoding and decoding an infinitely wider gamut of meanings to which at times we must refer as ineffable’.\(^5\) Poyatos explains that ‘what actually suffuses those words with life is a series of paralinguistic and kinesic elements subtly interrelated which support, emphasize or contradict them’.\(^6\) But these intangible sounds are not limited to words. In a compact, but highly detailed study, Meyer addresses the inarticulate sounds in instrumental music.

Meyer’s research is evaluated in terms of expectation theory. Through an analysis of music and meaning, he establishes his approach against music theorists, who have primarily focussed on ‘the grammar and syntax of music rather than with its meaning or the affective experiences to which it gives rise’.\(^7\) Similar to Stephen McAdam’s use of binaries, Meyer describes musical shape using words ‘good’ or ‘strong’, and ‘poor’ or ‘weak’. But insists that these words do not imply value judgements and are descriptive.

The analytical approach in this chapter supports expectation theory, because the ambiguity of weak shapes generates the need for resolution: ‘for the lack of distinct, tangible shapes and of well-articulated modes of progression is capable of arousing powerful desires for, and expectations of, clarification and improvement’.\(^8\) Meyer observes that the lack of a clearly defined shape in music functions to generate expectation. This is because the listener awaits the resolution of unclear phrases.


\(^8\) *Ibid.*, 160.
The straight line, for example, ‘lacks a distinct, tangible shape’ yet it ‘arouses powerful desires for, and expectations of, clarification and improvement’. This is heard in the opening of Chuck Berry’s ‘Rock and roll music’. The opening pattern of repeated G quavers cause tension, which is resolved by the turn: F#-E-C-E-F#. The straight line, followed by the descending turn, leads the listener from a point of heightened speech into song. The opening forms a ‘weak’ straight-line followed by a ‘strong’ U-shaped turn, that guides the listener into the song.

This is supported by Moore who addresses shape as a feature of delivery. Building on ‘the blues as a model for contour prominent melody for both historical and presentational reasons’, Moore’s methodology proposes four models of melodic contour: ‘generally falling; generally rising; generally flat; and undulating, i.e. where neither direction dominates’. By explaining that the generally falling melodic contour is much more common than the generally rising one; he suggests that it is due to the ease of movement in a downward direction. It is more likely that a melody ‘is orientated around a single pitch, and that we can describe [it] as axial’. For Moore, their use resides in a comparative approach to different melodic lines.

Moore’s approach to melodic contour is reinforced by Everett. Figure 1 gives Everett’s analysis of the opening of Missy Elliot’s ‘X-tasy’. It reflects the pitch and rhythmic structure. The arrows highlight the downward movement of the pitches sung by Missy Elliot at the end of the first three bars.

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10 Ibid., 96.
11 Ibid., 97.
The analysis uses arrows to highlight the contour of the melody. But this can be understood through the transcription alone, which makes the arrows redundant. The primary voice qualities are not accounted for, and Missy Elliott’s vocal might not move as indicated by the arrows. It may rise or fall as it passes through each note in the melody. The transcription here is hard pressed to show the paralinguistic properties intrinsic to the performance.

An independent analysis revealed that Missy Elliot sings a descending staccato line, in a breathy voice. This quality is more informative than the above image, for the whispery voice is a qualifier that creates intimacy. It is used by the protagonist to tease the ‘boy’ to join in on the illicit activity. Everett’s analysis is important, as it brings us closer to a paralinguistic analysis, but he focuses this approach on songs after 2000. This seems inconsistent with his wide-ranging analyses on The Beatles and his note in 2000 for further Beatles research.

The Beatles may not make explicit reference to paralanguage, but there is an awareness of melodic and primary voice qualities. In Lennon’s own words, ‘there was a period when [he] thought [he] didn’t write melodies, that Paul wrote those, and I just

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13 To be discussed in Chapter 4.
14 See Walter Everett, The Beatles as musicians: The Quarrymen through Rubber Soul (Oxford University Press, 1999); The Beatles as musicians: Revolver through the Anthology (Oxford University Press, 1999); and ‘The Future of Beatles’ Research’ Academia.edu (2000).
wrote straight, shouting rock ’n’ roll’. He suggests that initially McCartney tended toward grander intonation, and Lennon leaned on straight vocal lines. Lennon’s personal description of ‘shouting’ alludes to voice qualifiers (Chapter 4). But McCartney had a tendency toward greater melodic shape, possibly due to his emulation of Frank Sinatra. It is noted that McCartney and Lennon rely on adjectives ‘straight’ and ‘shouting’. This reliance on adjectives leads the theory into linguistics which has detailed terminology for describing these sounds.

Poyatos not only supports the use of linguistic theory in different subject areas, he gives clear descriptors of primary voice qualities. By drawing on knowledge of timbre in musical instruments, he suggests that ‘timbre is the organically-determined permanent voice register or pitch’. Depending on the vibrations from the vocal cords, resonance can be pharyngeal, oral or nasal. The resonance is further shaped by the resonance cavities. The overall sound is affected by loudness, that is the intensity or volume of the vocal. Some singers are naturally loud due to a loud speaking voice or naturally soft because of the same reason. The tempo of a person’s vocal is also considered, for example, the Southern drawl.

Pitch, pitch level, and pitch range are the most versatile message-conveying features of voice. Pitch range is the span from a person’s lowest to highest pitch. Poyatos relates this to different languages: ‘apart from its contribution to intonation contours – together with stresses […] and junctures […] pitch phenomena in languages like English, Spanish or German can give the same word (e.g. ‘well’) different meanings’. This supports the opening example of the word ‘morning’. The word is altered by intonation,

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15 Everett, The Quarrymen through rubber soul, 76.
16 Paul McCartney, inspired by Frank Sinatra, wrote ‘when I’m 64’ when he was sixteen.
18 Poyatos, Nonverbal Communication Across Disciplines, 10.
which adds nuance, changing the meaning and interpretation. It is interesting that Poyatos’ research revealed that the pitch level of most North-American English speakers, specifically African-Americans, tend to be at a higher level, often reaching falsetto.¹⁹

The significance of these pitches and their function in communication will be explored throughout the study. The point here is that intonation exists, it can mark language, as given in the introductory example of ‘morning’, but we lack a clear way to analyse it. Before presenting the methodology, I would like to reiterate that the approach outlined is chapter specific. But some facets of the method used here will be recalled in subsequent chapters.

3.3 Methodology

An analysis of primary qualities may be broached through two primary avenues; the articulate and inarticulate. Taking the articulate features of the voice, for example, a melody sung legato, moving in an ascending or descending pattern of pitches, gives rise to an arched melody line. This was the approach taken by Everett in his analysis of Missy Elliot’s ‘X-tasy’ (see Figure 1 above).

The second approach, adopted here, examines the inarticulate. These are the paralinguistic primary qualities: accent, intonation, and gesture. This is the way in which the resonance of a single pitch is shaped through intonation. Before proceeding with the analysis, it is worth looking at the types of arch-shapes that arise through intonation. The intonation range, between melodious and monotonous, is based on the combination of stresses, pitches, and junctures. Intonation gives rise to aural soundscapes that are realised through performance. For descriptive purposes, I have borrowed terminology from architecture.

¹⁹ Poyatos, Nonverbal Communication Across Disciplines, 10.
An arch with equal attack, sustain and release may be understood as a round arch. But an arch whose support is higher on one side, than on the other, is a round rampant arch. This is heard as a swell with a gradual ascending or descending slide. A three-pointed arch has cusps in the intrados on either side of the apex. This sounds like the round arch, but there is a short swell mid-way, creating a hiccup-like sound. A parabolic arch is shaped like the quadratic function: parabola. It is heard as a rapid swelling ascent with an equal decay. Finally, a catenary arch follows an inverted catenary curve. This is the curve that a hanging flexible wire or chain assumes when supported at its ends and acted upon by a gravitational force. We need only look outside to see examples of chains around green grass areas to understand this.

The reader might be wondering why there is a need for so many labels, but the thinking behind this will unfold throughout the thesis. The precise labelling will benefit our understanding of qualifiers, alternants, and differentiators in the subsequent Chapters. First, it is worth building on the methodology in the introduction by taking a closer look at vowels through spectral views.

Figure 2 gives Jürgen Handke’s formant characteristics of the four cardinal vowels. The pharyngeal cavity (F1 yellow), has a low frequency value and the oral cavity (F2 purple), has a high frequency value.
In producing the vowel [i], the resonance cavity in the mouth is reduced significantly. The tongue is elevated toward the roof limiting the space in the oral cavity for sound to resonate. [a] pushes the tongue low in the mouth, giving rise to a large resonance cavity. The lips are further apart and a large amount of air escapes, evoking a breathiness. The third example [a], indicates that the tongue is partially raised in the mouth, sharpening the sound. For [u], the tongue is almost at the roof of the mouth, dispersing the air evenly, but leaving little to no resonance cavity. The respective frequencies of the cardinal vowels are beneficial for reading melodic range spectrograms.

If a melody is pitch based, then it may be understood as a transition between one tone or note to a higher or lower tone or note. The individual tones or notes may be interpreted as a formant. Alternatively, it may be thought that the formant is a reproduction of the same note but a different timbre, which can generate a change in the spectral envelope of a sound. The following examples of a vowel, consonant, staccato and trill, give a visual control for the analysis.

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Sample Articulations

Figure 3 gives a spectrogram of [a] over 00:04. It vibrates at a low F1 value around 430Hz and a low F2 value around 818Hz. [a] places the tongue low in the mouth, forming a large oral cavity for the sound to resonate.

Figure 3: Sample Spectrogram of Vowel Sound [a]

The spectrogram, top image, indicates that the shape is a straight line, with patterns of steady micro-fluctuations in the upperpartials.

Figure 4 gives the upper partials of the consonant [c] over 00:06. It produces a low F1 value (129Hz), but a high F2 value (1335Hz). The difference lies in the microfluctuations, which are greater in Figure 4. Taking the top pane, the upper partials of the vocal can be seen in the long pillars that reach an inaudible hertz value. This forms a sharp attack which is met by a long decay. The decay causes an audible F1 and F2, that results in a wavering sound.

Figure 4: Sample Spectrogram of Consonant Sound [c]
A shape created by a consonant or vowel changes according to the singer’s intonation. Staccato, for instance, fractures the progression of articulation.

Figure 5 gives two broken ascending and descending arches. The quaver notes are evenly articulated in the ascent and descent, but the singer stalls just before 00:13, with a vibrato resonance.

Figure 5: Melodic Range Spectrogram of Staccato Articulation, 00:10-00:13

Staccato requires the singer to hit the back of the front teeth, breaking the airflow. This causes the tongue to hit the apiceovelar ridge. The raised tongue reduces the resonance cavity in the mouth and provides short sounds, with reduced air leak. This occurs through the articulation of some consonants such as ‘D’ and ‘T’.

In contrast, an example of vibrato over 00:05 is given in Figure 6. Vibrato allows the vocal cords in the pharynx to vibrate, giving the impression that they are out of control. In the spectral view, the first approximately 25% is occupied by the initial attack, and period for the note to be formed. This starts off slowly, but as the sound gathers momentum, the rise and fall in pitch builds, and the distance between pitches is reduced.
The regular, pulsating change of pitch in vibrato is an expressive feature in singing. In context, vibrato can sound fearful, desperate, or angry. Staccato, on the other hand, can depict hesitation, anger or nervousness.

The process of analysis through structural and processual mechanisms is summarised in the graph below. David Epstein’s model of structural time, has been borrowed and modified, to summarise the process of primary qualities, giving rise to expressive tropes in song.\textsuperscript{21}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{diagram.png}
\caption{Primary Voice Qualities in Popular Song}
\end{figure}

The repetitive structure of popular song is particularly suited to this analysis. The repetition of words and phrases benefits an intertextual and intercontextual analysis. The first section, for example, may have the same words and melody as the second, but the articulation may differ. Similarly, the articulation of a single phoneme can recall or inform articulations in other songs. It is important to note that the interpretation of voice qualities rely upon context and stylistic features. This is why the analysis must be evaluated in terms of the overall soundscape. The Beatles’ corpus complements this approach because there is a vast amount of repertoire for comparative purposes.

Knowledge of The Beatles’ singing style can be deduced from the songs they were performing. Their stylistic intonation was probably derived from a country-western influence; a style in which pitch bends are almost ubiquitous. The yodel-like quality constitutes a detuning of a single pitch. The singer hits a pitch centrally at the start, but then bends it through intonation. Beginning with Hank Williams, examples of the use and development of intonation, in selected Beatle songs, are analysed in relation to this topic.

3.4 Analysis
In *Buddy Holly: The Real Story*, Ellis Amburn explains that ‘[Hank] Williams and [Buddy] Holly, […] had in common a passion for breaking and twisting words into almost as many fragments as Handel, making them spin and loop to the delight of the listener’.

Amburn cites an account of Holly’s brother hearing him singing Hank Williams’ ‘Love Sick Blues’: ‘[Holly] managed every trick and turn of the 1949 No. 1 hit that heralded to Buddy the arrival of C&W’s greatest star, Hank Williams […] who became Buddy’s musical model’.

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Throughout ‘Lovesick Blues’, Hank Williams hits notes centrally at first, but then bends them. This occurs on ‘blue’, ‘cry’, ‘lonesome’ and ‘sigh’ in the lyric sections. This recurrent feature, on words of woe, emphasise the lovesick state of the antagonist. It is noted that Buddy Holly probably developed his intonation through his emulation of Hank Williams. Buddy Holly often converts monosyllabic words into multisyllables using primary voice qualities. His glottal stop, for example, is affected by syllabic duration, intonation range and rhythm. For Poyatos, syllabic duration can be ‘overclipped and clipped to single, double, and overdrawl, and long overdrawl’.  

Overclipped syllabic intonation is heard on ‘cry-hi’ in ‘That’ll be the day’, ‘We-eh-eh-eh-el’ in ‘Rave on’, and ‘pity’ in ‘Peggy Sue’. The country-western singing technique is explored in Barbara Bradby and Brian Torode’s article ‘Pity Peggy Sue’. His integration of the lilting vocal style, into early rock’n’roll, refurbished the voice quality. The glottal stop and lilting, combined with a shout, gave rise to a country-western infused rock’n’roll sound. Hank Williams’s ‘Honky tonk blues’ and ‘Hey, good lookin’ appear on The Beatles pre’ 1956 cover song set-list.

The significance of the country-western style on intonation is ever-present in this analysis. The Beatles’ cover songs are integrated to demonstrate the lineage of some arches probably learned through their emulation of prior recordings. Other examples are presented to contribute to, or enhance, understanding of expression. Beginning in 1963 with ‘Misery’, the analysis progresses through songs that demonstrate different types and functions of vocal intonation.

In ‘Misery’, the protagonist claims that the ‘world is treating him bad, misery’. Figure 7 gives an accurate transcription of the opening. I have placed a line above the

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24 Poyatos, Nonverbal Communication Across Disciplines, 16.
26 Everett, The Quarrymen through Rubber Soul, 86.
graph to show the outline of the melody. This is to demonstrate the difference between Everett’s approach to melodic gesture in his analysis of Missy Elliot’s ‘Xtasy’ and the approach adopted here through paralanguage. If the analysis followed Everett, arrows would be drawn above the transcription to indicate the direction of the melody. But this is insufficient for understanding intonation, because it highlights the direction of the melody and not the vocal resonance. Anyone with a good ear and suitable training would be able to furnish such a transcription upon hearing this extract.

Figure 7: Transcribed Notation, ‘Misery’, 00:02-00:08

What can be gathered from the transcription is that Lennon’s voice unfolds from E to A and returns to E. This results in a melodic enclosure for the protagonist who is feeling trapped by the ‘world’.

In Figure 8, I have improved the transcription by placing a melodic range spectral view of Lennon’s vocal above. It reveals that on ‘world’, Lennon’s voice swells upward to the primary pitch, before sliding down in a long decay. This gives rise to a parabolic arch. The poignancy of his intonation, forming an arch, through syllabic duration and pitch bends, supports the theme; misery.
Taking the first two notes, we can see how Lennon’s vocal rises to F and falls in a gradual decay. On ‘bad’, he attacks the B pitch centrally at the start, but tightens his vocal cords to generate a wavering resonance. The parabolic arch is a recurrent feature when we hear ‘world’ (00:17) in this song. The presence of this contributes to the emotional misfortune of the narrator, because it stresses and overplays the pronunciation of the word.

In bar 2, ‘bad’ pivots the narrative away from the all-encompassing ‘world’. The spectrogram reveals that ‘bad’ is sung with a segmental arch, followed by two round arches. Lennon’s vocal cords tighten on the second note in bar 2, evoking a wavering resonance. This is a paralinguistic voice qualifier that is made when someone speaks whilst crying. The protagonist believes that ‘the world is treating [him] bad’. In Everett’s analysis of ‘Misery’, he describes ‘bad’ as ‘the whining mordent’ and attributes the quality to Lennon. Whilst he recognises the paralinguistic property of Lennon’s articulation as ‘whining’, he does not give a transcription or analysis.

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27 ‘Misery’, *Please Please Me, The Beatles in Mono: The Complete Mono Recordings*, compact disc Paraphone B002BSHXJA, 2009. All recordings are from this mono collection unless otherwise stated.

The combination of the parabolic, segmental and round arch in this opening characterise melancholy in the song. This is achieved through the cry-like swelling of the vocal. Another example occurs after a statement of ‘my misery’ at 01:39. This time Lennon sings falsetto in a wistful longing, that produces a wailing sound. There is a slight decay before a broad peak in the spectral envelope. The decay emphasises the attack of the creaky vocal and surprises the listener.

Figure 9 gives a transcription and spectral view at 01:39. Lennon hits the note centrally, but the first approximately 80% is occupied by the initial attack and period for the tone to be formed. In the final 20%, Lennon achieves a swell near the 01:40 mark, resulting in a three-pointed arch. The brief swell and decay in his vocal generate the sound of a gulp.

Figure 9: ‘Misery’, 01:39-01:40

This is a qualifier that can occur whilst someone is crying or in fear. The transcription in Figure 7 is hard pressed to show this range of intonation. The analysis has begun with this song because Lennon blends pitch and extra-musical elements in a way that has long-
lasting influence in The Beatles’ songs and his solo career. A similar intonation is heard in ‘Ask Me Why’.

The transcription in Figure 10 suggests that the line is undulating because it moves in stepwise motion. The short transition from C# to B, leads one to expect a stable, or unwavering vocal.

Figure 10: ‘Ask Me Why’, 01:01-01:03

But the spectral view in Figure 11 shows that McCartney not only furnishes a swell, there is a rising and falling shape, that constitutes a temporary detuning of the notes. He hits C centrally at the start, but then bends it, giving rise to an M-shaped arch. The effect is that it over-emphasises the three syllables. This is supported by a comparative of Buddy Holly’s broken syllables heard throughout ‘Peggy Sue’ or Hank William’s detuning of ‘blue’ in ‘Honky tonk blues’.

Figure 11: ‘Ask Me Why’, 01:01-01:03
The parabolic arch that is achieved on ‘world’ in ‘Misery’ is similar to the M-shaped arch on ‘misery’ in ‘Ask Me Why’. One might observe that in ‘Misery’ the M-shape is supported by a change in tempo, from 6/8 to common time, and a change in supporting harmony from F to G. It might be argued that the primary domains are giving rise to intonation, but the stagnant transcription in ‘Ask Me Why’, with no change in tempo or harmony, negates this. The significance of these arches in 1963 is emphasised by comparative work. Take, for example, their cover version of Bobby Scott and Ric Marlow’s ‘A taste of honey’.

The song, originally an instrumental for the 1960s American television show of the same name, was released as a single by Lenny Welch in 1962 and covered by The Beatles in 1963. Everett notes that during the recording of Please Please Me, ‘A taste of honey’ was ‘the only non-Beatles composition taped before all five of the group’s original songs were complete’. For Everett, The Beatles reproduce the song ‘to a tee’ and the main difference lies in McCartney’s echoed vocal:

The Beatles reproduce the Lenny Welch arrangement to a tee, from the “doot-doot-n-doo’s” through the shuffling alternation of triple and quadruple meters with brushed drums, to the lead guitar arpeggiations based on the chromatic scale, although they transpose it up a whole step from E Dorian to F#. More differences, particularly in the metre and lyrics, exist between the two recordings. The Welch recording is 80 BPM, whereas The Beatles version is 100 BPM. Welch opens with ‘I think of your first kiss and then’, but McCartney sings ‘I dreamed of your first kiss and then’. Disparity also lies in the refrain: Welch sings ‘a taste much sweeter than wine’, but McCartney sings ‘tasting much sweeter than wine’. Finally, The Beatles omit the final lyric section:

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29 Everett, The Quarrymen through Rubber Soul, 150.
30 Ibid., 150.
Though other lips may cling to mine
I know they'll never bring to mine
A taste of honey
A taste much sweeter than wine.  

It is not just the lyrics, verses and tempo that differ between the two recordings, there is a variance in intonation. Figure 12 gives a spectral view of Welch’s vocals at 00:17. The view recalls the ascent of the parabolic arch from ‘Misery’. Taking the third and fourth note, we see that Welch furnishes a swell, but it does not decay and is held until ‘to mine’. This intonation results in an arch-shaped phrase. Taking the first note in bar 2, we can see that Welch achieves a vibrato vocal on ‘your’. This resonance is supported by the vibrato sample given in Figure 6 above.

Figure 12: Welch, ‘A Taste of Honey’, 00:17-00:22

Throughout the lyric sections, Welch sings an augmented arch with vocal inflections on the second and the penultimate words of specific lines. These are ‘think’,

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‘then’, ‘feel’, and ‘again’ in verse 1; ‘was’, ‘heart’, ‘linger’, ‘apart’ in verse 2 and ‘other’, ‘mine’, and ‘know’ in verse 3. The phrase swells upward in a gradual ascent with a slight decay. The note is held and just before the end of the phrase, the voice swells upward again and descends in a longer decay. Not only is this an example of intonation, the long speech-segments fall under Poyatos’ category of primary qualities.

In The Beatles’ version, McCartney does not articulate the lyrics through long-speech segments. Instead he sings specific words with vocal inflection. Figure 13 gives an example of ‘again’ at 00:27. Instead of hitting the note centrally, McCartney approaches F# with a U-shaped dip, he allows it to fall, which constitutes a subtle detuning of the pitch. He achieves a short swell before breaking and falling on ‘-gain’.

Figure 13: The Beatles, ‘A taste of honey’, 00:25-00:28

One might argue that this is a feature of the word, but at 01:16 McCartney sings the same melody with a different lyric. This time, there is a change in the articulation of ‘apart’.

The spectral view in Figure 14 reveals that McCartney’s vocal breaks after ‘a’ and descends on ‘part’. The descending intonation mimics the words of the song: just as the protagonist is far ‘a-part’ from his love, the voice detaches and descends in an arpeggiated descent. D falls to B and resonates with a vibrato vocal. The wavering in the vocal recalls the cry-like wavering in ‘Misery’ above.
The articulation of the word as an upbeat to bar 3 in Figure 13 and 14, with a downward descent, may be related to a blues singing style. This is supported by Moore, who traces the downward motion of the upbeat back to Muddy Waters in his analysis of ‘You shook me’\(^{32}\). The influence of Welch’s singing can be heard in McCartney’s cover.

It might be thought that it was only Lennon and McCartney who learned intonation through singing cover songs, but the next example gives Harrison’s vocal in ‘Devil in his heart’.

Figure 14: ‘apart’, The Beatles, ‘A Taste of Honey’, 01:14-01:17

Written by Richard P. Drapkin, ‘Devil in his heart’ was originally recorded by The Donays in 1962.\(^{33}\) The first obvious difference is that The Beatles’ version aptly substitutes the pronouns ‘his to her’, and ‘he’s to she’s’. Secondly, the metre is faster in The Donays’ version at 100 BPM, whereas The Beatles’ version is at 90 BPM. This implies a cautiousness in their performance, for as the novice follows the master, perhaps The Beatles were trailing behind their musical parentage. Even though the lead vocal is given to Harrison, McCartney and Lennon are present in the supporting harmonies.

\(^{32}\) Moore, *Song Means*, 94.

\(^{33}\) The Donays are a 1960s, all-female, African-American R&B group from Michigan.
Figure 15 gives a faithful transcription of the opening line. The repeated D’s are stagnant, giving rise to a straight vocal. Taking the last three notes, we see that Harrison not only furnishes a swell, which is shown in the transcription, there is a rising and falling shape, which constitutes a detuning of the note. His vocal swells upward to D before dropping to C. The effect of is a pulse-like quality that mimics a beating heart.

Figure 15: The Beatles, ‘Devil in her heart’, 00:08-00:11

The compressed seven quavers in bar 1 generate tension by starting on the offbeat and repeating the same note. This melodic line might be described by Moore as terraced.\(^{34}\)

The change in rhythm in bar 2 alters the momentum. This is because the repeated notes in the previous bar are released by the dotted crotchet on ‘heart’. The significance here is reinforced by comparative work. The 1957 song by Chuck Berry, ‘Rock’n’roll music’, features a pattern of terraced D pitches in the opening.

Figure 16 transcribes the opening phrase of ‘Rock’n’roll music’. The entrance of the quaver notes on the offbeat is the same as ‘Devil in her heart’. The subsequent release of the quaver notes on ‘rock and roll music’ gives a similar pitch bend in the vocal.

\(^{34}\) Moore, *Song Means*, 96.
In ‘Devil in her heart’, the subtle ascent and decay in pitch on ‘heart’, imitates a beating heart. This amplifies the meaning of the song that discusses the girl’s corrupted heart. Whilst there are parallels to be drawn between Chuck Berry’s ‘Rock’n’roll music’, Berry does not sing with the same intonation.

This leads one to conclude that the intonation was most probably emulated from their knowledge of The Donays’ recording. The word ‘heart’ at ten seconds is also more prominent in The Donays’ version than The Beatles’ cover. One notes that so far, the examples have been solitary, and it might be argued that the intonation is a result of phonetic structure. But a series of statements will now demonstrate an intertextual analysis of arched intonation.

McCartney’s vocal comes to the fore in the chorus. The consequent ‘no, no, this, I can’t believe’, is repeated three times, with each statement differing in lyric, rhythm, and intonation. These are: ‘no, no, this’; ‘oh, no, no, no, this’; and ‘Oh, no, no, no, no, no this’. Figure 17 gives these lines in order of appearance in the alternating chorus sections.

Figure 17: Three statements of the refrain in ‘She’s got the Devil in her heart’
Beginning with line 1, bar 1, the falling stepwise motion from E to D on ‘no’, reveals a melody that pivots around the fifth scale degree. The transcription gives both statements of ‘no’ equal rhythmic notation. Anyone with a good ear can hear that these words are not equally weighted in the recording.

Figure 18 gives a spectral view of line 1. This example shows how both statements give rise to a round rampant arch. There is little decay on the first statement of ‘no’ at 00:44, but the second utterance begins before 00:45 and decays at 00:46.

Figure 18: ‘no, no, this I can't believe’, ‘Devil in her heart’, 00:44-00:48

In Figure 19, line 2, from Figure 17, has been placed alongside a spectral view. As with Figure 18, the articulation of ‘no’ generates three round rampant arches. These occur between 01:17-01:19. McCartney furnishes a swell on ‘no’, allowing his vocal to decay slightly, before his voice swells upward again. This gives rise to a pulsing or wave-like sound, but this time the arches are evenly distributed and sung legato with a similar decay.
Figure 19: ‘oh, no, no, no, this’, ‘Devil in her heart’, 01:17-01:22

Figure 20 gives an analysis of line three from Figure 17. The three round rampant arches are sung vibrato. Taking ‘no, no, no, no’, we see that McCartney not only furnishes a swell, there is a wavering shape in the third round-rampant arch. This is unlike the previous statements, that were sung with legato decays.

Figure 20: ‘oh, no, no, no, no, no, this, I can’t believe’, ‘Devil in her heart’, 01:51-01:56

The recurring round rampant arch on ‘no’, building to the wavering arch in Figure 20, gives rise to a cry-like expression. The protagonist fails to believe that his love has ‘the devil in her heart’. The cry-like sound breaks in this line qualifying the expression of the narrative. It might be argued that this pattern would be observed in any performance, but comparative examples within the song demonstrate its significance.
The three statements of the line demonstrate the process of abstraction. This is a conceptual process that involves abstracting common features. The common feature can then represent the whole instead of recreating it with all its parts. Take the World Wildlife Fund logo, for example, the lines of the panda’s back and head are missing, but they are implied by our experience and knowledge of its whole form. In song, this can occur within statements: the first sets the standard, second repeats it with added or altered inflection, and third gives an abstract impression.

The melancholic themes that support these songs, and the corresponding arches, lead one to tentatively conclude that primary voice qualities have expressive significance in song. These examples contribute to feelings of longing and misery. The presence of a voice quality in one song, often functions in a similar way in another. The intonation in ‘Misery’ and ‘Ask me why’, was probably learned from the Lenny Welch version of ‘A taste of honey’, combined with songs recorded by Hank Williams and Buddy Holly. The Beatles’ version of ‘Devil in her heart’ reveals an internal comparative of one phrase. This negates the argument that this pattern would be observed in any performance of a word across songs.

The wave-like intonation in ‘Devil in her heart’, for example, is later heard in ‘Hold me tight’. Everett notes that this song, from the Cavern set-lists, was inspired by the Shirelles’ ‘Will you still love me tomorrow’. It ‘is built upon a bass ostinato played by both McCartney and Lennon, that looks forward to ‘Birthday’’.35 ‘Hold me tight’ gives rise to an example of intonation occurring on one word repeated multiple times.

Figure 21 gives a transcription of the refrain. Taking the first two notes, we see that McCartney not only furnishes a swell, which is shown in the transcription with hairpins, there is rising and falling intonation, giving rise to a catenary arch. The arch

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35 Everett, The Quarrymen through Rubber Soul, 187.
falls gradually with a vibrato decay. McCartney achieves a swell on ‘you’, giving a straight line, two round arches, followed by a vibrato decay. The descending vibrato arch on ‘oo’ suggests a cry-like sobbing, similar to Figure 20.

Figure 21: ‘Hold me tight’, 00:25-00:31

The use of intonation on the same word, within a song, reveals that it is the subtle nuance of pitch giving rise to expression. The Beatles were not only using paralinguistic intonation to mark formal structures, they often employed it to enhance the narrative content. For instance, descending intonation could mark the end of sections or an initial preparatory intonation would be hyperbolised later in a song. This is heard in the refrain of ‘Eight days a week’.

The word ‘love’ is prepared in the lyrics and exaggerated in the chorus. At 00:21, Lennon sings ‘hold me, love me, hold me, love me’. As requested, each statement of ‘hold’ and ‘love’, is held for a dotted crotchet. Figure 22 reveals that ‘hold’ and ‘love’ are sung with round rampant arches. McCartney achieves a swell to reach the note, but instead of sustaining it, he allows it to drop off. This diverges from the legato and vibrato decays in ‘Devil in her heart’.
Taking the first two notes, we see that McCartney sings a legato round rampant arch. In bar 2, he places an emphasis on ‘love’ by raising the amplitude (indicated by the bright white in the spectral view). The round rampant arch is heard again in bar 3, but bar 4 gives an abstract impression of bar 2. The intonation is not as audible and is sung vibrato.

It is proposed that this process of abstraction was learned through their performance of ‘no’ in ‘Devil in her heart’. But unlike ‘Devil in her heart’, McCartney builds toward a hyperbolised statement of ‘love’ at 01:05. Taking bar 2 and 4 in Figure 22, it appears that ‘love’ builds toward this climax. Instead of the dotted crotchets in Figure 22, ‘love’ in Figure 23 is augmented to four crotchet beats. McCartney not only furnishes a swell, he articulates the line with two round arches and a parabolic arch.
The augmented ‘love’ recalls the immediate past of the opening lyrics and the appearance of the word in the B section. The hyperbolised line contributes to the narrative that augments the duration of a week to ‘eight days’. In this example, the articulation expresses the emotional state of the protagonist who is trying to convey their love for the antagonist. This use of intonation to augment the syllabic duration helps to communicate the message of the song through primary voice qualities. In ‘Eight days a week’, modifiers and contextual elements, such as lyrics, perform a self-regulatory function and an interactional one. The modification of shape to enhance the lyric is an example of the modifier and contextual element providing an interactional function.

At this point, one can conclude that intonation gives rise to aural arch-shapes. These arches contribute to expression, because they enhance or modify lexicon. SV is useful for viewing the subtle nuances of intonation that cannot be accounted for through traditional models of transcription. The combination of intonation and lexicon contribute to the song’s narrative. In select songs, these examples undergo a process of abstraction that function to amplify delivery.

The nuances of pitch, heard in these songs, are supported by comparative work from cover songs. The sounds are employed in specific ways that either allude to or quote their influences. ‘I’ve just seen a face’, for example, presents a country-western vocal inflection similar to Buddy Holly’s ‘That’ll be the day’ and Hank Williams’ ‘Lovesick blues’. In 1965 and 1966, songs such as ‘In my life’, ‘Ticket to ride’, and ‘For no one’ mark a development of these thematic aural quotations. The primary qualities heard in ‘What you’re doing’, for example, demonstrate the influence of the cover song and mark the emergence of a self-reflective period. In Everett’s analysis of ‘What you’re doing’,
he notes that ‘the shouted “look!” and “I’m” sound like a rehash of the twice-heard “wait!” that opens ‘Please Mr. Postman’.\(^{36}\)

In ‘What you’re doing’ inflections of pitch mark the return to the verse sections. The form is AABABA, and an arched resonance occurs at the end of both B sections, signalling a return to the A section. The song tells the tale of the protagonist who feels that the antagonist is literally antagonising him. One might argue that this is melodic shape and not a result of intonation. But on repetition, the melody stays the same with a change in intonation.

There are two statements of ‘me’, 00:27 and 00:44, that build to an augmented 4 second ‘me’ at 00:57. Figure 24 gives a transcription and spectral view of the first statement. We see that McCartney not only furnishes a swell, there is a rising and falling shape, giving rise to a round rampant arch.

Figure 24: first ‘me’, ‘What you’re doing’, 00:27-00:29

The transcription for the second statement gives identical notation, but there is a variance. Figure 25 shows that McCartney’s vocal breaks before sliding up to F#. He sings ‘to’ as two syllables in a staccato descent and on ‘me’ his voice rises from B to F#,

\(^{36}\) Everett, *The Quarrymen through Rubber Soul*, 261.
to achieve a swell in the vocal. This articulation resonates in the upper partials of the voice, indicated by the shadow above the fundamental pitch (Chapter 4).

Figure 25: second ‘me’, ‘What you’re doing’, 00:44-00:46

Figure 26 gives a spectral view of the third statement. This time, McCartney’s vocal spans eight beats. The examples shown in Figure 24 and 25 were supported by chord I in D major. But the example in Figure 26 is supported by chord V falling to IV to start the A section. This taste of the twelve-bar blues was probably derived from their cover song set lists. In this example, three characteristics of the arched intonation are demonstrated: it challenges the expectations of the listener by altering the resonance, it constitutes content by facilitating a return to the A section, and it functions as a narrative marker by augmenting of the self-possessive pronoun.

Figure 26: third ‘me’, ‘What you’re doing’, 00:57-01:01
This is because Figure 24 and 25 above establish an expectation for ‘me’ as sung over a two second round rampant arch. At 00:57, we hear that McCartney not only furnishes a swell, he sings a descending round rampant arch over four seconds. This process of abstraction generates an expressive articulation that marks a climactic point in the song.

Just as the statements at 00:27 and 00:44 marked a return to the lyric sections, the four second ‘me’ functions as a marker for the return to the final A section. This emphasises its role as a climactic marker and demonstrates how it constitutes content in the narrative. The topic of the final statement is changed by the expression. The augmented pronoun is taken to represent the protagonist and the articulation expresses a pleading in the narrative.

The protagonist is singing about a troubled romance. They are ‘running’ and patiently ‘waiting with a love that is true’. Becoming desperate, the protagonist overemphasises that they are the right person for the antagonist, ‘it’s me’. The round rampant arch stresses and overplays the word conveying desperation. It might be argued that this pattern would be observed in any performance of the word. But the significance of it here is supported by comparative work.

The possessive ‘me’ is sung as ‘my’, in Lennon’s inward looking ‘In my life’. The use of a round rampant arch causes uncertainty in the harmony, rhythm, melody, and the narrative. The song is in E major, but on ‘my’, the C is naturalised and supported by a D minor chord. This not only enhances the change of chord, it contributes to the sombre style of the song. This is supported by Everett’s observation of Lennon’s reflective period in Chapter 1.

Figure 27 gives an analysis of the final line. This phrase is marked by a change in rhythm, harmony, and pitch. The subtle hints of a D minor chord throughout the song are resolved in this statement. Taking the first four notes in bar 2, we see that Lennon not
only furnishes a swell, there is a rising and falling round rampant arch, which constitutes a detuning of the note. The detuning is supported by hints of D minor, causing instability in the song’s harmonic structure. This instability is mirrored in the narrative because the descending arch, has the cry-like quality heard in ‘Misery’ and ‘Ask me why’.

The articulation of ‘I’ forms a pivot point in the song. It is naturalised as F, and prepares for a change of rhythm to 2/4, for ‘love you’. The rhythm returns to common time for ‘more’. Taking the second note in bar 3, we can see from the spectral view that on ‘you’, Lennon aims for a parabolic arch similar to the one heard in ‘Misery’, but he only articulates the ascent and sustains the C# for one second.

Figure 27: ‘In my life’, 02:10-02:15

Lennon uses the same device in the opening of his self-reflective ‘I’m a loser’. His vocal is delivered through a rockabilly sound, that is reminiscent of Hank Williams’ vocal style.

Figure 28 gives a transcription of the opening 00:07. Lennon not only attains a swell, which is shown in the transcription with hairpins, there is a rising and falling shape on ‘loser’. Taking the first note in bar 2, we can see that he hits the pitch centrally, but bends it, giving rise to a segmental arch. The G semibreve on ‘los-’ falls to F# crotchet on ‘-er’. The augmented G prolongs the arrival of the F# leading note, and the second
syllable of the word. In this instance, ambiguity is achieved in two ways: the listener awaits the knowledge of the word and confirmation of the key.

Figure 28: opening of ‘I’m a loser’, 00:00-00:07

In the second statement, Lennon achieves a similar segmental arch, but turns it into a brief three-pointed arch at the end of bar 4. This is heard as a hiccup before the articulation of the second syllable.

The ambiguity of key, shape, and lyric in the opening two statements contribute to the narrative. The next line supports the ambiguous opening: ‘and I’m not what I appear to be’. The hook ‘I’m a loser’, reoccurs in the refrain. Although, this time ‘-er’ does not fall to F# and remains on G. This removes the ambiguity set up in the introduction and emphasises the intonation. The segmental arch gives rise to a sigh-like quality, whilst evoking a feeling of helplessness.

The two opening statements of ‘loser’ are continued in the first statement of the refrain and resolved by the second statement. This generates a feeling of completion in the mind of the listener by explaining the narrative and establishing the key of G major. By resolving on G and not falling to F#, it disrupts the expectation set up by the previous
statements. It might be argued that these patterns are features of the singer’s vocal style and are not deliberate, but the consistency of intonation on ‘no’ in ‘Devil in her heart’, ‘me’ in what you’re doing’ and ‘my’ from ‘In my life’ reinforces the use within and across songs. It might be further argued that these are only cross-functional, but the changing intonation, within a song, was shown in ‘Devil in her heart’. This is supported by similar articulation heard, on the same word, in ‘Ticket to ride’.

Lennon sings the verses, with McCartney and Harrison singing backing vocals at the end of phrases. When they do, the mono line becomes homophonic and the word is augmented. This occurs on ‘today’, ‘away’, ‘ride’, ‘down’, ‘around’, and ‘me’. These words contribute to the rhyming scheme of the lyrics, for example, ‘today’ and ‘away’ have a similar rhyme-end.

The word ‘ride’ represents the hook throughout the song. But the melodic shape and consequent intonation are inconsistent. Taking the final four notes at 00:25, in Figure 29, we can hear that Lennon splits the word into ‘ri-ide’. He holds the E for a crotchet beat and uses a breath to slide upward to F#. This fractures the articulation and gives rise to an ascending slide to F#.

Figure 29: ‘ride’, ‘Ticket to ride’, 00:23-00:26
At 00:29, Lennon divides the word into three syllables, singing ‘ri-i-ide’. The melody in Figure 30 shows that this is an arpeggiated descent from F#-E-C#. What cannot be taken from the transcription is the **way** his voice transitions from one pitch to the other. The spectral view gives the intonation of his vocal in this descending melody. We can hear that Lennon’s vocal does not descend in a legato descent from F# to C#. He achieves a swell on the first syllable, breaks for the second swell, and slides into the third. This enables the F# to resonate with vibrato articulation in a long decay.

Figure 30: second ‘ride’, ‘Ticket to Ride’, 00:27-00:30

The third statement disrupts the expectation established by the previous two. After hearing the broken syllables twice, the listener envisages the intonation with some degree of probability. But Lennon abandons his multisyllabic intonation and sings ‘ride’ as one syllable. He does not achieve a swell or arched intonation, instead he sings an undulating pitch that resides in the upper partials.
The use of modified intonation, to deliver the same word across eight seconds, further negates the argument that phonetic structure is causal to intonation. This does occur to some degree, but the singer employs primary voice qualities in a structured way to enhance expression. In this example, the word is first articulated with two syllables (ri-ide), then three syllables (ri-i-ide), and finally as one syllable (ride). The use of syllabic resonance and intonation result in a process of abstraction. This is similar to the articulation of ‘no’ in ‘Devil in her heart’ and ‘me’ in ‘In my life’.

It is important to note that paralinguistic primary qualities are not limited to a process of abstraction, whereby a part can represent the whole. By building on paralinguistic primary qualities used in daily interaction, these arches gain expressive significance. This is heard in ‘Nowhere man’, a song that augments phrasing in a similar way to Lenny Welch’s ‘A taste of honey’ and The Beatles’ ‘I’m a loser’.

‘Nowhere man’, opens with two phrase-like arches that recall the opening of ‘I’m a loser’. From Figure 32, we can see that the two phrases represent an unfolding of chord one in E major, falling as E-B-G#. Taking bar 1 and 2, we can hear Lennon’s augmentation of E. This can be contrasted with ‘Ticket to ride’, which used broken
syllables to modify articulation. But Lennon does not use syllabic intonation on ‘real’. Instead he augments the two vowels, resulting in a round arch.

Figure 32: ‘Nowhere man’, 00:00-00:08

Taking the fourth and fifth note in bar 3, we see how he furnishes a U-shaped arch. The phrase-like round arches in this opening function as a paralinguistic quotation. This is because they recall Lenny Welch and Roy Orbison’s long speech segments. The long speech segments are enhanced in this example by establishing the melancholic theme. Not only were they recalling past influences through paralinguistic quotation, a self-referential process was emerging.

At 00:42, Lennon furnishes a swell on ‘world’. The reappearance of the parabolic arch on ‘world’ is reminiscent of the feeling of melancholy evoked in ‘Misery’. This is now a recurrent feature when we hear the word in Lennon’s singing. In contrast to ‘misery’, his perspective is positive in ‘Nowhere man’. In 1963, the ‘world [was] treating [him] bad’, but three years later, ‘the world is at [his] command’.
The parabolic arch, on the same word, reinstates the use of intonation on words of woe in their songs, whilst simultaneously presenting a changing perspective in Lennon at the time. The intonation is used to recall previous thoughts of the world mistreating him in ‘Misery’. Taking bar 1 and 2 in Figure 33, we can see that Lennon slides up to E and allows his vocal to fall in a melodic descent. The fourth note in bar 2 reveals the resonance of his vocal, giving rise to vibrato articulation.

Figure 33: ‘world’, ‘Nowhere man’, 00:42-00:46

It might be argued that the consistent intonation is the result of the syllabic and phonetic structure of ‘world’. But the significance of the arch on ‘world’ is supported by comparative work where the parabolic arch does not occur. Examples include: 1964 ‘I’ll cry instead’, 1967 ‘Fool on the hill’, and 1969 ‘Across the universe’.

In ‘I’ll cry instead’, Lennon sings world at 01:00 with a vibrato resonance. From Figure 34, we can see that he achieves an ascending intonation, but does not allow the vocal to decay in a descent. Instead, his vocal decays with vibrato resonance. The previous examples of ‘world’, sung with a parabolic arch, created a past experience. The knowledgeable listener will expect a similar intonation on this word. When the expectation is not met, it results in tension.
This is reemphasised in McCartney’s ‘Fool on the hill’. He presents the idea of the knowledgeable ‘fool’, who has been ostracised. Everett observes that each section of the song has its own tonal character: ‘befitting the changing narrative points of view regarding the fool’s unsuccessful position as defined by social norms’. The static bass reflects the ‘fools’ latency: ‘keeping perfectly still’; whilst the internal melody relates to the fool’s song that cannot be heard:

Instead of answering with his own conventional 3-2-1 descent, the fool presents his very different perspective […] we hear a rising motion from an inner voice […] This minor-mode line must be the fool’s song, to which nobody pays attention as it is buried in the inner voices until it rises to meet the upper voice […] the masses.

Figure 35 enhances Everett’s reading of the inner voice depicting the fool’s song. McCartney sings a straight line and ironically follows with an arch on ‘round’. The example shows how the fool breaks our expectation of the word by singing a straight-line on the anticipated arched intonation. The irony of this is reinforced by McCartney’s decision to articulate ‘round’ using the parabolic arch that was anticipated on ‘world’.

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37 Everett, Revolver through the anthology, 138-139
38 Ibid., 140.
The deliberate displacement of the arch on ‘world’ in ‘Fool on the hill’, not only plays with the listener’s expectations, it contributes to the narrative. The fool sees the world differently to those around him, for he might believe that it is flat. It might be argued that this intonation is a result of McCartney’s singing style, but the significance of it here is supported by a comparative study of Lennon’s intonation in ‘I’ll cry instead’ above, and in ‘Across the Universe’.

The opening *White album* song features the round arch, but not on ‘world’. Figure 36 gives the opening 00:05, which recalls the 00:08 opening of ‘Nowhere man’ from Figure 32. The four D quaver notes sung on ‘words are flying’, fall to a turn on ‘out like endless’, giving rise to a round rampant arch. This is reminiscent of the opening of Chuck Berry’s ‘Rock’n’roll music’ and ‘Devil in her heart’ discussed above.
At 00:45, Lennon sings ‘nothings gonna change my world’. Figure 37 gives a spectral view of ‘world’. This time, there is no swell, Lennon hints at a parabolic arch on ‘my’, but it falls from E to G in a rapid descent. Lennon states that ‘nothing’ is going to change his world, but ironically, his intonation has changed.

Figure 37: ‘Across the Universe’, 00:42-00:52

39 Recording from Let it be naked, compact disc Capitol B0000DJZA5, 2003.
In contradiction to the change of intonation, the line is supported by a twelve-bar blues chord progression recalling their early set list songs. The harmony moves from A to G on ‘nothing’ and falls to D major on ‘world’, forming a V-IV-I progression. The contrast between the change of intonation on ‘world’ and the use of the twelve-bar blues creates a dichotomy. This is because they appear to be progressing in their use of intonation, but their use of harmony is stagnating.

Figure 38 gives a faithful transcription of ‘universe’ at 00:21. The spectral view reveals a melody that pivots around the fifth scale degree, with a U-shaped dip in the middle. Perhaps Lennon was pushing the boundaries of the word whilst searching across the universe. The boundaries of the metre are also challenged in this phrase. Bar 2, sung in common time, changes to 5/4 in bar 3, and returns to common time for ‘pools of sorrow, waves of joy’. The change in metre to 5/4 is supported by a change in harmony to V7 and resolves to I on ‘pools’.

Figure 38: ‘Across the Universe’, 00:15-00:22

A U-shape occurs on ‘universe’, with Lennon’s vocal rising in a stepwise motion from A to C. The bar teases at C initially, with passing notes of B and does not reach C until the third syllable of universe. This evokes a sense of arrival in the song, which is delayed
through Lennon’s intonation. The change in metre recalls the boundary breaking in ‘Eight days a week’. But the optimism expressed here does not stay with Lennon for long. Fast forward to ‘Imagine’ in 1971 and ‘world’ returns with its melancholic expressive intonation.

Figure 39 transcribes an acapella version of Lennon’s vocal. At 01:49, his voice gradually swells upward from C to E. After 01:50, his voice decays to the original pitch, giving rise to a three-pointed arch. The consistency of an arch, on this word, confirms the use of intonation to communicate feelings of woe.

Figure 39: ‘world’, Lennon’s ‘Imagine’, 01:49-01:53

This allows one to discuss the melodic strategies in songs by The Beatles, that facilitate these expressive tropes. The patterns of intonation, learned through cover songs, were becoming embedded in the narrative. Not only were they expanding their function by transforming patterns of intonation into expressive tropes, they were testing the articulation of these patterns. Through the combination of the hiccup quality of the glottal stop and the legato intonation of the arch shapes, they began to use the broken arch in their songs. The next example, Figure 40, gives a transcription of the introduction of ‘For

no one’. In contrast to the phrase-like arch in ‘A taste of honey’ and ‘I’m a loser’, ‘For no one’ presents a broken intonation in the opening.

Taking bar 1 we see that McCartney achieves a swell. This is shown as an undulating melody in the transcription, but there is a rising and falling shape in the two phrases. The repeated F# does not depict the shape of the voice. This is repeated in the second A section on ‘you want her, you need her’. The spectral view shows how the line ascends, dips slightly, and descends in two parts. This results in an M-shape that is reminiscent of the articulation of ‘misery’ in ‘Ask me why’ and the phrase-like opening of ‘I’m a loser’. Everett alludes to this intonation by stating that the song ‘characterises the individual melodic arches shaped in the verse and the more agitated bridge’.  

Figure 40: ‘For no one’, 00:00-00:08

‘For no one’ introduces the broken arch to The Beatles’ palette of paralinguistic primary qualities. This is best demonstrated in Figure 41. There are two types of the

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41 Everett notes that ‘Paul wrote ‘For no one’ while on a March 1966 Swiss vacation. The manuscript (seen in Campbell and Murphy 1980, xli) is titled ‘Why did it die?’.’ Yet another example of The Beatles’ ability and ambition to gain influences from diverse sources.

42 Everett, Revolver through the anthology, 56.
broken arch that occur in this line. Taking the second and third notes in bar 1, it shows that there is a split parabolic arch on ‘you see’. Just as the antagonist sees ‘nothing’, the intonation is used to break the continuity of the sound.

Figure 41: ‘For no one’, 01:02-01:09

Taking bar 1 in Figure 41, we see that McCartney slides up to C, pauses and descends, giving rise to a broken round rampant arch. The staccato articulation of the rising and falling quavers evoke a broken articulation. This enhances the content of the lyrics, by mimicking disjunct sobbing and trying to look behind the tears for a sign of love.

The mimicry of the broken arch by Civil’s four bars on the horn imitate the disjunct sobbing. This also indicates Civil’s playing as a precursor for sound tropes heard throughout Sgt. Pepper. For Everett the final note played by the horn ‘suggests one last retreat to fond memories’. The song ends on chord IV and ‘the 4-3 suspension is the ‘musical equivalent of a sigh, the sorrow and self-obsession of a lover left behind’, all in

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43 Everett, Revolver through the anthology, 56.
the distant gallant style’. The sigh-like intonation recalls the arch shape on ‘loser’ in ‘I’m a loser’.

As the analysis progresses into their late period, vocal intonation becomes more proactive. Songs like ‘Lucy in the sky with diamonds’, ‘Mother nature’s son’, ‘The long and winding road’, ‘Julia’, ‘A day in the life’, ‘Happiness is a warm gun’, ‘Honey pie’, ‘While my guitar gently weeps’ and ‘Fixing a hole’ present examples where primary qualities, not only express content, they often constitute content.

In 1967 Lennon learned through fan mail, that a teacher, in his Grammar school, was analysing his songs in class. Lennon wrote ‘I am the walrus’ in opposition to these analyses and packed it with musical and literary influences. ‘I am the walrus’ has references to Lewis Carroll’s *Alice through the Looking Glass* and William Shakespeare’s *King Lear*. Sections of the lyrics are thought to have been influenced by a playground chant with Lennon’s school friend, Pete Shotton:

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Yellow matter custard, green slop pie,
All mixed together with a dead dog’s eye,
Slap it on a butty, ten foot thick,
Then wash it all down with a cup of cold sick.
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Lennon sings a series of sections in ternary form. Each of the A sections is closed by a descending ‘I’m crying’. Figure 42 transcribes the first statement of ‘crying’. Just like ‘ride’ in ‘Ticket to ride’, Lennon uses fractured syllabic resonance to emphasise the two syllables: ‘cry-ing’. There is a rising and falling shape in the transcription, and the spectral view conveys a faint parabolic arch.

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44 Everett, *Revolver through the anthology*, 56.
45 A sigh is a paralinguistic qualifier that communicates feelings of exasperation and frustration.
46 Everett, *Revolver through the Anthology*, 133.
The significance here is reinforced by comparative work, for example, the 1959 song by Buddy Holly, ‘Crying, waiting, hoping’, features the word no fewer than thirteen times. Figure 43 gives a spectral view of ‘crying’ in ‘Crying, waiting, hoping’. Buddy Holly not only furnishes a swell, his intonation gives rise to a faint parabolic arch.

Figure 43: ‘crying’, Buddy Holly, ‘Crying, waiting, hoping’, 00:37-00:38

Figure 44 gives The Beatles’ performance of ‘Crying, waiting, hoping’. McCartney sings a faint round rampant arch on ‘crying’. Perhaps, like ‘A taste of honey’, in their early attempts at mimicry, they were cautious about achieving the full expression.

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Their imitation of ‘crying’ in ‘Crying, waiting, hoping’ is realised in ‘I am the walrus’. It is first heard as an arch-shaped turn, but is augmented to a falsetto-like ‘crying’ leading to a high A.

The importance of this is three-fold: Firstly, it presents the intonation Buddy Holly used on ‘crying’ in ‘Crying, waiting, hoping’. Secondly, it creates an immediate past, because the intonation is presented in the song and recalled throughout. This is because the first statement of ‘crying’ establishes an expectation for subsequent statements. When the expected intonation is not realised, it creates tension. Thirdly, the blending of intonation and narrative transforms the function of the arched-intonation from decorative to expressive. It further informs the bridge-like structure, leading to the re-entrance of the A section.

This is supported by Moore’s analysis of Led Zeppelin’s version of the J.B. Lenoir/Willie Dixon song ‘You shook me’. Moore observes that ‘Robert Plant maintains the sense of downward motion, particularly in the last line of the verse’. He believes that the descending melodic intonation was probably learned through the Muddy Waters original. He traces the melodic contour through Rod Stewart and Jeff Beck’s versions.

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48 Moore, *Song Means*, 94.
For Moore, the descending melodic contour is not the result of phonetics. This is affirmed through a comparative of Elvis’ ‘All shook up’. He notes that ‘there is clearly no necessary association between the contour and the word ‘shook’, since in Elvis Presley’s ‘All shook up’, while there is a constant upbeat rise to the tonic, there is no fall from it’.\textsuperscript{49} This is supported by further comparative work, for the descending intonation on ‘crying’, is heard on ‘diamonds’ in ‘Lucy in the sky with diamonds’.

The 1967 \textit{Sgt. Pepper} song was allegedly inspired by young Julian Lennon’s drawing. The title is supposed to have reminded Lennon of Lewis Carroll’s poem ‘A boat beneath a sunny sky’ in \textit{Alice Through the looking glass}:\textsuperscript{50}

\begin{verbatim}
Still she haunts me, phantomwise
Alice moving under skies
Never seen by waking eyes
\end{verbatim}

From Figure 45 we can see the descending intonation on ‘diamonds’, giving rise to a round rampant arch. The significance of the straight vocal and the arch is supported by early cover songs: ‘Rock’n’roll music’ and ‘Devil in her heart’. The lyrics tell the tale of Lucy in the sky, but she is weighed down with diamonds. The result is that she will fall from the sky. Just as the descending arched intonation draws the melody downward, the weight of the diamonds pulls Lucy down. But the descending melody is contradicted by the harmony that ascends toward V. Written a year prior to The Beatles’ trip to India, perhaps it is an opinion on materiality. The material weight of the diamonds is preventing Lucy from elevating her ‘self’.

\begin{footnotes}
\item[49] Moore, \textit{Song Means}, 94.
\item[50] Lewis Carroll, \textit{Alice’s Adventures in Wonderland} (Wordsworth Classics, 1992).
\end{footnotes}
Figure 46 gives the next statement, but this time it is sung legato. On ‘head’, Lennon’s vocal descends mimicking the flowers tilting over Lucy’s head. At 01:43, ‘away’ is broken into ‘a-way’ and articulated with a round rampant arch. The disjunct between the descending line and the broken word convey the description of Lucy being taken away. The melody is sung over chord I and is the same D repeated until it falls to C. This recalls the opening of ‘Rock’n’roll music’ and ‘Devil in her heart’.

The articulation of ‘away’ was probably learned through their emulation of Lenny Welch: the intonation achieved on ‘apart’ in ‘A taste of honey’ supports this (Figure 14).
At this point, one can tentatively suggest that these arches not only function as expressive tropes, they can personify the meaning of a word. This is supported by an example from ‘A day in the life’.

Figure 47 gives a spectral view of the opening lyric. Lennon sings a series of waverying round arches. His voice swells up to E on ‘news’ and falls from E to B giving rise to a parabolic arch on ‘Oh! Boy’. The arch is not fluid and causes a break in the transition, whilst evoking feelings of woe. This is reinforced by the analysis of the broken parabolic arch in ‘For no one’ and Buddy Holly’s ‘Crying, waiting, hoping’.

Figure 47: ‘A day in the life’, 00:13-00:17

For the first-time listener, ‘A day in the life’ is a mundane story of someone reading the newspaper. The vocal ascends on ‘news’, plateaus on ‘today’ rises softly on ‘oh!’ and falls breaking just before the articulation of ‘boy’.\textsuperscript{51} The intonation causes uncertainty as to the overall theme. It is known that the protagonist has read the news, but the descending disjunct melody, evokes a feeling of angst. The fractured ‘oh! boy’ implies a glottal stop and conjures up the image of the protagonist clearing his throat to

\textsuperscript{51} The lyric ‘oh boy’ alludes to the Buddy Holly ‘oh boy’ aural signature heard throughout the Buddy Holly and The Crickets song ‘Oh boy’, released in 1957.
inhibit crying. This is reinforced through Buddy Holly’s use of glottal stop in ‘Pity Peggy Sue’ and ‘Crying, waiting, hoping’.

An example of text painting through intonation is given in Figure 48. ‘Downstairs’ is expressed through intonation, qualifying words, and syllabic duration. The protagonist finds his way downstairs and the vocal descends in a round rampant arch from B to G#.

Figure 48: ‘A day in the life’, ‘downstairs’, 02:29-02:31

This is characterised by a change in rhythm from 2/4 to common time. The spectral view shows the break in the arch between ‘down’ and ‘stairs’, helping to deliver the narrative. The intonation, delivered as a broken arch, qualifies the language used.

Their use of arched intonation is further developed in their late style. The inverted arch, for instance, is developed from a brief vocal melisma in the opening of ‘There’s a place’ in 1963. This gives rise to primary qualities that are post-lexical and employed in an interactional way to deliver songs. Such a development is heard in ‘Mother nature’s son’. It is noted that ‘Mother nature’s son’ and ‘child of nature’ were inspired by the Maharishi’s lecture on nature. The lyrics are minimal with three verses and the repetition of the title three times.
Figure 49 gives a transcription of the bridge in ‘Mother nature’s son’. In this section, McCartney abandons lyrics and employs a series of ‘do’, ‘yeah’ and ‘m’s’. The repetition of these mono syllable words requires intonation to avoid monotony. The melody oscillates around D, which means that variation is achieved through intonation. The first two notes of bar 2 and bar 4 hint at a parabolic arch. The change of metre in bar 5 contributes to a three-pointed arch. This three-pointed arch is heard again in the penultimate bar on G.

As with the series of three that occurs in ‘Hold me tight’ on ‘you’, and ‘crying’ in ‘I am the walrus’, the third phrase of ‘do’s’, sung in a three-pointed arch, play with the listener’s expectation. Taking bar 7, we see that McCartney hits the D pitch centrally, but achieves a swell. The swell breaks momentarily, and decays to an augmented ‘do’. This final statement marks a return to common time and leads into the next verse.

Following the second verse, the sequence of ‘do’s’ is repeated. The first two statements are exact, but the final statement differs, because it is sung as a broken round arch. This is redolent of the broken arch in ‘For no one’ given in Figure 41.
Figure 50: ‘Mother nature’s son’, 02:09-02:10

Figure 51 gives the final phrase; ‘m’ repeated at different pitches, giving rise to both segmental and three-pointed arches.

Figure 51: ‘Mother Nature’s Son’, 02:15-02:25

McCartney’s intonation, giving rise to shape, from monosyllabic sounds, is hyperbolised in this song. This recalls the folk-like singing style of Hank Williams, whose ‘Lovesick blues’, demonstrates post-lexical arches. The words become subservient to the
melody and perhaps this is how the Maharishi lecture inspired McCartney. It is cautiously suggested that he became humbled by nature and felt that words failed to convey his message. This is not without trying to incorporate nature into The Beatles’ earlier songs such as ‘Little Piggies’ and ‘Good morning, Good morning’.\textsuperscript{52} This abandonment of lexicon, in favour of post-lexical intonation, is heard in Lennon’s ‘Julia’.

Lennon suffered the loss of his mother twice. His mother left him to be raised by his Aunt Mimi when he was a child and then she was killed in a car crash in his teenage years. The death may have been internalised by Lennon as another abandonment, of which he struggled to overcome throughout his life. This is highlighted by his lament-like solo song; ‘Mother’. Opening with the defeatist ‘half of what I say is meaningless’, ‘Julia’ expresses Lennon’s desperation to communicate with his deceased mother. His confusion, frustration, and the inability of vocabulary to articulate himself is indicated through his reliance on intonation. This is supported by ‘Mother nature’s son’, because words break down entirely with a ‘hum, hum, hum’ in the final lyric section.

Figure 52 gives a spectral view and transcription of the first statement at 00:52. The ‘ju’ is sung as a straight line, with ‘li’ marking the descent and ‘a’ falling further. The descending ‘a’ is interrupted by the next statement of ‘Julia’. This time, however, it is shorter in duration; and sung as a straight line with a U-shaped dip on ‘li’, that is picked up by ‘a’. The U-shaped dip is an inverted parabolic arch. It is followed by a pause and a further statement of ‘Julia’. The line is almost the same as the previous statement, but the inverted arch on ‘li’ is picked up tentatively and does not fade. Instead, Lennon sustains it through a vibrato resonance.

The effect is that it corresponds with the overall narrative. Just as Lennon had to pick himself up after losing his mother twice, the intonation must pick itself up twice, before proceeding with the song. Three statements of ‘Julia’ do not occur again in succession until the final line. In subsequent statements; ‘seashell’, ‘morning’, and ‘sleeping’ are heard instead of the third ‘Julia’, that is expected from this opening.

The seashell, once mythologised as having the potential to communicate with mermaids, lends itself to Lennon’s depiction of his mother as a mermaid with ‘hair of floating sky’. Perhaps Lennon saw the seashell as a final avenue of communication with his deceased mother. This is reinforced by Lennon’s self-interruption using double tracking. The overlapping echo gives his vocal an otherworldly feel. The extension of his vocal contributes to the dream-like quality of the song. Simultaneously, his lament and longing for his mother is apparent in the ‘morning’, whilst ‘sleeping’ and he would even try to reach her through a ‘seashell’.

The juxtaposition of the long straight lines, and the inverted parabolic arch, form a wave-like sound. The wave approaches the shore and before it can settle, it is whisked

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53 The sea metaphors might also be related to Lennon’s father who was a seaman.
back out to sea. The instability of the ocean is reflected in Lennon’s personal experience
with his mother who was taken from his grasp, returned to him, and whisked away again.

Perhaps it is none of these speculations, and the song is a nod to the Crescendo’s
1957 song ‘Julie’. The song opens with ‘oh Julie’ and backing vocals singing ‘ah’ that
sound like ‘Julia’. But our knowledge of Lennon’s past, combined with the consistency
of intonation, supports the former interpretation. The consistency of the arched
intonation, in songs of woe, suggests that just as words verbalise a story, primary qualities
can function as narrative markers.

It seems apt to conclude this chapter with ‘The long and winding road’. Everett
notes that McCartney derived his inspiration for the song from Ray Charles. Everett’s
voice leading analysis starts and concludes on scale degree 8. This recalls the arrival and
departure of the melody in ‘Mother nature’s son’. The effect is that it forms a cyclical
feeling on this ‘long and winding road’.

Figure 53 gives the opening twelve seconds. The word ‘that’ is articulated as an
M-shape, similar to the one heard in 1963 ‘Ask me why’ and 1966 ‘For no one’. Taking
the last note in bar 1 and the first note in bar 2, we can see that McCartney sings road
with an ascending straight line. At the end of bar 2, ‘that’ is transcribed as C falling to G
and one would expect a descending straight intonation. But McCartney achieves a swell
on this note, it dips slightly, and swells again before decaying. This forms an M-shape,
giving rise to uncertainty in the vocal.
Perhaps the protagonist is unsure if the ‘long and winding road’ will lead to ‘your door’. At the end of the phrase, the melody leads to C, suggesting that they will not be led to their door, or home key. The C is supported by an Ab major chord, or IV in Eb major, and marks a return to the lyric section.

In contrast, from Figure 54 we can see that the melody progresses smoothly to E flat, or the tonic ‘door’. The undulating ‘you’ returns to scale degree 1; a return to the starting point. This may be interpreted by their return to their musical past in 1969.

Taking the Eb in bar 2, we see that McCartney sings vibrato. The quivering articulation contributes to the cry-like quality and evokes a sadness in the song. The evocation of

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sadness, through primary qualities, is conducive to the communication of expression through paralanguage in popular song.

**3.5 Arch-Shaped Intonation and Expression**

Paralinguistic primary qualities achieve expressive significance beyond our perceived extent of pitches and words combined. Depending on intonation, they can modify meaning, add nuance and convey emotion. The elision between pitch, word, syllabic duration, and deliverance enable primary qualities to function as expressive tropes. These tropes are often supported by a process of abstraction that gives rise to tension and release.

Tension and release occur on two levels here and reoccur throughout this study: Firstly, like the landscape, once we encounter the appearance of a mountain, we deduce that similar formations, in context, are also mountains. Secondly, following a primary statement, consequent hearings can be envisaged with some degree of probability. When the term does not resolve in the expected way, it causes tension. If, for example, a rapid descending articulation implies a hurriedness or sharpness, then subsequent encounters, within the confines of the song or style, will beget similar implications.

This continuity of expression is achieved both explicitly and implicitly. The former, means that the parabolic arch on ‘world’ creates continuity across songs. The latter explains that ‘ride’ in ‘Ticket to ride’ creates an immediate past within the song. This is exemplified in, what I have categorised as the tripartite series, for example: ‘you’ in ‘Hold me tight’, ‘me’ in ‘In my life’, ‘ride’ in ‘Ticket to ride’, ‘crying’ in ‘I am the Walrus’, ‘Julia’ in ‘Julia’, and ‘do’ in ‘Mother nature’s Son’. After an initial statement, these words are repeated, and often modified in the second and third statements. This results in tension and ambiguity as the listener awaits resolution.

Tension is created because initial statements become harbingers for a large-scale appearance in the same song or later songs. This is because intonation, introduced at the
beginning, remains recognisable when it returns in subsequent sections: even if a change in the method reveals a new function. In ‘What you’re doing’, the intonation reinforced the narrative. The lyric ‘me’, for example, was developed from a small-scale two second round rampant arch, to a four second descending one. With these examples, we can suggest that intonation supports, emphasises, or contradicts the basic message of a song.

Intonation gives rise to several types of arch that contribute to expression. The descending round rampant arch, for example, mimics the descent of the protagonist on ‘down’ in ‘Strawberry fields forever’, the stairs in ‘A day in the life’, or the weighed down ‘Lucy’ in ‘Lucy in the sky with diamonds’. The broken descent on ‘away’, in ‘Lucy’ was either derived from The Marvelettes’ articulation of ‘away’ in ‘Please Mr. Postman’ or modelled on ‘apart’ in Lenny Welch’s recording of ‘A taste of honey’. The detached parabolic arch depicts a cry-like sobbing heard in ‘For no one’, ‘Cry baby cry’ and ‘Mother nature’s son’. The appearance of the M-shape in ‘Misery’ informs ‘For no one’. The inverted parabolic arch heard in ‘There’s a place’, evokes nostalgia in ‘Julia’, ‘Mother nature’s son’, and ‘The long and winding road’.

Not only does intonation function as an expressive trope; it functions as a marker of the overall form and change in meter. The descending arch marks the return to the A section in ‘Love me do’ and ‘What you’re doing’. ‘I am the Walrus’ uses the arch-shape on ‘crying’ to return to the lyric sections. According to Moore, this was likely derived from American blues singers, such as Muddy Waters.

Modification of rhythm, to support intonation, occurs on ‘my’ in ‘In my life’, marked by a change from common time to 2/4. In ‘Across the Universe’, ‘world’ changes from common time to 5/4. In ‘Lucy in the sky with diamonds’, the arch is effected by a change from 3/4 to common time. Finally, ‘Mother nature’s son’, with its post-lexical
articulation of ‘do’s’ and ‘m’s’, features a change from common time to 2/4, recalling a similar change in ‘I’ve just seen a face’.

Intonation, therefore, is affected by both the primary and secondary domains. Once intonation is understood as a paralinguistic primary quality, giving rise to arches. And once the types of arches are understood as having a structural and expressive function in popular song, we can begin to investigate the content of the voice.

Lennon’s attention to his voice is often demonstrated in accounts from Abbey Road engineers. Richard Lush noted that ‘as usual, John was wanting his voice to sound different […] he would say “I want to sound like somebody from the moon” or anything, make it different’.\(^5\)\(^5\) This desire to alter the vocal is not limited to Lennon, the other Beatles sought similar aural modification. The next chapter will examine paralinguistic voice qualifiers through laryngeal, pharyngeal, and articulatory-tension control.

\(^{55}\) Lewisohn, *The Complete Beatles’ Recording Sessions*, 144.
4.1 Introduction
This chapter examines the relationship between vocal qualifiers and tone-colour. Qualifiers, the types of voices in interaction, reside on a sublinguistic level. They differ from alternants because they modify lexicon, whereas alternants are non-lexical utterances. Examples of qualifiers include crying, groaning, laughter, moaning, roaring, shouting, screaming, whispering, and yawning. A non-lexical alternant is ‘tut’, which is made by the tongue hitting the back of the teeth. It may be interpreted as dismissive in communication. Qualifiers addressed here are vocal fry, falsetto, and head voice.

Vocal fry and falsetto function as qualifiers in language and modify speech. Vocal fry is the fission of a single pitch or phoneme into multiple harmonics. This is heard as a gravelly voice that sounds cracked and breathy. It is created through laryngeal and pharyngeal control. The tightening of the larynx restricts airflow, resulting in a breathy sound. The exact origin of vocal fry is unknown, although it is thought, by van Der Merwe, that it was derived from Afro-American and Arabian music.¹ This is supported by the prominence of vocal fry in the songs of musicians from African-American descent such as Brother Joe May, Cab Calloway, Howlin’ Wolf, Little Richard, Smokey Robinson, and Willie Mae ‘Big Mama’ Thornton.

Falsetto, on the other hand, is the resonance of a single pitch in the upper partials of the voice. Due to the difficulty in achieving falsetto, it is generally wavering and unsteady, and rarely occurs in lexical articulation in popular song. This is because it is hard to sustain the tension in the vocal cords. Where a falsetto lexical voice is desired, head voice is usually used. Both head voice and falsetto are heard in the songs covered

¹ See discussion of van Der Merwe’s *The Origins of the Popular Song* in Chapter 1.
by The Beatles. The high-pitched tones of Little Richard, for example, were mimicked by the young Lennon and McCartney in ‘Long tall Sally’.

It is proposed that throughout The Beatles’ careers, qualifiers change function from decorative narrative markers to constituting the narrative. Qualifiers are developed to signify crisis, desperation, frustration, irony, mockery, self-reflection, and play with gender. Some of the more salient theories aligned with qualifiers are presented below to show recent research in the field. The term tone-colour is used as a neutral term alongside qualifier. This is because qualifier is derived from linguistics and does not account for the musical factors that affect inarticulate voice qualities in song.

Roland Barthes’ ‘Grain of the voice’, and Poyatos’ study on modifiers and qualifiers, form the theoretical framework of this chapter. Poyatos’ work has influenced music scholars such as Kate Heidemann, Serge Lacasse and Allan F. Moore. Studies by these scholars, alongside Robert Cogan and Simon Zagorski-Thomas, bring us closer to understanding the role of qualifiers, and how to analyse them, in song.

4.2 Theoretical Overview

The grain is the body in the voice as it sings, the hand as it writes, the limb as it performs.\(^2\)

Roland Barthes

For Barthes, the voice generates an identifiable ‘grain’. This might be understood as a vocal fingerprint that provides an aural identity in song. Barthes perceives the grain of the voice independent of timbre: ‘the grain of the voice is not – or is not merely – its timbre; the significance it opens cannot be better defined, indeed, than by the very friction between the music and [...] the language’.\(^3\) Although ‘grain’ brings us closer to an


understanding of tone-colour, it is hard pressed to distinguish between types and the function of this voice quality.

Moore believes that Barthes has been misread as opening the discussion on a singer’s articulation. Instead, he cites Simon Frith: ‘it is through the voice that star personalities are constructed [...] The tone of the voice is more important in this context than the actual articulation of particular lyrics’. But Barthes is still a good starting point for vocal analyses. His ‘grain’ is combined with Frith’s ‘tone’ in this analysis of voice qualifiers and tone-colour.

Cogan’s research is constructed through Hermann Helmholtz’s tone-colour analysis, and argues that previous theories have been instrument and tone-colour blind: ‘that tone-colour depends upon the number of partials in a sound and the relative intensity of those partials’. For Cogan, tone-colour, is the ‘succession of changing spectra, beats, tone modulations and attacks – the blossoming, the macrocosm, the great sonic and structural reality itself’. Cogan believes that previous theories have been limited and reductionist in nature. For him, tone-colour ‘is a structure only perceived by recognising the entire host of sonic elements left unrecognised by earlier reductionist theory’. With popular song analysis focusing primarily on articulate qualities, Cogan’s observation supports the need for a deeper understanding of Frith’s ‘inarticulate’. Theories derived from linguistics are useful for forming the theoretical foundation, but they do not always offer methods for analysis.

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4 Moore, Song Means, 102.
5 Ibid, 102.
Poyatos’ detailed study of qualifiers lends itself to an understanding of the colour of the voice. Qualifiers are affected by ‘respiratory-, laryngeal-, velar-, pharyngeal-, articulatory-, labial, and maxillary control, and articulatory tension’. In the following examples, they usually function to modify the voice in audible ways. These range from whispers to creaky or harsh falsetto and nasal sounds. Other examples include breathy, nasal, whining, and of course vocal fry, falsetto and head voice.

For Poyatos ‘the breathy voice is not quite full voice […] and] appears also in situations of weariness, facing a difficult decision or question etc.’ I wish to expand on this definition by adding that breathy voice can evoke excitement and disrupt the velocity of a song. This is demonstrated below where breathy voice is used to alter the speed of articulation, to create anticipation. A similar qualifier is the whispered voice, a voice type that may be normal or forced. For Poyatos, ‘normal whispered voice [is] excessive [in] pressure, the forced whispered voice [is more closely elided to] a stage whisper’.

In phonetic analysis, the fundamental difference between the breathy and whispered voice is that the whispered voice forms a formant and the breathy voice does not. Heidemann’s analysis on voice applies Poyatos’ theory to show how timbre gives rise to meaning in popular song. This is carried out by drawing on phenomenological and ecological understandings of listening to address the meanings that arise from individual Human perception. Like Poyatos, Heidemann concedes that there is a lack of terminology for studying expressive characteristics of vocal production in popular song. She explains that ‘vocal timbres in popular song contribute significantly to both the immediate pleasures and conceptual meanings afforded by this music, but they resist description’.

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9 Poyatos, New Perspectives in Nonverbal Communication, 189.
For Heidemann, clear and precise terminology is required to accurately describe the textural aspects of vocal sound:

It should afford detailed descriptions of the sound of vocal timbre, support intersubjective comparison of listening experiences while minimizing miscommunication and confusion, and recognise and reflect the visceral nature of music listening.  

But surely all rigorous study should minimise miscommunication and be supported by comparison. Heidemann’s aims for analysing vocal timbre make progress in this subject area, but they are not applied consistently in her analysis. By relying heavily on short snippets of recordings, she does not attempt a ‘detailed description of the sound’. This allows Heidemann to present her findings through sound, and existing terminology developed to analyse speech, but avoid contributing more accurate descriptions.

Heidemann addresses the breathy vocal of Michael Hutchence of INXS singing ‘Need you tonight’ as a ‘whisper, [that] usually refers to similar vocal sounds produced without the vibration of the vocal folds’. For Heidemann, the range of expressive possibility presented by the breathy voice includes relaxation, intimacy, and sensuality. In her fourth example of Otis Redding’s vocal in ‘These arms of mine’, she notes that Redding ‘seems to tense his vocal folds and then “overblow” them to achieve the harsh timbres that accent his vocal line’.

In her presentation of the creaky voice or vocal fry, Heidemann gives Britney Spears’ ‘Oops! I did it again’, as an example, but does not offer a detailed analysis. As discussed in Chapter 1, Zagorski-Thomas’ analysis of this vocal through knowledge of production is more informative. Heidemann notes the physiological apparatus required to produce the sound: ‘when the vocal folds open and close abruptly’, but does not offer

14 Ibid., 3.6.
15 Ibid., 3.8.
16 Zagorski-Thomas, The Musicology of Record Production, 49.
her own terminology or an interpretation. Zagorski-Thomas, on the other hand, tells us that the rasp on Spears’ vocal is a ‘common signifier of emotional angst’, and was added by the Swedish producer, Max Martin, using a guiro-scape.\textsuperscript{18}

Heidemann’s main tenet is her understanding through embodiment. She is a singer and regularly draws parallels between the recording and her own mimicry. Whilst this informs us of the change in vocal, it does not raise more accurate descriptions. But these definitions of voice are relevant; particularly her division between timbre and tone-colour. This is because ‘inflections of pitch […] are difficult to represent using musical notation – ornaments such as vibrato or glissandi – are not timbral either, but may occur in tandem with timbral manipulations by the singer’.\textsuperscript{19} In a parallel study, Serge Lacasse gives a detailed analysis of inarticulate voice qualities.

Lacasse adapts Poyatos’ 2002 model of paralinguistics to Tori Amos’ cover version of Eminem’s ‘97 Bonnie and Clyde’. The song describes the murder and disposing of the protagonist’s wife. Lacasse examines the effect of Amos’ whispered voice using spectral views. In the cover version, Amos inverts the original delivery of the song, from the perspective of Eminem, to that of the dead wife. When articulated from the perspective of the latter, the whispering evokes a grave-like sound. The words are not changed, but the delivery is, and this alters the expression.

The change in voice, from male to female, inverts the storyline, and the communication of the text. Lacasse explains that the spectrogram can distinguish between a whispered and murmured voice. Building on Poyatos’ theoretical framework; he suggests that the absence of a fundamental frequency on the spectrogram, confirms that it is a whispered and not murmured voice:

\textsuperscript{18} Zagorski-Thomas, \textit{The Musicology of Record Production}, 49.
\textsuperscript{19} Heidemann, ‘A System for Describing Vocal Timbre in Popular Song’, 2.6.
According to Poyatos, murmured voice ‘is neither whisper nor full voice, but is uttered in an undertone that makes it less than distinctive to the ear, perceived as a ‘stream’ [...] yet with almost complete vocal fold vibration and without the sighing quality of whisper’ some syllables do not present a fundamental frequency.20

In Poyatos’ 1991 study, he explains that ‘vocal roughness, like a hoarse and husky voice, portend associations of “normal” deep, soft, whispery voice [qualities].’21

If we liken voice to touch and temperature, then adjectives such as rough, warm and cold are easily understood. But these adjectives have their limitations in speech and song. Whilst a vocal can be touching, the vibration of the vocal cords cannot be physically touched. These are a further example of the limitation of binaries as outlined in Chapter 1. These descriptions fail to represent a detailed analysis or the nuances of tone-colour. The studies presented by Heidemann, Lacasse and Zagorski-Thomas support the existence of qualifiers to enhance expression, but they resist description. Poyatos, on the other hand, offers both a physical and psychological interpretation of qualifiers.

For Poyatos, ‘harshness, [is] a well-known disagreeable, rough voice quality caused by laryngeal strain and tension, extreme vocal-fold contract and irregular vibration and low pitch’.22 He expands on this physiological description, giving rise to a psychological aspect: ‘harshness adds to verbal languages or paralinguistic alternants the meanings of negative attitudes and feelings like anger, ridicule, rejection, scorn, contempt, cruelty’.23 Building on Poyatos’ physiological (and later psychological) approach, a deeper understanding of how these voice qualities are delivered provides more accurate terminology for analysis.

Vocal fry is used by singers and singing teachers to describe a technique for obtaining a specific voice quality. Karyn O’Connor, vocal teacher, explains that:

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22 Ibid., 184.
23 Ibid., 184.
In contemporary styles of singing, ‘vocal fry’ may [...] refer to a voice quality that may be added to any part of the singer’s range for vocal effect. Vocal fry is characterized by a rattling, crackling, creaking, croaking, or frying sound quality. It is produced through the use of a loose glottal closure that permits air to bubble through slowly.24

Similar to Poyatos and Lavengood, O’Connor uses adjectives for description: ‘rattling, crackling, creaking, and croaking’. She notes that vocal fry may be added to any part of the singer’s range and, like Poyatos, attributes vocal fry to the control of the glottis. But she expands her definition to include compression of the larynx:

During the vocal fry mode of phonation, the arytenoid cartilages in the larynx compress together in such a fashion that the vocal folds become relatively compact and slack, or ‘floppy’. This process forms a large and (usually) irregularly (or non-periodically) vibrating mass within the vocal folds – the vocal folds vibrate far less often per second than in ‘normal’ voice production, with successive vibrations differing in duration and/or size - that produces the characteristic low popping or rattling sound when air passes through the slackened glottal closure.25

O’Connor’s terminology supports Poyatos’ description of vocal fry as the result of laryngeal and pharyngeal control. For Poyatos:

Pharyngeal huskiness is the sort of huskiness of varying pitch which appears when speaking under emotional stress or in many forms of laughter, the retracted tongue constricting the pharynx and sometimes causing nasality, differentiated from laryngeal huskiness by the tense narrowing and friction felt in the throat (the passing from one type to another being used for special voice effects).26

The relationship between speech and song is ever present throughout this study. Even though Poyatos discusses language, he focuses on the friction between physiological sound and language. The tightened larynx, with slackened glottal closure, for example, gives rise to vocal fry. Taking song as heightened speech, Lacasse and Heidemann apply Poyatos’ model to convey the types of voice heard in song. These types give rise to expression, because both sound and word combine to convey something
beyond the words. For Barthes this ‘is where the melody really works at the language – not at what it says, but the voluptuousness of its sound-signifiers, of its letters – where melody explores how the language works and identifies with that work’.

Vocal fry is one differentiator; others include falsetto and head voice. When singing in a head or chest voice, the vocal cords vibrate, with the vocal folds opening and closing on each vibration. The vocal cords are connected and allow the singer to make an easy transition from head voice to chest voice. Heidemann gives Joni Mitchell’s ‘I had a king’ as an example of vibrations in the frontal sinuses. When singing falsetto, only the edges of the vocal cord vibrate, and the vocal folds do not close completely. This is because they are stretched and in a tilted position. The disconnected vocal cords allow air to pass through forming a breathy voice, which resonates in the head.

A singer’s falsetto will not smoothly transition into chest voice. It requires a break, however subtle, in articulation. Falsetto is difficult to maintain and is primarily used in short passages of singing, or moments of short monosyllabic words. When occurring in the male vocal range, falsetto can imitate the female head voice. For Poyatos:

[Falsetto] is at the high end of the pitch scale, falsetto or ‘light voice’, associated with a young girl’s innocence and with affectionate ways of addressing someone is typical of Anglo-Americans in general – a little higher pitched and spreading over larger utterances among Black Americans – to express surprise.

Falsetto and head voice can suggest mockery – repeating what someone has said in a higher tone, gender – imitate the female vocal, and excitement – such as the high-pitched screeches of a delighted child. Both qualifiers are affected by volume in communication.

For Poyatos ‘the volume of the voice requires a culturally dictated control’. This might explain the volume of specific cultures in speaking, but it opens another query in

29 Poyatos, ‘Paralinguistic Qualifiers’ 183.
30 Poyatos, New Perspectives in Nonverbal Communication, 207.
this study. In speech, volume usually responds to context; that of preceding or succeeding events: ‘she shouted’ or ‘he raised his voice’. This would imply that volume should not be a primary concern for an artist. They know that the listener has the final control over the volume in which the recording that will be played. Why then does an artist pay attention to volume in their songs?

This attention to variance in volume can highlight its expressive potential in song; for high volume communicates differently to low volume. The relative loudness of a song, in context, can contribute to expression. Low volume, for example, can suggest intimacy. This is explored by Moore through four proxemic zones; intimate, personal, social or public. For Moore, the persona occupies one of these zones, or travels between them, in song.31 An example of the intimate zone is whispering which has a range of communicative potential. This is complemented by Stephen Davies’ theory of volume and time as expressive tools in music.32

Davies notes that ‘the basic expressiveness of pitched intervals is shaped and articulated mainly by volume and time (tempo, phrasing, and movement), but texture and tone-colour also have their part to play in the process’.33 The potential of tone-colour, as an expressive tool, is reinforced through consistent use across songs. Heidemann’s experience of embodiment in her analysis complements the elements of mimicry. For just as Heidemann tried to imitate Aretha Franklin’s vocal in the opening of ‘(You make me feel like) a natural woman’, The Beatles emulated their predecessors.34

In the following analysis, the qualifiers are mapped from The Beatles’ cover songs through their own compositions. The presence of these features, in both the originals and

31 Moore, Song Means, 187.
34 Heidemann, ‘A System for Describing Vocal Timbre in Popular Song’.
cover versions, is evidence of their primary engagement with vocal qualifiers. Building on the analysis of primary qualities, the analysis of qualifiers cannot occur without recourse to pitch, lyric, rhythm and metre. By building on Poyatos’ theories, the analysis contributes to the approaches taken by Cogan, Lacasse, Moore, and Heidemann. It further calls on computational methods such as Roads’ ‘Magic Frequencies’ to illustrate the spectral views.

4.3 Methodology
Roads proposes layers in the spectrogram where certain voice qualities tend to reside. This can explain the sudden shift in a vocal from one hertz value into higher frequencies in the spectral views. Roads’ Magic Frequencies provide a description and direction to the reader, from 30 hertz to 20 KHz. 120-200 Hertz, for example, is the ‘zone of boomy and tubby mid-bass frequencies. [Roads directs the reader to] de-emphasise [these]’. The frequency zones of prominence in this analysis are between 200Hz and 5KHz.

The zone between 200-500Hz is the midrange pitches and formants. The zone above this, 500-800Hz, is the zone of expressive nasal pitches and formants, where vocal fry and falsetto reside. Often expressions of falsetto and vocal fry start in the mid-range, but progress to the zone of strident mid-frequency harsh pitches: 800-1200Hz. To avoid repetition, I have categorised Roads’ zones in descending order from A to F in Table 1:

Table 1: Curtis Roads’ ‘Magic Frequencies’

<table>
<thead>
<tr>
<th>Zone</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2400-4400</td>
<td>Transient articulation. The vocal fricatives and sibilants f,k,p,t,s,sh and z have energy that falls within this zone.</td>
</tr>
<tr>
<td>B</td>
<td>1200-1800</td>
<td>Mid-frequency harsh formants; to be attenuated</td>
</tr>
<tr>
<td>C</td>
<td>800-1200</td>
<td>Strident mid-frequency harsh pitches; to be attenuated</td>
</tr>
<tr>
<td>D</td>
<td>500-800</td>
<td>Expressive nasal pitches and formants</td>
</tr>
<tr>
<td>E</td>
<td>200-500</td>
<td>Mid-range pitches and formants</td>
</tr>
<tr>
<td>F</td>
<td>120-200</td>
<td>Boomy and tubby mid-bass frequencies</td>
</tr>
</tbody>
</table>

Roads’ categorisations of zones are useful for two reasons: firstly, in SV, a change in qualifier can lead to a transition between zones in the spectral view. Secondly, it allows the analyst to categorise vocal qualifiers in relation to these zones. The benefit of the melodic range spectral view is reinforced here because it can give information on amplitude. This is important because tone-colour is the resonance of a tone that is often supported by a change in volume. In SV, qualifiers give rise to varying spectral views.

Vocal fry, for example, appears as a series of segregated formants in the upper partials. This is because of the physical contraction of the vocal folds. The inward-tilting larynx results in a breathy sound causing vocal fission. This occurs when sounds split into multiple independent components. This supports adjectives such as: ‘gravelly’; ‘grainy’; ‘husky’; and ‘shredded’. The effect is similar to shredding a sheet of paper. In the examples presented below, the antecedent is often stable and is juxtaposed against the unstable consequent. But in contrast to the linear progressing paper shredder, this sequence can be reversed through fusion in song. Vocal fry can return to its point of departure, because the multiple components fuse into a single pitch or phoneme.

As a technique, vocal fry requires attention to the physiological process of the larynx and pharynx, but it can be the result of damaged vocal cords. This is particularly evident in smokers; whose voices tend to sound harsh and ‘cracked’. It is also the result of poor singing technique, for example, Pleasants’ description of Louis Armstrong’s ‘bad’ singing in Chapter 1. But vocal fry is not always the result of physical damage. Mick Jagger, Paul McCartney, John Lennon, and Little Richard, demonstrate harsh vocals juxtaposed against legato lines.

Falsetto, on the other hand, does not commonly occur in the two divisions of technique and natural physiological structure. It would take a lot of strain to sing an entire song in falsetto. This would be difficult for the performer and challenging for the listener.
The effect of falsetto lies in its ephemeral nature. It tends to grasp the attention of the listener by overriding other sounds for a short period and dissipating. In song, falsetto can evoke expressions of gender, mockery or desperation. Head voice, which resides below falsetto, is sometimes a differentiator because of its lexical dimension.\textsuperscript{37}

This supports Poyatos’ qualifiers existing alongside qualifying words and alternants. The effect is demonstrated using both vocal fry and falsetto. The structural and processual mechanisms are summarised in the table below.\textsuperscript{38}

Vocal fry, head voice, and falsetto are aspects of paralanguage that modify meaning, by adding nuance, and contributing to expression. Beginning with Little Richard, examples are taken from Buddy Holly, Roy Orbison, and Elvis Presley, amongst others. This is conducive to an understanding of The Beatles’ use of qualifiers. The analysis is divided into two sections, that is: vocal fry and, falsetto and head voice. Whilst they are both understood as qualifiers, the temporary division intends to highlight the difference between the physiological process and function of the two voice types.

\textsuperscript{37} Differentiators will be discussed in Chapter 6.

\textsuperscript{38} Built on David Epstein’s model of structural time in Epstein, \textit{Shaping time: music, the brain and performance} (New York: Schirmer Books, 1995).
4.4 Analysis
Part One: Vocal Fry

Little Richard sings with vocal fry in ‘Long tall Sally’, ‘Tutti frutti’, ‘Lucille’, ‘Kansas City’, ‘Rip it up’ and ‘Miss Ann’. His acute laryngeal control is often employed to decorate otherwise stagnant melody lines. This is because vocal fry neither complements nor contradicts the narrative but contributes to expression. He sings with a gravelly, raw, harsh voice, that is often articulated through long phrases of repeated pitches.

Figure 1 gives the opening of Little Richard’s performance of ‘Long tall Sally’. It reveals a pattern of terraced pitches, that pivot around B and Bb. On the second syllable of ‘uncle’, the Bb falls to G. From the spectral view, we can see that the continuous formant at 802Hz indicates that the upper partials of his vocal reside in Zone C.

Figure 1: ‘Long Tall Sally’, Little Richard, 00:00-00:07

The spectral view indicates that he takes a breath after 00:03, transcribed as a rest in bar three. Little Richard achieves a slight swell in the voice, as he fills his lungs with air to sing the consequent. The wavering formant resumes and continues until the descending arch on ‘baby’. The transcription alone is under pressure to depict Little Richard’s vocal heard in the recording.

As discussed in Chapter 2, his vocal fry was probably developed from the influence of gospel and blues music. There is a complementary influence of the blues in the harmony. He sings the monotone introductory line, supported by chord I, and the
repeated pitches are interrupted by chord IV on ‘ba-by’. This emphasises the importance of the scale degree 3-2-1 progression in the melody arriving on chord IV.

Figure 2 gives a transcription and spectral view of McCartney’s vocal in the introduction. His voice resonates in Zone B and C, indicating vocal fry. But McCartney employs intonation and time markers to enhance his delivery. McCartney’s subtle use of intonation, to articulate the melody, is emphasised by strong backbeats indicated in the spectral view.

Figure 2: ‘Long Tall Sally’, The Beatles, 00:00-00:07

This suggests that McCartney was moving pitch to help his articulation, rather than relying on the tightening of the larynx or compression of the pharynx. This implies that his vocal fry is not solely created using the larynx or pharynx. But Little Richard, being more adept at the technique, uses strong laryngeal control, giving rise to the harsh vocal.

The difference can be heard in the recordings. McCartney’s version is cautious in comparison to Little Richard’s. This is important because we learn that McCartney was aware that he needed to imitate the harsh vocal but thought that it was achieved through primary voice qualities. The use of vocal fry and intonation further suggest that the two are not mutually exclusive. The significance of this is supported by comparative work. In Buddy Holly’s ‘Ready Teddy’, he combines intonation and qualifiers.
‘Ready Teddy’ appeared on their set list in 1956 and was performed by both Little Richard and Buddy Holly. Amburn explains that in ‘Ready Teddy’, ‘[Buddy Holly] infuses the word ready with gripping carnality, yelping, growling,40 delighting in his voice as an instrument of seemingly infinite inflections and suppleness’.40 The opening plunges the listener into a powerful vocal quality. Vocal fry becomes a driving force of the song, because it is used to lengthen and shorten words. This results in a feeling of tension and release, because the listener awaits the resolution of the broken syllables.

Figure 3 gives a spectral view of the one second opening statement: ‘ready’. We can see that the amplitude of the word ‘ready’ is loud (highlighted in white). The word is pitched as C, but the intonation recalls the parabolic arch from Chapter 2. Buddy Holly sings with vocal fry resulting in what Amburn calls the ‘gripping carnality’.

Figure 3: ‘ready’, ‘Ready Teddy’, Buddy Holly, 00:00-00:01

This is similar to ‘Long tall Sally’, where the music progresses toward IV, hinting at the twelve-bar blues. But the upper partials do not reach the zone of strident pitches. This time, Buddy Holly stays in Zone E, but on the apex of the parabolic arch, the formant reaches 538Hz, pushing it into Zone D.

39 Italics added.
The chorus starts on chord IV, at 00:04, and ‘ready’ demonstrates a new function. It is repeated multiple times in a fast tempo: ‘Ready, Ready, Ready. I’m a read-dy, ready, ready, ready’. The ‘r’ of ‘ready’ is rolled, through the rapid movement of the tongue. The alliterated ‘r’, tongue roll, and repetition propel the vocal into a frenzy-like state. This frenzy reaches a climax at 00:31 with an egressive scream.41

Figure 4 gives a spectral view of Buddy Holly’s scream at 00:31. On ‘wow’, his voice diffuses, generating a vast harmonic resonance. The fundamental pitch occurs at 468Hz, but the upper partials fan up to 1345Hz. This vast layering of harmonics is the result of delivery through vocal fry and not ‘wow’ alone. Spanning Zones B to E, it functions as a release of the energy formed by the preceding vocal fry and alternants on ‘ready’. ‘Wow’ sung without laryngeal control would have difficulty in creating this tone-colour and consequent spectral view.

Figure 4: ‘wow’, ‘Ready Teddy’, Buddy Holly, 00:31-00:33

Just as primary qualities gave rise to past experiences in Chapter 2, vocal fry can hold a similar function. The opening of ‘Ready Teddy’ establishes a past-experience of vocal fry within the song. As the song gains momentum, so does the qualifier, until it reaches this climatic point. Without vocal fry, the song would lack its expressive drive,

41 This is understood as a qualifier functioning as a differentiator. To be discussed in Chapter 6.
because it embodies an otherwise undulating melody. This is supported by an example in Chuck Berry’s ‘Rock and roll music’.

This song appeared on The Beatles’ set list in 1957; but was not recorded for an album until Beatles for Sale. Lennon takes the lead vocal having demonstrated his command over vocal fry in ‘Twist and shout’ (to be discussed below). ‘Rock and roll music’ opens with repeated G quaver notes, followed by a crotchet. The opening lyrics are declaimed by Lennon, supported by a move from chord I to IV on ‘rock’ (another example of the twelve-bar blues in these cover songs).

Figure 5 gives an example at 00:21. It shows that there is a significant leak in the vocal in the upperpartials. The vocal resonates upward through Zone D, C, and B.

Figure 5: ‘Rock’n’roll music’, The Beatles, 00:21-00:24

Chuck Berry does not sing with vocal fry in his recording. This suggests that Lennon employed the qualifier to achieve the ‘raucous’, ‘rock’ sound, in his performance.

These initial examples have shown the presence of vocal fry, occurring on arbitrary words such as ‘ready’ and ‘wow’, in their cover songs. The prominence of chord IV in these examples, suggests that vocal fry is not far removed from a rhythm and blues style. The qualifier in these examples helps to strengthen a vocal. This is something that The Beatles were aware of when putting their performance sets together. McCartney was advised that a superior performance should be shaped like a ‘W’, that it should open and
close with strong material and have strong material in the middle. Songs with vocal fry carry this function on *Please Please Me*, *Beatles for Sale*, and *With the Beatles*.

‘Twist and shout’, ‘Dizzy Miss Lizzy’, and ‘Kansas City’, are grouped together because they are positioned at the end of side 1 or side 2 on their respective albums. These songs also held a closing function in The Beatles’ performance sets. ‘Twist and shout’ and ‘Dizzy Miss Lizzy’ contain the line ‘come on, come on, come on, come on, baby’. The line in both songs uses vocal fry, but with a different rhythmic articulation. These songs show both Lennon and McCartney’s engagement with the qualifier. Lennon sings lead vocal in ‘Twist and shout’ and ‘Dizzy Miss Lizzy’, whilst McCartney sings lead in ‘Kansas City’.

It is noted that singing ‘Twist and shout’ put a great strain on Lennon’s vocal. McCartney said that during the recording of *Please Please Me*: ‘John was sucking Zubes [throat lozenges] all day to preserve his voice’.42 McCartney explains that Lennon ‘knew it would rip his throat out’. Perhaps this was partially because *Please Please Me* was recorded in one day. ‘Twist and Shout’ was recorded last and by then Lennon’s vocal cords were probably tired and strained. But the consistency of vocal fry in their live performances, that is the Queen’s royal variety show in 1963 and the Ed Sullivan show in 1964, suggest an intentional use of this qualifier.43

In ‘Twist and shout’ Lennon’s vocals are contracted and there is little room for air to resonate in the larynx. He sings with vocal fry throughout, but there are specific examples worth highlighting. Figure 6 provides a spectral view of a scream at 01:33. The song builds toward this climactic scream, that gives rise to three resonating lines in the

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42 Beatles in the Studio Complete and Very Rare 5:09-5:22.
upper partials, from Zone C to Zone B. We can see from the spectral view, that it is sung with a faint parabolic arch.

Figure 6: Scream, ‘Twist and Shout’, The Beatles, 01:33

Figure 7 gives a faithful transcription of the refrain. The line, ‘come on, come on, come on, come on, baby now’ is sung as a pattern of repeated Gs. This recalls the opening of ‘Rock’n’roll music’, but the harmony is different. The line is supported by V7 and resolves to I on ‘baby’. Taking the first bar, the spectral view shows that Lennon’s vocal resides in Zone C. That is, until ‘baby’, when the line moves to Zone D for a legato descent. It might be argued that this pattern would be observed in any performance of this line, but the significance of it here is reinforced by comparative work within the song and from their influences.

Figure 7: ‘Twist and Shout’, The Beatles, 00:14-00:18
Figure 8 gives a transcription of this line at 00:44. Vocal fry is particularly strong on the second statement of ‘come on’. Taking the fourth, fifth, and sixth notes in the first bar at 00:45, we can see that Lennon’s vocal diffuses. This is because he allows more air to pass through the larynx and pharynx, giving rise to a breath-like resonance.

Figure 8 : ‘Twist and shout’, The Beatles, 00:44-00:47

The use of ingressive breathing, to refill the lungs, energises the song. This is supported by the analyses of Little Richard’s breath-like resonance in Figure 1 above. It recalls the previous example, because the line resides in the upper partials. This emphasises the harshness of the pitches and the highlighted white indicates that the voice is loud. This has an energising effect within the song, whilst the interspaced breaths in the articulation causes urgency. The use of the common phrase ‘come on’, with vocal fry, is further supported in ‘Dizzy Miss Lizzy’.

Figure 9 gives The Beatles’ 1965 cover version. This song appeared on their set list around 1958 and was a favourite for concluding a performance. Reminiscent of ‘Twist and shout’, bar 1 is sung as a pattern of repeated G#s. The G# is naturalised on the declamation of ‘baby’, resulting in a slight dip in the articulation.
This recalls Figure 7 and 8 above; the first bar resides in Zone C and falls to Zone D on ‘baby’. The sustained line indicates that there are no breaks in continuity and the subtle waveries in articulation are the result of vocal fry. The significance of the qualifier here is supported through listening to Larry Williams’ version. Williams does not achieve the same effect, which implies that, like ‘Rock’n’roll music’, vocal fry was employed by Lennon as an expressive technique. The use of vocal fry on ‘come on, come on, come on, come on, baby’ functions as an expressive trope in ‘Twist and shout’ and ‘Dizzy miss Lizzy’. This becomes a recurrent feature of these early rock’n’roll songs and aspects of this trope are alluded to in later songs.\(^{44}\)

The examples so far have shown Lennon and McCartney’s use of vocal fry in these early songs. It could be argued that it was the result of Lennon’s vocal tract; perhaps, like Louis Armstrong, he had damaged his vocal cords. But this would mean that subsequent performances of all Lennon songs would be sung with vocal fry. The sweet tones in ‘Julia’ (1969) or ‘Oh my love’ (1971) refute this. One notes that, on each occasion, there is no vocal fry to compare in Harrison or Starr’s voice. The next two

\(^{44}\) To be discussed in Chapter 6.
examples demonstrate McCartney’s laryngeal control in his cover of Little Richard’s ‘Kansas City’ and The Isley Brother’s ‘Shout’.

In McCartney’s speech inducting Lennon into the rock’n’roll hall of fame, he shares Lennon’s advice to him when performing ‘Kansas City’. McCartney was unsure about singing, and Lennon advised: ‘you can do it […] you just gotta scream out […] leave the top of your head’. From Lennon’s guidance, McCartney ‘screams out’ ‘Kansas City’ with vocal fry. The examples presented from ‘Kansas City’ give instances of vocal fry functioning as qualifier and alternant. These are articulated through the process of abstraction, as theorised in Chapter 2.

Figure 10 gives a transcription of the opening vocal at 00:08. Taking the first note, we see that McCartney sings ‘Ah!’ in Zone B initially, but it resonates in Zone C. This functions to prepare the listener for the vocal carnality in the song. McCartney hits the note centrally at the start, but then bends it, giving rise to a U-shaped dip at 00:08 in Zone C. The vocal pivots around G but falls to an E-D-E turn on ‘-sas city’. The U-shaped dip is embellished with a vibrato resonance (supported by the sample in Figure 2, Chapter 1).

Figure 10: ‘Kansas City’, The Beatles, 00:07-00:09

46 Alternants will be discussed in the next chapter.
The examples given in Figures 7-9, showed how the delayed arrival of the last syllable results in tension. But unlike the previous examples that occur in the refrain, the example in Figure 10 delays the entrance of the song title. The combination of McCartney’s vocal fry, delay, and wavering vocal cause tension. The listener awaits the arrival of the hook words. This functions to establish a past experience of vocal fry in the song, whilst simultaneously evoking anticipation for its reappearance.

Vocal fry occurs throughout with varied inflections. Figure 11 gives a transcription of ‘hey, hey, hey, hey’ from 01:12-01:17. McCartney sings three Bb crotchets falling to crotchet G. This is answered by Harrison and Lennon singing three B crotchets falling to crochet G. Transcribed, there is minor variation in the vocal line, and it appears steady and staccato. That is, until the slurred pitches in bars 3 and 4. Figure 11: ‘Kansas City’, 01:12-01:17

Taking the first four notes in Figure 12, we see that McCartney achieves a swell giving rise to four round-rampant arches. There does not appear to be a clear attack and decay, between the declamations of ‘hey’, because they are blended into the sustain. The clarity of McCartney’s articulation is juxtaposed against the backing vocals in the second statement. The unclear spectral view, between 01:14-01:16, is the result of the backing vocals being set back in the mix.

47 Vocal fry in this example can also be understood as an alternant, because it is non-lexical.
The three statements undergo a process of abstraction. The first statement establishes the articulation, echoed in the second statement by Harrison and Lennon, but the third statement is abstract in comparison. It begins with ‘hey’, but the melody descends on the word ‘baby’. Having heard two similar statements, this establishes a degree of predictability for the listener, and they expect the third to be the same. But the progression is interrupted by ‘Hey baby’ which upsets the established expectation. This reoccurs at 01:31 on ‘na’ in ‘na, na, na, tell me baby’. The repetition of the alternant ‘na’, helps to prolong the arrival of the antagonist to tell the protagonist what is wrong.

One can deduce at this stage that vocal fry resides primarily in the zone of strident harsh pitches and the zone of expressive pitches. It functions to energise and create tension and release in song. It is mainly loud in volume, highlighted in white in the spectral view. It would seem natural to deduce that vocal fry is loud, but this is not always so. The whispered voice, for example, can be delivered using laryngeal control. This is heard in The Isley Brothers’ ‘Shout’, which appeared in The Beatles set list in 1959. It was recorded by The Beatles in 1964, in IBC Studios, London for their television special *Around The Beatles*, broadcast by the BBC.

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48 ‘hey, 2, 3, 4’, in transcription for space.
‘Shout’ begins at 0.8 decibels (dB) with three emphatic beats followed by the entrance of McCartney’s vocal. Vocal fry is heard in the decorative: ‘woo’, and repeated phrases: ‘take it easy’ and ‘come on now’. A waveform analysis reveals that the spectral envelope of the sound peaks at 0.8 dB for most of the song. But at 00:16, on ‘A little bit softer now’, there is a gradual diminuendo.

Figure 13 provides a waveform view of ‘Shout’ from 00:26-00:32. It shows that the spectral envelope gradually descends from 0.8 dB to 0.1 dB, with the repetition of ‘a little bit softer now’. In contrast, with the repetition of ‘a little bit louder now’, the volume gradually returns to 0.8 dB.

The song is 01:31 in duration, and this line, sung over 00:24, makes it a dominant feature. Contrary to previous uses of vocal fry, which have been sung in full voice, this example is sung as a whisper. The lyrics direct the vocal to sing ‘a little bit softer now’ and the amplitude complements this by gradually getting quieter.

The song directs its listener to shout. The word is repeated throughout and supported using vocal fry, moments of falsetto and a whispered vocal fry. This is an example of qualifier affecting the narrative, because it combines language, paralanguage, and kinesic markers. At this pivot in the chapter, it is worth expanding on the connection between vocal fry and ‘shout’ in popular song, as discussed in the introduction.

49 ‘come one now’ recalls the common phrase in ‘Twist and Shout’ and ‘Dizzy Miss Lizzy’.
Not only does vocal fry and falsetto recall the African-American influence from Chapter 2, the word ‘shout’ has been traced to Arabia. In 1949, the linguist Lorenzo D. Turner argued that it was derived from the Arabian word ‘saut’ or ‘shaut’. Turner noted that it was used by West African Muslims during their procession around the Kaaba. ‘Turner explains, ‘Shout = a religious ring dance in which the participants continue to perform until they are exhausted’. The movement and rigorous dancing until exhaustion would not go amiss in a description of ‘Shout!’ in a live performance.

The influence of the migration patterns, ever present in this analysis, not only deepen our understanding of words, they support our reading of the delivery. An understanding of words, alongside the development of qualifiers, enhances the expressive potential of these tropes. The following examples give analyses of two cover songs that use qualifiers to complement or enhance the narrative. This is heard in Buddy Holly’s ‘Words of love’ and Arthur Alexander’s ‘Anna (go to him)’.

‘Words of love’ appeared on The Beatles’ set list as early as 1957; and was recorded for Beatles for Sale in 1964. It is an example of the whispered vocal fry, or what Poyatos and Moore call the intimate voice. As the title suggests, ‘words of love’ should be ‘whispered soft and true’. This implies that the sincerity of words depends on tone-colour. Buddy Holly’s delivery of the lyrics is soft and whispered, but he also sings parts with vocal fry. The way in which he embellishes his voice is mimicked in The Beatles’ cover, for example, on ‘darling’, Buddy Holly’s voice is soft and whispered, but has strength. This is because of the way the contracted vocal cords, and laryngeal control, result in a whispered vocal fry. McCartney imitates this qualifier, but their articulations differ due to their respective dialects.

50 Oliver, Savannah Syncopators, pp. 56-7 cited in van Der Merwe, Origins of the Popular Style, 77.
At 01:36, the lyrics are ‘darling I love you’. Buddy Holly sings this as ‘Dah-ling, I love you’, but McCartney sings ‘Darl-ing, I love you’. Figure 14 gives the formants of their respective vocals using PRAAT. This recalls the formant characteristics of the four cardinal vowels shown in Chapter 2. PRAAT can extracts segments of a sound file to form a spectral view. These views confirm that even though their accents result in different articulations, both sing with whispered vocal fry. This is because there is a clear formant profile. If this were a breathy voice the formants would be unclear.

Figure 14: ‘Darling’, ‘Words of Love’, The Beatles, 00:40-00:42

Figure 15: ‘Dah-ling’, ‘Words of Love’, Buddy Holly, 00:36-00:38

The presence of formants as confirmation of the whispered voice, is supported by Lacasse’s study of Tori Amos’ version of the Eminem song. Even though their articulation differs, from ‘dah-ling’ to ‘darl-ing’, we hear that both use a whispered growl to amplify the word. The use of whispered vocal fry creates an intimacy between the
protagonist and the antagonist, or ‘darling’. This is supported by a comparative analysis of ‘Anna (go to him)’, on *Please Please me*, 1963.

Figure 16 transcribes the lead into the chorus section. Lennon’s voice opens with ascending ‘ah’s’, rising as D-E-F♯-G. Not only does Lennon’s vocal ascend in pitch, it rises from Zone E through Zone D and into Zone C. Taking the minim in bar two, we can see that Lennon achieves a wavering two second vocal fry. This is exemplified by the four G pitches on ‘all of my life’.

The four Gs, given in the transcription, cannot represent the qualifier alone. The repeated G pitches are significant, because they recall ‘Twist and shout’, ‘Rock’n’roll music’, and ‘Kansas City’.

Lennon expresses a feeling of desperation and longing through vocal fry in the chorus. This corresponds with the narrative because the protagonist claims that he has spent ‘all of his life, searching, for a girl’. The desperation in the lyrics is mirrored in the qualifier. This suggests intimacy and simultaneously evokes desperation. Lennon tells Anna that he is in love with her, but the harsh vocal fry, heard as an attempt to fight for Anna, is unanswered. This is marked by a conceded vocal descent at the end of the refrain.

Figure 17 gives a spectral view of the refrain leading back to the verse. The descending ‘oh’ pattern is sung with vocal fry. It suggests that the protagonist is falling
into despair as he tries to communicate with ‘Anna’. In Figure 16, the expression in the vocal is gradually increased, but in Figure 17, the resonating partials gradually decrease. The harmonics of Lennon’s vocal descend from Zone C to Zone E.

Figure 17: ‘Anna (go to him)’, 01:30-01:32

This not only suggests text painting, it marks a return to the A section. The descending line is understood as both qualifier and alternant. ‘Oh’ is a lexical expression of surprise, or pain in this example, but the repetition renders it as non-lexical. It is an example of qualifiers having a structural function in these songs, because they mark the entrance of the verse. It might be argued that this is a one-off feature, but vocal fry carries the same function in The Beatles’ 1964 song, ‘This Boy’.

Figure 18 gives a spectral view of Lennon’s vocal at 01:00. Taking the first note in bar 1, we can see that Lennon not only achieves a U-shaped swell, his vocal resonates in the upper partials of Zone B and C. He hits the pitch through the U-shaped swell, before sustaining it with vibrato vocal fry.
Taking the first note in the second bar, we see that Lennon hits D centrally resonating in the upper partials. Falling to B on ‘boy’, the vibrato vocal resonates in Zone D. The pattern here is set up by the vibrato on F# and travels toward the augmented vibrato resonance on B. The entrance of the vocal fry is in preparation for the next two statements at 01:11 and 01:22.

Figure 19 gives a spectral view of Lennon’s vocal at 01:11. This time, he hits the first note centrally achieving vocal fry in Zone B. Taking the first note in bar two, we can see that he furnishes a vibrato vocal fry. He hits the G centrally at first, but his vocal resonates in the upper partials of Zone C.
The expression in this example is further supported through his use of intonation. Lennon sings two straight-lines and a parabolic arch on the descent. This results in a wave-like sound in the vocal and instability in the melody. This is supported through the repeated Gs falling to F# in bar 2. Lennon contracts his larynx intermittently causing fractures and giving rise to a cry-like vocal intonation.

Figure 20 gives the final statement of the chorus at 01:22. At first glance, the sparse texture of bar 1 is juxtaposed against the scant texture of bar 2. Lennon establishes tension by delaying the arrival of the wave-like vibrato. Taking the F# in bar 2, we can see that he not only sings in Zone C, with resonating harmonics in Zone B, he furnishes a swell. This results in four round rampant arches, that contribute to the cry-like imagery. It might be argued that this pattern would be observed in any performance of this word, but this is supported by comparative work across songs.

Figure 20: ‘This Boy’, 01:22-01:28

This was a recurrent feature when we heard the word ‘cry’ in ‘I am the walrus’ and ‘Crying, waiting, hoping’ in the last chapter and it begets similar implications in ‘This Boy’. In ‘This Boy’, the arch-shape reappears in tandem with vocal fry. This reinforces the importance of the vocal in performance, for neither qualifier nor intonation, can be accounted for in the transcription.
Vocal fry has functioned as a qualifier or alternant, generating expressive significance in ‘Anna (go to him)’, ‘Words of love’ or ‘This boy’. It was shown to create tension and release in ‘Dizzy miss Lizzy’, ‘Twist and shout’, and ‘Rock’n’roll music’. But The Beatles’ use of this qualifier still warrants deeper analysis. One might argue that they were merely imitating the vocal quality heard in the cover songs. But by building on ‘This Boy’, the next section gives further examples of their adoption of this qualifier in their own songs. This is demonstrated in ‘You’ve got to hide your love away’, ‘Help!’ and ‘Oh! Darling’.

The ballad opening of ‘You’ve got to hide your love away’ is evocative of Bob Dylan’s folk singing style. Lennon’s vocal is soft and unwavering, and it is not until the chorus that it is altered. From Figure 21, we can see that there is a descending octave jump from G’-G in the transcription, but the spectral view shows that this is not a straightforward staccato octave descent. Lennon rises to hit the pitch centrally at first, but then bends it, giving rise to a parabolic arch. As his vocal swells upward to the primary pitch, it transitions from Zone E to Zone D achieving vocal fry.

Figure 21: ‘Hey’, ‘You’ve got to hide your love away’, 00:39-00:44
In this example, Lennon plays with time. For timing in popular song is subject to numerous pulls and pushes, so stalling has to be set up contextually, but something regular. Lennon establishes common time in the verses but stalls on the first note of the refrain, amplifying the qualifier. Vocal fry on ‘Hey’, recalls McCartney’s ‘Hey’ in ‘Kansas City’. Similar to ‘Hey’ in ‘Kansas City’, this line undergoes a process of abstraction. The transcription remains the same, but the articulation of vocal fry is altered on each statement.

Figure 22 gives a spectral view of the second statement at 00:47. Lennon furnishes a similar swell that shifts his vocal into the vocal-fry register. But his voice is steadier and louder, with less vibrato in the descending octave slide.

Figure 22: ‘Hey!’, ‘You’ve got to hide your love away’, 00:47-00:52

In the third statement, given in Figure 23 at 01:32, Lennon holds the G in Zone D. This functions to amplify the sound. Unlike the smooth octave descent in Figures 21 and 22, his voice breaks, falls below 344Hz and gradually rises to G.
In the fourth statement, Figure 24, Lennon furnishes a similar swell that moves into the vocal-fry register, but this time the amplitude is reduced. Lennon not only uses time, pitch, paralanguage and volume to create interest in an otherwise stagnant melody, he plays on the listener’s immediate past experience through a process of abstraction. This is heard in the parabolic vocal fry in the fourth statement, which is a shadow of the first.
This is a recurrent feature when we hear ‘hey’ in this song. It might be argued that this pattern would be observed in any performance of this word by Lennon. But the significance of it here is supported by McCartney’s articulation of ‘hey’ in ‘Kansas City’. One notes a difference between the use of vocal fry in these two songs. It is decorative in ‘Kansas City’, but in ‘You’ve got to hide your love away’ it functions as an expressive marker that complements the narrative.

The qualifier heard in ‘You’ve got to hide your love away’, contributes to the song’s narrative by evoking desperation. Lennon orders the listener to hide their love away. ‘Hey!’ in ‘Kansas City’ does not support the narrative in the same way. The use of vocal fry, as an expressive marker, is supported by Lennon’s vocal in ‘Help!’ This results in vocal fry, complementing the narrative of two songs, on the same album.

In ‘You’ve got to hide your love away’, the desperation evoked through Lennon’s laryngeal control evokes a feeling of despair. This is delivered through vocal fry and further emphasises the slow decay of the parabolic arch. Lennon plays with time as he augments the decay of ‘hey’. The affect stalls the progression and the arrival of the hook line. This creates tension in two ways: Firstly, ‘hey’ implies that the listener is being called to attention. Secondly, the stalled delivery causes tension which is resolved by the broken intonation on ‘you’ve got to hide your love away’.

The delay in the vocal delivery is complemented by the tambourine, which is played on the offbeat of each bar. The offbeat tambourine plays with progression by establishing a delay. It enters on ‘you’ve’, giving a false sense of a new bar. Vocal fry in this song is shaped by pitch, rhythm, and instrumentation. The use of this qualifier in The Beatles’ songs of woe, suggests that it is an expressive trope.

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52 To be discussed in greater detail in Part 2.
Vocal fry is not used again, in the same way, until 1969. McCartney’s ‘Oh! Darling’ sees the return of vocal fry to The Beatles’ sound palette. Lewisohn notes Alan Parson’s memory of McCartney’s diligence in obtaining the qualifier:

Perhaps my main memory of the Abbey Road sessions is of Paul coming into studio three at two o’clock or 2:30 each afternoon, on his own, to do the vocal on ‘Oh! Darling’, ‘says Alan Parsons […] He’d come in, sing it and say: ‘No that’s not it, I’ll try it again tomorrow’. He only tried it once per day, I suppose he wanted to capture a certain rawness which could only be done once before the voice had changed. I remember him saying ‘five years ago I could have done this in a flash’, referring, I suppose, to the days of ‘Long Tall Sally’ and ‘Kansas City’.53

McCartney’s determination to capture the ‘certain rawness’ tells us that the use of vocal fry was chosen, rehearsed, and importantly, deliberate. Parson’s account also confirms that it easily came to McCartney in the days of ‘Long tall Sally’ and ‘Kansas City’. But as noted, it lay dormant for years, and he had difficulty reviving it. The hopelessness evoked by Lennon in ‘You’ve got to hide your love away’ is recalled to the listener in ‘Oh! Darling’.

Taking the first two notes in Figure 25, we see that McCartney not only furnishes a U-shape, the broken descent from A to F# evokes a cry-like sound. Just like ‘ah!’ in the opening of ‘Kansas City’, ‘oh’ establishes the vocal quality in the song. The voice is pitched as F# rising to A, but the harmonics resonate in the upper partials of Zone C and B. On the descent, McCartney sings a hiccup-like vocal at 409Hz that depicts sobbing.54

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54 The glottal stop is an alternant that can occur whilst crying.
Figure 26 gives the opening of the chorus section. Taking the first two notes, we see that McCartney not only furnishes vocal fry, he sings with a breathy vocal. McCartney’s larynx is tightened, causing fission, that results in a growl-like sound. Taking the two notes in bar 2, we can see that he amplifies his vocal in Zone C.

Figure 27 shows the consequent of the previous example at 01:12. McCartney achieves vocal fry, but this time he allows the vocal to diffuse on ‘more’, giving a vibrato vocal fry in Zone D.
The use of the descending line on ‘told’ and vibrato vocal fry build toward the articulation of ‘died’. Figure 28 shows McCartney’s vocal at 01:38, situated in Zone C. ‘Died’ is broken and sung as ‘d-i-ed’ in a descending pattern. Through tightened vocal he produces a gasping sound that is indicated by the dispersed spectral view. The gasping propels the theme of the song, because the protagonist claims he has died and is taking his final breaths. In this line, the vocal undergoes a process of fission and fusion. It diffuses at 01:38 and descends on the multisyllabic ‘d-i-ed’, but it fuses for the return to the A section just before 01:41.

Figure 28: ‘died’, ‘Oh! Darling’, 01:38-01:41
The process of fission and fusion results in tension. McCartney’s soft, legato, and ballad-like vocal in the lyrics, coaxes the darling to his side. Vocal fry fractures the sound to grasp the attention of the ‘darling’. The breathiness in the vocal, combined with broken syllables, evokes the sound of a person taking their final breaths. With knowledge of previous uses of vocal fry, one can suggest that it functions as an expressive trope in ‘Oh! Darling’.

The consistency of vocal fry, to evoke desperation, further demonstrates its function as a qualifier. But more songs must be analysed in order to confirm this claim. During the Let it Be sessions, the group were working through multiple conflicting interests, which was influencing their music. To rekindle their synergy, they tried to reconnect with their early style. This has resulted in several stylistic features, probably derived from their performance of cover songs, appearing on this album. Prominent examples of vocal fry are heard in ‘Get back’, ‘I’ve got a feeling’, and ‘Don’t let me down’.

As shown in ‘Oh! Darling’ and ‘Anna (go to him)’, ‘I’ve got a feeling’ features the juxtaposition of legato verses and vocal fry chorus sections. Prior to the chorus section in ‘I’ve got a feeling’, there are suggestions of vocal fry functioning as an alternant. These are heard on ‘wow’, ‘oh yeah’, and ‘oh no’. Figure 29 gives a spectral view of ‘oh no’ at 00:26. Not only does McCartney shift his vocal into Zone C, he achieves a swell evoking a broken parabolic arch. The protagonist sings about a feeling ‘deep inside’; which is to be denied. But the ‘feeling’ is released through expressive vocal fry.

\[\text{55 This is noted in Everett’s Table of their style features in Chapter 2.}\]
One might argue that the examples presented so far would occur on any declamation of a word, but the significance and development of qualifiers is supported by comparative work within songs. This was shown above with ‘hey’ in both ‘Kansas City’ and ‘You’ve got to hide your love away’. The next two examples provide the development of one word in ‘I’ve got a feeling’.

Figure 30 gives a transcription of ‘yeah’ at 00:31. In the first statement, McCartney’s vibrato vocal resides in Zone D. The first approximately 80% is occupied by the period of time for the vibrato to resonate. After 00:32, it gradually descends in a slow decay, heard as a sliding intonation. Before the intonation can resonate, there is a brief pause and Lennon repeats ‘yeah’. This time he not only furnishes a swell, generating a catenary arch, the resonance of his vocal shifts into Zone C. The difference in articulation, over three seconds, highlights the subtle significance of the qualifier.

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56 The supporting harmony progresses from I-V-VII-IV and returns to I for the A section. This progression hints at a twelve-bar blues with the V almost falling to IV (a nod to their early set lists, see Figure 1).
This is supported by two more instances of ‘yeah’, as given in Figure 31. McCartney achieves a longer swell to A and allows the vibrato vocal to reverberate into the upper harmonics. Taking the second statement, in bar 2, we see a straight-line ascent in Zone C. This is instead of the catenary arch heard in the previous statement.

The change in laryngeal control, across four statements, results in different auditory effects. The voice type contributes to the narrative because it personifies the primal feeling that Lennon has. These short outbursts in Zone D and C, are reminiscent of Little Richard’s vocal style. The use of vocal fry as a qualifier, is reinforced through McCartney’s performance of ‘Get back’.
Figure 32 gives a spectral view of ‘Get back’, released by Apple in 1969 and practiced during the *Let it Be Sessions*. McCartney sings with a sweet legato tone, but at the end, his vocal breaks, and he sings a series of declamations using vocal fry.

Figure 32: ‘Get back’, 02:13-02:17

Taking the first note in bar 1, we see that he rapidly rises to attack the C centrally in Zone C. He pauses briefly, and on ‘back’ his vocal falls to Zone D. This is supported by two more statements of ‘get back’ in Zone D.

From Figure 33, we can see that McCartney not only uses vocal fry, he furnishes a swell on ‘back’ giving rise to a catenary arch. This is heard as a cry-like sound, that is highly expressive as the final statement of the hook line.

Figure 33: ‘Get back’, 02:22-02:30
The consistency of these aspects of paralanguage, alongside language markers, result in expressive tropes. In ‘Oh! Darling’, for example, the vocal is cry-like, expressing the emotion of the desperate protagonist. It is proposed that McCartney was appealing to his fellow Beatles in ‘Get back’. It might be read that he was pleading with the group to return to their original synergy: ‘back to where you once belonged’. The repetition of ‘get back’, with varied tone-colour, not only gives different qualifiers, it creates tension. This is because, having heard the words sung legato throughout the song, the listener tries to predict the articulation with some degree of probability. Vocal fry comes as a surprise and highlights the despondency in the song.

Early examples use vocal fry in a decorative way, enhancing potentially mundane repetition. But the qualifier is developed to generate tension and intimacy, whilst contributing to the narrative. Lennon and McCartney demonstrate this technique in their performance of cover songs and their own compositions. One can conclude that vocal fry has expressive significance and functions as an expressive trope in popular song. The next section will explore the expressive significance of falsetto and head voice.

4.5 Analysis
Part Two: Falsetto and Head Voice
Falsetto has long been used by male singers, mainly tenors, to sing notes higher than their normal range. It is produced through the vibration of the ligamentous edges of the vocal cords. When singing falsetto, the vocal cords are stretched, disconnected, and in a tilted position. The disconnected vocal cords result in a breathy sound which resonates in the head. This is not to be confused with head voice, which is compressed and made using connected vocal cords. Head voice blends smoothly into chest voice, but falsetto requires a distinct shift from the modal register of the singer into falsetto articulation. Falsetto resides in the top of a singer’s vocal range, it is difficult to sustain for long periods, and tends to be short in duration.
Falsetto dates back to the countertenor. Frederic Hodgson notes the article on countertenors, which describes it as ‘a fistular voice supported by resonance’. He also refutes the notion that it is a ‘false’ voice by reaffirming the use of the tilted larynx, a physiological shift that cannot be regarded as false. This falseness might be explained through etymology: in ‘which [falsetto is] derived from falsus past participle of the Latin verb fallere – to deceive – and which in the Italian diminutive is falso or false’. Falsetto may be considered as an additional range above the comfortable singing voice. For David L. Jones, ‘the countertenor is basically a singer who has developed the falsetto with such strength that it has similar power and resonance of a full-voiced sound’.

Building on the Arab-African influence, recurring throughout this study, it appears that falsetto can be traced back to Arabia. For Ronald Stuart Tatnell, ‘the art of falsetto singing was known, practiced, and admired by the Arabians as early as the eighteenth century’. This is reinforced by Robert L. Garretson who notes that this probably occurred when the Moors invaded Spain. In the Grove dictionary, the earliest mention of falsetto in Europe is in reference to the Sistine Chapel. It is probable that the technique found its way to America through centuries of mass migration.

The earliest use of falsetto in popular song is unknown, but it has been used for a long time. Pleasants attributes it to African-American music:

This is characteristic of contemporary black singers – […] Ray Charles – and it has to do with their compulsion to achieve, or seem to represent a state of ecstasy, or, as in some recent secular music, anger and defiance. Mere loudness is not enough for them. […] It is the sense of extraordinary exertion, emphasis and accomplishment that they want, and for this they

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60 Ronald Stuart Tatnell, ‘Falsetto Practice: A Brief Summary’ (The Consort 22, 1965), 32.
have to appear to be going up and up, even higher and higher, to be reaching, so to speak, ‘out of this world’.  

This is supported by Poyatos, who observes that among African-Americans, the falsetto voice is used to express surprise. This is further supported by Hamm: ‘this is a sound unknown to white popular music, but common in music of American blacks, both in groups (which often feature an unusually high male voice taking the lead) and in solos’. In popular song, the striking sound of falsetto is prominent in artists such as Smokey Robinson and Little Richard.

Chapter 2 suggested that Little Richard’s falsetto stemmed from his emulation of 1940s and 50s African American singers. He readily employs the qualifier in ‘Long tall Sally’, ‘Good golly Miss Molly’, ‘Miss Ann’, and ‘Kansas City’. His falsetto is jovial, decorative, and energetic. Falsetto sounds occur on ‘woo’s and ‘oo’s’, and he either stretches the falsetto notes until he runs out of air or sings sharp staccato tones.

In an interview, Little Richard explains that ‘[he] taught Paul [McCartney] the holla and screams and the rhythm of the boogie woogie’. This is reinforced by Everett:

Little Richard made famous the registral isolation of a single tone in falsetto or a scream in multiphonics, and these were also practiced by his Specialty Records stable-mate, Larry Williams. Richard would usually break his voice to arrive on a high 1, as he did in ‘Tutti-Frutti’, ‘She’s got it’, ‘Miss Ann’, and ‘Good Golly Miss Molly’, or he would arpeggiate a triad in falsetto, as he did in ‘Long Tall Sally’. Such effects were probably first sung by Lennon in his Lonnie Donegan covers. While The Beatles’ falsetto ‘woo’ was not perfected until 1963, their cover versions gave them, particularly Lennon and McCartney, ample training in the effect.

Everett is certain that The Beatles’ falsetto ‘woo’ was not perfected until 1963, but this is speculative. Prior to the release of Please Please Me, The Beatles engaged with songs

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64 Poyatos, ‘Paralinguistic Qualifiers’, 183.
65 Hamm, Yesterdays, 420.
67 Everett, The Quarrymen through Rubber Soul, 73-4.
that readily used falsetto. This is supported through early bootleg recordings. ‘Long tall Sally’, for instance, appeared on The Beatles’ set list in 1956, so it seems unlikely that it took the group seven years to perfect the falsetto ‘woo’.

Smokey Robinson transformed the use of falsetto in Motown. His songs feature on The Beatles’ early set lists and ‘You’ve got a hold on me’, recorded for *With The Beatles*. Other artists who influenced their use of falsetto include Roy Orbison, Buddy Holly and Jerry Lee Lewis. This does not intend to contradict previous suggestions of the African-American, or what van Der Merwe terms, Afro-Arabian influence. Instead, it seeks to highlight that falsetto was becoming integrated into the rock’n’roll sound of the day.

Falsetto, in American popular song performance, is further demonstrated by Everett through Roy Orbison:

Lennon’s dynamic post-Orbison falsetto, a hallmark of each 1963 A-side is put to pasture in 1964. It disappears entirely from released product after a two-measure burst in ‘Tell Me Why’, as do most instances of structural registral contrast. Alongside occasional screams in only a few cover songs, vocal out-bursts are downright composed in ‘When I Get Home’ and ‘She’s A Woman’. Compared to any previous effort, *Beatles for Sale* is absolutely tame in this regard.68

Everett’s observation of ‘Lennon’s dynamic post-Orbison falsetto’, not only supports this study on qualifiers, it supports the influence of Roy Orbison on Lennon. For instance, Lennon’s lyrics in ‘Please please me’ were based on a Roy Orbison song. Everett also notes falsetto as a dominant vocal technique in ‘Tutti-frutti’. The consistent use of falsetto ‘woo’ is prominent and occasionally functions as a linguistic substitute. This is because it occupies the space between lyrics in the verse and chorus sections.

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68 Everett, *The Quarrymen through Rubber Soul*, 271.
Falsetto occurs in Roads’ 1200-1800Hz ‘zone of mid-frequency harsh pitches’. Due to the presence of falsetto in the upper partials, it often overrides lexicon in song. Songs, that incorporate falsetto utterances, appear on The Beatles’ set lists as early as 1956. Starting with Little Richard’s ‘Long tall Sally’, the analysis will present several examples of the presence and development of falsetto in The Beatles’ songs and cover songs. This is complemented by analyses of head voice.

Figure 34 gives a spectral view and transcription of Little Richard’s vocal. At 00:08, Little Richard sings falsetto ‘woo’, in a stepwise descent, from scale degree 1’-7-5, over chord I in G major. Little Richard achieves a slight swell before his vocal descends. The shadow above the amplified line indicates that the vocal resonates in the upper partials of strident pitches, or Zone B. The descent begins stepwise and leaps to a sustained scale degree 5. This creates anticipation for the listener as they wait for the resolution of D.

Figure 34: ‘Long tall Sally’, Little Richard, 00:08-00:09

Figure 35 gives a spectral view and transcription of McCartney’s ‘woo’ at 00:08. In contrast to Little Richard’s one second, straight descending glissando ‘woo’,

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McCartney sings a catenary arch over two seconds. The catenary arch is wavering as his vocal quivers to sustain the pitch.

Figure 35: ‘Long tall Sally’, The Beatles, 00:11-00:12

Even though The Beatles performed the cover songs diligently, we can hear how they started to develop their use of qualifiers by integrating other aspects of paralanguage. McCartney extends the qualifier heard in Little Richard’s version, by doubling the tempo, and combining it with a primary quality. This is supported in Beatle songs such as ‘Please please me’, ‘Help!’, ‘She loves you’, and ‘I saw her standing there’.

The first song on Please Please Me, ‘I saw her standing there’ was recorded in twelve takes. The consistent use of falsetto across takes confirms the application of the qualifier. In comparison to ‘Long tall Sally’, ‘woo’ is pronounced as ‘oh’ and each refrain is concluded by a falsetto ‘oh’. Figure 36 gives a spectral view of the first appearance of falsetto in the song. It shows that the vocal occurs in the mid-range and its upper partials reside in Zone C. McCartney does not hit the C centrally at first, which constitutes a momentary detuning of the note. From the spectral view, we can see that the line dips slightly before sliding up to C. This forms a less pronounced catenary arch than the one heard in ‘Long tall Sally’, in Figure 35 above.
A number of influencing factors from ‘When the saints go marching in’ may be heard in this song. The harmonic structure is almost identical, because both songs start on I and progress as follows before the lyric section: IV, V, I. In both songs, the refrain features an anacrusis: ‘so, how could I dance with another’ and ‘I, wanna be in that number’. The opening lines in both songs end with a falsetto ‘oh’. It is suggested that the structural influence of falsetto in ‘When the saints go marching in’ most probably gave rise to the opening of ‘I saw her standing there’.

Figure 37 gives an example heard at the end of ‘and I held her hand in mine’ at 01:05. This articulation is gradual and augmented to five seconds in duration. McCartney sings a sustained F# supported by Lennon singing ‘B’. McCartney’s vocal travels through head voice building toward a falsetto C# in bar 7. The first approximately 60% is occupied by the initial attack and period for the tone to be formed. Taking the minim in bar 6, we can see that the second approximately 30% shifts upward. The final, approximate 10%, shifts into the upper partials at the end.
This climactic declamation is prepared earlier at 00:25 on ‘oh’. The augmented line suits the expressive needs of the narrative. The protagonist’s desperate plea is supported by falsetto vocals throughout. The desperation evoked by falsetto in ‘I saw her standing there’ is supported by comparative work. ‘Please please me’, for example, demonstrates both falsetto and vocal fry qualifiers.

The line ‘come on (come on), come on (come on), come on (come on), come on (come on)’ is sung at 00:20, 00:47, and 01:32. Not only do the lyrics of this line recall cover songs like ‘Twist and shout’ and ‘Rock’n’roll music’, discussed in part 1, they are sung with vocal fry. This line functions to build tension in the antecedent phrase. Lennon sings the lead ‘come on’, with McCartney and Harrison echoing. The tension is released by the hook line ‘please please me, oh yeah, like I please you’.

As though it was in direct opposition to the preceding vocal fry, the second ‘please’ is sung with head voice. Figure 38 gives a spectral view of the consequent. Taking the first note in bar 2, we can see that Lennon’s vocal is amplified. He hits the pitch centrally and allows a full second for it to form. A vibrato resonance can be seen in the spectral view, as Lennon’s voice strives to maintain head voice.
The articulation of ‘please’, using head voice, reinforces the pleading narrative. The protagonist longs to be pleased by the antagonist. Their previous attempt to coax the antagonist using vocal fry on ‘come on’ are substituted for the desperate plea. The high voice implies a weeping and begging desperation. This use of falsetto and head voice to evoke desperation is further supported by an analysis of ‘Help!’

Deliberately titled with an exclamation mark, ‘Help!’ narrates a cry of despondency. Figure 39 gives a spectral view of ‘help’ after 00:08. Lennon not only furnishes a swell, giving rise to a parabolic arch, his vocal resonates from Zones E to B. The presence of falsetto, and the parabolic arch, reemphasise the support of different paralinguistic voice qualities. The entrance of this one second voice qualifier establishes the despair evoked in the song. One might argue that this is a one-off articulation, but this is supported by its reappearance in the refrain.
Figure 40 transcribes the refrain at 00:46, later occurring at 01:27, and 02:08 in the same way. Taking the first note in the second bar, we see that the transcription is limited and does not convey the range of tone-colour in this example. Lennon’s vocal swells, giving rise to a catenary arch, and he sings in head voice mimicking falsetto.

This contributes to the narrative because the plea of the protagonist is emphasised by the qualifier. This is now a recurrent feature when we hear ‘please’. Not only does this articulation recall ‘please’ in ‘Please please me’, it highlights the desperation in the narrative. Just as vocal fry became a narrative marker in their songs, so do head voice and falsetto.
The songs studied so far have hinted at this qualifier having a narrative function. But it is not until The Beatles’ mid-period that songs use it to complement, enhance and often constitute content. Examples are heard in ‘Ticket to Ride’: 02:46 and 02:50. ‘Oh! Darling’: 00:55, and ‘Twist and shout’: 01:07. At the end of ‘Ticket to ride’ there are a number of statements of ‘my baby don’t care’. These decorate the end of the song and aid the transition into the next song on the album: ‘Act naturally’.

Figure 41 gives the spectral view at 02:46. Taking the first note, we see that Lennon sings ‘my’ falsetto, as it resides in Zone C. He then sings ‘baby don’t care’ in head voice as the vocal descends into Zone E.

Figure 41: ‘Ticket to ride’, 02:46-02:48

One might argue that these occurrences are one-offs or language dependent, but through listening to multiple recordings and performances, it is apparent that The Beatles were careful and consistent in their use of qualifiers. This is supported by a comparative between the English and German versions of ‘She loves you’ and ‘Sie liebt dich’.

‘She loves you’, one of the biggest selling singles for The Beatles, was written whilst they were on tour with Roy Orbison. On 4 April 1964, it held a spot in the US

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70 Demos and outtakes are given a more detailed assessment in Chapter 7.
charts alongside four other Beatles’ songs. The narration is different from their previous songs, because they made the protagonist the mediator between the listener and the ‘she’. The falsetto vocals generate excitement because the narrator declares that ‘she loves you’.

Figure 42 gives a spectral view of ‘ooo’ at 01:02 in ‘She loves you’. The vocal is sparse as it resonates into the upper partials, giving a vibrato resonance.

Figure 42: ‘She loves you’, 01:02-01:04

Moore explains that ‘the trademark “ooo” just before the refrain is in falsetto, with a slight nasal edge, but in full voice – it does not sound weak’.

71 The strength and consistency of the moments of falsetto are not lost in translation to the German version.

Figure 43 gives a spectral view of ‘ooo’ in ‘Sie liebt dich’. This presents a similar spectral view to the example of vibrato in Figure 6, Chapter 3. Lennon rapidly rises to hit the pitch centrally, before allowing it to vibrate. Whilst the line appears to reside in Zone E, a shadow of its harmonics is visible in Zone C at 1184Hz.

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71 Moore, Song Means, 103.
The Beatles initially used falsetto in a playful way, but soon they began to expand its function in their own songs. Two examples where they adapted falsetto voice to qualify the narrative, are heard in ‘All you need is love’ and ‘She’s leaving home’. The introduction to ‘All you need is love’ is sung in a whispered falsetto. The descending ‘love, love, love’ is sung in harmony by Lennon, McCartney and Harrison.

Figure 44 gives a spectral view of the opening. The Beatles take an opportunity to play with rhythm, as it oscillates between common time and 3/4. McCartney and Harrison sing in harmony and furnish a swell on the first ‘love’, giving rise to a round rampant arch. This is followed by a straight line that decays with vibrato. The first statement occurs in Zone C, falls to Zone D for the second, and Zone E for the third. This pattern introduces the song and remains in the background throughout the lyric sections.
The subtle dominance of this results in a mantra-like expression throughout the song. The recurrence of falsetto or head voice, alongside a female antagonist, leads one to tentatively suggest that this qualifier can function to represent the female voice. This idea is supported by comparative evidence in ‘She’s leaving home’.

In ‘She’s leaving home’ the vocal parts are split, with Lennon singing the melody and McCartney singing long harmonic pitches above. Lennon’s counterpoint is ironic as his descending vocal is juxtaposed against McCartney’s head voice. The opposition between Lennon’s sarcastic tone-colour, and McCartney’s angelic voice, feed into the conflicting narrative. The three statements that occur also function to demonstrate an example of the process of abstraction.

Figure 45 gives a spectral view of the first statement of the chorus section at 00:46. We hear McCartney swell up to hit the pitch centrally and he sustains it in a straight line. There is a shadow in the upper partials, placing it in Zone D. Taking the third bar, we can see that McCartney shifts his vocal upward again. This is because a greater portion of the harmonic resonance is residing in Zone C, giving a sparse spectral view. The sustained G moves from a point of fusion to fission.

Figure 45: ‘She’s leaving home’, 00:48-00:53
Figure 46 gives a spectral view of the second statement. Lennon sings the ironic ‘sacrificed most of our lives’ below McCartney. Taking the first note in the second bar, we see that McCartney’s voice enters the upper partials. From 00:55-00:57, the presence of the vocal in Zone C and Zone B support it as falsetto.

Figure 46: ‘She’s leaving home’, 00:54-00:59

In Figure 47, McCartney sings falsetto from the beginning on ‘home’. Not only does his vocal resonate in Zone C, he furnishes a swell, resulting in a catenary arch. In terms of the process of abstraction; the first statement is clear and hints at falsetto near the end. The second statement is similar, but the voice is more prominent in the upper partials at an earlier stage. The final statement is an abstract version of the first, because it is sung in the upper range with arched intonation.

Figure 47: ‘She’s leaving home’, 00:59-01:04
The use of falsetto contributes to the narrative: just as the young girl has left her home, McCartney has left his comfortable vocal range. Falsetto may be interpreted as representing the female voice. Taking this view, the chorus appears to function as a dialogue between the mother and father. The weeping mother is represented by the qualifier and the ‘snoring’ father is represented ironically by Lennon. The use of falsetto or head voice, to embody a female role in The Beatles songs, is supported by a song where they used a female vocal.

In ‘Across the Universe’, ‘nothing’s going to change our world’ is sung by Lennon, with falsetto backing vocals. Lewisohn notes that ‘Paul realised that the song was still lacking something: falsetto harmonies, beyond the male vocal range’. To fulfil this, they selected two girls from a crowd of fans outside Abbey Road: Lizzie Bravo, aged sixteen and Gayleen Pearse, aged seventeen. In ‘Across the Universe’, falsetto functions to communicate the song’s basic message and propels the vocal beyond the existing boundaries of the world. The elision of falsetto and lyric in these songs confirms the use of falsetto as an expressive trope. This is because the function and feature combine to communicate the song.

The analysis suggests that falsetto was used initially to create interest and grasp the listener’s attention. The potential for falsetto to represent the female voice was present in early songs and covers, such as ‘Long tall Sally’, ‘I saw her standing there’ and ‘She loves you’. In ‘Long tall Sally’, the protagonist calls out to ‘Sally’, in ‘I saw her standing there’ the girl is represented by the ‘oh’ and ‘she’ is represented by ‘ooo’ in ‘She loves you’. In ‘I saw her standing there’, the falsetto ‘oh’ later builds to the augmented ‘mine’. This has significance on two levels: it sees the gradual transition between head voice and

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72 Lewisohn, The Complete Beatles Recording Sessions, 133.
falsetto, or the protagonist and the antagonist holding hands, and it recalls the experience of ‘oh’ in the introduction.

Taking the first point of significance, the building momentum toward ‘mine’ is mimicked in the narrative. The gradual union between the two characters is supported by the blending of the head and falsetto voices. In ‘She loves you’, the ‘ooo’s’ may be interpreted as representing the female who is declaiming her love. If the title was ‘she might like you’, perhaps the moments of falsetto would be cautious. These outbursts are not lost in the German version, which affirms their use as qualifiers in performance.

The use of falsetto or head voice in these early songs, is developed in their mid-late period. ‘Ticket to ride’, for example, uses head voice to convey a care-free rebellious teenager. The unruly, dismissive attitude of the teenager is personified at the end of the song. The song concludes with three statements of ‘my baby don’t care’. The teenager does not care about the consequences of her actions and departs with head voice. ‘She’s leaving home’, on the other hand, presents a more complex use of this qualifier alongside the narrative. The falsetto vocal stands out against Lennon’s ironic counterpoint. It depicts the weeping mother who can’t believe that her ‘baby is gone’.

For Everett, The Beatles abandoned falsetto after 1964, but examples here show that falsetto does not completely disappear after the two-measure burst in ‘Tell me why’. In fact, examples of falsetto can be heard throughout their songs and up until 1969 in ‘Oh! Darling’. The use of falsetto and head voice as a qualifier is supported by the narrative. In these examples, falsetto voice is associated with a young girl’s innocence, but in ‘Long tall Sally’ it is ‘a little higher pitched and spread over long utterances [...] to create surprise’. 73

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73 Poyatos, ‘Paralinguistic Qualifiers’, 183.
Poyatos attributes the expressive trope of surprise to Anglo-Americans. In ‘Ticket to ride’ and ‘She’s leaving home’, falsetto is used as ‘an affectionate way of addressing someone’. Another example is heard in ‘Martha my dear’, where McCartney uses falsetto to affectionately address his female dog. At 00:45 his vocal swells upward in an arpeggiated ascent to hit a high A. He sings ‘done’ falsetto and augments the pitch to a minim tied to a crotchet. The long falsetto pitch overrides the accompaniment and grasps the attention of the listener, or perhaps the canine Martha. This is because the high-pitch carries a whistle-like function.

Falsetto or head voice are not limited to The Beatles’ songs. Other 1960s singers have, and continue to employ, falsetto and head voice in their songs. In the Small Faces’ ‘Itchycoo park’ released in August 1967, Steve Marriott sings the verses in head voice that break into vocal fry for the refrain. Head voice complements the narrative that discusses ‘getting high’ in the park with friends. The song also hints at The Beatles’ ‘With a little help from my friends’, released five months earlier.

Falsetto is heard in 1970s disco and continues to appear in twenty-first century popular song. Robin Gibb, from the Bee Gees, stated that ‘[The Beatles] were a great influence to us because they were songwriters, they broke a lot of rules’. Anyone familiar with ‘Stayin’ alive’ will hear the high-pitched falsetto ‘stayin’ alive’ reading this. Or head voice sung on the refrain in ‘How deep is your love’. It is equally hard to imagine ‘Tragedy’ without falsetto. The BeeGee’s use of falsetto to evoke despondency, is supported by driving upbeat accompaniment. This is reinforced by the lyrics ‘staying alive’, questioning of the antagonist’s love, and finally ‘tragedy’ itself.

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74 Poyatos, ‘Paralinguistic Qualifiers’, 183.
4.6 Qualifiers as Expressive Devices
Depending on context, paralinguistic voice qualifiers can communicate or contradict the basic message of a song. In ‘Oh! Darling’, vocal fry communicated the narrative and recalled influences. The opening ‘oh!’ alluded to ‘ah’ that opened their 1963 cover of Little Richard’s ‘Kansas City’. Vocal fry on ‘oh! darling’ qualifies despair in the narrative; as the protagonist begs the antagonist, or darling, to stay. The subsequent appearance of vocal fry, in the chorus, recalls the qualifier in ‘Anna (go to him)’. ‘Get back’ and ‘I’ve got a feeling’, draw from The Beatles’ cover song set lists, and support the continued relevance of their pre’ 1963 material in 1969.

These songs not only demonstrate a style of singing, the qualifiers hold a structural role. In ‘I saw her standing there’, the flutters of falsetto in the anacrusis marked the influence of ‘When the saints go marching in’. As ‘Shout’ suggested, the whispered vocal fry determined that it is not always volume dependent. The analysis showed the development of qualifiers, from ‘shouting rock’n’roll’, to expressive tropes in their songs.

The function of falsetto and vocal fry fall under Davies’ meaning B classification. This is because ‘meaning B involves the intentional use of meaning A, or of a natural relation with potential for meaning A, to secure reference’. The use of vocal fry to evoke a sense of desperation is a natural relation of desperation to paralanguage. This is supported in ‘You’ve got to hide your love away’, ‘Help’, ‘Get back’ and ‘Oh! Darling’. Similarly, the use of falsetto, to depict a cry-like pleading, is the intentional use of high-pitched communication to convey meaning. This is enhanced by falsetto and head voice to represent the female voice. The natural relationship of vocal fry and falsetto to their respective themes; enhances the referential impact within and across songs.

76 Davies, Musical Meaning and Expression, 31.
Vocal fry and falsetto were shaped by pitch, rhythm, tempo, accent, phrasing attack and decay. Not only did the analysis demonstrate the presence and function of qualifiers, they built on examples from Chapter 3 and hinted at alternants that will be discussed in Chapter 5. This coincides with Poyatos’ definition of voice qualifiers as ‘they can appear as primary qualities’.\(^{77}\)

Vocal fry and falsetto require more than one anatomical or physiological change. The physiological configuration of vocal fry requires relaxed vocal band vibration, whereas falsetto voice requires a tightened vocal band. Vocal fry, falsetto, and head voice, fulfil Poyatos’ requirements for voice qualifiers. This is because the auditory effect of vocal fry is the gravelly voice and that of falsetto is a high-pitched female-like vocal. The voice-type presented is vocal fry and falsetto or head voice.

Despite the invisible nature of qualifiers, they have a primary function in popular song performance. Depending on context, they can depict fear, desperation, longing, anger, and frustration. In addition to this, ‘You’ve got to hide your love away’ played with the pushes and pulls of time in song. Through the attack and decay of ‘hey’, it challenged our expectation of rhythm and tempo. In song, rhythm can shape a vocal, cut a vocal line short, and occupy the absence of a vocal. The next chapter will take a parallel path, by tracing paralinguistic alternants in song.

\(^{77}\) Poyatos, *New Perspectives in Nonverbal Communication*, 189.
Chapter 5
Vocal Alternants

5.1 Introduction
The previous chapters gave examples of nonverbal voice qualities that are constituted by primary qualities, qualifiers, pitch and rhythm. Once the idea of primary qualities and qualifiers are clear in our minds, and once we are aware of the effect of these inarticulate sounds on our experience of a song, we can begin to evaluate paralanguage from a broader perspective. By expanding on theory surrounding vocal alternants, this chapter will explore the effect of silence and pause on the singing voice.

In communication, depending on context, silence and pause can consciously or unconsciously contradict or enhance the basic linguistic message. Select examples in the previous chapters featured entire sections interrupted by a pause. Select non-lexical alternants were shown to function differently within or across songs. This led to the observation that, not only do language and paralanguage evoke expression in song, their absence may give rise to an equally important, though different, affect.

For Poyatos, ‘sound and movement and silence and stillness constitute the very pillars of culture (since culture is communication)’.¹ Types of silence or pause occur on a spectrum; ranging from insignificant to significant. A natural breath, for example, is insignificant for communicative purposes. But a gasp and deliberate holding of the breath can communicate shock or disbelief. In conversation, silence can encourage turn-taking, communicate distrust, or create tension.

This is often used to manipulate communication in the classroom. A teacher who waits for a response to a question, creates an unbearable silence. This establishes tension and usually results in someone, either teacher or student, answering. If it is the former, then a social level of respect risks dilution. But if the latter, the teacher’s tactic has

¹Poyatos, Nonverbal Communication Across Disciplines, 296.
succeeded and will establish an expectation for future questions. Other communicative examples include speeches, where silence can create interest or uncertainty, increase attention, and dismiss or refute entire arguments.

In music, silence often turns our minds to John Cage’s ‘4,33’. A three-movement composition in which there is no sound played. Instead, the performer’s breathing, foot-tapping, possible yawns, the audience’s hiccups, coughs, sighs, shifting in their seats and footsteps become audible. The absence of sound-making forces the audience to be aware of ambient sounds. This explains why no performance is completely silent, because the variance in ambient sounds make every performance different. Whilst Cage’s composition is a hyperbolised example, it nonetheless makes us aware of the power of silence to communicate beyond the perceived extent of pitches and words combined.

The expressive potential of silence and pause in communication is included in Poyatos’ definition of paralanguage: ‘the intervening silences of varying length which we use consciously or unconsciously supporting or contradicting the linguistic, kinesic, or proxemic messages’. Poyatos’ note of ‘varying length’ suggests that silence and pause are time dependent. In this chapter, his theory of vocal alternants is taken as the foundation, which is combined with existing studies of time in musicology. This builds on a broad theoretical approach offered by: Poyatos, Roads, Cogan, Danielsen, Everett, Moore, and van Der Merwe.

5.2 Theory
Paralanguage is subject to modification, which is often achieved through differentiators: alternants and qualifiers. For Poyatos, alternants are:

Egressive and ingressive single or compound sounds, articulated or not, produced or shaped in the areas covered by the supraglottal cavities (nares, nasal chamber, nasopharynx, mouth, pharynx), the laryngeal cavity, the infraglottal cavities, the diaphragm, and the abdominal muscles, as well

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as communicative silences; they do not affect the verbal utterance, but are modified by primary qualities, qualifiers and kinesic activity, and occur either isolated or alternating with verbal language and kinesic constructs. Examples include clicks, hissing, yelping, moaning, audible frictions, nasal sounds and exhales. Alternants have post-lexical value that affects communication. These sounds can be accidental or characteristic but are often employed for affect. A long exhale, for example, can communicate frustration. Often our experience of alternants is through the absence of sound and it is worth examining the function of these voids in greater detail.

Broadly speaking, silence and pause may be understood through the nonverbal categories of chronemics and proxemics. In the 1970s, Thomas J. Bruneau developed the term ‘chronemic’ for his linguistic study of the function of time in communication. In 1983, Poyatos proposed the use of the term for his investigation into the communicative function of silence and pause in human interaction but recognises functional silences and pauses as features of paralanguage.

For Poyatos, silence results from the absence of sound and stillness results from the absence of movement. He codes silence and stillness into five categories: the listener can be more conscious of the silences than ourselves, sometimes silences are complementary and not redundant, the message might be embedded in the silence making words redundant, a silence or still is almost always arbitrary, and finally, that silence or stillness can be intrinsic sign constructs.

Poyatos gives three functions for silence and pause in communication: as signs proper; the silence is given by the words themselves. As zero signs; these ‘signify precisely by their very absence’. Finally, as carriers of the preceding activity; this is the

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3 Poyatos, New Perspectives in Nonverbal Communication, 190.
4 Poyatos, Nonverbal Communication Across Disciplines, 298.
5 Ibid., 302.
ability for silence to carry the meaning of the preceding sounds. These can amplify meaning, negate what has been said, or allow lexicon to resonate.  

Poyatos states that ‘silence and stillness, however, cannot vary in a sensible way in themselves, apart from duration’. But as this chapter will demonstrate, silence and stillness differ, when examined through velocity. This is where music theory can give a greater understanding of these alternants. Take, for example, the passage below. It gives five bars of silence, but the duration of rests imply that the silence is getting faster. It draws a variance between silence and stillness, for stillness lacks implied motion.

Silence and pause are affected by two qualifiers: intensity and duration. That is, the preceding, concurrent or succeeding sounds that affect the level of intensity in any given moment of silence. For Poyatos, this intensity can be progressive as ‘the sound dies down, in such a way that the gradual disappearance of sound is being replaced by the increasing silence until it becomes total silence’. This is similar to the function of a fade in recording, which marks the transition from one track to another, gives rise to false-endings, or marks the end of the recording.

The Beatles make use of false endings, which can be heard in ‘Strawberry fields forever’ (‘Strawberry fields’), ‘I’m only sleeping’, ‘Helter skelter’ and ‘Rain’ to name a few. From 03:25, in ‘Strawberry fields’, the song begins a gradual fade that suggests the end of the track. It fades out at 03:35 but gradually returns and prepares for the ending at 04:05. At 02:57, in ‘Helter skelter’, the supporting instruments begin to fade, and the

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7 Ibid., 305.
8 Ibid., 310.
guitar plays tuning notes. But at 03:09, the snare drum resumes, and the song returns for a final instrumental pattern.

The communicative potential of a false end is further supported by ‘I’m only sleeping’ and ‘Rain’. At 01:57, in ‘I’m only sleeping’, the guitar plays a descending melodic pattern, but at 02:05 it returns to its jovial lyric section. The false-end in this song complements the narrative, for just as Lennon sings about only sleeping, the song itself dozes mid-way through. In ‘Rain’, the false end recreates that communicative ‘hush’ that someone makes when listening to something in the distance. Take, for example, when someone quiets a conversation to hear if it is raining outside.

Their knowledge and use of false endings not only suggests a deliberate use of communicative silences in song, it is reinforced by Jon Dennis who notes that ‘an outtake of ‘What you’re doing’ (1964) shows The Beatles knew the value of a false ending [and] it became a central part of their musical arsenal’. Dennis adds, ‘Get back’ and ‘Hello goodbye’ to this list. These songs, and the Cage piece, are examples of silence that highlights ambient sounds, which gives rise to a communicative function.

In song, a silence is mainly noninteractive, but a false end can have a communicative impact. A pause, on the other hand, the interactive sub-linguistic aspect, co-determined by the basic triple structure, is almost always interactive. Types of pause include interactional or non-interactional, turn-taking, and transitional. In performance, these occur in both dialogues and monologues. An example of turn-taking pauses is heard in Sonny and Cher’s 1965 ‘I got you babe’. Cher sings the first two lines of the verse, then pauses, which indicates that it is Sonny’s turn to sing. Sonny answers the second two lines of the verse and pauses before singing the chorus together.

As a monologue, the singer might pose a question and await a response. But sometimes these are unanswered. This is aurally illustrated in Burt Bacharach and Hal David’s 1968 ‘I’ll never fall in love again’. The protagonist answers a series of their own questions throughout the song. Answers include: ‘A guy with a pin to burst your bubble’ or ‘You only get lies, and pain, and sorrow’.

Another example is the chorus of Ben E. King’s 1961 release: ‘Stand by me’. Written by Ben E. King, Jerry Leiber, and Mike Stoller. Throughout the chorus sections he asks the antagonist to ‘stand by [him]?’ These questions are met by pauses that suggest the silent presence of the antagonist in the song, but with no vocal to confirm. The final example is a technique that was dominant in American popular songs of the 1950s: stop time. Before providing examples, it is worth noting that its presence and function is not limited to popular songs of this era.

Over centuries, in many cultures, songs have used stop time. It likely stemmed from speech and was an economic way of creating interest in vocal singing, when instruments were not readily available. The first use of stop time remains unknown, but it has been thought to have its origins in African rhythms. For van Der Merwe, this grew out of accents and stresses in speech patterns adopted into song:

The European influence was not limited to simplifying African rhythmic complexities; it also had a few twists of its own to contribute, all connected in one way or another with perversion of accent. Either an accent was created where it would not normally exist (as in the Scotch snap type of figure); or an ordinary accented note was replaced with a rest; or an accented note was made to arrive before its due time.10

The ‘accented note replaced by a rest’, or missed beat, is often used in popular song. It creates kinetic energy or tension by upsetting the regular pulsation. For instance, in ‘All

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I gotta do’, the lyric sections enter on the offbeat. The result is an unaccented soft vocal delivery in the verse, that evokes the sensation of a ‘swallowed beat’.11

There are parallel features between African-American rhythm and stop time. Both are usually in common time and feature ‘the missed beat, particularly at the beginning of the bar’.12 The African-American rhythmic influence is supported by Frith, although he connects the rhythmic structures to early dance music: ‘black music’s most obvious influence on pop has been rhythmic. It was as dance music that black music first developed its cultural significance for whites’.13 Frith’s observation of the rhythmic influence of African-American music on pop, is supported by Everett.

Everett quotes Steven Porter’s definition of stop time: ‘[a] passage in which a clearly articulated rhythmic pattern ceases (‘stops’) in the percussion. The pulse continues as does the melody, but the drum (and perhaps other instruments as well) plays only a downbeat or syncopation here and there’.14 Everett amends this to include ‘those examples that begin not with a clearly articulated pattern but with a stop time passage that functions as a textural anacrusis’. He notes the syncopated punctuations on the articulated first and fourth beats in Elvis Presley’s performance of ‘Blue suede shoes’ to support his amendment of Porter’s definition.

I wish to modify Everett’s definition to include passages whereby both melody and rhythm patterns cease momentarily. Stop time is similar to the winding up of a clock. The tension created by the tightly wound coil momentarily stops the clock, before resuming with the regular pulse. The brief stopping of time creates kinetic energy before it is released and the ticking resumes. In song, this technique can energise a passage of

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11 A term suggested by Simon Trezise, Trinity College Dublin.
12 Van Der Merwe, The Origins of the Popular Style, 170.
14 Everett, The Quarrymen through Rubber Soul, 64. From Porter, Steven. Rhythm and Harmony in the music of The Beatles (Ph.D. diss. City University, New York, 1979).
otherwise stagnant harmonic and melodic progression, or it can contribute to the theme of a song through melodramatic time-defying pauses. But overall, it functions to create tension and release.

It is important to note that sound and pause are mutually dependent in the use of stop time. This supports Poyatos’ compatibility of silence and sound.\textsuperscript{15} Paul Willis alludes to this in his description of Elvis’ ‘Jailhouse rock’. He notes how the song ‘comes to an abrupt stop and starts again’.\textsuperscript{16} The abrupt stop amplifies the time and spatial interval between the two statements. The pause allows the previous statement to resonate and for the listener to prepare for the succeeding one.

It was hinted in the example of a fade above, that silence generally functions as a closing feature in popular song. This aids a smooth transition from one song to another, particularly on an album or radio. For Willis, it is the result of modern technical methods: ‘one of the commonest end-piece forms is the fade, the diminution of a constant beat into nothing – an impossible concept for any previous musical forms and, incidentally, one that relies completely on modern technical methods’.\textsuperscript{17}

The presence of silence and pause in song does much for articulating the primary domains whilst amplifying aural space. This is reinforced by Poyatos, who calls on Paul Ekman’s 1977 model of space markers; which illustrate size but not shape.\textsuperscript{18} But Poyatos does not engage with implied shape. There is no obvious intonation in a pause, but it can be implied. Depending on context, a sound pausing at 880Hz for three seconds and resuming at 440Hz, may imply a sharp descending intonation. In this example, time markers might be 00:01 and 00:04 forming a three-second pause or aural space.

\textsuperscript{15} Poyatos, \textit{Nonverbal Communication Across Disciplines}, 313.
\textsuperscript{17} Willis, ‘The Golden Age’, 53.
\textsuperscript{18} Poyatos, \textit{New Perspectives in Nonverbal Communication}, 110.
Sound, silence, and space exist in a continuous interactive role in song, for example, stop time is affected by rhythm and pulsation. Roads cites Howard E. Sypher to explain the consistency of pulsation in popular song: ‘it is typical that the beat never changes on a macroscale throughout an entire piece. […] the musical voices, [can] play a subdivided pulsation that is initiated by, but not necessarily aligned with, the main beat’.19 Another difference is that pulsation is related to the sense of a stable meter. For Roads, this is a regular and repeating rhythm, like four crotchets, that provide a regular meter for a song.20

Timing in popular song is subject to numerous pushes and pulls, so stalling must be set up contextually. For instance, the interruption of the four-bar pulse, often gives rise to stop time. The dramatic pause can alter the perceived beat and disorientate the listener, causing tension. This can modify or give nuanced meaning in a text. This is supported by Poyatos’ theory of the carrying function. The stopped time allows the preceding sounds to carry into the mind of the listener. This was alluded to in the analysis of ‘You’ve got to hide your love away’ in Chapter 4, Part 1.

The narrative potential of a pause is found in many facets of the arts. When discussing the impact of silence and stillness in the theatre, Poyatos categorises the communicative impact in terms of three functions, that is: signs proper; zero signs and carriers.21 Just as silence and stillness in the theatre await careful study of the various encoding or decoding processes; the communicative impact of silence and pause in popular song awaits similar attention.

In Everett’s analysis of The Beatles, he presents a series of examples of stop time in songs and cover songs but avoids a detailed interpretation. He notes that ‘The Quarry

21 Poyatos, New Perspectives in Nonverbal Communication, 333.
Men practiced stop time in at least twenty-nine of their pre-1960 covers. These, and many other songs, feature stop time in the first four bars of a twelve-bar blues verse or use it on the crucial fourth bar: ‘which launches into the song’s first change of chord, as in ‘Slow Down,’ or—to vividly highlight a full line of lyrics […] as in ‘Baby Let’s Play House’.”

Chuck Berry, for example, often makes explicit references to time in his lyrics. In the blues-like song ‘Wee wee hours’, the title places the song in an after-dusk setting. Everett cites Bill Haley and His Comets’ 1955 song ‘(We’re gonna) rock around the clock’. He explains how ‘the song is announced by snare alone; each phrase of the introductory map of the clock is presented in stop time, where the singer works alone with occasional punctuations from the rhythm section’.

[For Everett,] the most dramatic placement of stop time is at the end of the bridge and/or the return to the verse, and The Beatles performed this in ‘Come Go with Me’ and at least ten others before writing their own examples in ‘In Spite of All the Danger,’ ‘There’s a Place,’ and ‘This Boy.’ The entire bridge is subject to this texture in ‘I Got a Woman’.

‘Please please me’ and ‘All my loving’ use stop time to reduce the texture and aid the transition between the verse and chorus. Stop time functions in a similar way to a pause: it creates anticipation, marks turn-taking, and can enhance or modify meaning.

The theories presented engage with silence and pauses in speech and song. Moore’s study of the soundbox, for example, focuses on textual space. Whilst it improves our understanding of spatial relations in song, it does not address silence and pause in a way that this chapter will. This study gives the function of silence and pause as vocal alternants in popular song. Studies carried out by Moore, Everett, Poyatos, Hall and

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22 Everett, The Quarrymen through Rubber Soul, 64.
23 Ibid., 64.
25 Everett, The Quarrymen through Rubber Soul, 65.
26 Ibid., 65.
Roads recognise the impact of silence and pause, but do not offer a methodology for analysis. This leads to the question of how to analyse and present alternants in song.

5.3 Methodology
Danielsen, Griffiths and Butler analyse the internal beat or pulse through musical rhythm. In their respective studies, Butler notes the ‘turning the beat around’ trick,\(^{27}\) Danielsen examines microrhythms\(^ {28}\) and Griffiths situates lyrics in a verbal space.\(^ {29}\) In Griffiths’ approach, lyrics are transcribed according to a singer’s articulation in time. The hook line in Buddy Holly’s ‘You’re so square (baby I don’t care)’, for example, would be transcribed as:

‘You’re so square ____________________________(baby I do---n’t care)’.

This is useful for conveying broken lexicon, but it does not convey the way in which the preceding words transition into the succeeding ones. Nor does it give specific coordinates that can accurately determine the duration of these events such as time, rhythm, pitch, or implied articulation. There is evidence of a distance between the antecedent and consequent phrases, but the absence of time markers renders the pause unquantifiable.

The idea of stop time is present, but a detailed interpretation is not possible through this method. This is similar to presenting a map of the world, with the sea representing pauses, and not providing any land coordinates or discussing anything in the water. What is happening in these pauses? And when do they occur? Griffith’s recognises that there is a pause, but does not provide specific coordinates, nor present an interpretation of the space between the words. Danielsen, on the other hand, engages primarily with time markers.

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Her research is focused on micro-rhythms and cross-rhythms in popular song. She specialises in analysing the groove and uses the beat-mapping function in Logic Pro 7 to mark patterns and transitions in groove music. Danielsen approaches the analysis of pulsation through three avenues: the metronome model, local time shift and beat bin. The metronome model presupposes one dominant or correct placement and equal spacing of the beat. The local time shift model examines the modification between pulsations. The beat bin model, abandons the notion that the beat is a series of points in time, and is best suited to bodily activities that accompany the music.  

The beat bin model is constructed alongside rhythmic tolerance. That is ‘how large the actual distance between structurally simultaneous events can be without appearing out of time’. For Danielsen, this tolerance is context dependent. Slow tempi, for example, increase rhythmic tolerance, whereas fast tempi decrease rhythmic tolerance. She concludes that ‘pulse is no longer a series of points in time, because each beat is thought to have both a shape and a duration’. Calculating the beat bin allows one to approximate the shape of a pulse. This ranges from a point-like design to broader beat bins. The point-like design is visually similar to a parabolic arch (Chapter 3). Danielsen concludes that ‘differing rhythmic events may be regarded as located within the same beat, in turn contributing to the duration and shape of the beat’s virtual counterpart’.

This overall approach through pulse is important, as it brings us closer to the analysis of time and space markers in song. Whilst it acknowledges that the beat bin works at a level of expression, it does not explore the expressive potential or impact of rhythmic tolerance. To grasp a greater understanding of the vocal alternants, silence and pause, the methodology will focus on approaches derived from musicology and

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30 Danielsen, ‘Here, there and everywhere’, 19-35.
31 Ibid., 29.
32 Ibid., 33.
33 Ibid., 33.
linguistics. This builds on Roads’ anatomy of pulsation, Danielsen’s beat bins and rhythmic tolerance, and Poyatos’ coding of silence and pause.

For Roads, the pulse can be analysed using a four-step formula at any given time stamp in a song. The first instance the initial attack of the sound is located using frequency and time markers. The second is the duration of the sound, how long it is heard for. The third is the interval between attacks, which is located within beats. The final step is the interval between events. This is the space between the decay of the sound and the start of the next attack. An event is something that happens at a particular point in space and at a particular time, so one can specify it by specific coordinates.

It is within the interval between events that pauses gain their defining features. The event occurs as a feature of stop time or an interruption in pulsation. Features include: time markers, duration, rhythm, and pitch. Measuring the interval between events, using the anatomy of pulsation, will enable more accurate analysis of specific rhythmic events. But first, it is worth giving a more specific outline of silence and pause in popular song.

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34 Roads, *Composing Electronic Music*, Figure 6.9, 161.
There are three main types of silence and pause in popular song. These are the absence of preceding and succeeding sounds, the absence of the supporting bass line, and the anticipation rest. Each type has a divergent function:

1. **Absence of bass, melody, and lyrics:**
   This occurs when all the instruments, or singers stop playing for a period.

2. **Supporting rhythm stops but the melody line continues:**
   This is when the accompaniment stops, but the melody line continues to be articulated. This creates a dichotomy between the two lines. It is similar to being in an airplane: the melody line flows like the airplane in the sky, but the accompaniment, like the ground below, appears to travel at a slower speed.

3. **Anticipation rest, or the absence of a beat in time:**
   This is when the absence of the initial or accented beat, results in a void. Sometimes, as in the scotch snap figure, this void is quickly filled by interjections of the succeeding notes, for example, grace notes. Often the absence is not filled and can cause a sensation of unrest.

The analysis of silence and pause in popular song synthesises the approaches taken in the previous chapters. Whilst broaching chronemics, the duration of qualifiers and alternants is registered in post-primary qualities. Once we have recognised the presence, and gained an understanding of, primary qualities, qualifiers and alternants. It becomes possible to analyse the duration and absence of these qualities.

The co-dependency of the aforementioned aspects of paralanguage are presented using waveforms and spectral views. The waveforms offer a visual of space markers and spectral views are useful for highlighting a pause using Road’s anatomy of pulsation.

Time occurs on two distinct levels in popular song. Explicitly, it appears in the lyrics or titles, as with ‘Any time at all’, ‘Time is on my side’ or ‘Slow down’. Implicitly, time occurs as silence and pause, with two events.

Poyatos categorises explicit time references into types. These are references to the past, present, and future. An example of a specific past reference is heard in the opening of ‘Sgt. Pepper’ with ‘it was twenty years ago today’. A present reference is heard in ‘Come together’, ‘come together right now, over me’. Finally, a future reference
occurs in ‘Imagine’, ‘I hope someday you will join us’. These references are supported through the use of space markers.

Space markers make explicit reference to space in lyrics and titles of songs, for example, ‘wait’, ‘away’, ‘apart’, or ‘over the rainbow’, all imply a distance. Implicitly, the space between the time markers gives rise to communication within and across songs. These spaces occur on a spectrum, for example, a pause of half a second may be a breath but a three second pause might be deliberately articulated. Such a pause can communicate beyond the perceived extent of words and pitches combined.

The explicit and implicit interplay between alternants: silence and pause, primary qualities and qualifiers, eventually give rise to an understanding of alternants as expressive tropes. The structural and processual mechanisms introduced and analysed in this chapter are summarised in the table below.35

35 Modified version of David Epstein’s study of musical time in Shaping time: music, the brain and performance (New York: Schirmer Books, 1995).
5.4 Analysis

We used to show up at those early gigs and the promoter would say ‘where’s your drummer?’ we’d say, ‘the rhythms in the guitars’ and just, hold your nerve, while he panicked a bit and hope he bought it.

Paul McCartney

The absence of a drummer in early performances, meant that Lennon, McCartney, and Harrison had to develop a way to articulate a driving rhythm in the guitars and vocals. This may explain the presence of stop time in the vocal and supporting guitar parts. Noted by Everett above, they practiced stop time in at least twenty-nine of their pre-1960 cover songs. Before presenting the analysis, it is worth taking some time to explore The Beatles’ sound palette in relation to silence and pause.

Artists who appeared on their early set lists, and readily used vocal alternants, are Buddy Holly, the Everly Brothers, Chuck Berry and Elvis Presley. Whilst other chapters noted the gradual integration of technique and narrative into their own songs, stop time was not subject to the same durational development when it came to its expressive potential. The use of stop time to enhance a narrative goes back as far as 1875 and earlier.

A notable example is heard in the Everly Brothers’ 1961 recording of Henry Clay Work’s ‘Grandfather’s clock’ (1875). Hamm observes ‘the abrupt stop of the pervasive eight-note pattern in the accompaniment at the precise moment that the text proclaims that the clock “stopped – short – never to run again” at the moment of the old man’s death’. This is an example of explicit and implicit reference to time.

Explicitly, the song discusses a clock that stops in line with the death of a grandfather. Implicitly, the use of stop time gives rise to greater meaning through delivery. The inarticulate stop time, occurring in line with text, enhances the tale of the grandfather’s declining health alongside his clock. Time in the lyrics and the modification

36 Anthology Zero: The Beatles at their Best, 2:46-3:00.
37 Hamm, Yesterdays, 256.
of rhythm, give rise to greater expression. In this example, the music and lyrics, ‘stop –
short’, but this is not always the case.

Chuck Berry does not create a complete pause in the music and lyrics. Instead, he
stops the accompaniment but allows his vocal to continue. This is an example of the
second type listed in the methodology above and can be heard in the chorus sections of
‘Sweet little sixteen’. Chuck Berry sets up a call and response between his vocal and the
accompaniment. The stopped accompaniment causes tension, whilst highlighting the
entrance of the lyric. But in ‘Too much monkey business’, stop time marks the entrance
of the lyric sections, which is further supported by the lyrics of ‘Reelin’ and rockin’. The
implicit points of stop time are highlighted by the lyrics and make explicit reference to
time, for example, ‘I looked at my watch’.

In contrast, Elvis uses stop time as per Porter’s definition: the melody ceases, and
the supporting instruments play a downbeat or syncopation here or there. Take, for
example, the opening of ‘Heartbreak hotel’. Elvis’ articulation of ‘well since my baby
left me’ is followed by two emphatic beats. This becomes the hook and marks the start
of each lyric section. Not only does this give stop time a structural function, the two
emphatic piano chords break the continuity of Elvis’ vocal and contribute to the narrative.
The heartbroken protagonist is emphasised by the points of stop time breaking the
continuity of the lyric sections.

The use of stop time in songs of love, is supported by both Elvis and Buddy
Holly’s recording of the 1957 hit ‘You’re so square, (baby I don’t care)’, discussed in
terms of Griffiths’ methodology above. Implied in the title by the comma, Buddy Holly
and Elvis, make structural use of stop time in the refrain.

38 These songs feature on The Beatles’ set lists from before 1956-1962.
Other examples include Holly’s use of stop time as a structural marker in ‘Oh Boy!’ and ‘Midnight shift’. In both songs, stop time functions to mark the entrance of the refrain. But the most emphatic example is heard in the introduction of ‘Ready Teddy’. The articulation of ‘ready, set, go man go’ has a dual function: it disrupts the hurried Holly and prevents the song from establishing its pulsation. Stop time is used to mark the entrance of the verse, and to punctuate the lyrics, whilst recalling the introduction.

This section presents an analysis of select cover songs that demonstrate The Beatles’ engagement with stop time. These are: the Shirelles’ ‘Baby it’s you’ written by Burt Bacharach, Hal David and Barney Williams. Barrett Strong’s ‘Money! (That’s what I want)’, written by Berry Gordy and Janie Bradford, and ‘Act naturally’, written by John Russell and Toni Morrison. Lennon takes the lead vocal in ‘Money! (That’s what I want)’ and ‘Baby it’s you’, whilst Ringo sings the lead in ‘Act naturally’. One notes that this is the primary example of Ringo’s engagement with an aspect of paralanguage so far. It seems apt that the drummer would engage with the one most closely related to rhythm.

‘Baby it’s you’ opens with three statements of ‘Sha, la, la, la, la, la, la’, which are accompanied by rhythm-guitar and drums. The last statement is cut short by stop time and emphasised by a cymbal crash. In this first example, the interval between events is one second, 00:11-00:12. There is a final declamation of ‘sha, la, la, la, la,’ that is unaccompanied. This is followed by the re-entrance of the guitar, bass and drums. Tension is created by the preceding stop time, because it disrupts the sequence established by the opening nine seconds.

Figure 1 gives a melodic range spectral and waveform view, from just after 00:09 to 00:13. The waveform pane on the bottom shows that between 00:11-00:12 the amplitude is reduced to 0dB. The one second time markers indicate the interval between events when the amplitude is reduced. The vocal line picks up the ‘sha, la, la, la, la’ from
00:12. The lyrics are shorter in text, but longer in duration. This is because McCartney emphasises the line through interjections of pauses. This is unaccompanied and is given by the black space in Figure 1 between 37-134Hz.

Figure 1: The Beatles, ‘Baby it’s you’, 00:09-00:13

The articulation of this line is reinforced by a comparative analysis of The Shirelles’ version in Figure 2. Taking the first bar, we see that The Shirelles sing in unison with supporting instrumentation. But, like McCartney, just after 00:11, the supporting instrumentation stops, and the next statement is sung without backing instruments (see black area between 37-156Hz in the spectral view after 00:12).
From the waveform pane, we can see that the amplitude gradually gets quieter between 00:11-00:12. This differs from The Beatles’ cover that uses stop time to cause an abrupt pause (see Figure 3). Whilst the delivery varies, the function is the same: it creates anticipation by holding back the sound for the final ‘Sha, la, la, la’ that leads into the first section of the lyrics.

Subsequent statements of ‘Sha, la, la, la, la’ are used as a gap-filler. In The Beatles’ version, vocal fry is heard on ‘can’t help myself’ at 00:42. But it is softened and shortened through stop time and statements of ‘Sha, la, la, la’ in the song. This forms a brief pause before declaiming ‘baby it’s you’. The use of stop time evokes dramatic effect: the protagonist is declaring his love for his ‘baby’, but these pauses are unanswered, and the protagonist’s vocal grows desperate in the chorus.
The interval between events of the opening example in both songs is one second. But The Beatles’ use of vocal fry against stop time marks a fusion of a qualifier and alternant. This results in an enhanced overall sense of tension and release. They were in no doubt familiar with the Shirelles’ version, but their use of vocal fry marks a synthesis of two lines of influence: vocal fry probably learned from their emulation of Little Richard and stop time from The Shirelles.

This reading is supported through their engagement with stop time in Barrett Strong’s ‘Money! (That’s what I want)’. The Barrett Strong version and The Beatles’ cover version are almost the same in their use of stop time. Similar to the Shirelles, the opening presents an instrumental introduction, followed by a crotchet-beat break. This momentarily stops musical time and is heard throughout the song. It is used to mark the entrance of the lyric or chorus sections and contributes to the narrative.

The protagonist is screaming to the listener ‘now give me money […] a lot of money’. This gives the impression of a precocious child demanding money from their parents to socialise and buy things that they want.\textsuperscript{39} The tantrum-like aural image is inspired through vocal fry and stop time combined. The song gives a complete

\textsuperscript{39} This supports the emergence of the ‘teenager’ in American culture in the 1950s.
monologue as the protagonist demands money in the chorus and lyric sections. These demands go unanswered by the antagonist, believed to be the parents, occupying the silent turn-taking pauses. The chorus section is supported by backing vocals that give the illusion of peer pressure and support the tantrum-throwing teenager. The combination of stop time, alongside the narrative, marks a progression in their musical development. Before delving deeper into the narrative function of alternants in their songs. It is worth pausing briefly, to give a general overview of stop time in The Beatles’ corpus.

In 1963, ‘Any time at all’, ‘There’s a place’\(^40\), ‘Please please me’ and ‘Love me do’ gave rise to decorative uses of stop time. But in 1964, songs such as ‘This boy’ and ‘Slow down’, mark a pivotal point in The Beatles’ use of stop time and pauses. This is because their function is developed to articulate the song’s narrative. In 1966, these techniques are integrated into their own style. Songs such as ‘I want to tell you’, ‘We can work it out’ and ‘I need you’, give stop time and pauses similar to the ones heard in ‘Money! (that’s what I want)’. They develop the function of these techniques into melodramatic, time-defying caesuras in ‘She loves you’, ‘It won’t be long’, ‘Good day sunshine’, ‘In my life’, ‘Happiness is a warm gun’, ‘Just like starting over’ and ‘The end’.

Beginning in 1963, ‘Any time at all’ opens with a dramatic declamation of the title line and interjections of stop time marked by a drum beat. The opening is a statement of the chorus:

\[
\begin{align*}
\text{Anytime at all} \\
\text{Anytime at all} \\
\text{Anytime at all, all you gotta do is call, and I’ll be there} \\
\text{Anytime at all, all you gotta do is call, and I’ll be there}
\end{align*}
\]

\(^40\) Inspired by Leonard Bernstein and Steven Soundheim’s ‘Somewhere’ from West Side story. The song contains the line ‘there’s a place’.
Each statement of the line is different. The first is preceded by a moment of stop time, the second is sung as an echo to the first statement followed by a pause, and the third and fourth lines are sung as a refrain without a pause.

Stop time in this song is primarily functional. It marks the entrance of the chorus and re-emphasises the song’s title. The momentary pauses provide a breathing space for the performer, but also function to elicit anticipation in the listener. This is not unlike the use of stop time in ‘There’s a place’, given in Figure 4. The opening was mentioned in Chapter 3 as an example of an inverted arch. It also demonstrates stop time in a similar way to ‘Any time at all’, for it commences with a taste of the title, sung with vocal melisma. ‘There’ is followed by a pause and then the full title of the song is heard.

Figure 4: ‘there’, ‘There’s a place’, 00:05-00:10

This functions simultaneously to create tension and expectation, because the listener awaits the next lyric to resolve the augmented ‘there’. This leads one to hear the elongation of ‘there’ as more of a phrase than a word. It establishes the tone of the song, which turns out to be a series of overlapping lyrics.
One might argue that this is a one-off articulation at the start of the song, but this is supported by comparative evidence within the song. This is because the same intonation is sung on ‘I’ at 00:31, followed by stop time. The prolongation of the lyric, using rhythm and time, is an example of Danielsen’s rhythmic tolerance. It takes one and a half seconds to articulate the first lyric; any longer and it would risk the loss of interest in the listener.

The song suggests that there is a place where the protagonist can go. The ‘place’ in the protagonist’s mind is an invisible, imaginary location. The blues-like sound is complemented by moments of stop time. Perhaps these examples are symbolic of the ‘place’ where the protagonist can go to in their mind. The ideas in this song are later referenced in the opening line of ‘In my life’, with ‘there are places I remember’. The places are retained in the space of the mind, just as the place is in the mind of the protagonist in ‘There’s a place’.

Figure 5 gives a transcription of the chorus in ‘Love me do’. Taking the first note in bars 3, 5, and 7, we can hear that ‘know’, ‘al-’ of ‘always’, and ‘please’ is held for a minim beat. The first two statements build toward the third. In bar 7, ‘please’ precedes the entrance of the hook line ‘love me do’.\footnote{Lennon and McCartney sing ‘so please’ in harmony, over three seconds.} This recalls the chorus of ‘Please Please Me’, where stop time is used to create a sense of tension and release with ‘come on, come on, come on’. The tension created by this line is broken by the falsetto ‘please please me’ sung legato.
The word is interrupted by a one second stop time and McCartney sings the hook. This example creates a stalled effect in the momentum and functions to mark a division in the song. This is highlighted in the succeeding ‘do’, McCartney sings the hook line and Lennon plays harmonica.

Lewisohn notes McCartney’s own words in relation to this song: “Anyway, we got on with ‘Love me do’. We started playing it, [singing] ‘Love, love me do/you know I love you’ and I’m singing harmony then it gets to the ‘pleeease’. STOP. John goes ‘Love Me…’.” McCartney places a strong emphasis on their use of stop time in this 1988 interview. The importance of the time-defying pause is that it creates tension. The tension forms kinetic energy, which is released by the entrance of the hook: ‘love me do’.

In Figure 6, I have improved the transcription by aligning a spectral and waveform view from 00:23-00:29. Taking the waveform, we can see that the amplitude reduces significantly after 00:26 to 0.0dB. This marks the point of stop time before the entrance of the hook. Taking the first two notes in bar 4, we can see that McCartney sings ‘love me’ without backing instruments or vocals.

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42 Italics added.
The stop time interruption marks a brief, but drastic, change. The accompaniment stops and Lennon is no longer singing supporting harmony. This is supported by the opening of their cover of The Shirelles’ ‘Baby it’s you’, which features stop time in the accompaniment, but allows the melody to continue at its own pace.

The title suggests a theme of unrequited love and is an explicit nod to Buddy Holly’s 1958 song: ‘Love me’. The protagonist calls out to the antagonist to ‘love me do’. Stop time interrupts the continuity and provides the effect of a missed beat. Perhaps this is the effect of the heart missing a beat due to unrequited love. The entrance of the hook line, after the missed beat, reemphasises the longing in the lyrics. This is supported by ‘Baby it’s you’ and ‘There’s a place’.

More similarities can be drawn between ‘There’s a place’, ‘Please please me’ and ‘Love me do’. For instance, the songs use the harmonica to fill lyric sections and points of stop time. The technique is used for anticipation and as a light thematic marker in songs. These examples indicate that stop time has a dual function: that is, stylistic and as

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44 The use of stop time, alongside the harmonica, is prevalent in The Beatles’ early style.
a narrative tool. Characterised by the qualifier, duration, the alternant allows the preceding words to resonate in the mind of the listener and facilitates preparation for succeeding ones. This prepares the listener for the more reflective Lennon in 1965. The expressive potential of vocal alternants is further evinced in ‘This boy’ and ‘Slow down’.

Written and sung by Larry Williams, ‘Slow down’ entered The Beatles’ cover-song set list in 1958. Their recording of ‘Slow down’ was completed in six takes with the first three being concentrated on the rhythm track. Lewisohn notes ‘the best being take three, onto which, from take six, John superimposed his raucous and magnificently delivered vocal’. The ‘raucous’ vocal is indicative of the qualifier, vocal fry (Chapter 4).

There are three specific uses of time in ‘Slow down’. These are: explicit reference to time, stop time, and time-defying moments. It is indicated in the title that the protagonist wishes for the antagonist to ‘slow down’. There are supporting references to this in the lyrics, where it is stated that if you want it to last ‘you better slow down’. There are points of stop time when everything stops before the song resumes, and there are moments that appear to defy rhythm: these occur when the accompaniment stops, but the singer continues at their own pace.

The stopped accompaniment, with continued melody line, is similar to Chuck Berry’s style in ‘Too much monkey business’. At 00:44, 01:01, 01:18, 01:35, 02:26, and 02:43, in ‘Slow down’, the supporting instrumentation comes to an abrupt stop, but the vocal continues. In ‘Too much monkey business’, this features no more than seven times.

The Beatles waited until 1964 to record this song, even though it had been on their set list since 1958.

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45 ‘In my life’ alludes to the idea that life is in the mind. This supports ideas later explored by Lennon in ‘I’m only sleeping’, when he suggests that our lives are constructions of the sleeping mind.

46 Lewisohn, The Complete Beatles Recording Sessions, 44.

47 The Beatles waited until 1964 to record this song, even though it had been on their set list since 1958.
stops, and Chuck Berry sings the first verse. This reoccurs at 00:31, 00:47, 01:02, 01:47, 02:03, and 02:18.

The Beatles’ examples generally occur over 00:04-00:05 in the refrain. But Chuck Berry’s span entire verses, or 00:05-00:06 in duration. Both songs open with a long instrumental passage: ‘Too much monkey business’ has a 00:15 instrumental and ‘Slow down’ features a 00:32 instrumental introduction, double that of ‘Too much monkey business’. The long instrumental introductions establish a striding rhythm, with an overall pulse, and exaggerate the interruptive function of stop time.

It is not only the lyrics that use interactive pauses and stop time to deliver the dialogue. Everett notes that the song uses stop time to mark its first change of chord.\textsuperscript{48} The lyric section is in C major and only changes to F major on the entrance of the second instrumental. This might be interpreted as the protagonist’s line in C major that is answered by the antagonist, who responds through silences and F major quaver notes. With this, it is worth building on time markers, highlighted above, through an interpretation of interactive pauses, stop time, and qualifiers.

The A section establishes a series of interactive, unanswered turn-taking pauses. The protagonist poses a question: ‘well come on pretty baby won’t you walk with me?’ followed by a one second pause, but the antagonist does not answer. The protagonist assumes that it won’t be answered, so another question is posed: ‘Come on pretty baby won’t you talk with me?’ followed by another one second pause. The story unfolds through the combination of lyrics and alternants. There appears to have been a disagreement between the protagonist and the antagonist. The protagonist assumes that the antagonist will not respond and poses a final question: ‘Come on pretty baby give me one more chance?’ This time, there is a one and a half second pause before the protagonist

\textsuperscript{48} Everett, \textit{The Quarrymen through Rubber Soul}, 64.
declaims: ‘Try save our romance!’ These unanswered questions are interactive turnclaiming pauses. The protagonist must end the silence and resume communication because of the antagonist’s failure to respond.

It may be interpreted that the antagonist occupies the pauses and instrumental passages. This is supported by the long introduction of thirty seconds in a three-minute song. This emphasises the importance of the instrumental in conveying the overall narrative. The non-lexical instrumental passage in the introduction, and between 01:42-02:14, may represent the antagonist’s unintelligible angered response.

The hastened instrumentation heard throughout suggests that the antagonist is spiralling out of control. At 00:46, the protagonist declaims ‘slow down!’ followed by sixteen quavers in the accompaniment. The repeated quavers represent the antagonist’s quickened pace, but the protagonist tries again by declaiming: ‘Baby, now you’re movin’ way too fast’. The ‘ba-’ of baby is held for a full minim beat augmenting the phrase as the protagonist pleads with the antagonist to ‘slow down’. The instrumentation interrupts the last word ‘fast’ with another sixteen quavers.

Figure 7 gives a spectral and waveform view of ‘Ow!’ at 01:00. The non-lexical ‘Ow!’ is sung with vocal fry. The point of stop time, between ‘Ow!’ and ‘if you want our love to last’, is highlighted below. The combination of qualifier and alternant in this example communicate a climactic point in the song. The expressive trope is delivered as a non-lexical alternant, that is enhanced through stop time.
The alternant emphasises the preceding vocal fry and prepares for the return to the chorus section. This is an example of stop time functioning as what Poyatos calls a carrier in his definition of silence. The use of stop time and voice qualifier, in this example, is reinforced by an analysis of Larry Williams’ 1958 recording.

Figure 8 shows how Larry Williams’ vocal slides downward from 392Hz to 177Hz in a straight line, before returning to 263Hz. At three seconds, the ‘Ow!’ is longer in the Larry Williams’ version, whereas The Beatles’ is one second. In contrast to The Beatles’ version, the Larry Williams recording does not feature a complete instance of stop time at this point in the song.
Figure 8: ‘Ow!’, ‘Slow down’, Larry Williams, 00:56-00:59

Figure 9 gives a spectral view of the non-lexical: ‘Brrr!’ in The Beatles’ version at 01:26. This declamation functions in two ways: it communicates the frosty response of the antagonist throughout the song and facilitates a moment of stop time in the instrumentation.
‘Slow down’ gives an example of explicit and implicit uses of time to deliver a narrative. Implicitly, it combines language, paralanguage, and kinesics. The subtle use of stop time and interactive pauses represent a voice of the antagonist, whilst communicating the frustration of the protagonist. The Beatles’ performance of these features gave way to more expressive uses of time in their own songs. The next section gives the development of stop time and interactive pauses in ‘Wait’, ‘Help!’, ‘Act naturally’, ‘I want to tell you’, ‘We can work it out’, and ‘I need you’.

‘Wait’, the penultimate song on Rubber Soul, documents their development of alternants. Not only does the title make explicit reference to time; the lyrics, rhythm and melody use stop time and pauses to enhance the narrative. The song opens with ‘it’s been
a long time, now I’m, coming back home’. The stresses heard in this line break it into three sections: ‘it’s been a long time [crotchet rest], now I’m [crotchet rest], coming back home’. The broken passage forms a distance between the protagonist and the listener. It is quickly communicated that the protagonist has been away from home for a long time.

Following a primary statement: this three-part phrase is reemphasised with different lyrics: ‘I’ve been away now [crotchet rest], oh how [crotchet rest], I’ve been alone’. The crotchet rests are filled with two quaver beats on the tambourine. This opening sets the tone for the song. The three-part phrase, with pauses after ‘long’, ‘time’, ‘away’, and ‘home’ form an aural space.

The interactive pauses heighten the theme of loneliness. This is because the unanswered pause suggests a proxemic distance between the protagonist and antagonist. This is supported by the comparative study of the antagonist in ‘Slow down’. Throughout ‘Wait’, the line ‘I’ve been alone’ is sung as four quaver notes over 00:02. But the final line plays with rhythm and augments it to 00:04. The held notes re-emphasise the theme of waiting, stalling and delaying. The manipulation of time contributes to the isolation of the protagonist who is finding time slow.

The distance formed by the augmented line is supported by the succeeding two bars of silence in the vocal. The electric guitar picks up the melody and plays a descending C#-A-F#, marking a three-line descent to chord I to end the song. The guitar plays this line and the vocal is silent, but the presence of the vocal is implied. This is because the guitar appears to continue the melody into the mind of the protagonist who can no longer communicate verbally. They must rely on non-lexical sounds to convey their inherent loneliness.
By juxtaposing passages of short rhythms against passages of held notes, the interactive pauses function to create tension and release. The uncertainty in the rhythm reverberates throughout many facets of the song. Take, for example, the harmony on ‘I’m coming back home’ that moves from C#-F#, or V-I, returning to the home key. Not only is the protagonist returning home, the harmony is also. But on repetition, the words change from ‘I’m coming home’ to ‘Turn me away’. This causes a disjuncture between the narrative and vocal delivery. What is consistent, is that both lines are followed by a quaver rest. The function of the interactive pause is developed to suggest a moment of travel, either ‘coming home’ or moving ‘away’.

An ironic use of lyric and stop time is heard in the A1 section. The lyric ‘Hold on, I won’t delay’ is divided: ‘Hold on’ is articulated with a crotchet, stalling the song, but the end of ‘I won’t delay’, is met with a minim rest. The deliberate rest after ‘delay’
ironically results in a gradual stalling of the accompaniment. Whilst the lyrics suggest that no delay will be caused, the hyperbolised syllabic intonation on ‘de-lay’, stalls the momentum. This constructs a conflict between the content and articulation of the text, which results in tension.

Figure 11: ‘Wait’, 00:09-00:11 and 00:28-00:30

‘Wait’ is an example of the blending of proxemic and chronemic markers. The words imply a space; ‘away’, whilst the stalled rhythms constitute an aural delay. The song marks a period of development for The Beatles’ use of stop time and interactive pauses.

In 1965, they were continuing to absorb influences from their contemporaries. Everett notes that Lennon attributed his deeper awareness of ‘self’ to listening to Bob Dylan: ‘Lennon began to explore his own insecurities in more expressive ways […] a watershed in artistically portrayed negative self-views leading to ‘Help!’ and ‘Nowhere Man’.’\(^{49}\) Noted in the anthologies, and by Lennon himself, he was calling out for ‘help’:

When ‘Help!’ came out, I was actually crying out for help. Most people think it’s just a fast rock’n’roll song. I didn’t realise it at the time; I just wrote the song because I was commissioned to write it for the movie. But later, I knew I really was crying out for help. So it was my fat Elvis period. You see the movie: he – I – is very fat, very insecure, and he’s completely lost himself. And I am singing about when I was so much younger and all the rest, looking back at how easy it was.\(^{50}\)

It is interesting that even in Lennon’s subconscious cry for help, he takes his influence from his predecessor, Elvis.

\(^{49}\) Everett, *The Quarrymen through Rubber Soul*, 14.

The opening ten seconds of ‘Help!’ establish a call and response between voice and instrumentation. The pattern of fast articulate pitches construct tension, which is interrupted using pauses. Figure 12 gives a transcription of the opening. The word ‘help’ is followed by a minim rest, or one second pause. The backing vocal waits to interrupt with ‘I need somebody’.

Figure 12: ‘Help!’, 00:00-00:08

This opening demonstrates three uses of time: Firstly, the interactive pauses forge a feeling of drowning. This is because the declamations of ‘help’ are met with echoed responses, with the word descending into a falsetto-like cry on the third statement. Secondly, the vocal and backing-vocal set up an internal call and response. This provides the pauses with a turn-taking function. Lennon cries for help, but he offers a dulled resolution in the supporting statements: ‘I need somebody’ and ‘not just anybody’. The final declaration combines the qualifier (falsetto) and alternant (time). Lennon sings falsetto ‘help!’ over a dotted crotchet, quaver, and crotchet, or one second in duration.

The cry for help is further enhanced through the melody. The backing vocal opens on E, in bar 5 and ends on E, which contributes to the cyclical feeling of entrapment. This is supported by the analysis of ‘The long and winding road’ in Chapter 2. The
continuation of the pulsing accompaniment appears to function as a musical mask. Lennon is calling out for help, his response is being met with his own resolutions, but is veiled by a pulsing, jovial rhythm. This subtle introduction grasps the listener’s attention with the help of interactive pauses, but they are abandoned for the remainder of the song. This emphasises their function in the introduction, because they create tension by establishing an expectation for the listener.

The reader might be wondering at this point, if it was only Lennon and McCartney who demonstrated a keen use of interactive pauses and stop time. But Harrison, who was developing his vocal skills, demonstrates equal articulatory control in his songs. In fact, he readily combines aspects of paralinguistic primary qualities, qualifiers, and alternants. Examples can be heard in ‘I want to tell you’ and ‘I need you’.

‘I want to tell you’, written in 1965 for Revolver, is an example of explicit reference to and manipulation of time. The song constructs an overall state of tension by juxtaposing a striding rhythm against warped articulation. Through primary qualities, Harrison augments words whilst achieving a gradually rising and falling intonation. The song makes explicit references to time: ‘I've got time’ and ‘Next time ‘round’. Everett suggests that Harrison singing ‘I don't mind. I could wait forever, I've got time’, ‘as describing an eternity in reaching an understanding, these effects convey stammering and searching for ideas’.

Harrison’s warped lexicon either over-emphasises lyrics or causes disorientation. Simultaneously, he uses rhythm to amplify instances of text painting, for example, ‘when you’re near’ is met with: ‘all those words, they seem to slip away’. ‘Away’ is augmented to three quavers, a minim and a dotted minim. The stalled delivery establishes a distance in communication, which complements the lyrics.

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51 Everett, The Quarrymen through Rubber Soul, 58.
At 00:33, ‘away’, followed by a crotchet rest in the vocal line, fades into a rest and the cycle starts again with ‘I want to tell you’. The song builds to a final three statements of ‘I’ve got time’. The final statement is augmented to five bars and fades to close the song. Throughout the five bars, there are interjections of ‘ah’: these vocal alternants function to push the boundaries of ‘time’ and the rhythm of the song. The overlapping vocals give rise to a somewhat hypnotic effect. This is supported by the implied proxemic distance between the words slipping away and the possession of time: ‘I’ve got time’ and ‘I could wait forever’.

This explicit reference to time is reinforced in the bridge of ‘We can work it out’. The song depicts the struggle between the protagonist and the antagonist. The protagonist is pleading with the antagonist to listen to him and see things from his perspective. At 00:37, the lyrics are ‘life is very short and there’s no time’, but the rhythm of the song is altered in the bridge and feels slowed and stalled. This causes an unsteadiness in the rhythm that supports the unsteady relationship in the narrative. It is also an example of Lennon making ironic use of time.52

The second Harrison example is heard in ‘I need you’. His voice is double tracked, with Lennon and McCartney providing backing vocals. The title is similar to ‘I want you,
I need you, I love you’ written by Maurice Mysels and Ira Kosloff. It was recorded by Elvis in 1956, and the song was probably familiar to The Beatles. This is the third Harrison song to be released by The Beatles and he was not slow to employ paralanguage in his performance. The verbal rhythm is regularly upset by syncopated instrumentation heard throughout the song.

Figure 15 gives a transcription of the opening two syncopated bars played on electric guitar. The interjections of rests create anticipation between the short and long notes. The ostinato is used later in the song to mark the pauses between the lyric sections. This rhythmic ostinato was probably derived from Buddy Holly’s ‘Crying, waiting, hoping’ (see Chapter 3). The chorus section recreates this opening electric guitar line, supported by ‘I need you’.

Figure 15: rhythmic ostinato, ‘I need you’, 00:00-00:02

\[
\begin{align*}
\text{C#} & - \text{A} - \text{C#} - \text{B} \\
\end{align*}
\]

The song narrates the tale of a couple who have separated. The protagonist continuously calls out to the antagonist: ‘You don’t realise how much I need you’. They beg the antagonist: ‘Please come on back to me’, because the protagonist is as ‘Lonely as can be’. The split between the quaver and crotchet helps to communicate the split between antagonist and protagonist. This reading is supported through an analysis of the melody.

Figure 16 gives a transcription of the opening. The melody starts on C# and unfolds to A, before returning to C#. It concludes on B on the word ‘you’, the added ninth of chord I. The next line also starts on C#, but unfolds to G. The following line, ‘So come on back and see, just what you mean to me’ ends on C#.
This cyclical melodic entrapment formed by the recurring C# was suggested in the opening of ‘Help!’ in Chapter 4. The protagonist is calling out for the antagonist to return to him and longs for their affection. Just as the melody unfolds and strays, the antagonist strays from the protagonist.

The interjections of ‘I need you’, function to disrupt the flow of the song. The supporting rhythmic ostinato gives rise to a sigh-like, sobbing expression. This sounds like the expressive vocal alternant ‘Uh Oh’. This was most probably influenced by Elvis’ performance of two emphatic beats to disrupt the flow of ‘Heartbreak Hotel’. The song narrates a tale of heartbreak using stop time (see Chapter 2). With these techniques to hand, The Beatles soon began to manipulate time through reversing tapes and changing the speed of recordings.

This is noted in Lewisohn’s interview with their engineer Geoff Emerick: “Revolver very rapidly became the album where The Beatles would say “OK, that sounds great, now let’s play it backwards or speeded up or slowed down”. This is achieved in many of their post 1965 songs such as ‘Strawberry fields’, ‘Come together’, ‘Penny Lane’, ‘Good morning good morning’, ‘Maxwell’s silver hammer’ and ‘She’s leaving home’. Whilst these examples demonstrate stop time, what becomes particularly interesting is the collusion of pause, silence, and paralanguage.

The opening of ‘Come together’ combines several vocal alternants. The crotchet ‘shoo’ followed by a crotchet and minim rest is repeated four times, with a supporting

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54 Chuck Berry has a song called ‘Together (we will always be)’, released as a single by Chess Records in 1955. ‘Thirty days (to come back home)’ is on side 2.
rolling rhythm on drums. This is echoed after each verse section and results in a cyclical feeling of entrapment. The verse describes each of the four Beatles: Ringo ‘here come old flat top’ (verse one), Harrison ‘monkey finger’ (verse two), Lennon ‘walrus gumboot’ (verse three) and ‘ono sideboard’ (verse four). The last verse describes McCartney: ‘he got muddy water’.

At the end of the verses and building up to the refrain there is an emphatic use of stop time. The lyrics are ‘one thing I can tell you is you got to be free’ (quaver rest), ‘come together’ (minim rest), ‘right now’ (minim rest), ‘over me’. The fractured delivery contradicts the chorus that longed for union. The broken sequences, using alternants, supports the obvious and duly noted discordance in the group in 1969. Not only do the individual verses for each member cause a disjuncture, stop time further emphasises the separation of the lyric sections. But the song does ‘come together’ in the end.

There is an undertone of celebration for the differing roles of the members of the group and yet a sadness for the derailing comradery. The ‘shoo’ vocal alternants fade into the supporting rhythm. The fades following the alternant also function to form a series of false silences. Despite the comradery-like commentary of the song, the group were growing apart. This is supported through the articulation using stop time and pauses. This is an example of paralanguage contradicting the lyrics.

The final song for discussion in this chapter is Harrison’s ‘Long, long, long’; originally titled, ‘It’s been a long, long, long, time’. Everett notes that ‘the emphasis on three-bar phrases, although at a much subtler tempo, recalls the verses of ‘Wait’ (1965), which happens to begin with the same opening lyric and carry a related poetic theme’. But these opening statements are not the same. ‘Wait’ opens with ‘It’s been a long time’

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55 Further evidence of the Chuck Berry influence. ‘You can’t catch me’ opens with ‘Here come old flat top, he come grooving up slowly’.
56 Lewisohn, The Complete Beatles Recording Sessions, 159.
57 Everett, The Quarrymen through Rubber Soul, 64.
and ‘Long, long, long’ opens with ‘It’s been a long, long, long, time’. Other differences are that ‘Wait’ is filled with questions, and although they go unanswered, the presence of the antagonist is felt in the interactive pauses. In ‘Long, long, long’ there isn’t a feeling of a present antagonist. Harrison sings to a ‘you’, who he loved and lost, but the wording suggests a post-event monologue rather than a dialogue.

‘Long, long, long’ may refer to The Beatles’ career. At this stage, they had been performing together for over twelve years and throughout their adolescence. Harrison declares: ‘know that I love you’ and ‘know that I need you’. This might be a comment on the disjuncture in the group dynamic at the time or reemphasise Lennon’s ‘I need you’. Perhaps Harrison was longing for the group unity to be maintained for longer.

The opening lyrics not only make hyperbolised reference to time, the rhythm is augmented. ‘It’s been a’ is sung over a rising triplet figure and ‘long, long, long, time’ is stretched out to four dotted minim. The conflation of short ascending and long descending notes plays with the expectations of the rhythm. Harrison places a full bar of rest in between the lyrics in the verses. These pauses cause a delay in the progression of the song. Just as the interactive pauses in ‘Slow down’ represented the antagonist, it appears that they function similarly in ‘I need you’. Harrison remains unanswered, his pauses are unfilled and function to stall the progression.

These examples demonstrate both direct and indirect engagement with stop time and interactive pauses throughout The Beatles’ repertoire. Everett only notes ‘In spite of all the danger’, ‘There’s a place’, and ‘This Boy’ demonstrating examples of stop time, but evidently this occurs in many more songs.
5.5 Stop time and Pauses as Vocal Alternants

One might observe at this point, that Ringo is neglected in these analyses. But his presence is ever-felt in the supporting rhythms of these songs. Stop time and interactive pauses heard in the drums were not mistakes by Ringo. Lewisohn observes:

[On] only a handful of occasions during all of the several hundred session tapes and thousands of recording hours can Ringo be heard to have made a mistake or wavered in his beat. His work was remarkably consistent – and excellent – from 1962 right through to 1970.

Examples of stop time can be heard in Ringo’s performance of the country-western style song, ‘Act naturally’.

Lewisohn explains that ‘Act naturally’ was ‘the last cover version The Beatles recorded until the Get Back film/album sessions in 1969. In between times only group compositions would feature on The Beatles’ records’. Ringo sings with a nasal country-western vocal throughout and interrupts passages using stop time (alternant), at 00:25, 01:06, and 01:37. These have a structural function, because they occur after the refrain and mark a return to the verse.

The analysis of stop time and interactive pauses is not limited to the examples presented here, nor is it limited to The Beatles’ style. An example from their late period is heard in the hammer-like gesture in the chorus sections of ‘Maxwell’s silver hammer’. At 00:36, 00:42, 01:33, 01:41, 02:46, and 02:54 there are two quaver beats sounded on the words ‘bang, bang’, depicting a clattering sound like a hammer hitting steel.

Another explicit time marker is heard in the alarm clock in ‘A day in the life. This would be categorised by Poyatos as a mechanical sound. The alarm marks the end of the twenty-four bar middle-eight section (the same number of hours in a day) and perhaps

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58 It is noted that The Beatles did not use a click track during their recording process.
60 Ibid., 60.
61 Poyatos, Nonverbal Communication Across Disciplines, 314.
the end of time for the protagonist. But McCartney’s jovial lyric section negates this temporarily. The songs ends with a false silence succeeded by an emphatic sound on the piano suggesting that time is up for the man.

Lewisohn notes that ‘what followed was the sound of John, Paul, Ringo and Mal Evans sharing three pianos and simultaneously [hitting an E major chord], creating the *Bunnggggg*. The preceding silence creates a false-end and heightens the designed tension. This recalls the use of stop time to mark the death of the ‘old man’ in The Everly Brothers’ cover of ‘My Grandfather’s clock’.

Danielsen may believe that studies need to move away from clock metaphors, for ‘there is no reason for assuming that the virtual structures at play in rhythm always have the form of ticking clocks’. But we should not abandon a perfectly apt way to explain concepts of time, especially when an alternative method to aid our understanding is not offered. From Bill Haley’s ‘Rock around the clock’, to ‘My Grandfather’s clock’, the alarm clock ringing in ‘A day in the life’ and Chuck Berry’s many lyrical references to clocks in songs such as ‘Reelin’ and rockin’. The clock metaphor remains a relevant way to understand virtual time in popular song.

Vocal alternants, that is stop time, silence and pause, create tension and can occupy a narrative role. These build on Danielsen’s new conceptions of a pulse, in that ‘differing rhythmic events may be regarded as located within the same beat, in turn contributing to the duration and shape of the beat’s virtual counterpart’. Stop time may disrupt the flow of the accompaniment, but the melody continues. This enables the melody to occupy the soundscape of a recording, if only momentarily.

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63 Danielsen, ‘Here, there, and everywhere’, 34.
64 Ibid., 33.
This study of silence and pause in song corresponds to Poyatos’ theory of silence and pause in interaction. That is, ‘when speech is interrupted by a pause, at least one of the other two co-occurring activities paralanguage or kinesics, still fill that apparent (never semiotically) gap’.\textsuperscript{65} The analysis given here supports this assertion, for example, the pauses in between the ‘shoo’ vocal alternants in ‘Come together’ are filled by the resonance of the whispered qualifier used to articulate ‘shoo’. These pauses function as carriers for the preceding and succeeding sounds.

The approach to time, through silence and pause, allowed The Beatles to construct points of aural compression and release in their own songs. It also contributes to Poyatos’ definition of the segmental and non-segmental speech components in interaction. The points of compression and continuous tension result in tensegrity.

Tensegrity is the result of moments of isolated compression found in a net of contiguous tension.\textsuperscript{66} Points of compression create the energy needed to continue a sound. If a singer does not pause to breathe, they cannot maintain the flow of the song, for they will run out of breath. Instead, they take calculated breaths that do not disrupt flow but are merely moments of isolated compression in the overall continuous tension. This is a way to understand that the song does not cease until it finds its final resting place: that is, the silence at the end of the song, or between songs on an album or in a performance.

Alternants are examples of non-contiguous compression. This is because two points of stop time cannot exist simultaneously, for a two second stop time cannot be two one second events. Such a progression would require the re-entrance of sound in the melody or supporting instruments. Stop time is not unlike the bones in the human body. They are supported by muscles, tendons and ligaments, so the bones themselves are non-

\textsuperscript{65} Poyatos, \textit{Nonverbal Communication Across Disciplines}, 299.
contiguous. If we relate this to the overall context of the popular song it becomes clear that time markers are samples of floating compression. This floating compression is supported by primary voice qualities and qualifiers. The points of compression break the contiguous tension created by the aforementioned. Alternants are ubiquitous across popular song and not specific to The Beatles. But their consistent use of these, as expressive tropes, separates them from their contemporaries.

Inarticulate features such as the arch-shape, vocal fry, falsetto, and stop time all point toward a particular style of playing by The Beatles. At this juncture, it is possible to start patching together the various expressive tropes heard in their songs. This provides a broader understanding of the impact of The Beatles’ influences and paralanguage.

Several of the traits are not confined to song types, or sub-sets of songs. Each of the chapters presented so far have demonstrated examples in a range of styles from folk-like ballads, rock’n’roll, and Indian classical music. It can be said that paralinguistic expressive tropes, heard in The Beatles songs, appear regardless of song-type. The type might alter the function. Take the energising effect in ‘Any time at all’, versus the inward looking ‘I want to tell you’. But by combining the multiple features that define the group’s output, it is possible to understand these expressive tropes in relation to sonic signatures.

Sonic signatures are embodied sound terms, comprised of sonic patterns and compositional style. These sonic signatures give rise to specific personae in The Beatles’ corpus and their solo careers. The final chapter aims to present sonic signatures and how they contributed to their creative output. But before broaching that topic, it is worth pausing briefly to re-evaluate primary voice qualities, qualifiers, and alternants in terms of their capacity to convey emotional reactions in interaction.

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Chapter 6
Differentiators

The foregoing discussion proved useful to divide paralanguage into three categories. Leading with primary voice qualities, the study not only develops an understanding of intonation, it facilitates an analysis of the content of the voice (qualifiers) and the effect of time and space (alternants). At this point, we can combine the voice qualities, and influences, in a broader study of paralanguage, communication, and cultural learning.

The intention of this chapter is two-fold: it functions as a bridge to summarise the research so far and establishes a preparatory theoretical framework for the final chapter. Taking song as heightened speech, this study highlights the subtle, but often crucial, impact of paralanguage on the singing voice. The study further emphasises the influence of The Beatles’ predecessors on their musical sound palette.

By highlighting the relationship between verbal and nonverbal features of popular song, the analysis has presented ways of identifying and interpreting three types of paralanguage in vocal performance. SV was used as a visual aid to show certain sounds heard in a recording. Whilst PRAAT can show variances in phonetic utterance between Buddy Holly and The Beatles’ performance of ‘Words of love’, it is difficult to read. This is because the software cannot notate the shadings of sound as well as SV.

Analysing the physiology of vocal production has been useful for understanding sounds and providing terminology to describe the physical process. Theories derived from linguistics have benefitted the interpretation of these sounds in terms of communication. Before presenting the subject of this chapter, it is worth reflecting on the way cover songs can contribute to the creative process and paralinguistic voice qualities presented so far.
The cover song is understood as a learning tool in popular song. Through The Beatles’ performance, they not only learned harmonies, melodies, and rhythms, which formed much of their song-writing, they learned paralinguistic voice qualities. Through a process of imitation and counter-imitation, they collected these sounds and developed them in their mid and late period. The point is not that The Beatles were unusually imitative, but that aspects of paralanguage, learned from the first generation rock’n’roll artists, were becoming common among groups of the day. What differs is how The Beatles built on these aspects, giving rise to greater expressive potential in their songs.

The fundamental difference between cover song and imitation becomes clearer for the reader. A cover song is generally considered as the direct repetition of the song’s fundamental features. But imitation is more subtle, for it resides in the nuance of pitch, gesture and physiological processes that are often employed by a performer. This process of imitation and counter-imitation led to these qualities being adopted into the singer’s sound palette. This method of learning not only builds on Csikszentmihalyi’s flow theory, it refutes Zagorski-Thomas’ argument that it is ‘triangulating the individual within the cultural domain and the social field’.¹

Csikszentmihalyi’s theory can be understood in relation to Bruce Tuckman’s ‘Four stages of group development’: forming, storming, norming, and performing.² Through the forming, storming, and norming stages, they became the musicians they were. This led to the performing stages, which saw the transition of their use of paralanguage from physiological to psychological. Greater clarity ensues when we evaluate this through the songs covered in the previous chapters.

¹ Zagorski-Thomas, The Musicology of Record Production, 131.
Taking primary qualities, we know that they learned the songs of Buddy Holly, Elvis Presley, Roy Orbison and Frank Sinatra (among others). The primary qualities learned from covering songs performed by these artists informed their writing of ‘Misery’. They developed these qualities, with the inverted parabolic arch in ‘Julia’, or descending intonation on ‘crying’ in ‘I am the Walrus’ and ‘diamonds’ in ‘Lucy in the sky with diamonds’. It is thought that their use of pitch bends was learned through their emulation of country-western singers such as Hank Williams, who also influenced Buddy Holly. The use of rising and falling intonation is ubiquitous in American country-western dialect and grew in to their singing style.

Taking the subject of Chapter 4, part one, we know that The Beatles learned the songs of Little Richard, Buddy Holly, Smokey Robinson, and Louis Armstrong. They performed ‘Kansas City’, ‘Long tall Sally’, and ‘Ready Teddy’, and mimicked Little Richard’s laryngeal and pharyngeal control. This gave rise to vocal fry paralinguistic voice quality. Vocal fry is heard in ‘Please please me’, ‘Rock’n’roll music’, ‘Twist and shout’ and ‘Words of love’. It is enhanced to represent the despondency of the protagonist in ‘Anna (go to him)’ and ‘This Boy’. The qualifier receives further development in 1968 with ‘Oh! Darling’. It functions to represent their early style in ‘Get back’, a song that explicitly tells the subjects to return to where they once belonged.

‘You’ve got to hide your love away’ exemplified their ability to combine several lines of influence. The parabolic arched intonation from Chapter 3 was combined with vocal fry. This is further developed through their use of time, because the stalled delivery of ‘hey’ upsets the progression of the narrative, whilst acting as an everyday marker of communication. This was supported by their cover of ‘Kansas City’, which features a similarly stalled vocal in the opening. This intercontextual analysis not only identifies the impact of the expressive trope, it supports their emulation of their predecessors.
Falsetto was shown to have been learned through their imitation of Little Richard and Smokey Robinson. They played ‘Long tall Sally’ and ‘You’ve really got a hold on me’ and learned falsetto statements that were employed in ‘Please please me’, ‘All you need is love’ and ‘Ticket to ride’. Falsetto was developed to represent issues of despair, pleading, and represent the female vocal in ‘I saw her standing there’, ‘She loves you’, ‘She’s leaving home’, and ‘Help!’ Both falsetto and vocal fry expressive tropes were affected by time and pauses in song.

This led to the study of vocal alternants, which were shown to be affected by the qualifiers: intensity and duration. They listened to and learned the performance styles of Chuck Berry, Elvis Presley, and Buddy Holly. They played ‘Maybellene’, ‘Heartbreak hotel’, ‘Ready teddy’, and integrated stop time into ‘Any time at all’, ‘Love me do’ and ‘There’s a place’. Stop time was developed alongside qualifiers, which enhanced the fractured narrative in ‘Slow down’, ‘Come together’, ‘I need you’, and ‘Wait’.

A trend emerges that highlights The Beatles’ ability to learn aspects of paralanguage, practice these features, and integrate them into their personal style. Therefore, we can begin to take a panoramic view of paralanguage as a series of overlapping aural patches in song. These patches are understood within an aural framework of tensegrity. For once we have recognised the presence, and gained an understanding of, paralinguistic primary qualities, qualifiers and alternants, it becomes possible to analyse the emotional eloquence of paralanguage.

Differentiators, the physiological and psychological reactions in communication, are defined in relation to these categories. Examples include crying, laughing, shouting, throat-clearing, and yawning. They function to characterise and differentiate psychological states, and emotional reactions. For Poyatos, differentiators ‘are closely constructed with kinesic behaviour while being modified by primary qualities and
Qualifiers can function as differentiators, but not vice versa. A rapid ascending ‘woo’, sung falsetto or with a shouting voice, can be both a differentiator and qualifier. The shouting voice is supported by Lennon, who said he sang ‘straight shouting rock’n’roll’ (Chapter 3).

This is supported by Victoria Willingdale, who notes that differentiators are ‘a behaviourist paradigm, on speech forms, such as signal differentiation in speech recognition’. Whilst critiquing Jonathan Ginzburg’s semantic modelling, Klaus Kohler relates differentiators to meaning in his study of speech communication in human interaction. For Kohler, ‘the most elementary function is the differentiation of representational meaning, in its simplest form in functional phonetics’.

For Mauro Giuffré, they occur when ‘each lexical entry is composed of a series of elements that allow different combinations’. The ‘elements’ that Giuffré speaks of are the components of speech, that are modified through paralanguage. He defines the combination of these, alongside lexicon, as differentiators, but does not explore the potential for non-lexical articulation to function as differentiators.

Giuffré draws his definition from Jerrold J. Katz, whose study connects linguistic motion and character. This is supported by theories from Chapter 1, that is, Zak’s idea and action, Smalley’s hearing and motion, and Smalls’ spectromorphology to motion and thus energy expenditure. This builds on Zagorski-Thomas’ sonic cartoons, exploring ideas of gesture and hearing motion, and will be readily explored in the next chapter.

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3 Poyatos, New Perspectives in nonverbal communication, 189.
4 Italics added.
Poyatos’ definition of differentiators in linguistics is suited to this study of voice, for it combines emotion and motion to understand communication. Two prominent examples of differentiators experienced in everyday interaction are laughter and crying.

Laughter, a common paralinguistic construct, is defined by Poyatos as follows:

a series of regular, but mostly irregular, vocal or narial audible air movements, mainly egressive, of varying muscular tension, rhythm and paralinguistic phonic characteristics, accompanied by varying facial and bodily behaviours, simultaneous to, alternating with or independently of verbal language, and expressing either positive or negative feelings with regard to oneself, others, events or the environment.\(^8\)

He categorises laughter under the broad headings of affiliation, aggression, amusement, comicality, fear, joy, sadness, and social anxiety.

Primary qualities affecting laughter include: loudness, pitch level, pitch interval, resonance, rhythm and tempo. Loudness might range from a high volume to a whispered voice or the pitch level might change dramatically. A high-pitched laugh, for example, is often understood as female and child-like. Pitch interval and resonance are almost ubiquitous to laughter, whilst breathing effects laughter in several ways. It can be slow, indicating sarcasm, or quickened to indicate spontaneity. The resonance cavities, teeth and tongue also effect laughter. A closed mouth, for example, whilst laughing causes egressive air to exit through the nasal cavity, giving rise to a nasal sound. But if the mouth is open, and the teeth are closed, the egressive breath will result in a hissing laugh.

A parallel differentiator is crying. For Poyatos, this is the morphology of crying: ‘its different phonetic (paralinguistic) and visual (kinesic) configurations, either with speech (i.e., ‘crying speech’) or by itself, and either with or without tear-shedding (i.e., a chemical reaction), in other words, the crying syndrome’.\(^9\) For Poyatos:

[crying is] a series of regular or sometimes irregular vocal and/or narial audible air movements, mainly egressive, of varying muscular tension,

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\(^8\) Poyatos, *Paralanguage*, 249.

rhythm and paralinguistic phonic characteristics, accompanied by varying facial and bodily behaviours and almost always by tear-shedding, simultaneous to, alternating with or independently of verbal language, and expressing mostly negative, but sometimes positive feelings.¹⁰

There are many parallels that can be drawn between laughter and crying, for almost all paralinguistic qualities heard in laughter are present in crying. Crying speech is familiar to us in daily interaction, which is often accompanied by tear-shedding. This is because interjections of words and weeping express immense sadness and qualify words spoken. This is supported by Alex Hübler’s systematic grid developed for his study of the nonverbal in early modern English.

Hübler’s systematic grid is outlined using loudness, tempo, rhythm, tension, qualifiers, alternants, and differentiators’.¹¹ For Hübler, differentiators have to be supplemented by primary voice qualities. But I do not agree with Hübler’s perspective, because is not a matter of supplementation. Primary voice qualities, qualifiers, and alternants are combined to give rise to differentiators, which characterise psychological states of mind. Examining the effects of speech in a drama to characterise a psychological state benefits this interpretation.

Samuel Beckett’s ‘Breath’ is his shortest play and substitutes character and voice for an image and two carefully directed cries. Interest in breath is supported by Barthes, who notes that ‘the breadth is the pneuma, the soul swelling or breaking, and any exclusive art of breathing is likely to be a secretly mystical art’.¹² Cries are the only directed sounds in the drama. The first is a ‘faint brief cry’ followed by an ingressive breath and the second is the same. Beckett notes that it is ‘important that the two cries be

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identical’. The combination of physiological breath and psychological cry give rise to differentiators.

Beckett’s use of differentiators, giving rise to affect, is exemplified in ‘Not I’. By cutting off the physical body of the performer, for a mouth on a blackened stage, the sound of the vocal comes to the forefront. The play is a psychological representation of an inner state of mind, that simulates the inner scream. This is delivered through a series of differentiators including whispers, growls, screams, laughs, and shouts. In the absence of familiar scenery and the full person on stage, the play relies on the vocal to simulate the protagonist’s state of mind. Whilst there are words spoken, they are delivered too quickly to be entirely comprehended in a performance. This implies that the performance leans more heavily on the expression of the words than their semantic value.

In Billie Whitelaw’s 1973 performance, she delivers the vocal through a whispered voice, with occasional vocal-fry. The differentiators are described by Beckett as a ‘good laugh’, ‘brief laugh’ and ‘scream’. These are delivered alongside interjections of the open-mouthed guffawing ‘ha’. This is further supported by the line ‘yes… the tongue in the mouth… all those contortions without which… no speech possible.’ The physiological mouth contributes to the psychological voice in the play.

The musicality of these sounds is readily explored by Lucio Berio in ‘Visage’. In the composer’s own words, it ‘explores the musical equivalents of linguistic articulations [and he describes it as] a sound track for a play that has never been written’. ‘Visage’ not only explores many paralinguistic voice qualities, it presents these in English, Italian,

Hebrew and Neapolitan dialect. For Berio, ‘it is based on the symbolic and representative charge that is carried by vocal gestures and inflections, with the ‘shadows of meanings’ and the mental associations accompanying them’. Berio’s note of the ‘vocal gestures and inflections’ (physiological) and the mental associations (psychological) reinforce this study of differentiators in song.

The composition opens with a series of ingressive and egressive breaths followed by a female vocal growl, that breaks into a wailing sound. Non-lexical vocal alternants such as ‘d’, ‘ah’, ‘dah’, and ‘meh’ are delivered through a contracted vocal. The tightened larynx, alongside the short egressive breaths, give rise to a cry-like sound. The effect is disconcerting for the listener, because the whispered voice creates an intimacy that is disrupted through alternants and differentiators such as laughs and cries.

This is redolent of the vocal in ‘Not I’ and is further supported by other performances. Take, for example, Yoko Ono’s screaming in her performance art pieces and ‘Kiss, kiss, kiss’ on Double Fantasy. The effect of these differentiators is that they cause an aural claustrophobia. The stable sections are delivered with whispered voice which creates an intimacy. The intimacy coaxes the listener into a false sense of security, which is entirely disrupted by harsh screams, cries, laughs and intense breathing control.

Crying whilst singing is readily used in nineteenth-century opera. One example is the ‘Eccola’ scene in Gaetano Donizetti’s Lucia di Lammermoor. The soprano must have a capable stamina, vocal agility, and great attention to tone to convey the emotions of an intense state of mind. They must also be skilled in coloratura singing, to deliver the melody with its elaborate embellishments.

18 Luciano Berio, ‘Visage (Author’s Note)’.
19 Gaetano Donizetti, Lucia di Lammermoor: The bride of Lammermoor (New York: Kalmus, 1900).
In Dame Joan Sutherland’s performance, she demonstrates vocal dexterity through a beautiful tone.\textsuperscript{20} For Kate Hopkins, it is a ‘breath taking display containing a stratospheric virtuoso cadenza’.\textsuperscript{21} The sweet melodic tones are delivered against rising vocal alternants ‘oh’ and held vibrato notes. As the scene progresses, these are developed into a laugh with a rising ‘hah, hah, hah’, at 06:15. The rising laugh functions as a differentiator that not only combines a qualifier (vocal fry) and alternant (pause), it evokes the madness of the protagonist. When it breaks, Sutherland contracts her larynx, to transition from a laugh into a cry-like sound.

The use of instrumentation is interesting in this scene. At first, Lucia sings in unison with the flute, but at 10:07, she starts a call and response, and at 10:32 she resumes singing in unison with the flute again. This might be interpreted as her last moment of sanity before descending into another call and response at 11:59. This time it builds toward a high-pitched, vibrato vocal that concludes the scene. This passing of the instrumentation into the subconscious of the protagonist is supported by the reading of ‘I need you’ and ‘While my guitar gently weeps’ in Chapter 5.

Building on the continuous parallel that has been drawn between speech and song in this thesis, the effect of crying and laughter are explored as differentiators in The Beatles’ songs. Take, for example, the G\# strings that depict weeping in ‘She’s leaving home’. At 01:39, the lyrics are, ‘Daddy, our baby’s gone’, characterised by the succeeding staccato strings. The preceding lyrics of the mother ‘clutching her handkerchief’ and ‘she breaks down’ prepare the listener for the personification of the cry in the strings.

\textsuperscript{20} Dame Joan Sutherland – ‘Eccola’ (The Mad Scene) Donizetti’s Lucia di Lammermoor (7 December 2010) (https://www.youtube.com/watch?v=U3_8wz_xN10, 4 August 2019).

The expression of character is made possible alongside context. This is because leaders and onsets of differentiators can differ depending on context. Poyatos explains that ‘they particularly trigger specific, albeit culturally and personally modified, kinesic behaviours, more significantly so than other paralinguistic behaviours’.\textsuperscript{22} This is because differentiators are all subject to cultural-display rules in a way that is learned through imitation. This is experienced in everyday communication, for example, the ingressive breathing that accompanies crying or perhaps the open-mouthed egressive breathing and hitting of the knee whilst laughing.

In 2002, Poyatos noted that neither a phonetic transcription nor a written representation of differentiators had been attempted, but ‘they have all been used as literary material as part of character’s repertoires’.\textsuperscript{23} For an example of a primary quality he cites James Joyce’s 	extit{Portrait of An Artist as a Young Man}, ‘The laugh, pitched in a high key and coming from a so muscular frame, seemed like the whinny of an elephant’.\textsuperscript{24} This is redolent of the ‘raucous, harsh’ laugh given from the Agatha Christie example in the Chapter 1. These features are present in speech, drama, and song, but the question, if seldom ever asked, remains as to how to analyse and transcribe differentiators in song?

Chapter 7 analyses differentiators through terminology derived from music theory and linguistics alongside transcriptions and spectral views. The importance of differentiators is that they not only represent person-identifying features, they contribute to overall psychological expression. The elision between primary voice qualities, qualifiers, and alternants enable differentiators to give rise to personae. This highlights an intertextual analysis and strengthens our understanding of narrative in song.

\textsuperscript{22} Poyatos, 	extit{Nonverbal communication across disciplines}, 57.
\textsuperscript{23} Ibid., 58.
\textsuperscript{24} Ibid., 61.
Chapter 7
Paralinguistic Personae

7.1 Introduction
Nonverbal performance practices, explored in this study, connect with broader historical and aesthetic features of paralanguage in popular song. The Beatles no doubt progressed musically, but did so with their influences, old and new, and their own recordings to hand. This is heard explicitly in their harmonies, melodies, lyrics and rhythms, but is amplified through paralanguage in their mid and late style.

This chapter focuses on the period 1968-1969. Not only were they developing as musicians, aspects of paralanguage, learned in their early period, are shown to have a long-ranging effect. Certain features, developed at this time, provide a watershed for their solo material. On reflection, they each demonstrate a nostalgia for the early days (Hamburg, Cavern etc.) and yet were preparing for solo careers. This nostalgia is demonstrated on most of their albums, but primarily the White Album, Abbey Road, Let it be and accompanying outtakes. These include examples from the Esher demos/Kinfauns, The Nagra Reels and the 2018 White album outtakes.

The significance of outtakes, recording sessions, and multiple versions continues to underscore this analysis. Records are autonomous products distributed worldwide, but their process of formation is one of gradual growth that is often understudied. Take, for example, ‘Dig a pony’, there are over one hundred takes that provide an insight into the nuances of the vocal that were either abandoned or introduced in the recording process.

The Let it be rehearsal tapes not only inform the creative process, giving rise to the album, they yield insights into The Beatles’ brewing solo material. Harrison’s 1970 release ‘All things must pass’ (discussed below), is heard on the Let it be rehearsals but was rejected for the White album. Lennon’s ‘Child of nature’, also rejected for the White
Album, was Kept in reserve on the Esher tapes. Lennon refurbished the song and released it as ‘Jealous guy’ in 1971.

One would think that by 1968 their own material would outweigh their early cover song set lists, but techniques learned through covering continue to arise. On the Nagra reels, a collection of bootleg recordings from the Let it be sessions, many cover songs are heard alongside contemporary influences. These include Chuck Berry’s ‘Thirty days’, The Rolling Stone’s ‘I can’t get no satisfaction’, a short performance of Samuel Barber’s ‘Adagio for strings’, and the ‘Hare Krishna mantra’. Contemporary songs such as The Animals’ ‘House of the rising sun’, The Foundations’ ‘Build me up buttercup’ and Johnny Cash’s ‘Walk the line’ can also be heard.

Select outtakes from these recordings were released, on disc 3 and 4, of the White album anniversary release, mixed by Giles Martin in 2018. The release features session tapes of ‘Revolution 1’, ‘Blackbird’ and ‘Mother nature’s son’. Disc 3 contains a cover of ‘Blue moon’, wedged between two versions of ‘I will’. It is hard to deny that the Elvis-esque style of ‘Blue moon’ probably informed McCartney’s vocal in ‘I will’. Or the country-western drawl heard in ‘Yer blues’, was probably influenced by Dylan. A drawl functions to augment and stall the progression of words.

A prominent example of this practice of gathering influence and testing vocal styles is heard in ‘Everybody’s got something to hide except me and my monkey’ (me and my monkey). It is sung in a Dylan-esque style on the Esher demos, but was recorded with vocal fry for the album. The Beatles’ testing of vocal dialects, in song, gives rise to their use of dialect as a technique. The latter examples of their emulation of Dylan’s and Elvis’ vocals support this, and it is further evinced in their solo careers.

McCartney’s 2013 ‘Early days’ alludes to the country-western vocal in ‘I’ve just seen a face’, ‘She’s a woman’, ‘Mother nature’s son’, ‘Honey pie’, ‘Rocky raccoon’, and
‘Little child’. Not only were they preparing for solo careers, they were referring to past Beatle songs. This is informed through lyrics and musical quotations heard in ‘Savoy truffle’, ‘Glass onion’, ‘Dig it’ and ‘Sexy Sadie’.

The Beatles use dialect sparingly in their songs. I say sparingly because it is not consistent like The Proclaimers who sing with a Scottish accent or The Dubliners who sing with a drawl in an Irish accent. In ‘What a shame Mary-Jane’, Lennon consistently sings ‘party’ with a drawled American accent, giving rise to ‘pahr-tee’. But in ‘Maggie Mae’, McCartney and Lennon sing the Liverpool inspired lyrics with a Liverpudlian accent. Their enunciation of the harsh consonants ‘D’ and ‘T’ are softened by the alliterated ‘M’ on Maggie Mae.

Not only do The Beatles demonstrate the process of imitation and counter-imitation, they excel through innovation. Innovation is understood as the introduction of a new feature or the transformation of an existing one.¹ This implies, that at some level of consciousness, they were aware of tradition and innovation.² The Esher tapes, Nagra reels, and Let it be session tapes reveal they were continuing to draw on a plethora of influences from their surroundings, contemporaries, and past repertoire. This is supported by Everett’s graph of their style features (Chapter 2). Their ability to learn sounds and develop them in their own style is a central characteristic of their performance practice.

The impact of this is two-fold: for not only does it demonstrate their testing of vocal styles, it gives prominence to contemporary influences such as Dylan, The Stones, and The Beach Boys. Take, for example, ‘Back in the USSR’ which features a Beach

Boys style texture (01:05-01:17) in the accompaniment. It is through their use of primary voice qualities, differentiators, alternants, and qualifiers that personae arise in their songs.

By persona, I combine Cone, Hennion, and Moore’s understanding. For Cone, ‘the poetic persona is transformed into what we have hitherto called the vocal persona: a character in a kind of [monodrama] who sings the original poem as his part […] the protagonist of a song’.³ For Moore, ‘the way a persona comes clear to a listener is partly through the lyrics of the track but, perhaps more importantly, by means of the voice through which the lyrics and melody are articulated’.⁴ For Hennion, voice resides in the physiological and psychological mechanisms between the singer’s person and their songs.⁵ Cone, Moore, and Hennion draw a relationship between voice and persona.

This change of topic has a long-ranging effect on The Beatles’ songs and solo careers. Their use of dialect and paralanguage enhance the delivery and reception of vocal personae. These personae are central to our interpretation because they participate in ‘an all-encompassing environment of nonverbal sound – an environment to which [the singer] in turn contributes through [their] own melodic line and vocal timbre’.⁶ Not only do they develop a range of individual personae in their songs, they build them into their solo output through paralinguistic voice qualities.

The Beatles’ individual personae are evaluated in terms of paralanguage and dialect, introducing what I have termed paralinguistic personae. One might argue for the study of The Beatles’ personae as a group, but studying Lennon, McCartney, and Harrison’s individual vocal traits is conducive to a future study of the group personae, alongside the concept album.

⁴ Moore, Song Means, 91.
Through consistency in function, within and across songs, paralinguistic personae can be understood in regard to Meyer’s sound terms. By sound term, I mean a series of aural stimuli giving rise to affect. These are common traits that may be articulated differently or the same across songs. Before broaching an analysis, it is necessary to pause briefly to explore the relationship of paralanguage to narrative personae and sound terms.

7.2 Theoretical Outline
There is little research or theory surrounding paralinguistic personae in popular song. This means that we must draw on several theories that near the topic in order to provide an outline of this subject area. Taking narrative as the point of departure, this section explores the impact of paralanguage on story-telling, giving rise to personae. These are formed through sound terms, that are embodied by a singer in performance.

There are many ways to approach the impact of the persona on a song’s narrative. Aristotle, for instance, believed that there were three forms of poetry: the lyric, the dramatic, and the narrative. In the lyric, the poet speaks in his own voice; in the dramatic, the poet speaks only through the voices of the characters; and both methods are combined in the narrative. Cone cites T.S. Eliot who put ‘the triple division in another way: the poet talking to himself (as in many lyrics), addressing an audience (as in epic recitation), and assuming the role of a character (as in a play)’. Although some critics might fairly argue whether the singer ever really speaks in his own voice.

For Cone, ‘[the performer] is always assuming a role – a persona […] even when that persona is an implied version of the poet himself’. In Lennon’s songs, we might assume that ‘Julia’ presents a candid Lennon singing about the tragic loss of his mother.

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7 Meyer, Emotion and meaning in music, 45-63.
9 Cone, The Composer’s Voice, 1.
11 Cone, The Composer’s Voice, 2.
But we can also examine the implied ‘walrus’ persona presented in ‘I am the walrus’ and in the *Magical mystery tour* film. This is supported by Cone:

> The hypothesis underlying this point of view is an appealing one: that a basic act of dramatic impersonation underlies all poetry, all fiction, indeed all literature worth the name. Perhaps it is the presence of this element that distinguishes literature as an art.\(^\text{12}\)

The same can be said of popular song. The vast range of presented and implied personae often poses a dramatic context. Whether it is a lost lover, death, romantic encounter, angry experience, or joyful occasion, there is a certain degree of an implied dramatic situation that can be heard in most songs. This is not true of all songs, but I would like to highlight Cone’s clause: it underlies all popular song *worth its name*.

Popular song personae reside in the communication of a certain kind of experience. This is akin to a character in a play: alluded to with ‘Not I’ in Chapter 6. The narrator in a novel: suggested by the Agatha Christie example from ‘The Edge’ (Chapter 1), or the persona in a song. The inherent capacity for a song to give rise to a virtual experience that is both believable and relatable contributes to the popularity of this song type. How many teenagers suffering from heartbreak can tell you not only which groups, but which songs, helped them through the process?

For Cone, the natural approach to a study of ‘musical expression would seem to be through the medium of vocal music, through compositions in which the words may give some clues to the composer’s intentions’.\(^\text{13}\) He believes that every song is really a monodrama and ‘we learn what the composer has to tell us by giving exclusive attention to the singers’.\(^\text{14}\) Or more specifically the voice: nuance of pitch, tone, and gesture, giving rise to affect.

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\(^\text{13}\) Ibid., 5.
\(^\text{14}\) Ibid., 11.
Hennion argues that voice has double meaning, physiological and psychological, and what counts ‘is having an interesting sound which attracts attention: inflections, accents and a way of expression which is immediately recognisable’. This is redolent of primary qualities, the person-identifying features, and expressive tropes. Without these, how are we, the listeners, to know that the protagonist is angry if their vocal does not break with laryngeal strain giving rise to vocal fry?15

Analysis of specific vocal and musical traits has been addressed in recent years by Moore and Nick Braae.17 They use the term idiolect, derived from linguistics. For Moore ‘if style is the manner of articulation of musical content, then idiolect refers to the individual stylistic fingerprints (perhaps tone of voice)’. For Braae, ‘idiolect refers to the common musical details of an artist’s output or segment of their output’.18 Braae analyses Queen’s idiolect from 1973-75, with a focus on Bohemian Rhapsody. His study highlights consistent sonic patterns in Queen’s style, but focuses on harmonies, melodies, and lyrics. But Braae’s analysis does not address the form and function of paralanguage in a way that this study will. Moore, on the other hand, proposes the term idiolect through his methodology, but does not give supporting analyses.

The term idiolect refers to patterns of speech informed by tone, enunciation, pronunciation, and vocabulary. Moore and Braae’s use of idiolect demonstrate the risks of borrowing terminology developed in one discipline and applying it to another. This is

16 This is reinforced by John O’Donohue’s study of the lost voice that cannot be quieted. The voice that tells the listener that the speaker is sad, even when they appear happy. This voice ‘may speak with passion on a fascinating topic, yet its mournful music seeps out’. See John O’Donohue, Divine Beauty: The Invisible Embrace (Bantam Books: London, Toronto, Sydney, Auckland, Johannesburg, 2003), 89. An example is heard in Lennon’s performance of ‘Help!’, where his despondency is conveyed through falsetto outbursts.
18 Moore, Song Means, 166.
because idiolect addresses the speech habits peculiar to a person. The use of this term assumes a direct transference between speech and song, but this is not so. If this were true, the idiolect of Donovan Leitch would give rise to a Glaswegian accent in his songs. But Donovan predominantly sings with a folk accent akin to Dylan.

David Crystal’s 1971 definition of idiolect as voice quality, is more agreeable:

[it is the] idiosyncratic, relatively permanent, vocal background of an individual, which allows us to recognise him […] It is a physiologically determined activity, over which most individuals have little or no measure of control (others call it ‘voice set’, ‘speaker identity’, etc.).

These ‘vocal backgrounds’ exist in song, for how else would we know who is singing without a visual aid? Importantly, idiolect is not the same as paralanguage, which is more malleable. This is because it can alter meaning and convey emotion.

This reiterates the caution that ought to be taken when using a theory derived from speech studies on song. Whilst song is often understood as heightened speech, it is less common to describe speech as diluted song. Instead of an idiolect analysis, I combine Moore, Cone, and Hennion’s theory of the persona, alongside paralanguage, to give a series of paralinguistic personae. The chapter also proposes dialect as a differentiator, because it is affected by both physiological and psychological factors.

It is accepted for singers to perform with different accents, styles, breathing techniques and other voice qualities. But if I change accent in my everyday speech, begin to lisp or alter my breathing to create a false sense of breathlessness, it would be condemned. The change in idiolect would appear as mockery and would probably confuse the person I am communicating with. But in song, a change in voice quality or dialect is celebrated, because it can give rise to greater expression. This is true of acting, where the expressive nuances of pitch, tone, and timbre portray more detailed characters.

This raises the question of how to theorise dialect as a differentiator, and evaluate differentiators giving rise to affect?

Taking paralinguistic personae as the basis of this chapter, we can re-evaluate vocal fry, falsetto, head voice, and stop time as active contributors to a song’s narrative. Whilst these are analysed independently, they are re-evaluated in the larger context of the song, to better understand the subtle nuances of pitch, rhythm and lyric. It is worth briefly noting the relevance of the accompaniment in this wider context.

The accompaniment is understood in terms of Cone’s ‘virtual persona’. For, as I believe, Cone is correct in suggesting the implicit persona ‘is to be inferred from the interaction of [music and lyrics]’. This is because voice is married to music in popular song: it gets its rhythm, pitch, and melody from music. Often the melody of the lyric can be continued into the accompaniment and vice versa. The title of a song, for example, can often be determined through melody alone. This is heard in the opening of ‘Here comes the sun’ or the guitar riff on The White Stripes’ ‘Seven nation army’.

This is apparent in the instrumental sections that may occupy a role in the narrative. In ‘Money (that’s what I want)’, the precocious child is depicted through the tantrum-like pulsing rhythm on the piano. This also occurs in the guitar riff that fills the role of the antagonist in ‘I need you’ (Chapter 5). The success of these instrumental roles relies on the strength of lyrics and paralanguage combined. This equally applies to the function of vocal and musical alternants in song.

When this is achieved, the absence of the music is not mourned because it appears to be part of the design. Cone explains that ‘one should always feel grateful when the music returns, but one should never find oneself disappointed by the composer’s failure

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22 Ibid., 18.
to provide it’.\textsuperscript{23} Often an implicit (musical) persona is given alongside a paralinguistic persona, to enhance delivery and interpretation of a song’s narrative.

It is worth noting that the paralinguistic persona is not \textit{the} persona of each Beatle, but rather \textit{a} persona that is presented in different songs. These personae give rise to greater effect through consistency in use. As The Beatles developed their technique and sound palette, the nuances of pitch and tone became part of their narrative tools. Through vocal fry, Lennon conveys the grief-stricken lover in ‘Anna (Go to him)’ and the emphatic, confident narrator in ‘This boy’. These aspects of paralanguage, learned through their emulation of predecessors, have become a part of their narrative message.

In this chapter, the presence of paralinguistic personae, within and across songs, gives rise to sound terms. A sound term, then, is the result of both physiological and psychological aspects giving rise to affect. For Meyer, sound terms are ‘a sound or group of sounds (whether simultaneous, successive or both) that indicate, imply, or lead the listener to expect a more or less probable consequent event’.\textsuperscript{24} Sound terms occur within a particular sound system and are named so through consistency in use and function. It is noted that Meyer is discussing music, but his definition is applicable to this study. The expression and function of sound terms is akin to Zagorski-Thomas’ Sonic Cartoons.

One of the key concepts of Sonic Cartoons is the image schema. In his own words, ‘this is a schematic representation of a familiar, repeatedly experienced activity’.\textsuperscript{25} He states that there is a clear mapping between the image schema and structures of perceptual learning in relation to ecological perception. These are listed as the following:

1. Recurrent patterns of bodily experience;
2. ‘image’-like, in that they preserve the topological structure of the perceptual whole, as evidenced by pattern-completion;
3. Operating dynamically in and across time;

\textsuperscript{23} Cone, \textit{The Composer’s Voice}, 14.
\textsuperscript{24} Meyer, \textit{Emotion and Meaning in Music}, 45.
\textsuperscript{25} Zagorski-Thomas, \textit{The Art of Record Production}, 9.
4. Realised as activation patterns (or ‘contours’) in and between topologic neural maps;
5. Structures which link sensorimotor experience to conceptualisation and language;
6. Structures which afford ‘normal’ pattern completions that can serve as a basis for inference’.  

These image schemas are likened to sonic signatures. A sound term may be understood as a sonic signature, for specific voice qualities become identifiable with one individual. This is because the person embodies the sound term converting it into a sonic signature.

In everyday communication, a person might use head voice when consoling someone, speaking to a child, or particularly when nurses speak to elderly patients. These signatures recall Elvis’ vocal alternant ‘Uh-huh’. In some cases, the signature can be a result of mimicry, as ‘mimics always state that they pick up certain characteristics to emulate, [for example,] a particular form of low growl combined with a slurred articulation’.  

For Zagorski-Thomas:

The ‘signature’ can relate to particular types of performance or programming characteristics that characterise the musical gestures, to spatial characteristics, to particular types of sound sources or instruments or to the type of processing.  

Primary qualities, qualifiers, alternants and differentiators are reliant on recurrent patterns of bodily experience. That is breathing-, laryngeal-, pharyngeal-, velopharyngeal-, etc., control, that operate dynamically in and across time (Chapter 4). Through consistency of use and function, they liken sensorimotor experience to conceptualisation. This opens the potential for paralanguage to function as activation patterns in song. The consistency of sound terms, in and across songs, not only gives rise to paralinguistic personae, they highlight an inter-song thematic process.

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27 Ibid., 67.
28 Ibid., 68.
29 Poyatos, *Paralanguage*. 
The inter-song thematic process is one that has been readily explored in classical music. This is presented in Julian Horton’s study of cyclical thematic processes in symphonic works.\textsuperscript{30} The analysis takes an aerial view of the symphony and indicates, through individual composers, a process of thematic and cyclical relationships. This has primarily given rise to analyses in classical music, but the paralinguistic perspective taken in this research lends itself to such an approach.

Lyrics contribute to the interpretation of paralanguage, but voice qualities are not reliant on words for affect. If we accept that the parabolic arch is a melancholic ‘sound term’ in The Beatles’ style, consequent uses will evoke similar themes based on our initial encounters. This is because of the consistency of use, on words of woe, within their songs.

It is noted that the theories presented are primarily concerned with classical music, linguistics or music technology. But that is not to say that they are not applicable to this study; it just means that one must always be aware of the potential pitfalls of drawing theory from one genre or discipline and applying it to another. It is at this stage, then, that we must investigate the methodology for such an analysis in popular song.

\textbf{7.3 Methodology}

The paralinguistic persona is given through a combination of paralinguistic voice qualities. These are understood as a series of overlapping patches that contribute to tensegrity. In each patch, one can use a different set of coordinates to specify the position of an expressive trope. These can be re-evaluated in the broader context of the song and albums of an artist. As explained in Chapter 6, these may be understood as differentiators.

Taking differentiators as the emotional aspect of interaction, we understand that they are shaped by the preceding, simultaneous sounding, and succeeding sounds. That

is, it is not solely the specific characteristics of the differentiators that give rise to meaning in interaction, they are shaped by their context. Poyatos argues for the analysis of the preceding and succeeding sounds first, for these sounds can qualify or contradict the differentiator. 31 Laughter and crying were given as examples of differentiators in the previous chapter. But at this stage, it is worth looking at their formation and application, alongside other differentiators.

Laughter combines the physiological and psychological aspects of communication. That is the physiological use of the larynx and the psychological connotations of a laugh. Laughter is equally affected by alternants and qualifiers. Taking the former, a slow, broken laugh would suggest mockery or sarcasm. The latter is affected by vocal fry, falsetto or breathy voice. Falsetto, for example, might indicate a sinister or mocking laugh, but a breathy laugh can represent a loss of words or an expression of sarcasm. Vocal fry with laughter can communicate a hoarse laugh leading to grotesque sounds. This is often used in children’s films to depict an evil character.

One example is Ursula, the sea witch, in Walt Disney’s The Little Mermaid. 32 Her deep, egressive, slow, bellow-like laugh is delivered with a tightened larynx and large resonance cavity, giving her a male sounding vocal. The vocal is particularly important in this film: for it not only portrays the sardonic character of the sea witch, voice is what the sea witch wishes to take from the little mermaid. But the narrative potential of laughter is not limited to film, an acerbic laugh is heard in the sixth verse of ‘I am the walrus’.

The verse opens with ‘Expert, textbert, choking smokers/ don’t you think the joker laughs at you’. This is answered by a series of sardonic laughs in the background: ‘he, he, he […] ha, ha, […] ho, ho’. For Poyatos, ‘sardonic laughter, which can be of the

31 Poyatos, Paralanguage, 248.
32 Walt Disney, The Little Mermaid, John Musker and Ron Clements (dirs.) (Burbank, CA, Walt Disney Co., 2006).
guffawing, open-mouth harsh type or the closed-mouth chuckle type, is the offensive laughter of derisive mockery blended with disdainful or skeptical humor’. The lyrics explain that the joke is on the ‘expert’ and ‘smoker’, qualified by the differentiator. ‘He, he’, ‘ha, ha,’ and ‘ho, ho,’ are of the open-mouthed guffawing type. This is because the mouth is open and the tongue is high for ‘he, he’, but the tongue falls for the ‘ha, ha,’ and ‘ho, ho,’ giving rise to a larger resonance cavity. The effect is that they contribute to the song’s narrative: that is the jokers are laughing at the listener.

Poyatos categorises aggressive laughter as the following types: seduction, intrusion, mockery, contempt, scorn, challenge, threat, and cruelty. He explains that deceptive laughter is manipulated and masked to feign unfelt sentiments or find favour with someone. In song, aggressive types of laughter of particular interest include deception, satirical, sardonic, and mockery. In Poyatos’ words:

The laughter of mockery and ridicule […] can be most offensively displayed with open mouth, low-pitched mid vowel, loud orality rather than nasality, or, even worse, nasopharyngeal guffawing and even a pointing gesture toward its victim.

An aggressive laugh is heard in the example above of the sea witch. It conveys an element of seduction and mockery. She coaxes the young mermaid to surrender her voice and gestures toward those who have failed in the past. The use of laryngealised laughter by the sea witch, not only fulfils Poyatos’ requirements for aggressive laughter, it contributes to her persona. This is enhanced by song to convey the narrative, for Ariel’s sweet, melodic tones, are juxtaposed against Ursula’s harsh, bellowing vocal fry. But this is not limited to laughter and is apparent in the equally expressive differentiator, crying.

A leader such as a gulp, tears, or a qualifying word, often build toward the onset of a cry. Leaders are understood as both qualifiers and alternants: as qualifiers, crying is

33 Poyatos, Paralanguage, 273.
34 Ibid., 274.
35 Ibid., 272.
affected by breathing control, whimpering, and nasalisation. Alternants effecting crying include sighing, sniffling or a glottal stop. The primary voice qualities that effect crying are more or less the same as those that effect laughter.

Laughter and crying are not mutually exclusive, for one can laugh and cry simultaneously, thus combining two differentiators into another expressive trope. Or perhaps, it can also be a transitionary phase in communication. A story might modulate from a point of happiness to sadness, or vice versa. The differentiators, laughter and crying, combine aspects from the previous chapters for expressive significance in song.

The methodology combines two strands: that is theoretical and practical. Poyatos’ theoretical terminology and descriptions, are given alongside music analysis. By building on the tropes presented, the method not only reaffirms the subjects of the previous chapters, it expands on the analysis and interpretation. Danielsen’s ‘beatbins’ and rhythmic tolerance are given alongside Road’s compositional strategy of fission and fusion, his magic frequencies, and anatomy of pulsation. These are explained within the ADSR envelope (attack, decay, sustain, and release of a sound), and the broader theory of tensegrity.

In Chapter 4, Table 1, Roads’ fundamental frequencies are in descending order. Figure 1 gives these categories outlined on the x-axis: these mark the frequencies in the melody as given in hertz. Danielsen’s rhythmic tolerance is indicated by the dotted red line that subdivides the top portion of the parabolic arch. This is given by a time window of approximately three-quarters of a second.
Figure 1 shows that the vocal moves from a point of fusion to fission and occurs within the ADSR envelope. Roads’ anatomy of pulsation builds on the ADSR envelope by subdividing the interval between attacks into duration and interval between events.

RT2 is the second instance of rhythmic tolerance in Figure 1. The red circle indicates stop time. The vocal breaks momentarily before resuming with the melody line. In terms of tensegrity, this is a point of non-contiguous compression and builds on the clock metaphor given in Chapter 5. The duration is important in terms of Danielsen’s rhythmic tolerance, for it depends on the context of the song. A slow song can afford a longer RT than a fast song, before the listener begins to long for the sound to resume.

In these terms, tensegrity explains the mutual connective support between the subjects of analysis in Chapters 2-5. Through the evaluation of paralanguage, in terms of

36 See Chapter 3 for analysis of ‘Misery’.
tensegrity and sound terms, one can more readily evaluate the persona in the context of a song’s narrative. This is supported through an inter-song thematic process. This is because the use of sound terms, giving rise to effect, informs our interpretation of preceding and succeeding songs in The Beatles' musical output. The relationship between the structural and processual mechanisms of this study are given in the table below.  

The intention of this chapter is three-fold: it not only analyses differentiators, it presents them giving rise to affect. It highlights the process of discovering achieved through covering and demonstrates an inter-song thematic process through paralanguage. These are re-evaluated in a broader context of the contribution of paralanguage and tensegrity to a narrative interpretation and consequent personae.

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37 modelled on Epstein’s ‘structural time’ in *Shaping time: music, the brain and performance*, 1995.
7.4 Analysis, Part One: Paralanguage as Sound Terms


Their capacity to collect inspiration, from a plethora of sources, is demonstrated in ‘Savoy truffle’. Not only does Harrison note ‘Ob-la-di ob-la-da’, at 02:06, with ‘we all know ob-la-di-bla-da’, he received inspiration from Derek Taylor for the second bridge lyric: ‘You know that what you eat you are’, a lyric that is closely related to the macrobiotic 1968 counter-culture film *You are what you eat.*

The title, inspired by Mackintosh’s *Good News* chocolates, discusses select options from the box. These include: ‘savoy truffle’, ‘montelimar’, ‘ginger sling’, and ‘coffee desert’, alongside Harrison’s own creations: ‘cool cherry cream’, ‘coconut fudge’ and ‘pineapple heart’. The song appears as an innocent celebration of the popular confectionery, but it is a tongue-in-cheek response to Eric Clapton’s trip to the dentist.

Figure 2 gives a spectral view of the opening taunt-like vocal on ‘Créme tangerine’, which mimics the children’s ‘na, na, na, na, na,’ playground chant. We can see that Harrison hits the F# centrally at first but allows it to rise slightly, generating a catenary arch. He achieves this by lifting the back of his tongue to hit his soft palate. His voice slowly slides from F# to D, giving rise to the taunt-like voice quality.

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38 Lennon and Yoko Ono followed a macrobiotic lifestyle, so the philosophy behind the diet was probably familiar to Harrison at the time.
This antecedent is in 6/8 which breaks into common time for the consequent. In contrast, the consequent is articulated with a staccato vocal and a rising chromatic line.

Figure 3 gives the next statement. This time Harrison’s vocal breaks momentarily between F# and D. He achieves a similar swell, giving rise to a catenary arch, but his vocal does not slide to D. This is because the back of his tongue is not elevated to hit the soft palate. Instead the sound dissipates giving a short pause in the melody.

From Figure 4, we can see the slide from F# to D returns, but the line is faint in comparison to Figures 2 and 3. This indicates the paralinguistic quality of whispering and
suggests intimacy. Perhaps Harrison is teasing in Clapton’s ear about no longer being able to enjoy his favourite chocolate. Harrison places greater emphasis on the third syllable of ‘tangerine’, giving rise to a round rampant arch.

Figure 4: ‘Savoy truffle’ 02:14-02:19

The importance of the antecedent statements in Figures 2 and 3 is supported through stop time. The pulsing instrumentation pauses to facilitate the entrance of Harrison’s vocal. The effect of this is two-fold: it recalls the style of stop time used by Chuck Berry in Chapter 5, and it forms a point of compression, giving rise to tension. This is reinforced by Figure 4, which gives a break in articulation.

The change in articulation of this period, across three statements, not only gives an example of tensegrity, it demonstrates a tertiary relationship between two aspects of paralanguage. The intonation gives rise to tension in the antecedent, which is resolved by the fractured articulation in the consequent. The brief pauses enhance the taunt-like narrative: will Harrison’s teasing of Clapton cease? Unfortunately for Clapton it does not. At 02:38, Harrison breaks into head voice and sings: ‘you’ll have to have them all pulled out after the savoy truffle’.

With knowledge of the song’s background, Harrison’s use of head voice evokes an expression of mockery. At 02:38, the taunt-like intonation in the lyric sections is

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39 This is supported by Moore’s ‘intimate proxemic zone’ in Song Means, 2012.
abandoned for a high-pitched mockery of Clapton potentially needing all his teeth pulled out. This sinister use of voice qualifier, expressing mockery, is reinforced by Lennon’s use of this expressive trope in Chapter 4, part 2. It is further supported by Lennon’s use of head voice as mockery in ‘Happiness is a warm gun’.

The song opens with a pattern of repeated pitches in common time, recalling the opening of ‘Rock’n’roll music’ and ‘Devil in her heart’ (Chapter 3, part 1). Figure 5 gives the lyric pattern, ‘do, do, do, do, do, do’ at 00:08, recalling McCartney’s pattern in ‘Mother nature’s son’. Overall, the song gives examples of all four paralinguistic categories explored so far. But these overlapping instances exist in almost independent sections throughout the song, for instance, the ballad-like opening is nearly forgotten in the vocal fry cry-like bridge section.

Figure 5: ‘Happiness is a warm gun’, 00:08-00:10

At 00:45, following the melodious opening, the electric guitar interrupts with a stalled pattern. This musical passage is reminiscent of the taunt-like vocal sung by Harrison in ‘Savoy truffle’. The electric guitar slides up and down pitches, giving rise to a parabolic arch-like intonation. The rhythm shifts from the previously heard common
time to 9/8 and then 12/8. This has a dual function: it contributes to the stalled effect heard against the established common time and it introduces the crux of the song.

The guitar pattern is further broken by the entrance of the refrain: ‘I need a fix ‘cause I’m goin’ down’. The meter shifts from common time to 5/8, then 12/8, and the vocals are sung as a series of parallel octaves. The desperation of the protagonist who ‘needs a fix’ is evoked through the open-mouthed, stalled vocal. He can no longer keep with the pace of society and is on the decline. The physiological decline of the vocal complements the psychological decay of the protagonist.

Figure 6 gives a transcription of Lennon’s vocal at 01:08. The melodic shape is marked in the spectral view. We can see that on ‘down’, Lennon allows his vocal to quiver, giving rise to a vibrato resonance.

Figure 6: ‘Happiness is a warm gun’, 01:08-01:12

This is supported by comparative work. In ‘Strawberry Fields’, Lennon sings the same lyric with descending intonation (Chapter 3). At the end of the first lyric line in ‘Happiness is a warm gun’ (00:13), Lennon sings a descending arch on ‘down’, followed by an instrumental slide. This functions to heighten the decline of the protagonist.
The descending arches relate to Lennon’s dejected outlook in different ways. In ‘Strawberry fields’, it mimics the motion physically ‘going down’. But in ‘Happiness is a warm gun’, it reflects the declining psychological state of the protagonist who needs a fix before hitting their nadir. One might argue that it is the phonetic structure of ‘down’ contributing to this type of decay, but at 01:07, Lennon furnishes a swell, augmenting the two syllables of ‘town’.

From Figure 7, we can see that Lennon’s voice rises from E-G on ‘to-’. This contributes to the pitch bends heard on the electric guitar in the previous section and is contrasted with the articulation of ‘down’ at 01:01 and 01:11.

![Figure 7: ‘Happiness is a warm gun’, 01:07-01:08](image)

The descending melodic line on ‘down’ works with the narrative to convey the fragility of the protagonist looking for a ‘fix’. This is reinforced by an undulating tone that generates the image of a heart monitoring machine flat-lining upon the death of a patient. Occurring between 01:12-01:13, the one second tone evokes a feeling of stop time. This is because the other instruments and vocals stop to allow the tone to occupy
the sound world of the recording. But this is not sustained, and the stalled section is rescued by the entrance of ‘Mother Superior’.

The introduction of the religious figure not only rescues the descending intonation with the rapid succession of quavers and semiquavers, it acts as a narrative marker. The morose spirit of the protagonist treads on suicidal expression: ‘a warm gun’. But the protagonist’s morbid desires are momentarily stalled by the possibility of religious sanctity. This calling on a religious saviour is later recalled in McCartney’s ‘Let it be’. The song opens with ‘Mother Mary comes to me’ at 00:17, which simultaneously suggests his own mother and the religious figure. McCartney uses head voice throughout this song, giving rise to an expression of piety, which heightens the characterisation of Mother Superior in the narrative.

In ‘Happiness is a warm gun’, Lennon’s suggestive sanctity is transitive. This is marked by the despondency of his vocal in the bridge. Everett suggests that the line ‘when I hold you, in your arms’ was taken from Lennon’s ‘I’m so tired’ written in Rishikesh: ‘clearly flowing from this song’s concern for sanity, but cut from ‘I’m so tired’ to form the basis of the finale of ‘Happiness is a warm gun’.40 For Everett, this leads to a ‘unique spoken verse with text’.41 The spoken verse with text is a strophic song form characteristic of folk music. This spoken verse highlights the paralinguistic quality of Lennon’s voice, giving rise to expression.

Figure 8 gives an example of his vocal from 01:48-01:52. Not only does he sing this section with vocal fry, indicated in the transcription with hairpins and unpitched ‘x’ notation, he furnishes a swell-like resonance on several pitches. This is indicated by the resonance in the upper partials of Zone B and C. Taking the fourth note in Figure 8, we

40 Everett, Revolver through the anthology, 169.
41 Ibid., 169.
can see that he achieves a parabolic arch on ‘hold’. Lennon hits the note with a rapid ascent and equal decay, generating a fractured delivery. This is supported by the arch-like intonation on the sixth note and the rapid descending slide on ‘arms’. The transcription alone is under stress to show this range of intonation and vocal fry.

Figure 8: ‘Happiness is a warm gun’, 01:48-01:52

The use of vocal fry is reinforced by Lennon’s laryngeal control in ‘Anna (go to him)’ and ‘This boy’. On each occasion, vocal fry is used to evoke a feeling of desperation that complements the narrative. This not only reaffirms our reading of vocal fry as an expressive trope, it supports the mutual dependency of primary qualities and qualifiers in one statement. Previously, vocal fry primarily occurred on undulating melodic lines such as the entrance of ‘Rock’n’roll music’. But in 1968, Lennon combines aspects of paralanguage, giving rise to greater expressive nuance. This is supported by comparative work in McCartney’s solo albums. In ‘Maybe I’m amazed’, McCartney sings legato verses juxtaposed with vocal fry chorus sections. A lover is addressed in all three songs, and the sentiment is carried through the qualifier.
A melodious vocal is used in the lyric sections, appealing kindly to the antagonist, but when their efforts fail, the protagonist breaks into vocal fry for the chorus. This is reinforced by the declamation that they have spent ‘all of their life, searching’ in ‘Anna’. Or in ‘This boy’ the protagonist warns of ‘that boy, [who] won’t be happy, till he’s seen you cry’, and in ‘Maybe I’m amazed’, McCartney uses the trope to convey that maybe he was a lonely man. He frequently interjects head voice and falsetto statements, alongside vocal alternants such as a four second ‘woo’ at 01:06.

Throughout ‘Happiness is a warm gun’, Lennon uses head voice to articulate ‘happiness’, evoking a sarcastic tone-colour. ‘Happiness’ reaches a climactic point at 02:21 that recalls the building articulation of ‘mine’ in ‘I saw her standing there’ (Chapter 4, part 2). Not only does the transcription in Figure 9 tell us that Lennon’s vocal resonates in Zone B, we can see that he achieves a parabolic arch on ‘gun’.

Figure 9: ‘Happiness is a warm gun’, 02:21-02:26

Before 02:22, he rises to hit the pitch centrally. This is sustained for two seconds, before his vocal swells upward and descends with vibrato decay. The decay is indicated by the
highlighted white resonance in the upper partials. This not only indicates falsetto but highlights the volume of the vocal.

The amplified falsetto vocal is supported by ‘mine’ in ‘I saw her standing there’. Both songs go through a process of abstraction. In ‘I saw her standing there’, falsetto was gradually introduced in the verses and worked toward the augmented articulation at 01:03. This builds on the influence of their own repertoire, for example, the descending bass pattern after ‘down’ at 00:33. Whilst this is a descending instrumental part, it supports the reading above of the psychological effect of descending vocal intonation in ‘Happiness is a warm gun’ and ‘Strawberry Fields’.

In ‘Happiness is a warm gun’, falsetto is developed from a short ‘happiness’, in each statement of the hook line, to a four second expression for the final line. The effect is two-fold: it not only contributes to Lennon’s despondency; it functions as a cyclical aural signature in the song. This is hinted at in the refrains and is realised with a closing function. This use of a paralinguistic voice quality is supported by comparative work where falsetto is used to close ‘Dig a pony’.

The 1970 Let it be song marries paralinguistic voice qualities. The song opens with a rising melody interspersed with breaths. The breath-like vocal is a voice qualifier that was explored in the dramatic representation of a state of mind in Chapter 6. Figure 10 gives a transcription and spectral view of the opening. Taking bar 1, the transcription informs us that ‘hi’ is articulated as a crotchet, quaver, and crotchet, with interspersed rests. From 00:32-00:37, we can see that the resonance on the spectral view is faint.
Lacasse’s analysis of Tori Amos’ cover of Eminem supports this reading. Building on his analysis, we can deduce that this is a breathy vocal, because there is little to no resonance on the spectral view. A whispered voice would generate a more pronounced spectral view, because of the use of the larynx.

With the repetition of ‘hi’, the vocal gradually becomes clear. Taking note 2 in bar 2, we can see that Lennon not only achieves a stronger vocal resonance, he furnishes a swell, giving rise to a parabolic arch. The combination of the fractured rests, parabolic arch, and breath-like vocal in this line contributes to the narrative. This reaffirms their combination of expressive tropes in this period.

The five second snippet is conducive to an understanding of tensegrity. The points of stop time (non-contiguous compression) are supported through the articulation of the vocal line (contiguous tension). The effect is that it keeps the song in a state of abeyance until the vocal is resolved by the entrance of the hook line: ‘Dig a pony’. More examples, using falsetto, occur at 01:10, 02:06, and with a closing function at 03:22.

Figure 11 shows that at 01:57, Lennon achieves a vibrato vocal on ‘to’, followed by a point of stop time. At 02:00, all instruments and vocals pause to mark the entrance
of ‘be-cause’. Lennon not only achieves falsetto on the second syllable, resonating in Zone B, he furnishes an arched intonation in the vocal.

Figure 11: ‘Dig a pony’, 01:57-02:03

In terms of tensegrity, the vibrato falsetto lyrics are the points of tension and stop time is the point of compression. This example also contributes to Moore’s use of Camilleri’s morphological space, which ‘is the sensation of change we experience as timbres subtly alter’. Broadly speaking, the change of vocal, from ballad-like to falsetto, signals a change in the listener’s experience of the song. It consequently serves to evoke greater emotional resonance in the vocal persona.

The cry-like falsetto on ‘because’ indicates the protagonist’s desperation. This is supported by alternants such as ‘ah’ in the introduction and ‘to’ at 01:08. The augmented two second ‘to’, accompanied by stop time in the accompaniment, renders the vocal in abeyance before the entrance of falsetto ‘because’. This occurs in the refrains and functions to create uncertainty in the direction of the song. The cry-like falsetto

42 Moore, *Song Means*, 37.
contributes to the narrative, for the protagonist is trying to address a fractured relationship without allowing his vocal to break. Whilst this is an example of falsetto giving rise to a melancholic narrative, falsetto is not limited to a cry-like expression in their songs.

Falsetto, personified as mockery, is heard in Lennon’s satirical song ‘Sexy Sadie’. Originally written to expose the Maharishi as a fraud, Lennon changed the subject of the song to Sadie. But the name change does little to mask the lyrics that narrate his experience with the Maharishi and transcendental meditation. The lyrics: ‘you gave her everything you owned just to sit at her table’ and ‘made a fool of everyone’ support Lennon’s incorrigible attitude toward the Maharishi.

The idea of the knowledgeable fool from ‘Fool on the hill’ is abandoned here. Instead, the fool represents the masses: ‘the world was waiting just for you’ and the potential perils of following a guide. This is recalled later in Lennon’s ‘God’ when he declares that ‘god is a concept’ and that he no longer believes in ‘magic […]’, iChing […], bible […], Jesus […] or] mantra’.43 The use of falsetto, stop time, and intonation in ‘Sexy Sadie’ gives the song a cynical expression.

Figure 12 gives an analysis of Lennon’s vocal from 00:29-00:32. From the spectral view, we can see that his vocal slides upward to the second note in bar 1; he sustains it before breaking slightly prior to the sixth note. A brief stop in his vocal follows the held E on ‘fool’, which emphasises the word and suggests a natural breath in articulation. The spectral view tells us that his vocal resides in Zone C, which is indicative of head voice, and is supported by the consequent ‘of everyone’.

Figure 13 gives Lennon’s vocal from 00:36-00:41. This time there is a variance in articulation, because he achieves greater arch-like intonation through the descending melody on fool. His vocal on ‘everyone’ resides in Zone B indicating falsetto. This is supported through interjections of egressive breaths as indicated in the graph. Lennon’s articulation of everyone as ‘eve-ry-one-on-one’ gives rise to a breathy falsetto vocal.

The combination of breathy and falsetto voice qualifiers enhances the cynical lyrics. The interjections of breaths not only conjure a feeling of intimacy, they recall the
entrance of the vocal in ‘Dig a pony’. They further serve to simulate a child’s voice qualifier of mockery, that is, the egressive and breathy ‘hah, hah’. The interspersing of breath, with falsetto, combines two aspects of paralanguage which result in differentiators. This is because the physiological vocal is complemented by the psychological narrative, whilst being modified by primary voice qualities and alternants.

In both statements, Figures 11 and 12, Lennon sings in arch-like phrases. This recalls the arched intonation characteristic of Frank Sinatra and Lenny Welch. In Figure 11, we see that Lennon’s vocal gradually rises to E and is somewhat sustained until it falls with a vibrato resonance on B. Whilst the delivery in Figure 12 is fractured, the arch-like phrasing is in the overall aural impression. Lennon rises to E, sustains it, and allows it to fall with a vibrato decay at 00:32. This was probably derived from an African or Arabian influence and is supported by van Der Merwe: the passionate lengthening of the ‘high, tense, nasal delivery’ results in a ‘wavering intonation’.44

The significance of Lennon’s use of differentiators is demonstrated by comparative work. On take 3 of the Nagra Reels, he is heard singing ‘yeah, it’s getting better all the time’ from 00:04-00:07. Not only does this demonstrate an awareness of their own songs, he sings with a cockney dialect. This suggests that he was experimenting with types of voice during rehearsals. This guides the analysis toward outtakes and session tapes, because they give a more intimate understanding of voice types in song.

Several interesting insights arise from these tapes, for instance, a voice type used on a session tape did not always make it to the final recording. Individual Beatles can be heard testing dialects on different songs and using accent to highlight specific passages. Some of these are retained on the albums, but most are abandoned. Perhaps they were too close to the dialect they were mimicking, such as Dylan or Elvis. Alongside this, often a

44 Van Der Merwe, The Origins of the Popular Style, 30.
type of vocal or musical trope from one song informs their creative process in another. An example can be heard in the lyric section of ‘Don’t let me down’.

In the introduction, I mentioned that the lyric section was probably modelled on The Foundations’ ‘Build me up buttercup’. On 13 January, McCartney and Lennon can be heard playing ‘Build me up buttercup’, written by Mike d’Apo and Tony MacCauley and popularised by the Foundations, on the Nagra reels. Not only are Lennon and McCartney heard discussing Alan Freed and the payola scandal, they note that the low chord change for the verse is emotive.45 Rehearsals of ‘Don’t let me down’, prior to 13 January, do not feature a low chord change. But after 13 January, a shift downward for the lyric section is heard in the outtakes. This was kept for the final released recording and evokes a similar emotive sentiment.

‘Don’t let me down’ opens on a high G#, with Lennon singing the hook line using vocal fry. On the entrance of the lyric section, the melody drops an octave and Lennon’s vocal is softer and more intimate. Figure 14 gives a transcription from 00:28-00:32 in ‘Don’t let me down’. We hear that he articulates the melodic line as a rising staccato passage from G#. His vocal is low, and he sings with an open-mouthed articulation, giving rise to a large oral cavity. This contributes to a deep bellow-like sound in his vocal.

45 Alan Freed, an American disc jockey, was caught in a 1950s payola scandal.
From this example, we note their conscious effort to graft an emotive melody type, from an influence, into their own songs. ‘Don’t let me down’ derives much of its sentiment from this drop to the G# in the emotive lyric sections. Alongside this, the clash of vocal fry chorus and gentle lyric sections is softened by a point of stop time at 00:27. The point of non-contiguous compression gives a pause in the progression, whilst functioning to highlight the entrance of the emotive tone.

This indicates that The Beatles were aware of their contemporaries, and the importance of tone to convey a narrative. Their ability to learn new sounds and develop them in their own way is a central trait of their compositional and performance style. But their emulation is not limited to mimicry and it is at this point that I wish to explore the inter-song thematic process.
Inter-Song Thematic Process

Paralanguage is often used at the beginning of phrases to emphasise articulation which results in dramatic tension. This is heard in the opening of The Beatles’ version of ‘Kansas City’ and the lyric sections of ‘You’ve got to hide your love away’. Not only does the augmentation of a single pitch at the start of phrases mark the entrance of the hook line in many songs, it gives rise to an expressive trope. These statements combine paralinguistic voice qualities to express otherwise mundane words.

Taking the opening of ‘Kansas City’, sung by McCartney, we not only hear a lengthening of the first note, he sings with an intense vocal fry. This functions as a differentiator and evokes a feeling of longing, because the protagonist laments ‘Kansas City’ and his ‘home’. Little Richard does not sing the augmented ‘ah’, but it can be heard in the opening of ‘Shake a hand’, with an augmented five second ‘just’. What is consistent in both versions of ‘Kansas City’ is the articulation of ‘hey’ four times.

‘Hey’ has multiple functions in communication: it can substitute for ‘hello’ and it can be used to attract attention, express surprise, interest, or annoyance. In ‘Kansas City’ it bridges the gap between lyric sections and is often featured as a subtitle. The articulation of ‘hey’ is supported by stop time and vocal fry. It is a differentiator that is modified by primary voice qualities, qualifiers, and alternants. Both Little Richard and McCartney form a call and response in the chorus sections using four statements of ‘hey’.

Comparative work from The Beatles’ contemporaries builds on the reading of ‘Kansas City’ and ‘You’ve got to hide your love away’ from Chapter 3. Not only does Lennon sing with vocal fry, he achieves a parabolic arch on ‘hey’. The importance of this is supported by the articulation of ‘hey’ in Dylan’s 1965 release ‘Mr. Tambourine man’ and Donovan’s ‘Remember the Alamo’.

In ‘Mr Tambourine man’, Dylan sings a similar swell using vocal fry on ‘hey’ no more than ten times. The expressive trope is used to mark the entrance of the refrain and
title line. This is supported by Donovan’s cover of the Jane Bower song ‘Remember the Alamo’. It features a parabolic arch on ‘hey’, that is redolent of Lennon’s articulation of ‘hey’ to mark the entrance of the refrain in ‘You’ve got to hide your love away’.

Figure 15 gives a transcription of Dylan’s opening lyric. Just before 00:11, Dylan’s vocal ascends upward on ‘hey’ before sliding down in a long decay. He repeats this almost exactly on subsequent statements throughout the song. Overall this conveys a consistency in articulation when inconsistency might be expected. Lennon on the other hand, alters his articulation in subsequent statements giving rise to a process of abstraction (see Chapter 3, part 1).

This is supported by further comparative work in Donovan’s ‘Remember the Alamo’. The song features an arch-shaped intonation, with vocal fry, on ‘hey’ in the opening of the chorus sections. It is primarily covered by American folk singers such as Willie Nelson and Johnny Cash, and recalls other American Folk hit songs such as Bud & Travis’ ‘Ballad of the Alamo’. But neither Johnny Cash or Willie Nelson sing ‘hey’
with an arch-shaped intonation or vocal fry. In fact, Willie Nelson abandons ‘hey’ for ‘I’ and sings it with a rising high-pitched vocal.

In Donovan’s version, he contracts his vocal cords, giving rise to a folk-like quality. Not only does he articulate the paralinguistic sound, he conveys a Texan persona through his use of dialect. This contributes to the narrative of an elder telling the story of the last days of soldiers during battle. Vocal fry gives rise to an aged vocal that is supported through the stalled intonation on ‘hey’. Donovan builds toward an augmented ‘hey’ at the end of the song. By augmenting the previously established articulation, it plays with time and is an example of Danielsen’s rhythmic tolerance. This further functions as a climactic point whereby the repetition of the title line closes the song.

Vocal fry, intonation, and the manipulation of time on ‘hey’ contribute to the overall communication. The protagonist calls out for the listener’s attention, whether it is to tell them to hide their love away, that their soldiers are being killed, or to grasp the attention of Mr. Tambourine Man. The consistency of arched intonation, combined with vocal fry, gives rise to an expressive trope. The use of this trope, contributing to the narrative, is understood as a series of stimuli resulting in affect. The prevalence of these stimuli holds a structural function, which elevates their affect in song. This example may be understood as a sound term.

The structural and psychological reading of ‘You’ve got to hide your love away’ is reinforced by Keith Negus’ article on narrative in popular song. He explains that he ‘might hear the narrator of The Beatles’ song as telling me, a listener, to hide my love away’. Negus draws a comparison between ‘You’ve got to hide your love away’ and the Toy Story song ‘You’ve got a friend in me’. The song communicates the friendship

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between the child Andy, and the toy Woody, in the first film. Negus explains that the blues-inflected song is rotated among the characters in subsequent films, developing it as a narrative tool. For Negus, the song’s ambiguity could also lead to one hearing it as an interior dialogue, that is, the narrator talking to himself. In the absence of the word ‘hey’ the emphasis is shifted to ‘you’ve’ in ‘You’ve got a friend in me’.

This not only highlights a historic, cultural, political and contemporary influence on The Beatles’ use of paralanguage, it gives rise to an inter-song thematic process and the use of a sound term to convey a narrative persona in song and film. Is Lennon singing to an antagonist in ‘You’ve got to hide your love away’ or is the song an interior dialogue, that is, Lennon talking to himself. It might be read as a general narration on two characters in a story. The arch-shape and vocal fry on ‘hey’ generate the expressive image of Lennon calling out to an antagonist.

Taking expressive tropes as sound terms, we can begin to trace the appearance, function and development of sound terms within and across songs. The thematic development of the parabolic arch, for example, is heard within songs (‘You’ve got to hide your love away) and across songs (‘Misery’, ‘Nowhere man’, ‘Across the Universe’). This not only highlights the use of differentiators, it exemplifies sound terms contributing to differing personae in popular song.

‘I am the walrus’, for example, gives the ‘walrus’, Lennon’s suspected alter ego. Everett observes that ‘it was Dylan’s incoherent manner, not his message, that stimulated Lennon with the tongue-in-cheek ‘I am the walrus’.

A few years later, in their self-reflexive period, references are made to this song. In ‘Glass onion’ he sings ‘I told you

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48 Everett, Revolver through the anthology, 134.
‘bout the walrus in me, man’, in ‘Come together’ the ‘walrus gumboot’, and in Lennon’s 1970 ‘God’ he sings ‘I was the walrus, but now I’m John’.

The reoccurrence of the walrus is not limited to their songs. In the *Magical Mystery Tour* film, Lennon dresses up as a walrus, which portends the association between him and the mammal. The lyrics explicitly refer to songs such as ‘Lucy in the sky with diamonds’, with ‘see how they fly like Lucy in the sky’ at 01:12. But in ‘God’, Lennon rejects the persona and situates himself in isolation from the world and positions himself as John: ‘I was the walrus, but now I’m John’. He simultaneously denounces many belief systems, including The Beatles.49 This isolation is reflected in McCartney’s ‘Fool on the hill’ through the knowledgeable fool.

The consistency of the articulation of ‘world’, in many songs, confirms readings of the parabolic arch as a melancholic sound term. Similarly, the consistent appearance of the arch, on the possessive ‘me’ in ‘Eight days a week’, ‘What you’re doing’ and ‘Ticket to ride’, are further developed as ‘my’ in Lennon’s inward looking ‘In my life’ and ‘I’m’ in ‘If I needed someone’. The consistency of the arch, on possessive words around 1964-1965, marks an inward-looking, self-regulating period. It also, in some way, predicates their trip to Rishikesh, India, where they sought to find ‘themselves’.

Not only can we trace the explicit references in these songs, they give rise to differing personae. This supports Zagorski-Thomas’ sonic cartoons which are embodied sound terms. This is because they are recurrent patterns of bodily experience, they are image-like, operate dynamically in and across song, are realised as activation patterns, and liken sensorimotor experience to conceptualisation and language.50

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49 In ‘God’, released in 1970, Lennon states that he does not believe in magic, iChing, mantra, the bible, tarot, Jesus, Hitler, Kennedy, Buddha, Gita, yoga, kings, Elvis and Zimmerman (Bob Dylan).

Vocal fry is a recurrent pattern of bodily experience, for it requires a tightened larynx with pharyngeal control. It is image-like because it functions to preserve a structural whole by occupying the chorus sections in ‘Anna’ and ‘This boy’. It operates dynamically in and across time, for vocal fry is heard in 1963 on ‘Twist and shout’ and ‘Get back’ in 1969. Overtime it becomes an activation pattern that links sensorimotor experience to conceptualisation. Vocal fry, for instance, is developed to function as a marker for the onset of conflict or desperation in their songs.

The Beatles’ musical palette continues to derive influence from their early set lists, whilst being restocked with contemporary influences. This leads us into their solo careers where they develop sound terms in line with personae. As we know, they did not ‘Let it be’ in 1970.

7.5 Analysis, Part Two: Dialect and Personae
One might be wondering if Harrison, the quiet Beatle, has been neglected in this analysis. But, as shown with ‘Savoy truffle’, there are equally interesting comparisons and inter-song processes to be drawn from his songs. His use of expressive tropes is further developed in his solo career. Harrison makes both explicit and implicit reference to The Beatles’ repertoire and their influences. Explicitly, his 1979 post-Beatles release ‘Here comes the moon’, is an undeniable nod to ‘Here comes the sun’. Implicitly, stop time is demonstrated throughout his 1987 cover of Rudy Clark’s ‘I’ve got my mind set on you’. His emulation of the James Ray 1963 release indicates a Chuck Berry influence.

In this late period, Harrison’s use of paralanguage is developed in a way that binds itself to the music. Take, for example, his Abbey Road song ‘Something’, which consists of several instances of the parabolic arch alongside repetitive lyrics. But his economic approach to lyrics is not mirrored in his use of paralanguage. The parabolic arch is heard
in songs of woe and is further developed to represent the protagonist’s uncertainty. He sings of his love for the antagonist, but he does not know what holds his attraction.

Harrison adopts a mostly undulating melody line throughout, but stalls on noninformative words such as ‘that’, giving rise to a parabolic arch. On alternants, such as ‘woo’, given in Figure 16, he sings an arched intonation. He hits the B centrally at first, but then bends it with a slow wavering resonance. The wavering vocal not only evokes an image of coaxing, it generates a gulping kinesic quality in the vocal.

Figure 16: ‘Something’, 00:22-00:25

This cry-like differentiator is reinforced by ‘Crying, waiting, hoping’ and ‘I am the walrus’, which feature the cry-like paralinguistic voice quality. But Harrison complements vocal intonation with sliding guitar licks. Take, for example, the parabolic arched electric guitar lick at 00:36.

Figure 17 gives a view of ‘that’ at 00:55. We can see that Harrison not only furnishes a swell, giving rise to a parabolic arch, he pauses briefly before articulating
‘shows me’. The pause allows the arched intonation to resonate, giving rise to affect and contributing to a feeling of uncertainty. This is because the protagonist is unsure of what attracts them to the antagonist. The stalled intonation, on unmarked words such as ‘woo’ and ‘that’, evoke a sentiment of thoughtful reflection.

Figure 17: ‘Something’, 00:54-00:58

The transcription shows this as C rising to D, but the expression of the vocal, through primary voice qualities, not only recalls Lennon’s use of this arch, it gives it a new function. It is used by Harrison to create instability in the vocal that contributes to the unknown ‘something’ in the narrative. But Harrison retains the process of abstraction that has been used throughout The Beatles’ songs.

Figure 18 gives a spectral view from 01:20-01:28. Previously, the parabolic arch is heard on the alternant ‘woo’ and ‘that’. But it builds toward an augmented and emphatic statement in the bridge section on ‘I don’t know, I don’t know’. From Figure 18, we can see that Harrison’s staccato vocal on ‘I’ and ‘don’t’, leads into an augmented ‘I’, giving
rise to a catenary arch. The articulation of ‘I’ recalls Lennon’s self-regulating ‘my’ from ‘In my life’. This suggests Harrison’s inward-looking self-reflective period in 1969.

Figure 18: ‘Something’, 01:20-01:28.

Following the augmented ‘I’, the vocal descends on ‘don’t’ and falls with a gradual decay on ‘know’. The descending vocal gives the impression of the voice blending into the music. This is confirmed by the descending pattern on the guitar leading to a brief instrumental section. Perhaps this leads into the mind of Harrison who is trying hard to figure out what that ‘something’ is that ‘attracts [him] like no other lover’ (00:12).

The descending instrumental is interrupted by a moment of stop time and Harrison picks up the lyrics again with ‘you stick around’. Figure 19 gives a view of the descending ‘I don’t know’. This time the vocal is not interrupted and progresses into an instrumental section. The guitar solo, 01:41-02:12, features a series of pitch bends juxtaposed against a single resonance. This is because Harrison strikes a pitch and allows it to vibrate, giving rise to a vibrato resonance.
The initial simplicity of the song about ‘something’ is made more complex reflecting the vast use of paralanguage to enhance the narrative. Harrison appears to have been synthesising several musical and oral techniques to build his song palette. During the *Let it be sessions*, he was working on ‘All things must pass’, ‘Hear me Lord’, ‘Isn’t it a pity’, and ‘Let it down’, all rejected for *Let it be*.\(^{51}\) ‘All things must pass’, kept in reserve, appears as the title song on Harrison’s 1970 solo album.

The song features examples of the parabolic arch and combines the arch-shaped intonation, with the guitar slide, in a way that recalls Harrison’s ‘Something’. The reflective poignancy of the lyrics reaffirms the use of the parabolic arch on words of woe. On ‘morning’, ‘warning’, ‘always’ and ‘pass’, Harrison allows his vocal to swell upward before descending in a long decay. The hook line is of specific interest in terms of the process of abstraction. Previously, we encountered examples from Lennon and McCartney who tended to work in a series of three, but Harrison articulates the hook line four times. Occasionally it gives rise to the feeling of a two-line statement, and at other

\(^{51}\) Everett, *Revolver through the Anthology*, 234.
moments it hints at a third but dissipates. Just as the song acknowledges the ephemeral nature of the world, the hook line dissolves into the accompaniment.

If we divide the hook line into an antecedent: ‘all things must pass’ and consequent: ‘all things must pass away’, it not only recalls Harrison’s period structure in ‘Savoy truffle’, it gives rise to an interesting paralinguistic intonation. Figure 20 gives a spectral view from just after 00:41, Harrison’s vocal rises to hit the pitch centrally, he sustains it for approximately 40% of the line but hints at an arch on ‘must’.

Figure 20: ‘All things must pass’, 00:41-00:45

At 00:43, he hits the pitch centrally at first but then achieves a rapidly rising a falling shape. This not only constitutes a momentary detuning of the pitch, it recalls the hiccup-like vocal from ‘Crying, waiting, hoping’. After 00:43 on ‘pass’, his vocal gradually rises in a three-pointed arch. Not only does he furnish an arch-shaped intonation, his larynx tilts and projects his vocal into Zone C with vibrato decay.

Head voice, sung on pass with a three-pointed arch, gives rise to a swell-like crying in the vocal. The protagonist struggles to articulate the line and falls short of completing the phrase. Figure 21 gives a view of his repeated attempt at closure. This
time, Harrison does not furnish a three-pointed arch on ‘pass’. Instead, he achieves a catenary arch that slides into ‘away’.

Figure 21: ‘All things must pass’, 00:47-00:51

The articulation of ‘away’ recalls the word painting achieved by Lennon on ‘away’ in ‘Lucy in the sky with diamonds’. The first syllable, sung with a catenary arch, decays into the second syllable, giving rise to a fractured delivery.

Harrison achieves a similar two second augmented arched intonation on ‘always’ at 01:19. From Figure 22, we can see that he furnishes a swell, using head voice, giving rise to a catenary arch and allows it to decay in a gradual descent.

Figure 22: ‘All things must pass’, 01:19-01:25
Not only is the long-lasting influence of Lennon’s intonation in ‘Misery’ realised in Harrison’s ‘All things must pass’, it bleeds into Lennon’s solo career. In ‘Oh my love’, he fuses the extramusical elements in a way that demonstrates the effect of this expressive trope in his singing style.\(^{52}\) The prime form of the parabolic arch, heard in ‘Misery’ on ‘world’, is also heard in ‘Nowhere man’ and ‘Imagine’ on the same words.

The suggested intention of his intonation was indicated by the absence of a parabolic arch, on the same word, in ‘I’ll cry instead’ and ‘Across the universe’. This was supported by McCartney’s avoidance of intonation on ‘world’ in ‘Fool on the hill’. The sensitivity of the protagonist is conveyed to the listener, because it is expressed through paralanguage. The parabolic arch does not represent Lennon, McCartney, or Harrison, but rather evokes the melancholic theme and consequent personae in their songs.

This development across songs, exemplifies that it is popular song’s nonverbal traits that allow it to convey essential meanings without lyrical detail. The inter-song changes of topic: misery, questioning of the self, the universe, a knowledgeable fool, and a lament for one’s mother, not only facilitate the progression of song-types, they form an aural thread using paralinguistic sound terms.\(^{53}\) The changes of theme from the world treating Lennon bad in ‘Misery’, to the world being at his command in ‘Nowhere man’, give rise to greater inter-textual reference.

The extra-musical narrative is developed in Lennon’s later songs. This is from intonation supporting the central theme in ‘Misery’ to representing a beloved antagonist in ‘Mother’, ‘Julia’, and ‘Oh my love’. This difference of intonation, representing Lennon as central character, to the beloved as the object of perception, is developed from 1968

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\(^{52}\) Horton, ‘Cyclical thematic processes in the nineteenth-century symphony’, 194. Horton concludes a similar point through an analysis of Berlioz.

onward. Lennon not only detaches himself from this expressive trope, he gives it to the object of his songs. That is, his mother in ‘Julia’, and his love in ‘Oh my love’.

In ‘Oh my love’, he sings an inverted arch on ‘my’ which not only recalls the arched intonation of ‘my’ in ‘In my life’, it is inverted like ‘Julia’. Lennon sings to his love ‘for the first time in [his] life’. The inversion of the arch has a dual function: firstly, it signals Lennon’s self-reflective period ‘my eyes are clear’, because he no longer sees everything happening to him. He now demonstrates greater empathy and concern for his love, to whom he embodies with the arched intonation. Secondly, it confirms the use of the arched intonation to communicate with the object of his affection.

Lennon’s ‘Imagine’ might be put forward as a counter argument, but this is also a development of the trope. This is because it is developed from a subjective perspective in ‘Misery’ to an objective one in ‘Imagine’. Lennon is no longer suggesting that the world is treating him badly or that it is at his command, but that it is now a way to re-imagine the world ‘as one’. Instead of representing one protagonist, he calls on multiple antagonists to come together. This is understood through, what Cone terms multiple personas, who forego individuality to take part in a common enterprise.54

Although Lennon’s treatment of intonation is not altogether advanced, he does play with it. He augments it in ‘Ask me why’, inverts it in ‘Julia’ and ‘Oh my love’, teases at it in ‘A day in the life’ and puts it through a process of abstraction in ‘What you’re doing’. But this is not limited to the type of intonation giving rise to aural shape. In Chapter 4, it was demonstrated that Lennon took the expressive significance a step further by embodying the primary voice qualities with vocal fry. This is heard in the faint parabolic arch in ‘Twist and shout’ and recurring catenary arch on ‘cry’ in ‘This boy’.

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From these analyses, one can tentatively conclude that Lennon’s use of paralanguage is an attempt to utilise five lines of influence: Little Richard’s vocal fry, Buddy Holly and Hank Williams’ focalisation, Roy Orbison’s intonation, and Chuck Berry’s stop time. This is evidenced in his Beatles songs and further realised in his solo career, with ‘Oh my love’, ‘Imagine’, ‘Crippled inside’, and ‘Jealous guy’.

‘Oh my love’ and ‘Imagine’ exemplify the inter-song thematic relationships. The reappearance of the parabolic arch on ‘world’ in ‘Imagine’ functions to recall ‘Misery’ and ‘Nowhere man’. The inverted arch from ‘Julia’ is projected onto the object of his desire in ‘Oh my love’. But this time it is augmented to entire phrases, giving rise to greater thematic tension. ‘Crippled inside’ not only demonstrates arched intonation, it employs dialect as a paralinguistic voice quality. This was alluded to above with the Dylan-esque vocal on the demos of ‘Me and my monkey’. But the Dylan influence is not limited to Lennon; the country-western vocal is heard in McCartney’s songs.

This enables one to trace a development of the country-western vocal from his and Lennon’s early vocal personae, The Nerk Twins in 1956. This voice-type is heard in McCartney’s vocal in particular. Songs include: ‘Crying, waiting, hoping’, ‘Little child’, ‘Matchbox’, ‘She’s a woman’, ‘I’ve just seen a face’, ‘Mother nature’s son’, ‘Honey pie’ and ‘Rocky Raccoon’. Whilst Lennon’s solo, ‘Crippled inside’, is sung with a country-western vocal, this is especially apparent in McCartney’s songs.

When discussing ‘Mother nature’s son’, Everett notes that ‘musically, McCartney’s song also resounds with the simple folk style of ‘I’ve just seen a face’ and of the incredible string band and portrays McCartney as a natural busker, singing songs for everyone’.55 This idea of McCartney as the natural busker is heard in his cover of

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55 Everett, *Revolver through the Anthology*, 186.
‘Kansas City’ where he imbues the opening lyric with arched intonation and vocal fry. The use of the country-western vocal gives rise to the function of dialect as paralanguage.

The inter-song relationship of McCartney’s country-western vocal begins with cover songs such as ‘Kansas City’. Other songs, in chronological order, include: ‘Little child’, ‘Matchbox’, ‘She’s a woman’, ‘I’ve just seen a face’, Mother nature’s son’, ‘Honey pie’, and ‘Rocky Raccoon’. The use of country-western dialect in these songs, not only demonstrates that influence, it modifies the function of dialect. These dialects give rise to specific personae in song and the personae are often given alongside reference to time and place. Examples include Liverpudlian, folk, and American accents.

‘Honey pie’, for example, draws on Bing Crosby’s ‘Mandy’ from the 1954 *White Christmas* film. The chorus of ‘Mandy’ is similar to that of ‘Honey pie’: ‘Mandy, there’s a minister handy/ and it sure would be dandy/ if we could let him make a fee’ and ‘Oh honey pie/ you are making me crazy/ I’m in love but I’m lazy/ So won’t you please come home to me’. ‘Honey pie’ pays further reference to American song with the lyrics: ‘Hollywood song […] sail across the Atlantic […]. But it is not solely the lyrics that recall the Hollywood song, the articulation and instrumentation give rise to a 1930s sound. The song evokes a singing style of Bing Crosby, Frank Sinatra, or Perry Como and is juxtaposed with the opening slowly spoken lyrics. Following the slow recitative-like first verse, the song launches into an upbeat and lively style, redolent of Tin Pan Alley.

On the final word of the chorus, McCartney augments the second syllable in line with the beat. This not only highlights words of importance, it disrupts the pulse. Later this is disrupted by the line ‘makes me weak in the knees’ at 01:15. McCartney sings ‘knees’ with a descending intonation, generating an image of the protagonist falling to his knees. An instance of stop time follows at 01:19 to reintroduce the chorus section.

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Figure 23 gives a spectral view of McCartney’s descending intonation on ‘oh’.
The black area between 253Hz and 436Hz indicates a void in backing instrumentation.
This point of stop time allows the word to resonate with the listener and leads into the
next lyric section.

Figure 23: ‘Honey pie’, 01:19-01:20

Other paralinguistic features that are introduced in this song include the scat-like
‘I like it like that’, delivered just before 01:44, with whispered vocal fry. This is preceded
by a jazz style riff, giving rise to another American influence. The delivery of the vocal
through a radio in the introduction declaring ‘now she’s made the big time’ is redolent of
the 1930s American radio. This is supported by a crackling lo-fi sound in the recording.

Zagorski-Thomas uses the song as an example of media-based staging: ‘The
Beatles’ ‘Honey Pie’ (1968), […] has a short fragment of “old crackly record” at the
beginning’. The effect is the opposite of the intimate whispered voice, for the radio
voice highlights the distance between the antagonist and the protagonist, which supports
the narrative. McCartney uses paralanguage to evoke the antagonist’s persona. That is,
the ‘honey pie’ who has emigrated to America and wound up on the ‘silver screen’.

Zagorski-Thomas, The Musicology of Record Production, 87.
A similar use of an American accent to enhance narrative is heard in ‘Rocky Raccoon’. This time McCartney delivers a nasal vocal, that is more spoken than sung, giving rise to a folk accent. The opening recitative line: ‘now somewhere in the black mountain hills of Dakota’ recalls many country-western songs such as the Calamity Jane song ‘Black hills of Dakota’. In ‘Rocky Raccoon’, McCartney employs a country-western vocal style to deliver the lyrics. The accent not only enhances the narrative, it gives rise to a wider breadth of paralinguistic personae.

The understanding of accent as a paralinguistic voice quality contributes greatly to the character of a play, drama, or film. Just as a study of opera portends the effects of differing accents on characters, popular song uses dialect to convey characters and enhance expression. Taking popular songs as dramatic works that deliver a story, accent is conducive to enhancing our reception. Across The Beatles’ output, the most dominant accents are the Liverpudlian and country-western folk.

In ‘Maggie Mae’, for example, Lennon enunciates his vowels on ‘Liverpool’ making it ‘liiverpooool’, he contracts his vocal cords, giving rise to a tense Liverpudlian dialect. The augmented word highlights the location of the song and is contrasted by the staccato articulation in the verses. The vocal timbre not only contributes to the narrative of ‘dirty Maggie Mae’, it gives rise to a persona embodied by Lennon, McCartney and Harrison. Lennon projects a persona through his choice of accent to narrate the tale. In the chorus sections, all The Beatles sing. This generates a communal feeling of pub storytelling. It is supported by Cone’s multiple personas, because it poses a third voice that functions to represent a crowd.

It is difficult for a listener not to connect the ‘heart of Liverpool’, and choice of accent, to the city. It is curious, though, that Lennon enunciates his accent in this song

because he is striving to achieve a particular vocal that complements the drama. We can almost hear him hitting the back of his teeth with his tongue, generating a paralinguistic-kinesic construct of the apiceovelar tick. Without dialect, the sense of place, indicated by the lyrics, would lack its expressive quality. The use of accent as an expressive trope is carried into their solo careers.

Lennon’s 1971 ‘Crippled inside’ employs a country-western folk accent. By starting each verse line with ‘you can’, he builds up to an addressing of the antagonist, who tries to hide that they are crippled inside. The delivery is complemented by a significant number of pitch bends on the electric guitar and a pulsing rhythm. But the pitch bends are not solely heard in the accompaniment. They function to enhance Lennon’s focalisation, intonation, and glottal stops. At times the instrumental is married with the vocal in such a way that it can function independently of the vocal. This can be compared with the opening melodic pattern on electric guitar in ‘Blackbird’.

The soft opening is interrupted by the pulsing rockabilly rhythm. Throughout the song, Lennon achieves a remarkable number of pitch bends and staccato articulations. These are mainly on words beginning with ‘h’: such as ‘hair’ just before 00:26; and ‘hide’ at 00:31, 00:36, before 01:00, 02:09, before 03:19, 03:24, and 03:31. The ‘h’ sounding words indicate that the tongue is low and at the back of the mouth. This is indicative of the child-like ‘hah hah’ and recalls the mocking laugh in ‘I am the walrus’.

On ‘face’, Lennon consistently sings an augmented arched intonation. He hits the pitch centrally at first, before ascending. The ascent is sustained temporarily before sliding downward in a long decay. This intonation is supported by an instance of stop time that highlights the delivery. This recalls the effect of the hiccup-like vocal used to deliver ‘crying’ in ‘Crying, waiting, hoping’. Lennon’s arched intonation is reinforced by McCartney’s articulation of ‘face’ in ‘I’ve just seen a face’.
The song’s introduction leads the listener down an aural path similar to ‘Blackbird’, but it is interrupted by McCartney’s folk-like vocal. McCartney does not articulate ‘face’ with an arched intonation. He reserves this for alternants ‘m’s’ and ‘dahs’ that direct the vocal intonation into the accompaniment. This supports Lennon’s combination of instrumentation and use of dialect to form an extramusical feel.

In ‘Crippled inside’, the listener is presented with a folk-like persona and virtual persona of the instrumentation. The pitch bends in the vocal are given to the electric guitar at 01:28. From Figure 24, we can see that the guitar melody is articulated as a series of rising and falling pitch bends. These not only evoke the aural quality of the country-western sound, they give rise to a virtual persona. This is enhanced by the thirty second guitar solo which lends itself to an interpretation of the narrative entering the protagonist’s subconscious.

Figure 24: ‘Crippled inside’, 01:28-01:37

Accompaniment, functioning as a virtual persona, was alluded to in the analysis of ‘I want to tell you’, ‘We can work it out’ and ‘I need you’ in Chapter 5. Cone explains it as ‘that shadowy figure, the musical persona, which we are supposed to infer from the presence of instrumental accompaniment and its interaction with voice’. With this, it becomes possible for the instrumental to represent a virtual persona. ‘Crippled inside’ conveys a persona of an American country-western singer. This is achieved through the

59 Cone, The Composer’s Voice, 15.
emulation of the subtle paralinguistic properties of the American country-western speaking voice. These pitch bends, ubiquitous across the vocal line, are later blended with the instrumental, giving rise to an extramusical expression. This enhances the depth of the paralinguistic and consequent virtual personae.

The final thread to be traced across songs is one that was alluded to in Chapter 4, Part 1. I wish to cast the reader’s mind back to the consistency of vocal fry on the phrase ‘come on, come on, come on, come on, baby’. It was argued that this functioned as an expressive trope in ‘Twist and shout’ and ‘Dizzy miss Lizzy’. It reappeared in the analysis of ‘Please please me’ (Chapter 4, Part 2) and was noted as a recurrent feature of The Beatles’ early rock’n’roll songs. This phrase, probably derived from everyday speech, was not entirely abandoned in their late style.

Beginning with Eddie Cochran’s ‘C’mon everybody’ appearing on The Beatles’ set lists in 1958, the use of ‘come on’ is a recurrent feature. It is used in daily interaction to encourage someone to hurry up, change their mind, and rally interest in an idea, for example, ‘come on, give it a chance’. The coax-like quality of these words not only informs the narrative, they are developed through vocal fry in ‘Dizzy Miss Lizzy’ and ‘Twist and shout’. In ‘Little child’, Lennon fuses the folk vocal with the expressive trope altering our expectation. In 1968, he develops ‘come on’, sung with vocal fry, in ‘Me and my monkey’. But in 1969, Lennon abandons the qualifier, and sings the soothing two-word phrase as ‘Come together’, alongside a series of vocal alternants (Chapter 5).

The revamped delivery through paralanguage and a change of lyric, from ‘on’ to ‘together’, benefits the narrative. Whilst Lennon separates each Beatle in the verses, he unceasingly calls out to them to ‘come together’ in the refrain. Reading the narrative in this way gives rise to the ‘shoo’ vocal alternants functioning as dismissive paralinguistic utterances. They might embody the other Beatles who are chasing away Lennon and his
pleas. Despite this failed attempt to reignite the group’s synergy, paralinguistic voice qualities continue to appear in their solo careers. This is exemplified in McCartney’s use of dialect in his 2013 and 2018 songs.

The country-western vocal reappears in his 2013 album New. In ‘Early days’, McCartney reminisces about his time with Lennon. He sings about being ‘dressed in black from head to toe/ with two guitars across [their] backs’. He makes explicit reference to the differentiator laughter aiding his ability to deal with the pressure: ‘So many times I had to change the pain to laughter/ just to keep from getting crazed’. McCartney continually tilts his larynx, achieving tightened vocal cords, giving rise to a country-western dialect. His choice of dialect to recall the early days is apt, for it not only recalls The Quarrymen, who were a rockabilly group when he joined, it nods toward their early personae, the Nerk Twins.

The effect of the vocal gives rise to McCartney as a storyteller, but the sincerity in the lyrics suggests that it is a candid recollection of times gone by. This is emphasised by the cry-like swelling of the vocal on ‘try’, ‘home’, and the augmented pitches on ‘days’, ‘crazed’, and ‘road’. At 02:07, he shifts his vocal into head voice to sing the refrain. He achieves a similar voice-type at 02:29, but augments ‘crazed’ from 02:29-02:33. The guitar picks up the melody and continues until 02:43.

He sings vocal alternants ‘woo’ in a slow, steady, head voice throughout. These are more mature than the declamations heard in ‘Long tall Sally’. The subtle hints to these early vocal alternants give rise to the expressive trope in a new way. The listener who is familiar with The Beatles’ cover songs and albums, will not only connect this vocal alternant to a Little Richard influence, but will think of ‘I saw her standing there’, ‘She’s leaving home’ and ‘I’ve got a feeling’.
Paralanguage continues to form an inter-thematic process within and across their songs. McCartney, having survived Lennon and Harrison, continues this in his accompanying music videos. The initial engagement with the music video here proposes a future avenue of research in relation to paralinguistic voice qualities and the five other categories of nonverbal communication. That is: chronemics, haptics, kinesics, oculesics, and proxemics. McCartney’s solo output benefits from a visual world of storytelling, not readily available during The Beatles’ period.60

The lyrics in ‘Early days’ lead one to expect a video of McCartney singing solo and perhaps an enactment using two boys from Liverpool. But the video presents two African-American boys playing and exchanging music in a rural American context. Perhaps McCartney is using the two boys to convey the influence of African-American song on himself and Lennon in those ‘early days’. Whilst they were young Liverpudlians, it suggests that their musical souls were African-American. This is supported by the dominance of African-American songs on their early set-lists.

Figure 25 gives a still of the video at 01:52 and 01:53. One might note that it is in black and white; suggestive of the past. The image offers a visual of two boys sharing records with a guitar across the back of the boy on the right. This boy looks older, perhaps Lennon, and the boy on the left is carrying his guitar in the left hand. Again, one might suggest that he is portraying the left-handed McCartney.

60 Promotional videos such as ‘Paperback writer’, ‘Rain’, ‘Strawberry fields forever’, ‘Penny lane’, ‘Hey Jude’, and ‘Revolution’ are noted, but they carried out a different function to these music videos.
The image of the young boys carrying their guitars is akin to accounts of runaway slaves in America in the eighteenth and nineteenth centuries. Samuel A. Floyd cites an account by Vincent Harding who explains that ‘a good many black musicians took their violins – forerunners of the generations who would walk the roads with guitars strapped to their backs’. Not only does the above still nod toward this historic account, the boy on the left carrying the guitar in his left hand, suggests progression. This is because he is carrying the guitar in his hand as a businessman might carry a briefcase. Floyd explains

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61 Paul McCartney, ‘Early Days’ (https://www.youtube.com/watch?v=QvBVIA_ZaNg, 8 April 2019).
that ‘in black culture, this freedom of movement was symbolised by songsters travelling rural roads with guitars on their backs; epitomised by the railroad train’.  

McCartney supports this reading, of the two boys representing himself and Lennon, in his explanation for the song:

It is pre-Beatles, so I can see as if it’s a little black and white film. Me and John walking along with guitar[s] over our backs, we’re dressed in black and I know exactly what I’m talking about, it’s Menlove Avenue in Liverpool. So we would often be walking there. We would try to get people interested in our music. That’s that. And the next verse is about the record shops. We would go and listen to these great new imports from America and that was a very exciting time.

The use of black and white film to convey the pre-Beatles’ era is explained by McCartney. The idea of the past is enhanced by his explicit reference to the profound influence of American records on the young musicians. The simplicity of the video, lyrics, and instrumentation means that the narrative relies on acute scenes and paralinguistic qualities to evoke nostalgia. But this positive nostalgia is not sustained.

From 03:25, there is only one boy in the video and the rest of the characters are at a funeral. McCartney sings ‘these sweet memories of the past/ they always come to you’, and the accompanying funeral scenes contribute to the real-life narrative of losing Lennon. In McCartney’s own words:

[‘Early days’ is] basically a little acoustic thing and it’s me remembering, basically me and John when we were just two kids, before we’d started The Beatles, before we’d gotten on as songwriters, so you know, I’m really going back to kind of very early days. The joy for me was: I was one of those two. It’s not me talking about two other guys.

For McCartney, the song is about himself and Lennon in the early days. This makes his decision to use two African-American boys in the video more relevant to the narrative persona. He sings in his own voice but gives a differing visual persona. It is not physically

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possible for McCartney to be the boy, but it is not unimaginable. The listener must accept the role embodied by McCartney for the emotive content of the song to be conveyed.\textsuperscript{66}

The use of the cry-like vocal is also discussed in this interview. McCartney explains that his producer Ethan Jones supported the quivering quality of his voice:

\begin{quote}
We did a take and [Jones] says: ‘That’s great!’ So I came back up and I said: ‘A bit of the vocal is a bit wobbly, I’m sure I can sing that a bit better’. He said: ‘But it’s you! It’s vulnerable, and it sounds really true to life’. And we left it, and people have said to me: ‘Oh, I like that track’.\textsuperscript{67}
\end{quote}

The cry-like vocal gives rise to affect, by evoking a melancholic feeling of sadness. The hiccup-like cry is supported through primary voice qualities: intonation, accent, timbre, alternants: pauses, and qualifiers: head voice and vocal fry. Jones’ note that the vocal is true to life supports the response of the listener. In an interview for Absolute Radio, Jones explains that ‘[McCartney] thought it was too rough sounding. I had to persuade him and say ‘Paul, the vocal sounds great, it’s really powerful because it’s not perfect’. In my role as producer, that’s what I wanted to hear from Paul; a sort of beautiful imperfection’.\textsuperscript{68}

In 2018, McCartney continues to recall their early set list songs through his voice quality and lyrics. ‘Come on to me’ builds on the use of ‘come on’ noted above. We hear a solo McCartney, but the video evokes several personae, as given in Figure 26. Instead of the expected Beatle, we are presented with a chip-van worker, security guard, and cleaner miming the song. This gives rise to an afterhours setting where the characters dance and mime without being seen. Shots of these characters in an empty office, department store, and chip-van support this.

\textsuperscript{66} Cone, \textit{The Composer’s Voice}, 22.
\textsuperscript{67} Ibid., 2013.
Figure 26: Stills from ‘Come on to me’: 00:26, 01:04, and 01:18 69

69 ‘Paul McCartney – Come on to me (Official Video)’
(https://www.youtube.com/watch?v=mSU4O7FzrRU, 2 May 2019)
Not only does this song present a variation of the common phrase ‘come on’ heard throughout, it challenges our expectation of the persona. There is one vocal persona, but multiple visual personae are presented throughout the video. It places McCartney in the background, but his vocal is carried through the different personae. The music is a part of the persona’s diegesis, but there is no indication of its source.

The personae further complement the narrative through kinesic gestures. These function to break down the fourth wall of the drama. This is because, at different points, the chip-van worker, the cleaner and the security guard point to the camera to encourage the viewer to ‘come on’. Take the second image, for example, it shows the security guard pointing and miming ‘come on to [him]’.

The personae carry the narrative, but after a moment of stop time at 03:19, they no longer mime the lyrics and McCartney enters singing: ‘yes I will, yes I will now’ with vocal fry. But this does not last, and the lyrics are picked up again by the security guard. The use of stop time, vocal fry, and ‘come on’ all appeared on McCartney’s musical palette in his early days with The Beatles. He does not abandon them in 2018, instead he builds on them by introducing visual personae. This further functions to disrupt our expectation of the persona and forms narrative tension.

McCartney’s use of everyday characters to sing this song recalls Everett’s observation of McCartney as ‘a natural busker singing songs for everyone’. This is supported by the reading of *Sgt. Pepper* as an album that represents many voices. That of the meter maid in ‘Lovely Rita’, the family unit in ‘She’s leaving home’, the importance of companions in ‘With a little help from my friends’, Lucy in ‘Lucy in the sky with diamonds’, the man ageing in ‘When I’m sixty-four’, the worker in ‘Fixing a hole’ and the man reading the newspaper in ‘A day in the life’. In ‘Come on to me’, McCartney’s

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70 Everett, *Revolver through the Anthology*, 186.
voice is embodied by the security guard, the cleaner, and the chip-van worker in an infectious way that drives the energy of the song. The eclectic personae are continued in 2018 with ‘Fuh you’. In the accompanying video, McCartney embodies a young Liverpudlian who mimes his seventy-seven-year-old vocal.

The use of the young boy, in a twenty-first century context, is suggestive of both a young McCartney, by the black and white video, and the timelessness of the love-song narrative. The boy sings of ‘a love that’s proud and real’ that makes him want to ‘go out and steal’. The lyrics are met by falsetto vocal alternants: ‘woo, woo, woo’. These suggest the expression of children teasing each other when conveying feelings of love. This is supported by the protagonist’s reluctance to sing until he has turned the corner and is out of sight of the girl he is courting.

Figure 27 gives a still of a boy beginning to mime alongside McCartney just after he has turned a corner. His arched eyebrows, creased forehead, and wide mouth suggest an emotive expression. These might be interpreted as kinesic constructs.

Figure 27: ‘Fuh you’, 00:5071

The vocal alternants, heard in the chorus, are supported through stop time and the Liverpudlian dialect to convey the narrative. This is notwithstanding another example of ‘come on’, and vocal alternant ‘woo’, in McCartney’s songs.

McCartney introduces the lyric sections through the articulation of ‘come on’ using a glottal stop that is an aural signature of the Liverpool working class dialect. The momentum of the song is interrupted by a three second stop time at 02:56. His vocal enters alone with ‘I just want to know’ and the accompaniment re-joins. This recalls the influence of Chuck Berry from Chapter 5, but it is in reverse. Instead of stopping the instrumentation and allowing his voice to continue, McCartney stops everything and then introduces his voice followed by the instrumentation.

In these late songs, McCartney’s paralinguistic patterns can be understood as a combination of several influences: Little Richard’s vocal fry, Buddy Holly and Hank Williams’ focalisation, Roy Orbison and Lenny Welch’s intonation, and Chuck Berry’s stop time. McCartney’s development of personae, into a video narrative, elevates the impact and possible interpretations of paralanguage into the larger framework of nonverbal communication.

‘Come on to me’ and the lyric ‘come on’ in ‘Fuh you’, not only show McCartney’s engagement with the two-word phrase, they demonstrate inter-song thematic relationships. The reappearance of the same phrase, in differing periods, reaffirms its function as an expressive trope. These expressive tropes contribute to our reception and understanding of the persona in popular song. McCartney’s use and development of the phrase over time promotes the expressive trope to a sound term.

These sound terms can be understood in relation to Zagorski-Thomas’ sonic cartoons but are more readily understood as sonic signatures. McCartney’s use of ‘come on’ becomes a signature in his songs and contributes to his dramatic impersonation of the security guard, cleaner, and chip-van worker in ‘Come on to me’, and the young boy in ‘Fuh you’. This is reinforced by Cone, ‘the singer is always assuming a role – a persona,
as it is now fashionable to call it – even when that persona is an implied version of the poet himself.72

One might argue that the personae given by McCartney in ‘Early days’, and the security guard in ‘Come on to me’, is an example of blackface minstrelsy.73 But McCartney’s embodiment of the young boy in ‘Fuh you’ and the various characters in ‘Come on to me’ negate this. McCartney gives several implied versions of himself throughout these songs. That of a young African-American, a young twenty-first century Liverpudlian, an African-American Security guard, a chip-van worker and an Eastern European female cleaner.74

This recalls W.E.B. Du Bois’ statement ‘that sometime, somewhere, men will judge men by their souls and not by their skins’.75 McCartney gives different souls in these videos, similar to the different accents that he, and the other Beatles, use to convey different personae in their songs. It might also be further related to the different personae presented in Sgt. Pepper. For this reason, we cannot think of popular song as presenting the persona of the singer, but rather as giving a persona that is conveyed through the melody, harmony, lyrics, and rhythm, but expressed through paralanguage.

Through consistency of use, paralanguage gives rise to affect throughout The Beatles’ repertoire and solo careers. In their solo period, Lennon, McCartney, and Harrison demonstrate continuous nostalgia for the past both explicitly and implicitly. This is demonstrated through Harrison’s formation of The Travelling Wilburys. A folk

72 Cone, The Composer’s Voice, 2.
74 Whilst this is the proposed case in this study, it is not ubiquitous, and the risks of cultural borrowing are ever-present. When studying narratives of minstrelsy, Eric Lott explains that ‘these narratives, in other words, are riveted by the moment of cultural expropriation, and we should look to them, as Pierre Machery’s work suggests, as much for what they do not say as for what they do – for the way they construct, and then sometimes blur, racial boundaries’. See Lott, Love and Theft, 58.
group comprised of himself, Dylan, Orbison, Jeff Lynne, and Tom Petty. Not only did they adopt different Wilbury personae, their songs, ‘The Wilbury twist’ and ‘Inside out’, reference ‘Twist and shout’. Lennon uses paralinguistic voice qualities to evoke feelings of melancholy in his songs. But instead of retaining the expressive trope for himself, he projects it onto his late mother in ‘Julia’ and his love in ‘Oh my love’.

McCartney, having survived Lennon and Harrison, has the greatest opportunity to continue to develop his paralinguistic personae in and across songs. In his apparent nostalgia for the early days, he not only continues to use voice qualities from their early set-list songs, he evokes a strong sense of place. In ‘Early days’, he sings of Menlove Avenue in Liverpool, an avenue with a turn onto Strawberry Fields. This is also the title of Lennon’s 1986 posthumous album. Finally, ‘Fuh you’, filmed in Liverpool, shows shots of many streets and avenues including Inwood road at 02:40.

7.6 ‘Something in the way [they] Sing’
According to Meyer, meanings in and across music in general only become objectified under conditions of self-consciousness and when reflection takes place.\(^{76}\) The Beatles’ individual development of paralanguage, from cover song to their late style and solo careers, is imbued with self-reflection. Through a process of covering and imitation, they developed their singing voices, and range of paralinguistic personae.

The plethora of personae put forward throughout their career do not imply that they are those characters, but that they embody these characters in the respective songs. Examples include the walrus, and the grief-stricken persona in ‘Yesterday’. These are further amplified in their solo careers by Lennon’s working-class hero, the Nelson Wilbury folk-persona adopted by Harrison in the Traveling Wilburys, and McCartney’s embodiment of varying personae in his continuous solo-career.

Whilst words and music lay important foundations for these characters, they get their pitch, rhythm, and textural cues from them, it is the use of paralanguage that expresses personae. Without the glottal stops, focalisation, laryngeal control, and occasional absence of voice, these characters lose their defining human qualities.

When primary qualities, alternants, and qualifiers function as differentiators their impact is altered. That is, paralanguage as differentiator and differentiation as affect. Without these, there would be a limited scope of personae in songs, and the expressive nuances would be limited. Therefore, sonic signatures are embodied sound terms that give rise to paralinguistic personae.

This reading is complemented by what Cone terms the multiple and virtual persona. The accompaniment not only functions to provide pitch, key and rhythmic qualities, it can function as a virtual persona. This is because the character portrayed might be unaware of his accompaniment, but it is wrong to imagine that the singer is not aware of it. For Cone, this is when ‘the music, preceding entirely and directly from the consciousness of the composer’s persona, could be dramatically appropriate and highly expressive and yet outside the represented world of the character, and hence totally unperceived by him’. 77 The characters presented, may be unaware of accompaniment or backing vocals in ‘I’ve got a feeling’, but the singer is aware of them.

This chapter has evaluated the persona in popular song as being bound to expressive tropes. The expressive tropes, realised as sound terms, are communicative because they liken our sensorimotor experience to conceptualisation. 78 By drawing on our experience of the children’s playground chant in ‘Savoy truffle’, Harrison gives rise to a taunt-like vocal that contributes to the teasing narrative.

78 Zagorski-Thomas, The Art of Record Production, 9.
The use of dialect not only gives rise to specific personae, it contributes to the amount and expression of types of pitch bends, voice qualifiers, and alternants, whilst situating a song in a time and place. This was demonstrated in the 1930s Hollywood sound in ‘Honey pie’. The significance of these expressive tropes is partly inherent and partly associative. One becomes accustomed to hearing the arch-shape on words of woe, but that does not mean that arched intonation is inherently melancholic.

The inter-song thematic process further confirmed the use of the cover song as a learning tool. This was amplified through the study of demos and outtakes. Without these, how would we know that initially ‘Me and my monkey’ was rehearsed with a Dylan-esque vocal? This not only renders the vocal fry in the final recording significant, it confirms the choice and production of vocal for this song. This is contrasted with Louis Armstrong, who sang with vocal fry because of his damaged vocal cords.

In the early years, The Beatles were prone to mimic their influences. Take, for example, Little Richard’s vocal fry in ‘Long tall Sally’ and the melodic rendition of The Shirelles’ ‘Baby it’s you’. But in their mid and late period, they were making decisions about their choice of paralinguistic primary qualities, qualifiers, alternants, and dialect in their songs. It soon transpires that these choices not only evoke a series of paralinguistic personae, it elevated their roles from *metteurs-en-scène* to *auteurs*.
Chapter 8
Conclusion

Words are the signs of a voice [...] vehicles for the voice [...] Song writers, therefore, draw on our conversational knowledge of how voices work.1

Simon Frith

8.1 Overview
From this study of paralanguage and The Beatles, one can conclude that Lennon, McCartney, and Harrison learned several aspects of paralanguage from their performance of cover songs. They developed these features into expressive tropes and enhanced their expressive significance in their mid-late period. These tropes were embodied, giving rise to paralinguistic personae, that were carried into their solo careers.

The expressive tropes are analysed through Poyatos’ theory of paralanguage alongside Cone’s music theory and Everett’s study of The Beatles. Poyatos’ research in linguistics and Meyer’s study of music and meaning inform our understanding of the ephemeral nature of performance embedded in recorded sound. When combined, their theories contribute to an interdisciplinary approach to the analysis of paralanguage in popular song, that does not reside in speech, song, or music alone. It is the conflation of these areas that contributes to our interaction and reception of songs.

Our reaction to paralinguistic voice qualities is more intimate than that of an instrument. Knowledge of what these features are and how they contribute to communication are often learned through society. From cultural knowledge, we know that a cry may be indicated by a quivering lip and quickened breathing. We also know that the paralinguistic voice quality of a shout, or raised voice, may indicate the onset of

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1 Frith, Sound Effects, 35.
a disagreement. This can account for some of our intuitive knowledge of a tightened larynx indicating imminent conflict.

Songs draw on our every-day experience of these sounds. Words might complement expressivity, but it is within performance, and subtle nuances of sound that personae are expressed to a listener. Whilst Lennon, McCartney and Harrison, might embody the persona, they are brought to life in performance. In the absence of paralinguistic qualities, there is no character, no expressive narrative, and no relationship to everyday nonverbal communication.

The consistency of paralinguistic personae may be understood in terms of Davies’ music and meaning. This is built on his interpretation of Jerold Levinson’s study of musical truth.² I have modified this outline below to better reflect this study:

i. The trope expresses emotion and does so because the articulation corresponds to the morphology of the corresponding actual emotion

ii. The trope expresses X as Y; that is, expresses a Y sounding X; that is, expresses Y as qualifying the presence of X
And X is Y (sometimes)

iii. The expressiveness achieved is the expressiveness aimed at

iv. The song expresses X and Y as going together

v. The trope expresses Y as succeeding X

If a trope is frequently associated with contexts involving X, then it can be convenient to give it the name Y. But the trope does not mean Y, it merely represents X. This can function to stimulate memory of X and Y in the mind of the listener. This is demonstrated through the process of abstraction and particularly the inter-song thematic process. But first, it is necessary to unpack this idea further through paralinguistic voice qualities presented in this study.

Taking the parabolic arch from Chapter 3, we can reflect on how it relates to the points above. The rising and falling shape expresses emotion because the articulation corresponds to the morphology of the actual emotion. This is reinforced by the descending intonation on ‘crying’ in ‘I am the Walrus’. The singer expresses sadness as a descending arch-shape, that is, the sliding intonation expresses X as Y. In the context of the song, sadness is explicitly qualified by the word ‘crying’. Here, the expressiveness achieved is the expressiveness aimed at. Through repetition within and across songs, X and Y are expressed as going together. Take, for example, the articulation of ‘world’ across songs in Chapter 3. The trope thus expresses Y as succeeding X.

Taking vocal fry, we can hear that it expresses anger and despair because it likens our experience of someone shouting or grieving to conceptualisation. In ‘Oh Darling’ the qualifier (X) expresses the protagonist’s frustration (Y) with the antagonist. The expressiveness achieved in the chorus sections is the expressiveness aimed at because it corresponds to the narrative. Anger, frustration, and despair are paired through similar uses of vocal fry throughout their songs. In ‘Long tall Sally’, vocal alternants, combined with vocal fry, express Y as succeeding X. This is because the knowledgeable listener will expect a laryngealised vocal based on the original version.

This leads to vocal alternants or the absence of sound, for a void gives rise to tension and expectation. It expresses interest in an otherwise mundane string of pitches and functions as communicative pauses in ‘I need you’ and ‘Slow down’. This supports point iii above, because stop time stalls the progression of ‘Slow down’ and functions as a turn-taking pause. The song expresses stop time and the lyrics as going together. Alternants build on point v because it is the very absence of sound that expresses the narrative alongside stop time.
Expressive tropes not only determine that X and Y go together, they give rise to personae that enact these sensorimotor experiences and relate them to conceptualisation.\(^3\) The personae, realised through performance, correspond to our knowledge and experience of paralinguistic voice qualities in every-day interaction. This is especially true of the presentation of dialect as a form of paralanguage. Dialect functions as Y expressing X. The country-western drawl, for example, heard in ‘What a shame Mary-Jane’ on ‘pahr-tee’, conveys an American country-western persona. This is further apparent through the use of a Liverpool dialect to sing ‘Maggie Mae’ and ‘Early days’.

Through consistency in presence and function, expressive tropes communicate beyond pitches and words. This fulfils the definition of communication in that the voice quality used has the same meaning for the individual who makes it and the individual who responds to it.\(^4\) The listener understands the persona in the song due to their experience of The Beatles’ previous songs that use the same trope. This leads us to Cone’s central tenet: ‘no context, no content’.\(^5\)

Without context, the depth of our interpretation of the content is shallow at best. Cone explains that ‘only the syntactical and formal context supplied by a specific compositional situation can reveal the significance of a musical idea’.\(^6\) Cone is discussing music in his argument, but similar to Braae, Everett, Moore, Lacasse, Pleasants, Zagorski-Thomas, and Zak, he hints at paralanguage. He argues that the significance must take the entire composition, and each motif, into consideration. For Cone, content refers to humanly expressive content and reinforces this study of paralanguage.\(^7\)

\(^3\) This is an example of Zagorski-Thomas’ ‘Sonic Cartoons’. See Zagorski-Thomas, *The Art of Record Production*, 9.
\(^5\) Cone, *The Composer’s Voice*, 165.
\(^7\) *Ibid.*, 165.
In song, a sliding intonation, shout, falsetto whoop, or pause is expressive, but meaningless without context. The context determines the tempo, rhythm, tone of voice and the way the aforementioned are performed and received by the listener. This is highlighted by Cone through examples from literature including the line ‘Howl, howl, howl, howl’ from Shakespeare’s *King Lear*. The first statement of the word has already completed its semantic function, rendering the repetition redundant. But in context, ‘howl, howl, howl, howl’ is a powerful expressive statement. From the context of Act 5, Scene 3, we know that Lear is in the midst of a physical and mental storm. He is in a state of despondency because his daughter, Cordelia, is dead in his arms. The repetition of ‘howl’ resonates in the mind of the listener and is further informed by the backdrop of the physical storm. The same is true for reiterative passages of lyrics in popular song.

Take, for example, the repetitive title lines throughout ‘Oh! Darling’, ‘Come together’, ‘Something’, ‘She said, she said’, ‘I want to tell you’, and ‘Julia’. Not only do the words hold a structural function, they complement the narrative and expressive content. McCartney uses vocal fry in ‘Oh! Darling’ to plead with the antagonist to believe him. This contrasts with the comradery-like call to action heard in ‘Come together’, because we know of the fractures in the group at the time. McCartney’s whispered vocal fry is heard as coaxing the separated Beatles to re-unite. In this example, the song and their personal context are paired to inform the content.

This is further demonstrated through repetition in ‘Julia’, a song that tells of Lennon’s loss of his mother. Building on Cone’s example of repetitive words, it is proposed that once the semantic work of these words has been carried out, the repetition often relies on paralanguage for communicative significance. This is explicit in songs

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with non-lexical lyrics, for lyrics do not always have referents, but they can retain an expressive function.

In ‘Ob-la-di, ob-la-da’, the phrase is repeated no more than nine times, with backing vocals of la-la-la. The non-lexical expression has no referent, but it conveys a feeling of youthful carelessness: ‘life goes on’. Another example includes the repetition of the nonsense syllable ‘na’ in ‘Hey Jude’. The syllable is void of referent, but in context, and through repetition, it gains a semantic value. That of a guiding mantra to encourage ‘Jude’ to keep going and pursue his love interest. In this sense, depending on context, words like ‘ob-la-di’, ‘ob-la-da’, and ‘na’ are ‘meaningless, but meaningful’.

This is supported by R.P. Blackmur, who suggests that ‘language has a gestural as well a strictly semantic aspect. Semantically a verbal utterance conveys a conceptual content; gesturally, it functions as an expressive action’. This has underpinned this thesis, for the semantic content of the lyric was often used to affirm readings of paralinguistic (gestural) expressions. This relates words to motion and supports Zak’s tenet for analysing the recording as an autographic text, given in the introduction. This is because ‘an autographic work is by nature a fusion of idea and action’. It further recalls the Frith quote that opened this thesis: ‘song words [...] are vehicles for the voice’. The expressive action of the vocal alternant on ‘Slow down’, was complemented by the lyric directing the antagonist to slow down. The content of the song is not given by the words or music alone, but by the relationship between these and expressive tropes.

Words, then, act as carriers of paralinguistic voice qualities, for paralanguage does not always rely on semantic value for expression. Not only can paralanguage convey

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10 Cited by Cone in *The Composer’s Voice*, 163.
context, it can contribute to content and, sometimes it constitutes content. Take the falsetto ending of ‘Dig a pony’ and ‘Happiness is a warm gun’, where paralanguage functioned to close the song or section within the song. This was heard through the descending arched intonation, leading into the verse sections, of ‘What you’re doing?’, ‘Lucy in the sky with diamonds’, and ‘I am the Walrus’.

The impact of this is two-fold: firstly, it helps to convey expressive tropes within the context of the song and secondly, it draws connections across songs and potentially across cultures. This results in expressive tropes, occurring on words of woe, despair, joy, or the very absence of words, giving rise to paralinguistic personae. Cone gives this reading further encouragement through his analysis of the persona in Western art music.

For Cone, ‘the legitimate interpretation, the ‘faithful’ performance for which every singer should strive, is the one in which the two aspects of person and persona fuse’.13 This is an important idea in relation to this study. Why does Ringo not sing ‘Julia’ or ‘Michelle’? Because the person, John or McCartney, are fused with the personae in the respective songs. This simultaneously offers an explanation for the difficulty that others encounter when trying to accurately imitate these personae in cover versions.

As Cone so eloquently puts it: ‘the person of the singer invests the persona of the song with personality’.14 That is, Lennon, McCartney, and Harrison do to some degree invest their physiological and psychological presence in the songs. Even though they embody different roles in different songs, they remain identifiable without a visual aid. Their use of everyday paralinguistic voice qualities contributes to the persona, whilst complementing the meaning and expression of song in performance.

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14 Ibid., 62.
Paralanguage relies on performance and is not easily replicated on the page. This is supported by Zagorski-Thomas, who explains that ‘recordings are a representation of performance, whereas notation provides a set of instructions for how to create one’. The importance of the recording is highlighted because it retains these utterances in an aural record, without them, there would be no distinct personae and no expressive instances.

In certain cases, the absence of the human voice crucially alters the song. If we were to listen to one of these songs as pure accompaniment, all that remains of the vocal is the melody and rhythm. Its leading role alongside the accompaniment will remain distinguishable, but it will have lost its emotive, expressive, and essential human element.

Taking this viewpoint, the human voice occupies a special position within popular song. As Cone so thoughtfully puts it, ‘for when the human voice sings, it demands to be heard, and when it is heard it demands recognition’. In popular song, voice is clearly demarcated; one knows exactly when it enters and when it stops. Voice can convey nuances of expression without lyrics, shown in the non-lexical sections of ‘Mother nature’s son’, ‘Julia’, ‘Ob-la-di, Ob-la-da’ and ‘Hey Jude’. This is reinforced by Cone’s observation that ‘words are not necessary so long as the voice is there’. This leads to hypothetical substitution, for which there was not ample time for in this study.

Hypothetical substitution replaces voice with a different aspect of paralanguage, an undulating line, or the instrumental alone. It helps to highlight the importance of said voice quality in performance. For example, what is the effect when ‘Twist and shout’ is sung without vocal fry, but with an operatic soprano vocal? Does it retain its rock’n’roll expressive nuances? Or are they lost? They are lost, even though the only change is the delivery. This extreme example highlights the importance of paralanguage in song.

15 Zagorski-Thomas, The Art of Record Production, 21-22 (cited in the introduction of this thesis).
16 Cone, The Composer’s Voice, 79.
17 Ibid., 79.
Hypothetical substitution has been kept in mind throughout this study. Before an analysis, I always queried what the song would sound like without the subtle intonation, qualifiers, alternants, or differentiators. This re-confirms their expressive significance and feeds into the analysis. One could take another group, or popular song style, from the late 1950s and early 1960s and complete a similar study. If anything, this will give rise to more aspects of paralanguage whilst simultaneously supporting theories of imitation and cultural learning. This is the process of learning in any given society.

The gradual adoption of paralinguistic voice qualities, learned through cover songs, can be further understood in terms of Mihalyi Csikszentmihalyi’s learning theory. His work examines the psychology of happiness and he attributes his flow theory to autotelic personalities. These are people with several personality traits that can more easily achieve a state of happiness. This is calculated through his graph that charts the difficulty of workload in relation to ability and skill-set of a person. He centres his argument around cultural theory and explains the following in relation to music:

In every known culture, the ordering of sound in ways that please the ear has been used extensively to improve the quality of life. One of the most ancient and perhaps the most popular functions of music is to focus the listener’s attention on patterns appropriate to a desired mood. This paralinguistic analysis has given rise to patterns that correspond to emotion. The absence of these inarticulate sounds in the lyrics, would be akin to a monotone rendition of a poor-quality speech.

The process can be understood as a wave approaching the shore. As it approaches, a song gathers momentum, it builds by introducing subtle nuances of pitch or imitating previous styles. These can function to recall past experiences or might draw on our everyday experience of words and music. As the wave breaks, so does the expressive trope,

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anchoring the narrative context, be it the cry-like falsetto on ‘please’ in ‘Help!’, or the harsh vocal fry in the chorus of ‘Anna (go to him)’, ‘This Boy’, and ‘Maybe I’m amazed’. The impact of an expressive break carries the wave to shore, for just as the water retreats and the cycle starts over, the song will return to an A or B section. If the song has reached the end, it will fade into silence, carrying the impact of the preceding sounds with it, similar to debris being washed ashore.

This gathering of paralinguistic voice qualities, through imitation and counter-imitation, supports Csikszentmihalyi’s learning theory and Bruce Tuckman’s ‘Four stages of group development’. The learning, norming and performing require an aural memory. This is supported by Luis Bunuel who said ‘life without memory is no life at all […] our memory is our coherence, our reason, our feeling, even our action. Without it we are nothing’.

This theory proves successful in supporting the use of cover songs and influences to learn popular lyrics, melodies, harmonies, rhythms and of course paralanguage. It further highlights the importance of rote learning. For Csikszentmihalyi, rote learning is complementary to creativity: for ‘a mind with some stable content to it is much richer than one without. It is a mistake to assume that creativity and rote learning are incompatible’. From 1956-1962, The Beatles learned one-hundred-and-ninety-one cover songs, that we know of. With these songs, and consequent nonverbal qualities on their musical palettes, they were well equipped with the melodies, harmonies, rhythms, and paralinguistic voice qualities necessary to write and perform their own songs.

Chapter 1 conceded the difficulty in constructing a complete theory of everything that is nonverbal in popular song in one thesis. Instead, progress has been made by

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21 Csikszentmihalyi cites Luis Bunuel in *Flow*, 121.
dividing it into categories and focusing on finding theories to describe paralinguistic voice qualities in song. This has resulted in neglecting other nonverbal categories such as chronemics, haptics, oculidesics, proxemics, and kinesics. But that is not to say that these areas cannot offer a rich analysis.

8.2 Future Research
Taking any nonverbal category, one could complete a similar analysis that would give a greater understanding of popular song. A chronemic analysis might build on Danielsen’s rhythms and micro-rhythms in dance music or Butler’s micro-rhythms and cross rhythms in electronic dance music. Such a study might inform our knowledge of polyrhythms in African music, which probably found their way into popular song through migration.

A study of recording processes would also yield significant insights. Not only are sounds retained on record, often they are chosen and rehearsed in the studio. This was shown in references to Zak, Zagorski-Thomas, and Lewisohn’s studies throughout and is supported by Jeff Touzeau’s interview with Andy Chase, who notes his influence on the recording process. Touzeau explains Chase’s impact on recording a female vocal. Dominique ‘sings very softly, and [Chase] find[s] that putting her up real close on [the mic] gets a nice low-end bump and more crispness to her voice’.  

A broader focus would build on proxemics through vocal staging. Vocal colour and staging were studied by Lacasse, who explored William Moylan’s ideas of staging. A study in this area would lend itself to the field of proxemics and might complement Moore’s ‘soundbox theory’ and Griffiths’ ‘verbal space’. It would build on Zagorski-Thomas’ observation that the staging of sound, using gesture, is not limited to voice: ‘for

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23 See Jeff Touzeau, Artists on Recording Techniques (USA: Course Technology PTR: a part of Cengage Learning, 2009), 129.
example, staging a guitar sound by adding overdrive or distortion creates a spectromorphology for that sound that is similar to the timbre of a shouting voice. Such a study might analyse the effect of record production on paralanguage in song.

The effect of staging, in the spatial sense and Zagorski-Thomas’ instrumental timbre, would facilitate a study of the instrumental in terms of paralanguage. The virtual, or instrumental persona, was introduced because it offers a wealthy area for the nonverbal. Harrison’s ‘While my guitar gently weeps’ is just one example. The emulation of his own voice, through the personified guitar, gives rise to a musical persona. The function of instrumentation, in relation to a musical persona, can also be understood in terms of the vocal persona. Cone demonstrates this through Berlioz:

For, side by side with his faith in the predominance of the musical persona, Berlioz exhibits a belief in the personality of the musical instrument. Almost more than any other composer he can convince us, not just that instruments have personality, but that instruments are personalities. One must be careful here. It is not the material instrument that is personified, but the energy it transforms – kinetic into sonic – and transmits.

An example in The Beatles is the ‘bung’ ending of ‘A day in the life’. This can be likened to Cone’s analysis of the famous gong stroke at the end of Tchaikovsky’s sixth symphony or the final cymbal crash at the end of Berlioz’s ‘Songe d’une Nuit du Sabbat’. He notes that ‘the effect is one of extreme simplicity. [But…] its role becomes bafflingly mysterious. Was it always ‘there,’ waiting for us?’ This is reinforced by Poyatos’ mechanical sounds that function to highlight silence, such as the cow bell in the field.

In song, the role of instrumentation may be more complex, for a musical idea may often be taken as representing the subconscious component of a character’s thought. For

26 Cone, *The Composer’s Voice*, 86.
Cone, such ‘motifs may thus have a triple significance – for the character, for the instrumental agent, and for the complete musical persona’.\textsuperscript{30} This was alluded to with the role of the electric guitar in ‘Wait’ that leads the melody into the mind of the protagonist. This is mimicked by the ‘uh-oh’ sigh-like syncopated figure in ‘I need you’, that might be understood as representing the antagonist. It is also heard in the descending instrumental in ‘Help!’ perhaps leading into the mind of the desperate protagonist.

A much broader interest involves an analytical and historical study, from a paralinguistic perspective, of the formation of popular song in America from 1930-1950. This would not only highlight paralanguage in historical recordings, it would generate a series of expressive tropes that were developed alongside migration. These tropes might be collected and compiled in a valence dictionary. This would function to provide a reference point for future analyses of paralanguage.

Further study might address tropes as culturemes. That is, ‘any portion of cultural behaviour [that is represented by signs of behaviour and] can be broken down into small units or amalgamated into larger ones’.\textsuperscript{31} Paralanguage can be broken into expressive tropes, or amalgamated to understand communication through embodied sound terms, giving rise to personae. Such a study would complement a cross-cultural comparison. For the expressive tropes central to one culture, will not be consistent across cultures. This has been shown time and time again in ethnomusicology.\textsuperscript{32} A study of such magnitude would not only deepen our understanding of cultural theory, it would support theories of ‘twin culture reinforcement’. That is, when two cultures meet, the dominant characteristics in either culture reinforce each other.

\textsuperscript{30} Cone, \textit{The Composer’s Voice}, 106.
8.3 Final thoughts
This study of popular song, in light of nonverbal communication, reflects a current trend in studies in the arts and humanities. The potential for popular song to comment on real-time historical, cultural, political, and economic situations has not been given sufficient attention. As Negus explains, ‘historical knowledge and understanding of any period is acquired, accumulated, and enstoried – narrated – through a panoply of cultural forms of which songs are an important part’.  

Understanding history requires engagement with a variety of theoretical and sociological issues, to the point that commentary on war, revolution, and economic recession, may be illuminated through popular songs of the respective periods. For Negus, the ‘intercontextual accumulation of knowledge through time links events in such a way that people react not only to immediately contiguous acts but also to acts separated in time and space’. 

Popular song shadowed an emerging consciousness of its cultural context by reflecting the shift in social attitude of the 1960s counter-culture in Britain or the hippy movement in the US. In parallel, Dylan, The Beatles, and Joan Baez responded to social and cultural events using their musical platform. Their songs, Dylan’s ‘Hurricane’, Lennon’s ‘Give peace a chance’, and Baez’s cover of ‘We shall overcome’, convey political and cultural developments.

Popular song can rapidly ignite or absorb social and cultural changes. Protest songs, for example, are often immediate responses to social and political situations. But caution needs to be exercised in explaining a song’s commentary on social and political events. For without primary data it is only speculation. But very often a popular song is the only primary source and it is not always treated as so.

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34 Ibid., 381.
Current trends, within academia, to pair complementary interpretations and perspectives of subjects, has opened a broad range of disciplinary devices to address our disciplines. The importance of this is obvious from Cone’s statement in 1974: ‘I do not see how an attempt to interpret nonverbal and unverbalizable phenomena can proceed otherwise than by metaphor and analogy’.  

As this thesis has demonstrated, drawing on theories derived from linguistics and blending them with music analysis reveals vocal qualities that were recognised, but not analysed.

It is worth noting Negus’ point here that ‘popular song, in form, practice and character, is never reference-free; no song can be totally “original” in the sense of having no precursors’.  

Whether it is anticipated by its composer or interpreted by its listener, the song will signal, acknowledge, and pay some form of homage to its sources and inspiration. This is why Chapter 2 took time to explore The Beatles and their influences.

The potential for popular song to convey both referential and absolute meaning, through paralanguage, is worth greater attention in a subsequent study. As Negus explains, for ‘not only does meaning continually accrue, but the interpretation of narrative moves back and forth from specific song text to other songs, to knowledge of cultural forms […] and personal experience’. The exploration of paralanguage as a tool of meaning-making has much room for development and will contribute to the concept of nonverbal communication within music studies in general.

As Poyatos explains, analysing paralanguage involves ‘identification, anatomical, physiological and phonetic description and functional classification of many more qualities than we are likely to suspect at first’. This is akin to music analysis, which involves the identification and description of instruments, notes, chords, melody, vocals,

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35 Cone, The Composer’s Voice, 158.
36 Negus, ‘Narrative, interpretation and the Popular song’, 373.
37 Ibid., 389.
and rhythm, alongside a historical context. This pairing of linguistic and music analytical elements provided a way to analyse paralanguage in the songs of The Beatles.

By gaining knowledge of the styles of The Beatles’ predecessors, we observed how they learned techniques, developed them and presented a new take on the sounds. This is reinforced by Davies, who notes that ‘in art, we can appreciate the expressive significance of the painter’s choice only if we know what was on his palette and are familiar with the medium employed and the traditions against which he worked’. With this, the 1950s American popular song informs the study in two ways: it sets the scene for emerging artists and establishes the use of several expressive tropes in song.

Meyer backs this historical aspect of the study by explaining that past experiences inform the present. This is because ‘the immediate past of a particular stimulus or gesture informs the listener’s expectations as to the impending consequent event’. We have both an immediate and distant past that are continually informing our daily actions. If we take cover songs as past experiences of the various voice qualities, then their recurrence, in subsequent songs and eras, is recognised aurally.

Within the context of a song, a primary hearing creates an immediate past of the voice quality, thus establishing an expectation in the listener. This resonates with the listener in two ways: it creates an immediate past within the song and recalls a past experience of other songs. Following an initial hearing, we can generate a hypothesis of how a trope may resolve. When it does not resolve in the expected way, it causes tension. This is closely related to Meyer’s ‘Principles of Pattern Perception’:

A jagged line understood merely as a line may be unpleasant; for it cannot be related to other aspects of experience, its irregularity will seem pointless. Consequently, the tensions aroused in perceiving it as a pattern will seem meaningless and unpleasant. But the same line placed in an aesthetic context, where its perception is understood as part of a total

experience and where belief tends to create a disposition to respond, will seem exciting and significant.41

Taking the parabolic arch, vocal fry, falsetto, head voice, silence and stillness alone is meaningless and out of context. But in context, where the aural perception is understood in relation to the preceding, simultaneous or succeeding sounds, it gains significance. The combination of voice qualities, in context, is understood through tensegrity.

In linguistics, tensegrity might be the combination of the segmental and the non-segmental. This is because, the verbal and nonverbal, although diametrically opposed, exist in an infinite state of mutual dependency. Negus explains the following:

Songs are produced and perceived within grids of intertextuality and intercontextuality – semiotic chains, networks of social encounters within which interpretations are proposed, debated, accepted, or rejected, a dialogue that continues into the future.42

Paralanguage travels through a process of textuality, inter-textuality, and inter-contextuality. In other words, no paralanguage no expression. But due to the essential human element of voice, there is always paralanguage and expression in popular song.

This thesis not only identified the ‘inarticulate’ as paralanguage, it tested existing terminology, giving way to stronger critical engagement for future research. Binaries, whilst useful for general descriptions of ‘harsh’, ‘soft’, ‘loud’, or ‘quiet’, do not yield detailed descriptions. But paralanguage, although lacking in music analytical techniques, fills many of the descriptive gaps. Combining paralanguage, with music theory and analysis, gives a way of addressing this essential, but invisible aspect of communication.

Paralanguage must be analysed first as part of the body’s physiological apparatus, then as part of the song’s structure, and then in terms of Poyatos’ triple structure: that is, language, paralanguage, and kinesics. This should be complemented by music theory and

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41 Meyer, Emotion and Meaning in Music, 92.
42 Negus, ‘Narrative, Interpretation and the Popular song’, 390.
analysis to enhance our understanding. The expressive tropes in Chapters 3-6 inform both our understanding of communication and highlight an inter-song thematic process. By evaluating paralanguage in popular song, we not only get an insight into the zeitgeist, it can inform our understanding of narrative and cultural theory.

Context continually contributes to our understanding of expressive tropes, for a glottal stop alone is merely a physiological sound. But in context, it gains psychological significance. It can contribute to a country-western dialect, it might indicate choking, crying, or it might signify a dismissive communication. For Davies, ‘expressiveness is context dependent, and the conventions within which or against which the artist works provide context without which natural expressiveness cannot exist’.  

Voice calls on our natural expressions in communication that contribute to our understanding and reception of songs. These are expressed through our physiological apparatus and psychological states that are closely related to kinesic constructs, whilst being modified by primary qualities, alternants, and qualifiers. Perhaps this is what Zak meant when he noted that records represent the transferral of aura. The point is, these features can be heard, they have been alluded to in previous studies, but they have not been presented in this way.

By analysing paralanguage several features of The Beatles’ performance practice have been introduced to the reader. These features were probably learned through their emulation of their predecessors and contemporaries. This not only gave a historical account of paralanguage in their songs, it conveyed that human agency is presented through paralanguage in song. In the words of The Beatles: ‘sounds of laughter, shades of life/ are ringing through [our] opened ears’.

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