Musical Analysis and Vocal Jazz

Investigating Form in Ella Fitzgerald’s solo in “How High the Moon” (1960)

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Chapter 1 Introduction

When I started working on this thesis I wanted to analyze great vocal music in my favorite genre, jazz. I wanted to identify the essential features of mind-blowing performances, and learn how and why my favorite music evokes my interest and involvement. During my education, I was disappointed to find that vocal jazz music rarely was the object of musical analysis. Should not all great music be of interest to any musicologist and the musicological field? The methods I learned were suited for sonatas and harmonies of the 17th century. Other methods promised to understand how music affects mood, motion or identity, and not what I wanted to know about the musical elements and construction of form in a vocal jazz performance. It became clear that this thesis needed to investigate what analytical methods could be used to analyze and explain vocal jazz. I know vocal jazz music in light of my own practice as a jazz vocalist as well as a student of Musicology. My interest is to understand how a vocalist constructs form in a vocal performance and how this form is experienced.

On February 13, 1960, Ella Fitzgerald held a 45-minute concert in Berlin. Accompanying Fitzgerald’s singing was Paul Smith on piano, Jim Hall on guitar, Wilfred Middlebrooks on double bass and Gus Johnson on drums. The recording of this live concert is “generally regarded as one of her greatest releases” (David, 2004, 203). During her concert she gives the audience brilliant demonstrations of what is said to be her most impressive and characteristic features. These include inventive and spontaneous alterations of lyrics, timing and imitations and incredible scat singing.

[In the performance of] ‘The Lady Is a Tramp,’ […] Ella invents the lyrics in the second chorus, even sticking in references to the occasional concerns she has about her weight […]. Ella prepares to sing ‘Mack the Knife’, […] she announced ‘[…] We hope we remember all the words.’ […] she starts having trouble with the lyrics seemingly as early as the second chorus. She, of course, does not miss a beat, manipulating her phrasing so she can fit in what words she can remember. […] Ella even throws in an impersonation of a scatting Louis Armstrong for half a chorus […]. She absolutely floors her Berlin fans […]. Incredibly, Ella still has one more blockbuster to present to the Berlin audience. “How High the Moon” is a perfect vehicle for her unmatched scatting. The great singer produces an astounding tour de force a prolonged scatting romp that floors her listeners again. The stunning finale is a second true landmark of her career–from the same concert. (David, 2006, 206)
The song “How High the Moon” was written by Nancy Hamilton (lyrics) and Morgan Lewis (music) in 1940 for the Broadway revue *Two for the Show*. The song has been recorded by many artists, such as Benny Goodman and his orchestra (1940), Duke Ellington and his orchestra (1947) and Nat King Cole (1949). In this thesis, when the reference is "How High the Moon" (1960), I am referring to Ella Fitzgerald's performance at her concert recorded on *Ella in Berlin: Mack the Knife* (1960). Whenever "How High the Moon" is mentioned without reference to a particular year, I am referring to the original song as it is represented in the lead sheet on page 35 in this thesis. Other songs Fitzgerald performs at the same concert will have a reference to the composer and the year it was composed.

Fitzgerald's performance of “How High the Moon” (1960), referred to in Norman David’s quote above, lasts for seven minutes. Almost all of it is a continuous scat solo. *Scat singing* emerged in the early jazz period and refers to singing with nonsense syllables instead of verbal lyrics (ed. Kernfeld, 2002, "scat singing"). For one with an interest in scat singing, Ella Fitzgerald is without doubt a performer that evokes serious interest. My immediate response to her solo was great excitement and blind admiration. But what is Fitzgerald actually doing in her performance to create form in the whole course of her solo? How can she repeatedly surprise me; yet, have coherence and never ‘leave’ the song? How can virtuous lines over basically the same chord scheme be exciting for seven minutes? In order to find out how to gain this insight, I started looking for useful analytical approaches and analyses of similar performances. Given the level of admiration Ella Fitzgerald has received for her accomplishments, it was no surprise that much literature has been written about her. However, I realized that most of this literature was on biographical details and I struggled to find previous applications of analytical methods onto this kind of vocal music. When performances were described it only went so far as to briefly describe what happened, and what critical views they evoked at the time. Fitzgerald is one of the most acclaimed vocalists in the jazz tradition, but there seemed to be no interest in understanding *why* her music was good or enjoyed. Fitzgerald is described as *virtuous, instrumental* and *different*. These adjectives can serve as answers to my questions above, but their only function is *labeling* her performances, not explaining them. They do not even explain why they are positive labels in that particular musical setting.
Musical analysis usually aims at understanding music beyond putting labels onto the music. A variety of analytical methods have been developed, tested, celebrated and criticized. These methods can provide many and valuable answers to questions about music. I want to perform a musical analysis on Ella Fitzgerald’s appreciated scat solo in “How High the Moon” (1960) from Ella in Berlin: Mack the Knife. However, it is unclear which analytical approach will give the most comprehensive answers to my initial questions on Fitzgerald’s performance. This thesis will, therefore, approach the question: What can musical analysis tell us about how Ella Fitzgerald creates form in her scat solo in “How High the Moon” (1960)?

The Structure of this Thesis

To answer the question above, I will apply different analytical approaches to Fitzgerald’s performance. The aim is to provide insights into the form of the performance and the ways in which musical analysis can explain this form. Through the analyses I want to gain insights into how and to what extent the different analytical methods can answer my initial questions on Fitzgerald’s performance.

“Chapter 2 Structural Analysis” contains the first analysis of the performance of “How High the Moon” (1960). This will start with analyzing the form that is the basis of the performance: the lead sheet. This formal and harmonic analysis will serve as a starting point for a structural analysis of the solo. “Chapter 3 Rhythmic Analysis” consists of the second analysis of the performance. The aims for this analysis are to approach the questions that are left unanswered by the Structural Analysis. At the beginnings of each of the analyses I will present and discuss the methods and terminology used. Throughout the analyses I will present and discuss the musical elements I find significant to the creation and experience of form and investigate them with the selected methods. At the end of each of the analyses I will summarize my analytical results and point out the questions that are left unanswered. My conclusions based on my analytical results are presented in “Chapter 4 Conclusions and Discussions” along with my conclusions on what the different analytical methods can tell about the form in Fitzgerald’s performance. I will also point out other significant aspects in the vocal solo that I have chosen not to investigate in this thesis.

“Chapter 1 Introduction” will continue with a description of the musical and historical setting in which Ella Fitzgerald performed and the subject of this thesis was
conceived. After this, I will present historical and contemporary theory on musical analysis in general and the challenges associated with the application of analytical methods.

**Ella Fitzgerald and her Singing**

The article on Ella Fitzgerald in the New Grove Dictionary of Jazz (ed. Kernfeld, 2002, “Ella Fitzgerald”) stretches well over one page. In addition, several biographies have been written. One is Stuart Nicholson’s *A Biography of the First Lady of Jazz* (1995), which also comments on the challenges from racism and sexism media-shy Fitzgerald met throughout her life. Another biography is Norman David’s *The Ella Fitzgerald Companion* (1998), which, as it claims, is not so much a biography, as a celebration of Fitzgerald’s singing. David’s book is valuable to this thesis and to anyone with analytical ambitions on behalf of Fitzgerald’s work as it gives an overview of the musicians Fitzgerald worked with and who thus influenced her. I refer to these comprehensive works, following up with a brief overview of Fitzgerald’s life and the musical context in which she had her career as a vocalist.

Ella Fitzgerald was born on 25 April 1917. After moving to Harlem in New York City, she participated in music and entertainment contests. She won a singing competition but, due to her appearance, she was not engaged at the club as promised. After having befriended Charles Linton, Chick Webb’s singer, she joined Webb’s orchestra at the Savoy ballroom in April 1935. Thus, her career as a singer had started. After joining Webb’s band it soon became apparent that Fitzgerald had tremendous talent and an extraordinary voice. She also effectively and successfully learned and interpreted popular songs. She continued to perform together with trios and quartets and, under the management of Norman Granz, became one of the best-known international jazz performers. During the next decades she frequently performed together with Duke Ellington, Count Basie, Oscar Peterson and Joe Pass.

Bebop is the term coined for music that emerged in the early ‘40s. Charlie Parker and Dizzy Gillespie had started to gain a reputation as soloists and arrangers, and were seen as promising talents of their generation. The innovations by which their music was considered challenging and even difficult applied to both the rhythm and harmony. The name of this style of jazz comes from the nonsense vocables commonly used in scat singing (ed. Kernfeld, 2002, "Bop"). The role of vocalists as interpreters
of “easy” tunes with lyrics on top of an accompaniment was challenged with the emergence of bebop. This resulted in less vocal music than had been common in swing music and, scat singing became more common.

As a vocalist, Fitzgerald has been regarded as one of the best. Her range, D3–C6 (American Standard Pitch Notation described in Charles, 1994, 241), and her control of it allowed for endless selections of vocal expressions. In addition to her range, she had superior timing and sense of swing making her performances as virtuous as those of any musician in the bebop era. The New Grove Dictionary of Jazz (Ed. Kernfeld, 2002, "Ella Fitzgerald") also mentions her gift for mimicry. Her singing is considered to have high-level skills of both vocal technique and musical performance. It is strange that in The Birth of Bebop (Devaux, 1997), about a genre she mastered (bebop), she is treated as a guest artist, merely singing on top of the work laid down by style creators such as Gillespie and Parker. There are some similarities between the limitations in the literature on the musical elements in Fitzgerald’s performance and her contributions to the genres she participated in, and the general lack of analytical research on vocal jazz music. There may be many reasons for this, some of which have to do with the cultural status of vocalists in jazz music. Vocalists (usually females) are likely associated with the commercial segments of the jazz genre, rather than with the art music produced by the (male) instrumentalists (Stavrum, 2008, 67). This can be explained by the development of the virtuosic characteristics of bebop, which were regarded as unsuitable for the vocal instrument, and the gender aspect, which points to the fact that males dominated as instrumentalists and, thus, contributed to greater status of instrumental music. The difference in status between vocalists and instrumentalists is manifested in the labeling of the impressiveness in Fitzgerald’s performance as “instrumental”, as in the quote from John McDonough in the following paragraph. Nevertheless, vocal music means much to many and Ella Fitzgerald was and is celebrated both as a vocalist and as a musician in the swing and bebop traditions.

From the start of her career and what led to her success, there is no doubt that swing music and popular songs were an important part of her stylistic repertory. Influence from these styles is to be expected in her performances. Her participation in the rise of bebop and the bebop era is perhaps what separates her from other vocalists. With her good ear and articulation, bebop was a suitable style for Ella Fitzgerald. Dizzy
Gillespie (quoted in David, 2006, 86) states that Ella has “impeccable tonality and […] sense of rhythm”, and further that she “thinks like we do with those licks that she sings. That’s from the bebop era.”. John McDonough describes her manner of performance: “The origins of Fitzgerald’s vocal improvising were rooted primarily in instrumental models, not vocal ones. And particularly the instrumentals at that point where swing and bebop meet. She coined the most subtle nuances of jazz improvisation–its attack, smears, curves, phrasing, vibrato and pulse … In mimicking virtuosity, she came to possess it.” (John McDonough, 1996, quoted in David, 2006, 81). Fitzgerald had many features to her singing that were typical bebop. She made use of “typical boppish phrasing” (David, 2006, 204), such as elaborating a small movement by “descending on a sixteenth-note figure, only to leap back up a major seventh on the last syllable”, even in ballads such as “Misty” on the lyrics “sound of your hello” (Garner, 1954) Scatting in a bebop manner became a consistent part of her performances and her discography contains many exciting examples of this (David, 84–85).

In “How High the Moon” (1960), the scat solo evokes my interest in understanding how Fitzgerald creates form for such a long stretch of time. I want to understand how she ensures coherence and surprise and how analytical methods can be used to investigate this. My starting point are the elements that impress me the most, that is my experience of tidiness in her phrases combined with the constant excitement throughout the solo. I will conduct a structural analysis with traditional analytical methods in order to investigate how she organizes her vocal solo through form, harmony and melodic structures. After that, I will conduct a rhythmic analysis to understand how she uses the rhythmical structures to create tension and excitement. My overall aims are to understand what musical analysis can tell about this performance.

Musical Analysis

Just as vocal music has always been part of human culture, “I don’t suppose there has ever been a time when music did not attract some kind of intellectual speculation.” (Cook, 1987, 7). Ian Bent (referred to in Cook, 1987, 7) describes musical analysis as the “natural science” approach to music. This represented a 19th century view on the science of music to both be objective, and absorb the idea of evolution from a simple
origin to a more complex result. In *A Guide to Musical Analysis* (1987), Nicholas Cook gives an extensive overview of the field of musical analysis. The traditional analytical methods evoked my intellectual interest in all music prior to my work on this thesis. The analytical approaches made promises of understanding the elements in music, both in isolation and as a unity. They should be able to tell me about the form in Fitzgerald’s performance. Cook’s thorough description of methods and questions addressing these methods make the book a natural starting point for this thesis.

Cook says there are two ways that people normally approach pieces of music. “One was the overall form and the other was their melodic, harmonic and rhythmic content.” (Cook, 1987, 9). The simplest ways of approaching the *form* in music is “purely sectional – binary form, ternary form”. There are also forms that have more complexity, and that have become more dominating within the intellectualization of music. The most important ones of these forms are “by definition thematic”. “Theme”, according to Cook, is a technical term, and was important to analysts because the music they analyzed was thematic. The non-thematic parts of a piece of music were simply there to link the thematic parts together. In my experience of Fitzgerald’s scat solo, the melodic structures from the singing are the primary source of both coherence and surprise in performance performance. Cook depicts two opposite ways of looking at how music gives pleasure. One is that music develops according to the listener’s expectations. The other is that it doesn’t follow these expectations but, instead, surprises the listener. Common to both is that expectations play a key role in our judgment of music. Expectations are, therefore, essential to the experience of form. To an analyst, this means it is necessary to investigate how expectations are created and how they are met. To me, the comprehensible experience of Fitzgerald’s phrasing makes the traditional methods of form appear useful to my investigation. Her phrases seem to have a clear start, goal and function and are, thus, probably contributing to my expectations. The starting point for Cook’s “guide” to musical analysis is an explanation of traditional, analytical methods. He continues with presenting Schenker’s analytical methods and how these have evolved and come to dominate musicology in Germany and America during the 20th century. For a Schenkerian analysis, musical form means a large-scale harmonic direction. Cook calls this method “psychological” (1987, 67) in the sense that it is the experience of sounds, rather than the sounds themselves that is interpreted. One sound can have
different contexts and, through them, the sound provides different experiences. The “psychological” aspects of a Schenkerian analysis remain a virtue for analysis in general throughout Cook’s book. The virtue is to isolate the factors determining a listener’s response to and experience of the music.

In the twentieth century, the belief that analysis explains the experience of music “in an essentially scientific sense” (Cook, 1987, 223) has been influential. According to Cook, this belief can cause a “kind of aesthetic determinism”: The value of music is decided by whether a piece of music (more specifically, the score) fits into an abstract structure that is derived from music already valued as great. Although the ideal of objective, scientific methods and answers has provided us with many well-developed techniques for studying music, many of which are extensively described in Cook’s book, it has also contributed to some possible fallacies. It can easily become unclear what these techniques can tell us about music. Cook talks about two undesirable results: “First, the development of analytical approaches that are themselves false or at least wrong-headed; and secondly, false or wrong-headed notions of what it is that we can learn from existing approaches such as Schenkerian analysis. In addition to finding out whether a musical analysis is good, it is crucial to find out ‘good in what sense? good for what?’ ” (1987, 215).

A musical analysis is rarely right or wrong in what Cook calls a mathematical sense. Cook says often we can decide whether an analysis is right or wrong based on whether or not it seems true to our experience, that is, does it put into words what you perceive when you listen to the music. However, many analytical methods are not limited to what most listeners can perceive as they listen to a piece of music. Analysts keep commenting on musical factors in addition to what can be heard. For instance, an analysis can make conclusions based on two similar bars, which are 45 minutes apart in the music. A listener, on the other hand, will probably not be able to go back measure a bar against what occurred some time ago. There are two possible reasons for why the analyst’s insight still is valuable. The elitist explanation is that full musical insight demands an ideal listener and that the analyst’s insights will explain the experience of this ultimate listener. The other explanation is that the analyst’s insights into the structures of music explain the unconscious perception of music. The explanation presupposes that an average listener subconsciously understands and depends on the “invisible” connections and large-scale developments. No matter
which of the reasons one agrees with, knowledge and insight about similarities, differences and connections in a piece of music can be useful.

According to Cook (1987, 232), analysis is most appropriate as a means of education rather than advanced research. Music education has a much broader approach today than when the traditional analytical methods emerged. Accordingly, new analytical methods have been developed and old methods have been tried on new music, jazz music included. The traditional methods can be useful tools when investigating any music, but it is not necessarily obvious what they can say about this music. One of Cook’s conclusions is that an analysis cannot be either good or bad. An analysis can be good under one set of circumstances and bad under a different set, it simply depends on what you wish to find out. According to Cook (1987, 242), an analyst should ask questions about one’s immediate response to a piece of music. Such questions should not be “in terms of a special analytical technique or style, but rather in general terms”. Your intuitive response to the music should work as a starting point so that what you actually hear become the subject of the analysis. By doing this, your response can control what your objective is (rather than the other way around). This valuation will be important to determine what the traditional methods can say about Fitzgerald’s performance of ”How High the Moon” (1960). However, it is just as important to understand what limitations the methods have. Therefore, I will present some of the historical criticism of these methods before introducing newer ideas in the field of musical analysis.

**Questions about analysis**

The possible fallacies presented by Cook can be recognized in much literature on musical analysis. Some have criticized the belief in analysis as a scientific, objective method – a few more polemic than others – and neglected the analyst’s judgments. In his article “How We Got into Analysis, and How to Get out” (1980), Joseph Kerman criticizes the domain of musical analysis in musicology. He argues that analysis “fails to open access between the artist and his audience (1980, 312), and further that it fails “to confront the work of art in its proper aesthetic terms”. Analyses performed today usually take into respect this and other criticism, which has been raised the last decades. However, it is necessary to be aware of the possible presuppositions and fallacies that can be embedded in the traditional analytical methods and this very criticism is a good source of information.
Kerman speaks of musical analysis as a method that claims to be an objective, scientific way of explaining and understanding music. However, he points out that the analytical methods themselves originated from clear opinions among theorists on what made a piece of music great. The opinion on what defined greatness controlled what the analytical methods were supposed to be looking for. What Kerman really thinks of musical analysis is that it represents an ideology, which actually performs value judgments rather than scientific investigations. The analytical process, the choice of elements I investigate and the results in this thesis will be affected by my conscious and unconscious judgments about what I experience as most significant in Ella Fitzgerald’s performance. The ideology Kerman criticizes is based on the strong belief that the German musical tradition is the superior tradition of music. The superior tradition is limited to the German *instrumental* music and, even more specifically, the *absolute* music. At the same time, analysis is the dominating form of academic music criticism. As made clear by Nicholas Cook (1987), analysts can have notions about their analyses that are just plain wrong. The ideology that Joseph Kerman criticizes is important to be aware of because it illustrates what some of these notions might be. The traditional musical analysis is not free from value judgments, and that cannot fully explain a piece of music or make clear why it is good or bad.

In his chapter “Ch. 4: Change Gonna Come? Popular Music and Musicology” in *Studying Popular Music* (1990), Richard Middleton shows how the ideology of musical value, which Kerman wrote about, manifests itself when dealing with popular music. First, Middleton, agreeing with Kerman, says that one strategy to make musical analysis fit with other types of music (or rather the other way around) is to conduct the process of *legitimation*. People who like a certain music and are aware that musical analysis is the most prestigious way of dealing with music, naturally want to apply this confirmation of quality to their preferred music. Middleton says, however, that attempts to do this with popular music fail to do justice to the music. This is one of the reasons why this thesis aims to evaluate the methods based on my analytical results, rather than the value of Fitzgerald’s performance (which I have made clear that I think is great). Although Middleton has described the following issues in regard to musicology dealing with popular music, the issues can, in light of Cook’s and Kerman’s reservations, be relevant to the analytical method in general.
Middleton presents three main aspects of the problem of musical analysis as being derived from and for one certain type of music and tradition. First, he says we have been provided with a terminology “slanted by the needs and history of a particular music (‘classical music’)” (1990, 104). In domains such as harmony, tonality, some types of part-typing and some concepts of form we have a rich and well-developed vocabulary. But the vocabulary is poor and not very precise in areas such as rhythm, pitch-nuance and gradation outside the steps of diatonic/chromatic system and timbre. Furthermore, the general vocabulary is loaded. “Dissonance” as opposed to “consonance”, “tune” as opposed to “theme” or “melody” and “syncopation” as a subversion of the rhythmic norm are all examples on what is verbally regarded as normal and/or positive. Other musical elements and expressions are described in terms of what they are not.

The second aspect is especially relevant to analysis, although its consequences reach out to the bigger field of musicology. Middleton explains how notated music has been the “typical musicological corpus” (1990, 104), and, using Peter Tagg’s term, he refers to the consequence of this as “notational centricity”. Middleton presents two aspects of this consequence. Musicology and musical analysis are good at dealing with the musical elements and relations that are easily notated, but struggle with musical content that is not. Because of notational centricity, examples of musical parameters regarded with much significance are: pitches within the diatonic/chromatic system; chords and melodies of those pitches, mathematically simple durational relationships; relationships of phrases, sections, movements and themes; orchestration. For the same reason, neglected areas are: non-standard pitch such as slides, slurs, blue notes and microtones; irregular, irrational rhythms, micro-rhythm, offbeat phrasing, anticipations and slight delays; nuances of ornamentation, accent, articulation (attack, sustain, decay) and performer idiolect; specificities of timbre (Middleton, 1990, 105). In addition to this division into what is seen as significant or insignificant in musical analysis, notational centricity has given a misguided notion of what we actually are studying in the field of musicology and musical analysis. The notated music, for example the score, is regarded as the perfect representation of the music, or the music. The sounding music, the actual music, however, does not have the same status, and we end up analyzing scores instead of music. The performance as the area of investigation is discussed more thoroughly later.
The third aspect of Middleton’s musicological problem again refers back to Kerman’s criticism and is an “ideology slanted by the origins and development of musicology itself” (Middleton, 1990, 106). Musicology has developed alongside music and the aesthetic view of music. Since many musicological theories and methods were developed together with certain aesthetics in the 19th and 20th century, the musicological field often regards music from this certain aesthetic view. The methods have derived from a certain kind of music, thus suggesting and validating this music in later use. The analytical approaches are therefore limited in regard to when and on what music they can be used. They are also limited in only emphasizing certain parts of music, thus actually rendering them inapt to comprehend the very music they were created to investigate.

**Popular musicology**

The musicological field has changed significantly during the last decades. Influences from other disciplines of art, like literature and the visual arts, as well as social sciences like sociology and anthropology, and even other sciences such as engineering, cognitive science and physics have caused musicology to widen its repertory of methods. In part, credit for this inclusion of different sciences and disciplines in the study of music is due to the increasing interest in understanding popular music. In Richard Middleton’s words, “Musicology is the ‘scientific study of music’. It ‘must include every conceivable discussion of musical topics’ […] Musicology, then, is clearly a science which, above all others, should study popular music.” (Middleton, 1990, 104). During the 20th century we have experienced a growing diversity in music, expanding toward and beyond the beginning of a new millennium. At the time Middleton wrote his book *Studying Popular Music* (1990), he belonged to a musicological field he claimed acted “as though popular music did not exist”. Attempts to understand popular music had been made, but usually it was measured by what Middleton saw as inappropriate criteria.

In 2003, in his book *Analyzing Popular Music*, Allan F. Moore (ed.) describes a changed scenery. He says popular music is now being taught at an undergraduate level, and this has actualized questions in academic society about how to best study popular music. Since musicology is affected by other sciences and disciplines, and there is a wish to study pieces of music that the traditional methods are not suited for, some notions about music and musical analysis are being challenged. For example,
there has been a growing acceptance that musicology is not a natural science with mathematically right or wrong answers. Furthermore, music has begun to be regarded as a cultural phenomenon, not a sort of magic created by a genius composer. Also, musicology has discovered the “average” listener, the one who interprets the sounds that musicologists try to analyze (Moore, 2003, 8). From this last point, the conclusion is drawn that one analysis is only one of many possible analyses.

When it comes to musical analysis, Moore puts jazz in the same box as classical and world music, that is, as something different from popular music. This may be how the musical world is at the present time, but jazz started as a form of popular music for which there was no academic interest. Also, the introductory discussion from Cook, Kerman and Middleton should make it clear that the traditional methods provide limited, though valuable insight. The historic and present status of jazz music should not make us avoid either the musicological traditions of analytical methods or the criticism against them. Moore says that, for jazz, we may have a “mutually agreed theoretical paradigm” (Moore, 2003, 8) that is needed to conduct a real analysis. Though this thesis does not provide a presentation of such a paradigm, it will use a combination of the theoretical groundwork of others as a basis.

In his chapter “Popular music analysis: ten apothegms and four instances” from the same book, Robert Walser (ed. Moore, 2003) confirms what the scholars previously referred to in this thesis have mentioned, that musical analysis is a form of valorizing music. Walser says, “it seems that much journalistic criticism and academic work alike […] exist for the same purpose” (2003, 20), that purpose being to argue why a certain music is a music others should (or should not) listen to. When Walser looks to the scholars that have tried to include popular music in the musicological corpus, he sees a weakness in their incorporation. Instead of insisting on “aestheticizing” popular music, musicology should be “historicizing all music and accounting in each case for the particular pleasures that are offered and thus for the values on which they depend and to which they appeal.” (2003, 20).

In popular music, there often is a vocal track, and many adored artists are vocalists. The lyrics and the singer’s persona and voice are often what a listener remembers of and associates with a piece of music. From what has been said about musical analysis so far, there are some issues that become even clearer if we take these points of view
and look back to the introductory paragraphs on vocalists and vocal jazz music (Stavrum, 2008). First of all, the vocalist, as many other instrumentalists, is a performer and not a composer. The voice is also a non-harmonic instrument, meaning it cannot provide by itself a complex harmonic development, as is provided by orchestras or pianos. Secondly, a vocalist traditionally uses verbal words, and “everyone” has a voice to do that. This means that vocal music can be seen as further from the sphere of genius and magic where complex, autonomous music is created. Lastly, even in some newer styles of music, the voice is regarded with less status than other instruments. It is regarded as commercial and unauthentic. An important reason for this is that the voice has also traditionally been seen as an instrument suited for women and associated with the “pretty face” singing a song in front of the (real) musicians. I have already mentioned that one of the finest compliments that is often cited in literature about Ella Fitzgerald is the fact that her singing was instrumental, as opposed to vocal.

Walser (2003) refers to a general distrust of musical analysis among some scholars. Given the objections presented above to the traditional methods, this attitude is not surprising. However, Walser, as well as Cook, presents ways of avoiding discarding musical analysis all together, despite its weaknesses. Walser refers to Alf Björnberg (in Walser, 2003, 21) and says “musicologists need to consider carefully the tools and goals that they have inherited from previous analysts […],” and then concludes: “[b]ut analyze we must.” This stance should certainly include vocal performances.

Musical analysis and jazz

Walsers’s article in Moore’s Analyzing Popular Music (2003) draws up ten “apothegms” about musicology. He explains each of them, also showing that they work best when the analyst takes into consideration the possible flaws that may occur by following them. Many of Walser’s apothegms take us one step further from only identifying the issues with musical analysis. He also argues against the categorically inappropriateness that follows these issues. With the aims of this thesis in mind, a short description of some of them follows.

The first apothegm refers to the issues of translating music into language. Of course, any verbal or notated representation of Fitzgerald’s solo in this thesis will be limited in the way that it will only represent certain features of the music. However, Walser
Language is a powerful and nuanced system, just like music, and it is okay to use it when trying to understand music. Another apothegm is that “[m]usical judgements can never be dismissed as subjective; neither can they ever be celebrated as objective.” Interpretations can always be discussed and changed, but they are “never arbitrary”. Subjective interpretations are what we can use to expand our overall understanding of music. Walser’s fifth apothegm speaks directly about analysis. He writes “[a]nalysis is a relational activity; its success is relative to its goals which analysts should feel obliged to make clear.” (2003, 24) Here Walser touches upon Cook’s conclusions (1998). In order to find out what insight the analyses in this thesis provide, we need to know what the goals of the analyses are. I have made my aims clear during this chapter and they are discussed in relation to my analytical process and results throughout the thesis.

An important point in regard to jazz is that “popular music” and “classical music” are “interdependent and actively reproduced”. This means that comparing these in terms of value is impossible. Both categories are too diverse to be stable, and there are social processes, not internal structures, that determine the hierarchy between categories. (Walser, 2003, 25) That music is made and heard, something that we do, makes it obvious that it is a part of society and not a separate sphere. Walser says that analysis is “inevitably reductive, which is precisely why it’s useful” (2003, 25). In his article “Out of Notes: Signification, Interpretation and the Problem of Miles Davis” (1993), Walser suggests a way of dealing with this in the case of jazz music. He presents the theory of Signifyin’ formulated by Henry Louis Gates Jr. (1989) and says that instead of “classicing” jazz music, Gates’ theory enables us to “deal with cultural difference on its own terms” (1993, 350). From this perspective, the musical elements that other analytical methods investigate can have meanings from what they signify on. Both the performer and the listener signifies on previous performances, musical background and an infinite number of different memories. Walser uses this theory to make sense of the problem of Miles Davis. The problem is that Miles Davis is considered a great trumpetist even though he “misses notes” (1993, 348). In the case of Ella Fitzgerald, there are rarely any missed notes, but Walser’s point is important to analysis in general. Musical meaning and value are not explained solely by whether the musical elements are performed correctly. The manner of performing
constitutes meaning through *signifyin’* on musical and extra-musical contexts. However, the acknowledgment that music is socially and culturally constructed does not make it less important or interesting to explain and understand musical features (Walser, 2003). My analyses of Fitzgerald’s vocal performance will concentrate on some isolated elements I experience most important to my aims, with some disregard to other elements and their contexts. Though musical content is created from social and cultural influences and interpreted in social and cultural contexts, the musical signals, the *sounds*, are the same. Musical analysis is essential to understand these musical signals and their *musical context*.

If there is some skepticism for what musical analysis can actually provide, there is huge skepticism about some specific analytical methods. Schenkerian analysis and the ideology that follows it (Kerman, 1980; Middleton, 1990) is an obvious example of a method of analysis that has been blamed for many of the above mentioned weaknesses in structural analysis. In his article “Schenkerian Analysis of Modern Jazz: Questions about Method” (1998), Steve Larson discusses and uses Schenkerian analysis. Although I use traditional analytical methods in “Chapter 2 Structural Analysis” and methods of rhythmical analysis in “Chapter 3 Rhythmic Analysis”, Larson’s arguments for the application of Schenkerian analysis are highly relevant to the application of other analytical methods onto any music as well. They are especially relevant in that his arguments are about the conceptions of form, tension and release, which are the main subject for this thesis. He addresses the three main objections of applying Schenkerian method onto jazz:

1. Is it appropriate to apply to improvised music a method of analysis developed for the study of composed music?
2. Can features of jazz harmony (ninth, eleventh, and thirteenth) not appearing in the music Schenker analyzed be accounted for by Schenkerian analysis? And
3. Do improvising musicians really intend to create the complex structures shown in Schenkerian analyses?

In this article I answer yes to these questions, and also argue that the questions themselves imply mistaken assumptions about the content and origin of Schenker’s theories, about the role of analysis, about the function of dissonance in common-practice harmony and in jazz, about the nature of improvisation versus composition, and about the role of simplicity and complexity in popular and art music. (Larson, 1998, 210)
With Walser’s (2003) first apothegm in mind, Larson is making use of techniques that already exist. He claims misunderstandings, ways of looking at different aspects of musical analysis and jazz, are the cause of the difficulty in applying the method. He offers a new, correct understanding of the same techniques and terminology, which he says makes it relevant to jazz. The first question “implies misconceptions about the content and origins of Schenker’s theories.” (Larson, 1998, 211) Schenker appreciated improvisation and saw it as an essential part of creating music. The second question, Larson says, “implies misconceptions about the function of ‘dissonance’ in both classical music and jazz.” (1998, 212) Larson explains different ways dissonances create tension and are resolved in jazz, and that the melodic context often can provide answers on how to interpret them. Of course, dissonance may be “treated more freely in modern jazz than in classical music”, but their effect on tension and resolution is derived from “stable pitches at deeper structural levels”.

Larson counters the question of large-scale development by first pointing out the “mistake of confusing one’s experience of a work of art with knowledge of its creator’s intentions” (1998, 218), the intentional fallacy. He also mentions an artificial distinction between improvisation and composition. Larson shows that an improvisation can indeed be governed by a principle of large-scale movement. An improvisation can have different layers, and these layers relate to an underlying melodic structure. In this case, this structure is partly constructed with the original melody of the song Bill Evans is improvising on. Though the improvisation can “work around it” it does have a direction. Given an adjustment to the conception of jazz and musical analysis, it should be possible to listen to jazz and improvised music with the same “demanding ear” as any other music. This applies to any kind of form investigated in any kind of jazz performance, such as Ella Fitzgerald’s scat solo in “How High the Moon” (1960). What the musician was thinking in the execution is not important, because the actual music is the result, as well as the experiences we go through listening to it.

**Performance and lead sheets**

When starting an analysis, Cook (1987, 252) stresses the importance of knowing whether you are analyzing a piece of music or something else. A performer, no matter what music, has a compositional role. He or she selects ways of using a certain material with varying degrees of freedom. Cook goes as far as to ask if we should
perhaps stop thinking about “pieces” altogether. Maybe what we are dealing with is rather a repertory of “possibilities from which the performer chooses”. According to Middleton (1990), the problem of “notational centricity” has grave implications in genres such as jazz. Here the performance is regarded the “primary ‘text’” (1990, 106), and the “non-notable parameters’ are of great and often predominant importance”. In the Tin Pan Alley tradition, from which many standard jazz songs have come, the performer, and not the composer, was important. The music is every single performance of a song, not the simplified representation of it on the lead sheet. Cook’s repertory of “possibilities” is very relevant in a jazz performance.

Lead sheets are how the standard songs are notated and mass-produced. According to the New Grove dictionary of Jazz, it “shows the melody, the basic harmonic structure, and the lyrics (if any) of a composition (ed. Kernfeld, 2002, “lead sheet”). Compared to other types of scores a lead sheet actually offers limited information on how to play a song. The lead sheets include information on how the melody is structured throughout the song form and what chords should be played. There are several versions of every lead sheet, and one may or may not be “correct” according to the original or the majority of performances. Lead sheets have been important for distributing standard songs and thus, providing a base for learning and performing in the jazz tradition. However, a standard song may be performed without any of the performers having seen the lead sheet.

In the standard song tradition, the concept of “originality” is essentially performative. One standard song can be performed by hundreds of artists without stating that any have copied one another. These performances can be of different styles and genres; it does not even have to be jazz. To make it a performance within a specific genre, a performer or conductor must have knowledge about the performing practice of that genre. Only then can one read the implications in simple sheet music on the stylistic essentials of for example rhythm, dynamic, accentuation, expression and instrumental technique apparent in the performances (Cook, 1998). A lead sheet of a standard song is a representation of what often is possible to recognize as the song in jazz performances. The lead sheet can thus provide a framework of interpreting a formal and harmonic structure in a performance.
In this thesis I use transcriptions of Fitzgerald’s solo to illustrate the musical elements I investigate. There are a lot of important details that these transcriptions leave out and I will account for such details in my written text when necessary. Note that the straight eighths in my transcriptions are, of course, swung eighths. They are notated with equal length as is usual. I have not attempted to find ways to visually represent sounds in Fitzgerald’s performance that the traditional notation can visualize. This is because the elements I experience as important to investigate are best accounted for through the written text and listening to Fitzgerald’s performance. It is important to have the record of the performance available when reading the analysis, as the analyses will foremost be based on elements in the performance rather than elements that are visually represented. A certain familiarity with the performance and the musical tradition in which it belongs is useful for getting the most out of this thesis.
Chapter 2 Structural Analysis

On the record named *Ella in Berlin: Mack the Knife*, Fitzgerald’s performance of “How High the Moon” (1960) lasts for eight minutes and nine seconds. Although I see every second on the record as part of the performance, the subject of my analysis is Fitzgerald’s scat solo. Without using the original melody or words of the song, she performs a vocal solo that sounds meaningful to her audience and has brought her acclaim both among her contemporary audience and critics (she received two awards for the concert, in which the subject of this analysis was performed) as well as among succeeding generations of musicians and audiences.

My initial questions about this performance have risen from my intellectual interests, my interests as a singer and my intuitive experiences from listening to this performance. Cook’s principle of musical analysis, that analytical conclusions on music should be true to the experience of the particular music, will be important in my discussions following the analysis. I wish to see how Ella Fitzgerald creates form in her solo through coherence and surprise. The questions for this analysis are described in more detail in “Chapter 1 Introduction”. My immediate impression of Fitzgerald’s solo as periodic, coherent and never “leaving” the song raised the question of how Fitzgerald organizes her solo. Aiming for at an initial answer to these questions, the analysis in this chapter is based on the traditional concepts of form and harmony. It will isolate elements that seem important to the organization of the vocal performance in order to see how traditional analysis can explain their impact on the form. The chapter begins with a presentation of certain aspects of form and harmony typical of the jazz style we are dealing with. The terminology and methods used in this chapter will also be presented here, before the analysis starts.

Form and Harmony in Jazz

Jazz music has its origins in many different musical traditions, which melted together and introduced the early jazz period in the early 20th century. Throughout the century jazz has accordingly both developed from and influenced many different genres. The variety of forms in jazz performances is, thus, significant. The same goes for jazz harmony. Some jazz music has blues form and chords, other does not seem to build on any apparent formal or harmonic principle, while some again has complex systems and developments governing the course of the music. The “How High the Moon”
(1960) performance by Fitzgerald belongs to the bebop and swing traditions. These traditions are associated with certain common formal and harmonic principles. A few examples of such principles relevant to the analysis of this performance are mentioned here.

**Jazz forms**

From dance and popular music to an elitist expression of black culture to a diversity of different genres, jazz performances can take on any form there is. Jazz is influenced by other traditions and known to deconstruct their expected forms. However, over the course of its history, there have been developed typical principles of form and harmonic progressions for swing and bebop performances. In his book *What to Listen for in Jazz* (1995), Barry Kernfeld gives a thorough explanation of important features in jazz, among them form. He makes an important distinction between form in the *songs* (found in lead sheets) and form in *performance*.

Form in the songs mostly refers to the traditional standard song repertory, which dominated jazz performances for many decades. The songs in this repertory are mostly originally popular and Broadway songs. In addition to some other influences of forms (blues, gospel song, ragtime, brass-band marches, dances and later rock and soul), these *song forms* have also dominated jazz melodies that were composed as such in the first place. The song form refers to the form of the original song as it is represented in the lead sheet. The song forms often consist of 32 bars divided into four units of eight bars, for example an *aaba* form. Being songs, they are likely put together by written phrases. Phrases that are melodically different from the rest of the song, for example, in a *b* unit, are often supported by deviating harmonic content as well. The song form may, thus, have huge impact on how a performer can organize and vary a solo on top of the chords and how a listener perceives it. Jazz songs are often composed or have evolved in such a way that a performer can easily adjust them as she wishes. It is likely that an *a* unit can be altered to end either on a dominant or tonic chord. The performers can play the *a* unit ending on a dominant if they want to prepare for a repetition of the *chorus*. The chorus is the performed section consisting of the song form and its chords.

Besides the song forms, common practices of forms in performances have developed. *The New Grove Dictionary* (ed. Kernfeld, 2002, “small-group jazz”) states that with
the emergence of small groups early in the 20th century, Louis Armstrong and his Hot Five worked out a form in their recordings that became somewhat the norm. It is a version of what Kernfeld (1995) calls a *chorus form*. In a chorus form, the performance starts with a presentation of the original melody. This presentation is often referred to as the *head*. After the head, the chorus is repeated with the song form and its chords. There are many variations of the chorus form, but the basic principle is that the chorus’s is repeated, usually with improvisations and solos performed over these repetitions.

**Jazz harmony**

Harmony has become an important feature within jazz theory. In the book *The Jazz Theory Book* by Mark Levine (1995), approximately 400 pages are about harmony, while the remaining 100 pages are about forms and how to read lead sheets (which, first and foremost, contain the chords). There are reasons for this. The tonal material in much of jazz music has similarities to the diatonic/chromatic relations of Western classical music. Therefore, a theoretic paradigm and a well-developed terminolology already exist. In the swing era and in swing music, jazz harmony can without doubt be summarized as tonal in the traditional sense of diatonic functions. Modality is not relevant to this thesis. However, it is common that jazz chords are named after the modal characteristics, which only implies the corresponding scale material and will be explained later.

In the bebop era, the tonality in jazz music became more complex, with chromatic harmony and great use of tension notes and alterations (altered notes: b9, #9, #11, b5, #5, b13). Even though several musicians contributed to the development of what was later known as bebop, recordings made at the time of this development put Dizzy Gillespie in the center of it. Gillespie had a theoretical approach to his inventions, which ended up characterizing the bebop style. Another important contribution to the style were the imaginative improvisations of Charlie Parker, whose improvisations have been the model for later musicians trying to get a grasp of bebop or improvising (ed. Kernfeld, 2002, “Jazz: Developments in the musical language”). In their own ways, they both contributed to the new harmonies in bebop music, with more use of the ninth, 11th and 13th.
When performing or analyzing a solo, chord progressions and the interpretation of specific chords may both influence and be influenced by the form. The harmony is based on cadences and progressions that move from tension to resolution. Typically, dominant chords and cadences, such as the II–V progressions are used extensively. This creates a demand for the tonic or intermediate tonic that follows. The chords provide a set of notes, which can be graded from the very stable notes, such as the tonic, to the unstable, altered notes. Within the harmonic paradigm associated with bebop, this will be common among both performers and listeners. Moreover, dissonances, altered notes and secondary dominants and cadences are used to increase the tension. On the other hand, consonance, chord notes and sustained chords are used to create resolution.

In jazz music, some dissonances have become stable non-chord notes, such as the major sixth and major seventh to a major chord and the minor seven to a minor chord. In improvising and jazz music arranging, it is common to use the scale material of a chord, for example a diatonic major scale to the tonic chord to decide the chord’s function. By doing this, one can play what is strictly considered a dissonance, like a seventh, and still constitute a stable harmony because it is part of the tonic (Ionian) scale. If a chord provides, or is interpreted to provide, a scale of natural notes and few alterations, it is a stable chord. On the other hand, if the chord is supplied with a scale with mostly altered notes, it will most likely be perceived with a lot of tension.

**Methods and Terms**

This analysis will investigate how the formal and harmonic aspects affect the experience of form in Ella Fitzgerald’s scat solo. It is necessary to discover how the performance is divided into sections and how the harmonic development in the lead sheet constitutes form within these sections. From this, the analysis can investigate how Fitzgerald relates to the formal and harmonic framework and uses melodic structures to create form in her solo.

The analysis will be influenced by several traditional methods. As indicated so far, established tools and terms can deal with much of the melodic content in this performance. Thus, the traditional analytical methods are a natural starting point for my thesis. The terms used in this thesis are based on the traditional methods, traditional music theory and ideas of themes and harmonic development. Because of
the genre, which is investigated, they are adapted to the swing and bebop music and the characteristics of scat singing.

There are several formal and harmonic aspects in the performance besides the solo, such as voicings and repetitions in the accompaniment. The interaction between the solo and the accompaniment is extremely important in performance in general and in improvised music in particular. In this thesis, Ella Fitzgerald’s singing is the subject of this analysis and the form created by the vocal performance is what the thesis aims to understand. Therefore, many aspects of interaction that probably affect the experience of form in the performance as a whole will be omitted.

Analysis of form

A step toward discovering the form in the solo is to divide the performance into sections. There are different ways of identifying such sections, however, in this type of music there are some common criteria for doing so. In a song, the phrases are natural building blocks when analyzing a performance. In the lead sheet, we can see written phrases as well. On a smaller scale, the motifs of which a phrase consists can also be building blocks for the construction of form. On a larger scale, the phrases can be put together into choruses, as is the case with “How High the Moon” (1960). The organization of phrases is, of course, affected by the harmonic development, which will be analyzed as it is represented in the lead sheet.

We know that understanding the expectations needs to play a key role in an investigation of the experience of form. The analysis will touch upon both the form in the song, as it is represented in the lead sheet, and the form in the performance. Both these forms have impact on the expectations for and, thus, the form in Ella Fitzgerald’s solo. The analysis of form in the lead sheet gives some insight into how the song was originally organized in units. This gives a reference point to investigate Fitzgerald’s organizing of the corresponding periods in the performance. The analysis will continue by identifying any larger sections across the choruses in the performance. When the different levels of organization are discovered, the analysis can investigate how Fitzgerald’s performance relates to the expectations that come from that organization. The vocal solo may comprise periods and motifs that either confirm or contradict the organization. Fitzgerald’s singing can also indicate other structures than those derived from the units in the lead sheet and the sections of the
performance. This can be done by, for example, repetition, periods of different lengths or motivic similarity or development.

The *theme* has traditionally been very important to analysts (Cook, 1997, 9–10). A reason for this may be that themes, and how they are treated are believed to create, meet or disappoint listener’s expectations. However, Cook argues, it is not necessarily the themes that are important to the listening experience. Rather, what are important in building expectation are the parts that are seen as linking the thematic parts together. These parts are, “to use the old-fashioned and rather unsatisfactory term, ‘transitional’ ” (1997, 9). In a repetitive performance, such as “How High the Moon” (1960), this notion is important to have in mind during the analysis. *Transitions* connect the sections into which the performance is divided. Expectations being the keyword, the transitions may be at least as important to the creation of form in the solo as the “thematic” parts. *Theme* will in this thesis refer to the first phrase or phrases in the lead sheet or performed chorus. *Transition* will refer to the bars containing a cadence that prepare a new repetition of the harmonic development.

**Harmonic analysis**

Jazz harmony has much in common with traditional, classical harmonic principles. As is demonstrated in Steve Larson’s analysis (1998) of Bill Evans’s piano solo, the traditional musicological terminology and ways to talk about harmony can be useful when analyzing jazz music. The chords, their functions and the scale material they provide can be expressed and communicated with a well-known and well-developed terminology. The harmonic principles include the increase and release of tension and the tonic or tonicized resolution as a goal. The dominant chord, and elaborations of the dominant chord, may be the most important element in this type of harmony. Dominant chords increase tension and create expectation for release. Cadences, such as the II–V, the III–VI–II–V or variants of these are more elaborate dominant preparations, which gradually increase tension and the expectation of resolution. The placement of dominant chords and chord progressions are therefore likely to be crucial to the experience of form and to a soloist’s creation of form.

To most people with some experience of jazz, the chords in the lead sheet can be recognized in the performance. The harmonic development is closely related to the song form and affects how the different units in the song form are connected and
interpreted. This also applies to the sections of a performance. Larson (1998) uses scale degrees as well as the name of notes to describe what happens. Scale degree terms are useful for many reasons. I have already mentioned the II–V–I progression, which, in different variations, is very common in the jazz repertory. It can be elaborated to increase tension before tonic resolution or be used to prepare intermediate modulations and color more simple progressions. I will use scale degrees in the analysis of the lead sheet, because they communicate how I interpret the relation between chords. Note that I do not differentiate between minor and major chords in the scale degrees, since jazz performers often alter between the two within the same harmonic function. Parenthesis marks for a chord progression, such as (II–V), means that I interpret the chord or progression in relation to the chord that follows the parenthesis. Otherwise, the scale degree is in relation to the main tonic. By doing this, the analysis will show whether a resolution is complete or only intermediate. The main key of the music is the actual key at any time; in this case, Eb major is the main tonic throughout the lead sheet and the performance. When dominant relations are used as an elaboration or ornamentation of a main function, the above mentioned parentheses are used, and the progression is called a secondary cadence. If a cadence introduces an intermediate tonicization of a different key, it is an intermediate modulation. The preceding dominant progression is, thus, an intermediate cadence. A II–V progression is one example of a turnaround in jazz. In this thesis, a turnaround is a chord progression that is added at the end of a section to prepare the beginning of a new section. The turnaround, thus, normally ends on the dominant of the starting chord in the following section.

Much of the jazz repertory is based on improvisation or the mere creation of new melodies on top of a set of chords. Because of this, the interpretation of the chords’ functions has consequences for how a performance turns out. A G minor can be a III in the main key, Eb, or a II in a (II–V) cadence to a temporary tonicization of F. In jazz, it is common to use the name of the corresponding modal scale that starts on the scale degree. A chord with scale degree III has a Phrygian scale and the function of a mediant, while scale degree II means a Dorian scale and a supertonic function. In the analysis of the lead sheet, both the modal scale names and scale degrees will be used to explain the interpretation of a chord’s function or the corresponding scale material. Before this interpretation is made clear, I will simply refer to the written name of a
chord as it is written in the lead sheet. In the analysis of the performance, I will only use the modal scale names when referring to the chords in the chorus. It is common to use some altered notes in voicings and solos that deviate from the chord’s function. For example, a tonic can have either an Ionian or Lydian scale material. This is also true for scale degree VI, which has an Aeolian scale. The chord’s function will dictate the names in this thesis; thus, a tonic chord Eb will be referred to as \textit{Eb Ionian}, even though the performed scale material is Lydian.

An interpretation of a chord or a chord progression in the lead sheet may be different from the scale material that is chosen by Fitzgerald in the performance. Following the presented problems with analyzing notated music in “Chapter 1 Introduction”, the analysis of the lead sheet should only be seen as a tool for analyzing the solo. It is not an ideal or goal by which the solo is evaluated and valued. Any opposition between the analysis of the lead sheet and the content of the solo should therefore only serve as an observation of the fact. However, such an opposition may have impact on the experience of the form and will, therefore, be considered specifically in the analysis. The harmonic development is mainly given by the song form and the lead sheet and is repeated throughout the performance. The harmonic content provided by Fitzgerald in her solo is commented on when her choice of scale material seems to have consequences for the form.

\textit{Large-scale development}

Ella Fitzgerald sings her solo with phrases, themes, choruses, transitions and new choruses for several minutes. The formal and harmonic analysis aims to discover how every section develops with tension and resolution. In addition, the analysis tries to make sense of form in the solo as a whole. How does Fitzgerald maintain a balance between coherence and surprise for so long? No matter what we conceive or what the intentions of the performer are, Larson (1998) offers good arguments why it is interesting to look for large-scale development in solos. In the analysis, this means to discover whether there are developments of any sort, which stretch over the full course of the solo. Even though sections such as choruses and phrases can be experienced as clearly started and ended, the solo is experienced as a whole. Obviously, the analysis must consider experiences that reach over more than one section.
Large-scale development is sometimes associated with the Schenkerian concept of fundamental structures and tonal direction. In this thesis, however, large-scale structure includes what connects the sections together as one performance, as well as how the performance develops from the beginning to the end. To find form in the solo as a whole, the analysis will build on the formal and harmonic analysis of the sections in the performance. The form, the tension and the release within these sections, the construction of phrases and transitions between choruses will serve as basis for identifying a large-scale development in the solo.

**Analysis of the Lead Sheet**

As a starting point for the analysis of form in the solo, it is necessary to identify the song form in “How High the Moon”, which is the basis for the performance. The lead sheet, which is printed on the next page, is a representation of the melody and harmony of the song and is the first area under investigation of my analysis. A lead sheet gives a rather poor representation of the variety of performances that exist of every standard song, but might, nevertheless, be thought to capture some of the song’s characteristic structural aspects. The analyst’s conception of the song is likely to affect the judgments in an analysis. This can happen as a performance offers an interpretation of the content in a lead sheet. In addition, there is no guarantee that a performer has any knowledge of the lead sheet but has learned the song some other way.

*Song form and the intermediate modulations*

“How High the Moon”, originally a song from a Broadway show, is an example of a popular song form. The concept of the form of a song needs to be separated from the concept of the form of a performance, which will be discussed later. For now the issue at hand is the lead sheet and its representation of the song form. Like most songs with a popular song form (Kernfeld, 1995, 48), “How High the Moon” has a 32-bar chord progression, “a perfect vehicle for building jazz choruses”.
How High the Moon

Hamilton

Lewis

Figure 1. Lead sheet of “How High the Moon”.

The Real Vocal Book, Second Edition, Volume 1
Transposed by Ingrid Liland
Bars 1–8 and 17–24 are identical, and are, thus, easily perceived as the starting theme of each half of the song. This gives a symmetrical division of the song in two 16-bar parts, from now referred to as the first and second half form. To use traditional formal labels, we can see these half forms have the same theme and, thus, represent two variants of an a unit. As we will see in the following analysis, the melodic and harmonic movement in bars 1–8 needs to continue through bars 9–16 before a half form is concluded. Therefore, it is appropriate to say that the song form is \(a a'd\). This means there are no independent units where the song stops and introduces a new character with its own development of tension and resolution. The absence of another unit has consequences for the creation of a solo, and probably the perception of it. First of all, the harmonic and melodic units are quite alike, and variation must come from the performance. Second, there are fewer moments of possible rest and resolution. The analysis of the harmonic development in the song that follows shows how the two half forms are similar and how they are different. The song form and harmonic development are the most relevant aspects in the lead sheet as they are repeated in choruses throughout the performance. However, there will be a short comment on the melody as well.

The lead sheet for “How High the Moon” offers a great illustration of some common features of jazz song harmonizing. It contains several intermediate modulations and rapidly changing scale materials. It thus has a traditional harmonic development in jazz, with many dominant relations and movement directed towards the tonic at the end of the form. With directed it means that the chords that prepare the tonic are well-known dominant progressions, which, to the average listener, will be conceived as part of a cadence. The analysis will first deal with the first half form. Then I will delve into the deviations in the second half form. According to the lead sheet the key of the song is Eb major (Ionian). Both the half forms start with the tonic chord. The second half form also ends on the tonic, while the first half form ends on the dominant. The harmonic analysis of the lead sheet will begin with a description of the chords and their functions. The aim for doing this is to find patterns in the harmonic development that affect the song form.

The song starts with the tonic chord, Eb Ionian. The tonic harmony continues through the first two bars. In the third bar, the chord is Eb Aeolian. The turn of the tonic to its minor variant does not yet have any obvious function. In the fourth bar, we get an Ab
Dominant. The fifth, from the root of the Eb Aeolian to the Ab Dominant, gives a clear signal that this is the cadence of II–V. But this is not a II–V cadence to the main tonic, which we know is Eb. It is a cadence preparing the Db Ionian in bar 5. The cadence in bars 3–4 constitutes an intermediate modulation to Db Ionian, with an according change of scale material. The cadence leads to a chord that does not belong in the Eb Ionian diatonic material, and it is conceived as more than just a temporary tonicization. The end of the sequenced phrase contains a corresponding intermediate modulation, which prepares the Cb Ionian in bar 9. The intermediate Cb Ionian key area is not as stable as the intermediate Db Ionian key area, as the Cb Ionian is not sustained for more than one bar before a new intermediate modulation arrives.

So far, the cadences have been easy to interpret and their relations have resulted in intermediate modulations. The harmonic development and the melody seem coherent and directed in one movement. The following bars have a less straightforward harmonic development and a different melodic structure. From bar 9 on, the chords change more often. Bar 10 contains a relation similar to the II–V progression. In bar 11 we land, as expected, on an Eb, but in the minor variant, not the major tonic. In bar 12 we get a new II–V and, this time, the development returns to the main tonic, Eb Ionian. With some familiarity with song forms, this would be an odd place to end a song. Accordingly, the tonic only lasts for one bar before the chords change. Leaving less time to establish a new tonic than in the other intermediate modulations. In bar 14, the same II–V progression is repeated, though, instead of leading again to the tonic, it is a weak cadence leading to G Aeolian, the mediant of Eb major. The mediant immediately continues chromatically through F#7 to, in bar 16, the last II–V progression, F minor to Bb7, before we return to the main tonic at the beginning of the next half form.

It is essential to the first half form’s harmonic movement that it leads toward the second half form. The second half form begins identically with the theme from the first half form. The melody and chords are, in fact, identical through bar 26. In bar 27, we have a major Eb chord instead of the minor we had 16 bars before. From this point on, the song continues as it does from bar 13 in the first half. By skipping the repetition of bars 11 and 12, the melody in the second half form ends in bar 30 on the tonic, which is sustained till the end. If the chorus was to be repeated, the tonic in bar 32 could be replaced with some kind of turnaround, for example, a II–V progression.
The intermediate modulations make the full course of an a unit necessary. The first half form completes its harmonic development when the second half form starts. The return to an Eb Ionian in bar 13 is too short for a proper resolution and is dependent on the full phrase, which continues through bar 16, to be completed. When the second half form starts with a return to the tonic, this is, however, also a temporary resolution, as the intermediate modulations start all over again. It is at the end, in bar 31, a proper resolution is delivered. This makes the full song form necessary for the harmonic development to be completed.

**Preparation of the tonic**

When a song form is repeated, or when the second half form begins, the tonic Eb Ionian in the theme offers resolution. However, there are many cadences throughout the song form and, with them, many intermediate resolutions. The resolution to the main tonic must carry more weight than temporary tonicizations and intermediate modulations. In “How High the Moon”, there is a II–V progression in one bar preparing the main tonic in the next bar. However, the intermediate modulations are introduced by a corresponding II–V progression, and often it lasts for two bars. The preparation for the main tonic must begin earlier. Again, the analysis will primarily be performed on the first half form unless otherwise stated. The following paragraph starts at the end, and describes, in reverse, the dominant relations leading to the main tonic in the next half form.

In bar 15, we have a (II–V) progression in a temporary tonicization of the II (F Aeolian) to the main tonic. The F# Dominant is a tritone substitute for the secondary dominant. Bars 15 and 16, thus, contain a four-chord progression, which is one cadence preparing the main tonic. However, the first of four II–V progressions to the main tonic is already presented in bar 10. The preparation toward the main tonic starts here and the tension is sustained through the end of the half form. The cadence in bar 10 ends in a tonic variant, Eb Aeolian, in bar 11. The next II–V progression leads to the actual main tonic in bar 13, but before it can offer any resolution, another II–V progression begins. This cadence leads to the G Aeolian in bar 15. The dominant cadence in the song form, thus, lasts from bar 10 through bar 16. Compared to the two-bar cadences preparing the intermediate modulations, the preparation of the main tonic has much more suspense of tension and demand for resolution. In the second half form, this cadence is two bars shorter. However, it is more appropriate to say that
an extra two-bar suspense is added in the first half form. Doing this sufficiently prolongs the suspense so that the tonic resolution arrives when the next half form begins. The seven-bar dominant cadence, which is an elaboration of the Bb dominant function, is introduced by a intermediate tonicization of the tritone substitute (B) for the secondary dominant of the main dominant (Bb). The harmonic development as a whole can be interpreted as one movement, which starts and ends at the same place, the main tonic. Up to bar 11, II–V progressions are used for intermediate modulations. The intermediate modulations have a downward, stepwise motion. From the tonic of Eb, through Db to Cb, which prepares the main dominant cadence in Bb.

It is clear that the main tonic at the end of the harmonic development offers more resolution than the intermediate tonic resolutions because it is prepared for longer. It is both the starting point and the goal for the full harmonic development. The cadence leading to the main tonic is prolonged and lasts for seven bars. It also contains more elaborate harmonies and establishes the main tonic, the “goal”, during the cadence. Furthermore, the intermediate modulations have a downward direction toward the main dominant and the dominant preparation of the main tonic. From the beginning in the Eb Ionian to the resolution with the Eb Ionian, we have one harmonic movement away from the main tonic, through a seven-bar dominant cadence and back to the main tonic. In the second half form, two bars of the cadence are skipped in order to finish the song within the song form. This interpretation of the harmonic development and the two-bar difference between the first and second half confirms the aa′ song form. All 32 bars are necessary for the musical movements to be completed and the tension to be resolved.

The melody

In addition to the chords, the lead sheet also contains the melody of the song. In a jazz performance, the melody is often presented together with the first presentation of the chords. It is important to the experience of form and a short comment on the melody will end the analysis of the lead sheet on “How High the Moon”.

The phrases in the theme all end on the third of the new (II) chord. This actually happens throughout all the intermediate modulations and all the vocal motifs. In fact, all the motifs end on the third of the corresponding bar. This is especially noticeable when it happens at the same time as the scale material changes. Examples of this are
in bars 3, 5 and 13. The melody, thus, emphasizes important chord notes and helps stabilize the intermediate modulations. It is only when the song is supposed to end in bar 31 that the melody lands on the root of the corresponding chord. Another important characteristic of the melody is where the phrases start and end. In the theme, the phrases all end in the same bar where the intermediate modulation starts. This makes the phrases of the melody and intermediate modulations work together in pushing the song forward. The conflicting placement of a phrase and an intermediate modulation gives no time of rest. As one phrase is concluded, the harmonic development has made a demand for resolution. As this resolution arrives, the next phrase has already started. The melody supports the interpretation of both the song form and the harmonic development in several ways. First, the melody emphasizes important chord notes throughout the song. Second, the melody only ends on the root of a chord at the end of the song. Third, it secures the openness of the harmonic development, by never having its moments of rest correspond with the moments of intermediate harmonic resolution.

The lead sheet and the performance

In the performance by Ella Fitzgerald and her band, it seems they do not play the cadences, i.e. bars 10–16 and 26–32, as harmonized in the lead sheet. The band replaces the II–V progression going to the chromatically falling chords with two sets of the same chromatic fall. This blurs out the distinction between the first and second half of the choruses, giving about equal demand for resolution in both, but also little actual resolution. Both half choruses demand the beginning of a new half chorus. Using Fitzgerald’s periods, the cadences are referred to as half-chorus transitions (bars 13–16) and ending transitions (bars 29–32). The only distinction left between the half choruses is an Eb minor chord in bar 11 and an Eb Major chord in bar 27. This makes the conclusions from the analysis of the lead sheet about the openness in the song form strongly apply to the following analysis of the performance.

Organization of the Vocal Performance

Before going into the content of Ella Fitzgerald’s solo, a short description of the overall organization of the performance will be presented. The recorded performance of eight minutes and nine seconds includes applause, an intro and an outro. The piano starts playing during the applause for the preceding song, Mack the Knife (Weill,
1928), and repeats a small rhythmic motive until the drums and, later, the electric guitar and double bass join in. When Fitzgerald starts to sing, she first presents the song “How High the Moon” with recognizable melody and lyrics. This chorus is the first 32 bars of Fitzgerald’s performance, on the recording 0’14”–0’59”. This chorus is the head. The head is quickly followed by a drum break in double tempo that presents the tempo for most of the remaining performance. In the second chorus, is in double tempo, Fitzgerald sings a new melody with new lyrics. This will be referred to as a Transitional Chorus. The sectional division of the performance is illustrated in this table.

<table>
<thead>
<tr>
<th>Name in this thesis</th>
<th>Time in the record</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head*</td>
<td>0’13”–1’</td>
</tr>
<tr>
<td>Transitional Chorus*</td>
<td>1’–1’25”</td>
</tr>
<tr>
<td>Chorus 1</td>
<td>1’26”–1’51”</td>
</tr>
<tr>
<td>Chorus 2</td>
<td>1’52”–2’17”</td>
</tr>
<tr>
<td>Chorus 3</td>
<td>2’18”–2’43”</td>
</tr>
<tr>
<td>Chorus 4</td>
<td>2’44”–3’09”</td>
</tr>
<tr>
<td>Chorus 5</td>
<td>3’10”–3’36”</td>
</tr>
<tr>
<td>Chorus 6</td>
<td>3’36”–4’01”</td>
</tr>
<tr>
<td>Chorus 7</td>
<td>4’02”–4’27”</td>
</tr>
<tr>
<td>Chorus 8</td>
<td>4’27”–4’52”</td>
</tr>
<tr>
<td>Chorus 9</td>
<td>4’53”–5’17”</td>
</tr>
<tr>
<td>Chorus 10</td>
<td>5’18”–6’32”</td>
</tr>
<tr>
<td>Coda</td>
<td>6’33”–6’57”</td>
</tr>
</tbody>
</table>

*Figure 2. Names of sections

*The section is not investigated in my analyses.

After the Transitional Chorus Fitzgerald starts scatting. This is where the solo, which is the subject of this analysis, properly ‘starts’. The scat solo from Chorus 1 through the Coda lasts for five and a half minutes. The first part of the solo consists of nine choruses, referred to as Chorus 1–9, of equal length, 32 bars with the harmonic form of the head. After the nine 32-bar choruses, something completely different is introduced: Chorus 10. In Chorus 10, only Fitzgerald and the drums play and this chorus is much longer than the nine choruses preceding it. After Chorus 10, just as the
rest of the band joins in, Fitzgerald arrives at a Coda. Since I experience that the Coda offers significant resolution, I see it as essential to the form in the scat solo as a whole. The Coda is a direct quote from the song “Smoke Gets in Your Eyes” (Harbach and Kern, 1933), actually a full a unit of the song. At the end, Fitzgerald verbally returns to the title tune, “How High the Moon”. Within all these choruses, Fitzgerald sings her solo with coherence and surprise, tension and release. The analysis of her solo will begin with an investigation into how the choruses are structured. First, we will look at how phrases and repetition are used as building blocks in her solo. Then, we will look at how the solo emphasizes certain periods that appear significant to the form within the choruses.

Phrases and repetition

One of my immediate responses when listening to Fitzgerald’s solo is that it is melodic. It is easy to decide where one motif is completed and a new one is introduced and where phrases start and end. “Melodic” also means that one phrase sounds like it naturally follows the previous phrase. The solo is easy to follow, although the details may be hard to pin down when listening to it. Fitzgerald’s solo is obviously virtuosic with many notes, big leaps and fast tempo. The tidy impression of coherence in the solo combined with the virtuosity and surprises can seem like a paradox. In order to explain the tidy impression, the analysis will begin by dealing with how the virtuosic melody is organized in phrases and how the phrases are organized in the choruses.

The first chorus introduces the solo with a melodic form with some similarity to the lead sheet. The first eight bars consist of a phrase that is sequenced according to the intermediate modulation. As the theme phrase in the lead sheet, the first two phrases of Chorus 1 contain two motifs, both of which contain a pick-up of shorter notes that leads to the ending note. Although the placement of the beginnings and ends of the motifs vary, Fitzgerald confirms the symmetrical division of the popular song tradition and the melodic structure of the lead sheet. The symmetrical division governs the first chorus. Exceptions are the sixth phrase and the transitions, which all tend toward a phrase with a melodic movement that lasts for four bars. In Chorus 3, some of the phrases are not as clearly divided as in the first two choruses, and in Chorus 4 longer periods are properly introduced and the symmetrical division only goes so far as down to the four-bar phrases. In addition to the lack of division into
smaller motifs, Chorus 4 has less obvious divisions between its phrases. One phrase can start with the same motif with which the previous phrase ended. This is the case when the second phrase continues into bars 9 and 10 and the third phrase has begun before the second is concluded. Chorus 4 and the second half chorus of Chorus 6 have less strict divisions between phrases. In comparison, Chorus 5 is very tidy with clearly separated four-bar phrases. Chorus 7 mixes phrases that stretch over more than four bars with shorter, independent motifs. Even though there is inconsistency in how long the phrases are in Choruses 4, 6 and 7, the overall experience is that sooner, more often than later, the phrase stops in time for the next to start correctly according to the symmetrical division. For instance, all the transitions have a mostly clear four-bar melodic structure that is separated from the phrase before. Toward the end of the solo, in Choruses 8 and 9, the phrases are of more regular length, and the four-bar periods govern the solo once again.

At this point, it looks like the solo confirms a symmetrical organization of the melody. In several of the choruses Fitzgerald uses repetition and sequencing to confirm the symmetrical division from the lead sheet. However, during Choruses 4, 6 and 7, Fitzgerald introduces a more free approach to the division between phrases. This coincides with her increase in pitch range and note leaps in the vocal performance. Phrases of irregular length are always at some point released by a reestablishing of the symmetrical division. This is much due to the fact that the transitions throughout the solo have a strict four-bar structure. This does not only reestablish the symmetrical division of four bars, but, as we shall see, also confirms the symmetrical division between half choruses of 16 bars.

*The song form in the vocal performance: the transitions*

The solo creates formal parts within each chorus and similarity between phrases, for example by repetition, is used to achieve this. Two of the choruses in Fitzgerald’s solo have an *ad* organization similar to the song form in the lead sheet. These are Chorus 2 and Chorus 5. Chorus 2 has a borrowed melody from “Ornithology” (Parker, 1946). Chorus 5 has a sequenced theme in addition to the repeated half chorus. They both confirm the symmetrical division as well, in Chorus 5 down to four-bar phrases and in Chorus 2 down to two-bar motifs. The transitions confirm, every 16th bar, the symmetrical division, no matter how chaotic the chorus otherwise is. Therefore, it is easy to hear where one half chorus stops and prepares the next one.
The transitions in bars 13–16 and 29–32 (transcriptions in Appendix) in every chorus create this division. In the transitions, on the dominant cadence from the chords, the solo creates quite a lot of tension. The analysis will continue with an investigation into how these transitions secure the experience of a symmetrical division. The transcription of the solo in the half-chorus transitions gives some information on how these phrases are structured. Below are transcriptions of the half-chorus transitions of Choruses 1 and 3.

![Transcriptions of half-chorus transitions in Choruses 1–3](image)

Figures 3–5. Transcriptions of half-chorus transitions in Choruses 1–3

The half-chorus transitions of the three first choruses consist of one melodic movement, from around the Bb3 center of the two first bars up to Bb4 during the next two bars. However, the phrases include motifs of different characters. They have short, rhythmic motifs and motifs of longer lines and notes. With the exception of the first octave leap in the transition of Chorus 1, the intervals are small. The movement from Bb3 to Bb4 concludes their half-chorus melody. In both half choruses, we have had a clear downward movement during the half chorus and the transition takes the melody back up in pitch, ending on the dominant Bb. This is also the case in Chorus 2, but it is not as clear. The transitions stand out as periods that confirm the symmetrical division. It is a tidy movement that prepares for the theme in the next half chorus. In Chorus 2, the motive, which concludes the transition after Bb4 is sung, is quite similar to the first motif of “Ornithology”, the theme in the same chorus. The transitions in Chorus 2 are not part of the borrowed melody and, thus, offer a good illustration on how the melodic structure in the transitions is adapted to conclude and prepare the melody of its chorus.
Some of the transitions are slightly different than the others. The half-chorus transition of Chorus 4 is the only transition with a downward movement and has the largest range in pitch with a perfect twelfth. Nevertheless, there is a clear movement in the phrase, from Bb5 and down. The ending transition of the same chorus mirrors this movement by starting on Bb3 going up. A transcription of both of them is presented below.

![Picture 6. Transcription of half-chorus transition and ending transition of Chorus 4.](image)

The ending transition of Chorus 7 also stands out in that the phrase actually starts in bar 27, although the transcription only include the last four bars. The phrase, thus, lasts for six bars, and releases two bars of silence preceding it. Most of the remaining transitions have a movement from, on or to the Bb. Most of the transitions have in common that they are four-bar phrases with one melodic movement. This way, they are able to re-establish the symmetrical division of the performance if the preceding melody has contradicted it. A few of them further confirm the symmetrical division with two-bar or one-bar motifs. The above analysis shows that the transitions can be recognized as such by their directed melodic structure and development. Also, the transitions are adapted to the chorus, which they end and/or introduce.

So far, the analysis has shown that the solo is organized in separable 16-bar half choruses. This is true to the intuitive experience of the solo, where the transitions and the beginning of a new half chorus are clearly detectable. However, the song form lasts for 32 bars and a quick look at the ending transitions show that there are, in fact, an obvious distinction between the two half choruses in the solo. In the ending transition in Chorus 1, the solo has a movement from Bb3 to Bb4, similar to the half-chorus transition. But where the half-chorus transition used many different motifs to make this movement, the ending transition uses one melodic idea over two whole bars.
with eighth notes to get from Bb3 to the leading-note of Bb4. The same happens in Chorus 2, and in Chorus 3, the rhythmical ending motif from Chorus 1 is sung twice, creating a phrase of only Bbs. The difference between the first and second transition of this first chorus is evident throughout the solo. One characteristic of the half-chorus transition is a tonal movement that consists of more than one melodic motif. Thus, the movement does not give one exclusive sensation of direction from start to end. This provides an experience of a melodic line, which is more in style with the rest of the solo. The half-chorus transitions are still detectable, but the ending transitions stand out even more. The ending transitions can also have motifs of different character, like in Choruses 1 and 2, but the first motif is clearly functioning as a direct line toward the second motif. The ending transitions appear as obvious rhythmic breaks. This is particularly noticeable at the ending transitions of Choruses 3, 6 and 9.

Some parts of the solo contradict the organization that has been pointed out so far. For example, Chorus 5 has a theme that has some characteristics in common with how the transitions are described above and contrasts the melodically virtuosic characteristics of the other themes. The Chorus 5 theme is more rhythmic and contains fewer notes. The Chorus 5 theme could perhaps disturb the function the transitions have in separating the choruses, but the Chorus 5 theme is treated as and experienced as a theme. The theme is sequenced in the second phrase and repeated in the second half chorus and, thus, it relates to the song form. In addition, the melodic structure is after a closer look significantly different from the transitions. The rhythmic figure starts the phrase, and a shorter melodic motif concludes it and changes the direction of the phrase. The phrase is clearly not a transition with a directed movement from start to end. It is also affected by Chorus 4, which precedes this rhythmic theme and has

![Transcription of Chorus 3](image1)

![Transcription of Chorus 6](image2)

![Transcription of Chorus 9](image3)

*Picture 7–9. Transcriptions of ending transitions of Choruses 3, 6 and 9.*
transitions that are more melodic and have more movement than most of the other transitions. In this way, the deviating theme of Chorus 5 is introduced by contrasting and deviating transitions in Chorus 4.

The above analysis shows that the transitions in the solo can be recognized as such by their melodic structure and development. It is easy to hear where one half chorus starts and another begins. Despite the fact that only one bar harmonically separates the first and second half chorus, the solo emphasizes the structural unit of 32 bars. When the solo deviates from these characteristics, other tools, such as references to the song form and internal contrasts in the solo are used to create the separation between the half choruses. This is true to the experience of the solo as regularly, periodic divided into half choruses. At this point it is necessary to remember that this separation is supported by the harmonic development, which starts over again with the beginning of every chorus. How the harmonic aspects of the solo may affect the experience of form and how these aspects relate to the organization of the phrases and melody will be investigated now.

**Harmonic Development and the Vocal Performance**

Now we now that Fitzgerald’s solo easily is divided into periods within the choruses. This makes it possible to look at one period at a time and analyze it in light of the chords on which it is sung. The chords govern a great deal of what tonal material a soloist can use. The choices made by Fitzgerald about pitch, virtuosity and tonal emphasis can give further insight into how she creates form and how it is experienced. An important part of this investigation will be to use the characteristics we have already have found in the transitions. The tonal content can maybe shed light on why these are perceived as conclusions and preparations. The melody in the transitions is adapted to the melody of the half choruses, which they conclude or prepare. They are sung on the dominant cadences, which prepare the return to the main tonic. The clear melodic structures in the transitions make them recognizable. The melodic structure must contribute to the experienced tension in these periods. The analysis will continue with an investigation into Fitzgerald’s tonal relation to the harmonic development and the preparation of the main tonic.

Increase in tension and demand for resolution are usually associated with dominant chords and dissonances. We know that all transitions in one way or another center on
the note Bb, which is the root of the main dominant. The ending transitions of Choruses 3 and 9 contain a one-note phrase on Bb. All ending transitions except in Choruses 4 and 6 end on a Bb or the leading note D. The half-chorus transitions also end on Bb Dominant chord notes, except for Choruses 2, 6 and 9. Fitzgerald confirms the tonal function in the transitions and the harmonic preparation of the main tonic at the end of every chorus. In the ending transitions, the solo contains unaltered scale notes of the Bb Dominant, except from what clearly are chromatic lines toward a melodic goal (most often a Bb or an Eb). From the notation in my transcription, one can argue that the ending transition of Chorus 6 contains a significant diminished ninth. However, the change in pitch is experienced more as rhythmical detail, rather than a tonal important distinction between the ninth and the tonic. The fact that the ending transitions stick to the scale material of the Bb Dominant not only means that Fitzgerald confirms the dominant function, but also that she sticks to the main key of the song in this period of the chorus. She prepares the tonic, not by a great use of dissonances and tonal instability, but rather the opposite. She prepares the tonic by confirming it as the main key during the transition.

The half-chorus transitions include more non-chord notes and altered scale notes than the ending transitions. Especially, the major and augmented ninth are used in these transitions. The ninth, in all its variants, is a common tension note in a dominant function. The ninth is also very common as a melodic tool, simply because it is one step from the root. Therefore, the inclusion of the ninth in the half-chorus transitions appear more as a consequence of more melodic movement and more different motifs than in the ending transitions. The half-chorus transitions have more notes of both dissonant and consonant character and, in conclusion, the ending transitions are experienced with at least as much tension as the half-chorus transitions. Dissonant notes do not seem to be an important tool for Fitzgerald in building tension. To understand how the choice of notes can affect the form of the solo throughout the harmonic development of each chorus, it is necessary to look at the scale material in the solo at different points of the performance.

In addition to being periodic, the solo is melodic in the way that it seems easy to follow the choices of notes in the solo. In Chorus 1, Fitzgerald’s phrases end on the minor thirds in bars 3 and 7, just as the melody in the lead sheet. By doing this, she establishes a close relation to the harmonic development of the song by confirming
the intermediate modulations. Fitzgerald uses consonant notes throughout the first half chorus of her solo and, thus, relates to the harmonic development here as we have seen her do in the transitions. The first motif in Chorus 1 ends on a sustained ninth and reinforces the structure in the lead sheet. The melody denies rest where the chords resolve in an intermediate resolution. The solo deviates more from the strict division of two-bar motifs from the next half chorus on. In many of the choruses, the virtuosity of Ella Fitzgerald is breathtaking. There are a lot of notes in a short amount of time, and they are precise and intelligible. Choruses 4 and 6 include examples of phrases with a very fast succession of notes. Even though the long lines of fast notes are less periodic, the continuous flow of notes ensures that the change in scale material, corresponding to the chords, is established faster as well. The fast pace, thus, both disturbs and confirms the structure of the song.

As the solo develops, Fitzgerald uses more slides, blue notes and non-chord notes in the singing. From Chorus 3 onward, Fitzgerald introduces the use of pitches that are not easily placed within our tempered twelve-tone system. However, such places do not last for long, and she quickly returns to the tonal pitches. A comprehensible tonality and pitch precision is important to the experience of the solo and a big part of what makes it impressive and interesting. For instance, the motif that is repeated in the first phrase in Chorus 3 has a blue note slide between the minor and major third of the Eb. The experience of this slide is very interesting. The first time, the accompanying harmony is an Eb Ionian, while the second time it is an Ab Dominant. The context makes the two versions of the motifs seem adapted to their corresponding chord, while they are very similar. In the motif on the Ab Dominant, the slide is closer to the G natural than the motif on the Eb Ionian. However, the experience is the opposite. The confirmation of the harmonic development and the symmetrical division normalizes the experience of slides and blue notes and they adapt to the harmonic context. The opposite is the case in, for example, Chorus 5, where the theme starts by being very different from the rest of the solo by only using a one-note phrase, without any symmetric subdivisions into motifs. After the one-note figure, the phrase is concluded by a motif of a triad, which confirms the intermediate modulation that is taking place. Her confirmation of the given structures and her deviation from these structures seem to be mutually dependent on one another in order to develop the solo.
There is some use of altered scale notes and Fitzgerald, thus, shows that she knows the art of bebop and relates to its traditions. However, the main characteristic is without a doubt that most phrases have a consonant tonal content, which constitutes a melodic movement within each phrase. This is a more traditional way of creating melodies and places Fitzgerald safely within the swing and popular song traditions. Fitzgerald confirms the harmonic development and the harmonic functions of the chords by often using notes most characteristic of the chords in the lead sheet. She alternates between having periods that correspond with the intermediate modulations and periods that, as in the lead sheet, end on different places than on the intermediate tonal resolutions. The solo starts with confirmation of the melodic structure of the lead sheet, but as the phrases start varying in length, there is also more variation to what notes are used to begin and end a phrase. The solo seems to ensure a relation to the song or the harmonic development of the lead sheet one way or another. In Chorus 7, the variation is significant, along with an increased instability. At the end of this chorus she compensates for this instability by starting her transition earlier in the long cadence to prepare the next chorus. The form of the solo is deeply dependent on the harmonic development of the song. Fitzgerald uses this as a motor for preparing what is to come, but her tonal content itself does not seem to be a tool for creating tension in this preparation.

**Chorus 10: a break or a climax?**

After nine choruses Fitzgerald continues without the tonal instruments to accompany her. Only Fitzgerald’s solo and the groove from the drum set continue. In one way, this seems to allow Fitzgerald greater liberty to expand the stylistic repertory she uses in her solo. This chorus starts with an elaboration of the ending in the last chorus over the word “high”, and the title question “how high is the moon?”. The phrase starts on the Bb where she left off and stays in the tonal sphere of the song. In the first phrases, the solo uses notes from the Eb Major triad, resembling fanfare like motifs. As the harmonic context has disappeared, the only tonal information in this chorus is that of Fitzgerald’s singing. Chorus 10 ends by introducing the Coda, which also has Eb as a tonal center. In between, it is hard to find any harmonic development that corresponds to the harmonic relations that govern the rest of the choruses in the solo.

Chorus 10 can be divided into different parts that have different characteristics. The different characteristics come from the sound of her voice, lyrics Fitzgerald uses and
the tonal material in the phrases. Even though these parts are easily separated, the changes between them come suddenly. A few phrases in, Fitzgerald starts singing with distortion in her voice. This is an exhausting vocal technique, which she uses consciously. The melody starts on the root of the dominant, with a rhythmic phrase on that note for four bars, and then doing the same rhythmical pattern on the major third above. In the following phrases, the solo uses notes from the Bb Major triad and the G minor triad, and gradually introduces other notes as well. After this, Fitzgerald sings “way, way back home in Idaho” on G minor triad notes. After using G Aeolian scale material, she introduces more chromatic melodies. Many of the motifs give oriental associations, with augmented ninths, and it is hard to pin down a governing tonality for each phrase, and for the chorus as a whole. Every phrase has its own tonal characteristic, but they all are succeeded by a new phrase with another characteristic before a tonality, as we traditionally expect, has time to establish.

The phrases in Chorus 10 are easy to separate when listening to it, but during the course of the solo, the organization of periods becomes more irregular. It is difficult to explain within the framework of this analysis what is going on in Chorus 10, other than that Fitzgerald sings phrases and motifs with increased tonal freedom. However, when the Coda starts and we return to a song (although a different one), the experience is a significant release. In contrast to the earlier choruses, Chorus 10 has no transition. The last few motifs tend toward a Bb Dominant function, but they are so brief compared to the total length of the chorus, that it can hardly explain the amount of experienced release from the Coda. Because of this experienced resolution when the solo arrives at the Coda and “Smoke Gets in Your Eyes” (Harbach and Kern, 1933) it does not seem suitable to call Chorus 10 a break. However, given the tension building up through the dominant transitions in the nine previous choruses, it is hard to describe Chorus 10 as a climax. For now, the experience of Chorus 10 can be explained by its difference from the rest of the performance.

Large-scale Development

So far, the analysis has investigated certain sections and periods of the performance and discovered a lot about how Fitzgerald organizes her solo. However, the solo lasts for several minutes, and the full course of the solo needs to be investigated. What we have learned about the sections may tell us something about the solo as a whole. The
last part of the structural analysis will investigate how the sections relate to each other and contribute to a large-scale development. An important part of investigating the large-scale development is to see what happens within the framework of repetition. The periods, such as the transitions and phrases, have in common that they occur many times, although in different shapes, and that the similarity between them occur regularly. The harmonic development of the song form and the symmetrical divisions of phrases and motifs contribute to an overall coherence in the solo from Chorus 1 through Chorus 9. The similarity between the transitions can contribute to a large-scale development through difference.

We have found that Chorus 5 is the only chorus with an \textit{ad'} song form like the lead sheet. As it is the middle chorus, this gives a symmetrical division of the solo as a whole. This is mirrored in the choruses that surround Chorus 5: Choruses 4 and 6. Choruses 4 and 6 start off in the same way, and both of them are very virtuous with their long lines of quickly succeeding notes, big leaps and wide range in pitch. These three middle choruses have an internal ABA development in character. Choruses 4 and 5 are contrasts, while Chorus 6 re-uses elements from Chorus 4 as well as including more typical elements from the rest of the solo and the song form. The insights into the development in the three middle choruses make them appear as one chorus group. What characterizes this chorus group is its internal contrasts and development. As will be clear in the following analysis of the transitions in a large-scale development, a grouping of the choruses can be a useful tool to understand how form is created in the solo.

\textit{Transitions and chorus groups}

The important function the transitions have in the division of the solo as a whole makes them interesting in a large-scale development as well. The first two choruses have similar ending transitions. After sequenced motives of four ascending eighth notes, Chorus 1 ends with a rhythmical motif on the Bb4. Chorus 2 ends with a stepwise, chromatic motion from the first Bb to the leading-note of Eb. The ending transition of Chorus 2 can be seen as an elaboration of the first ending transition, increasing the tension. This increased tension demands an equally increased release at the start of the next chorus. This can explain why Chorus 3 is the first chorus that starts on a downbeat, on the tonic root and with a sustained note. The ending transition of Chorus 3 consists of a rhythmical figure on the Bb4. At first sight it is
different from the two preceding ending transitions, but in fact it is a further prolongation of the characteristic introduced in Chorus 1. Without the sixteenth notes, Chorus 3 simply uses the rhythmical figure from Chorus 1 and repeats it over the four-bar transition. In other words, Chorus 3 seems to complete a melodic movement that started in the first ending transition. In the analysis of the organization of the solo, we discovered that Choruses 1–3 have mostly symmetrical divisions between phrases. Toward the end of Chorus 3, the character changes a bit and seems to introduce a more liberal approach to the phrasing. These three choruses seem to have an internal development through their ending transitions. This seems to correspond with an increased deviation from the strict structures given by the lead sheet. With the conclusion of the development in the ending transition in Chorus 3, they introduce the middle chorus group of huge contrasts. Because of their internal development and preparation for the middle chorus group, Choruses 1–3 can be seen as the first chorus group of the solo.

Looking at the last three choruses, we find signs of similar developments between the transitions. The half-chorus transition of Chorus 8 stands out between Choruses 7 and 9. Both the one before and after are centered on Eb4, whereas the half-chorus transition of Chorus 8 seems to have an emphasis on the Bb, pointing back to the half-chorus transitions of Choruses 1–3. The last three half-chorus transitions thus have a development from Chorus 7 with a movement that rests long on Eb4, then starts moving toward the Bb4. Chorus 8 continues this movement up to the leading-note D, but descends back to Bb. In Chorus 9, we have returned to Eb4 and have a small movement to the G, which concludes it. Choruses 7–9 are the last chorus group. The last chorus group has another important formal characteristic in its ending transitions. The ending transition of Chorus 7 has a reference to the melodic structure of the ending transition in Choruses 1 and 2. The ending transition of Chorus 8 repeats a rhythmical motive, which appears as a faster version of the motive in the ending transition of Chorus 5. The ending transition of Chorus 9 offers an exact repetition of the ending transition in Chorus 3. The last three ending transitions re-introduce material from earlier ending transitions in the solo. This tendency reaches a climax in Chorus 9 with an exact repetition.

This analysis has so far divided the solo into three chorus groups, with three choruses each. There have been similarities and internal development found in these chorus
groups. The last chorus group also points back to the previous sections, especially the first. Notice that the last ending transition of each chorus group, Choruses 3, 6 and 9 have a rhythmical phrase with the Bb4 as the base. The fact that Choruses 3 and 9 end the same way implies a sort of ABA structure of the solo as a whole. In the B section, the middle chorus group mirrors this structure, with the symmetric Chorus 5 in the middle, between the virtuosic Choruses 4 and 6. After nine choruses, the contour of a large-scale structure is appearing, then the form is contrasted by something completely different. Up to this point, the form and structure of the solo has been interpreted from the relation between the soloist and the harmonic form of the lead sheet and the band. Resolution is first offered when we return to the “wrong” song, which neither concludes the harmonic development from the lead sheet or the song form.

**Structural Analysis: Summary and Comments**

The structural analysis has given some insight into how Ella Fitzgerald creates form in the solo. The analysis has investigated the lead sheet and Fitzgerald’s solo and looked at what sections existed in the performance and how the solo dealt with these sections. The harmonic analysis went through the harmonic content in these sections, and finally the analysis investigated how the sections contributed to a large-scale form in the solo. Conclusions from the analysis will be summarized here, before the chapter ends with identifying some questions that are left unanswered.

*Periodic form and coherence*

The analysis showed us that the lead sheet has both internal modulations and a formal harmonic development that persists through the whole song form. The modulations and development are supported by the melody and, together, the chords and melodic content give no point for rest until the 32-bar song form is completed. We found that the lead sheet has an $aa'$ form, and there are no bridge or independent smaller parts that the song form can be divided into. However, the melody and internal modulations divide the song form into two half forms, where the last intermediate modulation back to the main tonic in bar 17 separates the first and second half form. Each of the half forms has a melody and intermediate modulations that roughly divide the song form into units of 8, 4 and 2 bars. There is, thus, a symmetrical division within the development of the 32-bar song form. The song form and its chords provide the
chorus form with choruses that are strong, independent sections of 32 bars. The song form and the constant harmonic development contribute to a direction within each chorus that is not resolved until the beginning of the next chorus, where the development starts all over again.

After the head and the Transitional Chorus, nine 32-bar choruses and one completely different chorus make up the solo. The first nine choruses are based on the song form, and in several of the choruses, we have found elements from the original formal elements. This includes the clear symmetrical division of phrases into 16, 8, 4 and 2 bars. In some of the choruses, Fitzgerald uses sequencing of the phrase in bb. 1–4 or a repetition in the second half chorus of the theme from the first half chorus. In Chorus 5 all of these elements are obvious.

Although the harmonic development lasts for 32 bars, there is an immediate, experienced emphasis on the 16-bar half chorus in Fitzgerald’s solo. This was supported by the analysis, which showed that the transitions, bb. 13–16 and 29–32 in every chorus, stand out among the other phrases. They conclude the phrases that have been part of the chorus up to the transitions, as well as being specifically directed at introducing the next half chorus. There is no doubt that there is a lot of tension in these phrases. At the same time, the transitions are found to have in general clearer motivic ideas and a more directed melodic structure than the rest of the solo. Although all the transitions conclude and introduce a half chorus, the analysis also showed that Fitzgerald has different characteristics for the half-chorus transitions (bb. 13–16) and the ending transitions (bb. 29–32). This way the 32-bar chorus is emphasized, but this is an analytical insight that is somewhat difficult to hear when listening to the solo.

The analysis has identified phrases within each chorus, which are different (such as transitions) or similar (through repetition and sequencing). They are discovered, but why they end up having the function that they have, that is, how they affect my expectations through building tension, is not explained so far.

**Harmony and/or tension**

The harmonic analysis of the lead sheet told that internal modulations played a key role in the harmonic development of the song. The lead sheet has a harmonic development that starts at the main tonic of Eb major, through intermediate
modulations to Db major and Cb major before arriving at the cadence that prepares for the harmonic development to start over again. The melody emphasizes the intermediate modulations and is moving when the harmonic movement rests and is resting when an intermediate modulation is prepared. After the building of tension during the first half form, we get a short resolution as we start the next half form on the tonic and the harmonic development and its building of tension starts all over again. At the end of the song form, tonal resolution comes at bar 31 and the development is completed.

Throughout her solo, Fitzgerald follows the melody in the lead sheet several times and emphasizes new scale notes as the intermediate modulations arrive. She uses many chord notes and emphasizes the rapidly changing intermediate keys. Above all, what the above analysis shows is how she uses the intermediate modulations and the formal dominant functions to support the harmonic movement forward. Instead of using features contradicting the form to create tension, she uses notes and melodic motives that are safely within the harmonic frames of the song. The transitions are adapted to the melodic content in the half choruses that precedes and follows. In addition, they consist of notes that are consonant with the formal dominant function, Bb.

Chorus 10 has very simple harmonic content. It does not have any harmonic development in the way the other choruses have the chords from the 32-bar song form. The solo maintains Eb as tonal center, but scale material is elaborated with chromatic material, demonstrating the solo’s expanded tonal freedom in this chorus. Harmonically, this could result in a long period of resolution and rest, but that does not correspond with my experience of the section. On the contrary, Chorus 10 sounds exciting to me and leads to resolution first when the Coda arrives.

**Large-scale development**

The analysis could tell us that the sections into which the performance is divided also contribute to a large-scale development. First of all, the similarity in the organization of Choruses 1–9 make these choruses come together as one structural part of the solo. The organization includes division into phrases, transitions that divide choruses and half choruses and the harmonic development of every chorus. The different Chorus 10 and the fact that we do not return to this organization support this notion of Choruses
1–9 being one large structural part. Chorus 10 becomes a somewhat independent structural part, on which the resolving function of the Coda seems to depend.

Secondly, in the one large section of Choruses 1–9 we have Chorus 5 in the middle. This chorus resembles the original song form the most. The Chorus 5 theme, which is the basis for this resemblance, is melodically and harmonically very simple. It is especially different from the themes of Choruses 4 and 6, which surround it. The characteristics of Chorus 5, as well as the extraordinary virtuosity of Choruses 4 and 6, make these three choruses an exciting contrasting middle chorus group.

Finally, looking at the transitions of all the choruses, the analysis proved it possible to group Choruses 1–3 and 7–9 as well. The half-chorus transitions of Choruses 1–3 have similar melodic movements. The ending transitions of Choruses 1–3 have an overall movement, which is completed in Chorus 3. The middle chorus group also has a common movement in the ending transitions of the three choruses. The movement starts with a downward direction in Chorus 4 and end with phrases centering on Bb4 in Choruses 5 and 6. The transitions in Choruses 7–9 center on the tonic. With the climax in the middle group, Choruses 1–9 as a structural part turns out to have a symmetrical ABA form. Conclusively, the ending transitions of Choruses 3, 6 and 9 are similar, and give coherent endings to the three chorus groups. The concept of a symmetrical ABA form is, in this performance, best suited as an illustration of how I have found more melodic contrasts in the middle chorus group. It is less suitable as a description of the true experience of a large-scale form in the nine choruses. In addition, the ABA label disregards that a much longer chorus, i.e. Chorus 10 follows and leads to the end of the solo in the Coda.

The problems

The analysis in this chapter still leaves us with some questions unanswered. The largest structural part, Choruses 1–9 builds up a lot of tension. This tension is, however, not resolved during this structural part. Neither is there any resolution in Chorus 10, which only sustains the tension from Choruses 1–9. Although making a lot of sense of divisions and sections, melodic repetition and difference in the solo, this analysis does not seem to get a complete grasp of what creates form in the solo through tension and release. Why do I experience tension being at its highest in the phrase with the clearest and most coherent melodic structure? Or, to put it in another
way, how are her consonant notes and apparently simple motifs increasing the tension that comes from the harmonic development?

Throughout the performance, the solo is constantly pushing forward and Fitzgerald’s melodic virtuosity must be relevant to this sensation. The drive forward is clear in the choruses at any point of the harmonic development. How can the solo never rest, even though we frequently return to the main tonic, and have a complete structural part with a stable tonal center; Chorus 10? This brings us to the problem of this structural part itself. Chorus 10 does not fit into any of the conclusions so far, and the transitions that have proven so important to the experienced form of the solo are completely absent in this chorus. The thesis will now move on to a new analysis with a different approach to see if there are answers to be found to these questions.
Chapter 3 Rhythmic Analysis

The analysis in the previous chapter has provided important insight into how Fitzgerald’s scat solo is organized. The organization and division into sections are important to our experience of the form. In addition, the structural analysis easily identified sections and periods that stood out from the rest. This includes the theme of Chorus 5, many of the transitions and Chorus 10. However, in my experience, these distinctive sections and periods contribute to the form of the solo in more ways than just being different. They seem to affect the level of tension and, thus, the listener’s expectations, surprises and disappointments. This chapter will aim to fill some of the gap between the analytical insight so far and the experience of the performance.

In Ella Fitzgerald’s performance of “How High the Moon” (1960), one of the most striking features is her melodic virtuosity. The rhythm and tempo is an essential part of the virtuosic impression of her scat singing, which is characterized by a quick succession of precise notes and leaps. The temporal and tonal precision in a high tempo is often mentioned among Fitzgerald’s extraordinary skills. Fitzgerald is constantly pushing the solo forward, but it is yet to be explained what it is about her virtuosity that does this. Furthermore, the solo is pushing forward in phrases where Fitzgerald is less melodically virtuosic as well. These phrases, such as the theme in Chorus 5 and the transitions also build significant tension and an expectation for something to follow. A rhythmic analysis is a natural step forward to further understand the form and experience of the solo. To approach the questions left unanswered in the “Introduction”, this chapter will start by presenting some of the most common principles for rhythm in bebop and swing music, followed by a presentation of the methods and terminology used in the rhythmic analysis.

Rhythm in Jazz

As in jazz harmony and form, there is a huge diversity in rhythmic practices in jazz music. This is due both to the diverse origins and influences of the music, as well as the large number of different jazz styles that have evolved. In the jazz band era, it became common to refer to the rhythm section of a band. The rhythm section included the drums, the bass and the piano and/or the guitar. This section maintained the constant rhythmic and harmonic accompaniment as the band and soloists played the voicings, riffs and melodies. The smaller jazz groups that emerged in the swing and
bebop eras often consisted of the instruments of the rhythm section as well as one or more melodic instruments. This has laid the foundation for common rhythm practices in jazz, such as the marking of periods and breaks, as well as determining subdivisions and accentuation. After a century of increased diversity in the jazz genre, a correspondingly increased diversity of rhythmical practices can be found in jazz music. In the swing and bebop tradition, however, there is no doubt that the foremost associated rhythmic characteristic is the swing with its uneven eighths.

Rhythm and tempo can be crucial in distinguishing one jazz style from another. However, it is the harmonic characteristic of jazz styles that is most commonly documented and verbalized. Contrary to jazz harmony and form in lead sheets and performances, jazz rhythm is considered more of a choice for the performer. This has to do that rhythm is a performative parameter and, as Middleton (1990) suggests, the traditional notational means and terminology is not as suited for representing rhythmic details as details of for example harmony. However, the choice of rhythmic principles in the performance gives the listeners and the performers a certain set of expectations. It is against these expectations the rhythmic content is measured and evaluated. Barry Kernfeld (1995) uses the listening experience as starting point for his book *What to Listen for in Jazz*. Therefore, the book includes topics from the performance practice, such as rhythm, performance forms, improvisation and sound. Kernfeld mentions the important swing rhythm, and points out that the swing is most often not notated. The same goes for phrasings and accentuations, which are very important to the expression of style and individual artistry.

The rhythmic information in the lead sheet of “How High the Moon” is limited. The reason for this is not so much that the notation does not contain rhythmic information, rather than the fact that the important details in practice differ from what is notated. The lead sheet offers a sketch of an overall rhythmic organization, such as division of phrases. The lead sheet of “How High the Moon” also contains further rhythmic information that is likely to have impact on a performance. The pulse is quarter notes and there are four of these in each bar. The melody is written with articulated quarter notes that are rarely subdivided. Where the quarter notes are not articulated, we are dealing with sustained notes that start on the first downbeat of a bar. The phrases and motifs constitute a symmetrical division, which is confirmed by many of Fitzgerald’s phrases. As we know, the rhythm in the lead sheet is not meant to be an accurate
instruction. In any performance, rhythm is an aspect that strongly relies on the competence and judgment of the performer (Cook, 1987, 227). The rules and governing principles for rhythm that arise from something other than an established theoretical paradigm and notation; they are defined by performance practice.

*Rhythm in performance*

In a jazz performance, the rhythm section or the band contributes to the formal division of a performance into sections and periods and the hierarchy of these. Periods within the symmetrical division, such as a four-bar phrase, are marked by a rhythmic break at the end or by a stronger hit on the bass drum at the beginning. Usually, the bigger the section, the more pronounced is the marking. In the performance of standard songs in the swing and bebop tradition the rhythmical framework often seems quite repetitive, straightforward, and symmetric. Such jazz styles have this in common with contemporary and later groove-based music. In swing and bebop, uneven “swung” eighths are an important characteristic of this repeated rhythm (see “Swing” below).

At the same time, there is a liberal approach to the form and rhythmical distribution of solos in jazz music. This became gradually more common at the beginning of the bebop era. In swing performances, the form of a solo resembles a song form with, for example, 16 bars equally divided into four phrases of four bars each. Charlie Parker in particular liberated the approach to phrasing, sometimes even “turning the beat around”, meaning that his solo moved the experience of downbeats to other places than the positions in the lead sheet. If the band kept its original downbeat, as it was supposed to, the result was instability. This resulted in a significant resolution when the solo returned to the original phrasing.

Anne Danielsen (2006) has done extensive analyses of rhythm in funk music. The analyses are done on structures of grooves and on a micro-rhythmical scale. Danielsen explains that a repeated groove, such as a rhythmical pattern of one, two or more bars, creates internal structures with the performers and listeners. These internal structures work as a framework generating expectations. The articulated rhythms will create degrees of stability depending on how much they correspond or not correspond to this internal structure. If the rhythmic pattern contradicts the internal structure, for example by introducing a competing downbeat as Parker did, it will destabilize the
groove. This creates tension, which demands resolution. Resolution is not necessarily a stand-still, but rather a return to the stable groove.

**Rhythm and the Vocal Instrument – Methods and Terms**

The vocal instrument is a very flexible instrument. As it is the subject of this analysis, it is necessary to comment on its diversity in particular. There are a lot of nuances in the production of sound in the vocal instrument, which can be perceived as articulation of rhythm. This includes, above all, shift in syllables or phonemes. In a vocal performance, whether it is with nonsense syllables, as in the case of “How High the Moon” (1960), or lyrics, there are many different sound signals in one note. The word “start” gives one signal when the “s” is pronounced, then another when the production of “t” stops the “s”, and another when “t” turns to “a”. At the end of the word, we have the “r”, the start of the production of “t” and then the articulation of “t”. These sounds give the listener rhythmic information in addition to, for example, changes in pitch and loudness. The placement in time of a sound can be decided by physical or technical limitations, as well as conscious and unconscious sense of rhythm. In the high tempo of “How High the Moon” (1960), there is not much room to misplace a rhythmical detail. Because of the flexible opportunities in the sound production, the rhythmical information in the solo can come from many different sounds. It is important to be aware of this when performing a rhythmic analysis on a vocal performance.

The starting point for this analysis is the questions that were left open in the previous chapter. One important distinction between jazz rhythm and jazz harmony and form is that where musicology and musical analysis had a terminology and paradigm in which it was possible to describe and understand harmony and form, it cannot provide the same for rhythm. The methods and terminology in this chapter are borrowed and adapted from analyses and works done in specific areas of musicology, in particular Danielsen’s work on funk music (2006).

**Swing**

A rhythmical analysis of a bebop performance by Ella Fitzgerald has to deal with *swing*. Swing is often defined as a triplet subdivision instead of a duplet subdivision, but this is inaccurate. Most swing rhythms have a subdivision that is somewhere in between even and triplet eighths. This is decided by the performers, and may vary
from band to band, individual to individual and performance to performance. Some have a lot of “swing”, while others play the eighths almost evenly. In bebop, it continued to be a question of individual style, but with a slightly higher occurrence of more equal division. Research (Friberg, 2002) has shown that high tempo also tends to even out the eighths. There are many opinions as well as theories on what actually creates swing. As with rhythm in general, it has to do with timing, interaction, communication, dynamics and accentuation. In his article “Searching for Swing: Participatory Discrepancies in the Jazz Rhythm Section” (1995), J. A. Prögler suggests that swing is “somewhat ‘out of time’” (1995, 49). Swing can emerge from perfect timing in a band, or imperfect timing in a band. It depends on both individual and context. In the words of Kernfield (1995, 12): “Swing in its broadest sense involves the simultaneous interaction of rhythmic components of articulation, duration note placement, contour, dynamics, and vibrato”.

According to the New Grove Dictionary of Jazz (ed. Kernfeld, 2002, “Ella Fitzgerald”), one of Ella Fitzgerald’s talents that made her stand out as a vocalist was her impeccable sense of swing. In general, micro-rhythmical details, such as whether notes are played before or after the beat, have a huge effect on the experienced rhythm (Danielsen, 2010). It is important to be aware of the level of detail that can affect the swing. The details can be seen in different factors; the context, in genre or in the actual performance, the interplay, the individual, the timing and dynamics, the accentuation and timbre. Much of what you would expect from a swing performance stays evident throughout Fitzgerald’s performance. The swinging forward, which Fitzgerald participates in, is crucial to the experience of the solo as a swing performance. As this thesis aims to understand how the musical elements in the solo contribute to the form, the rhythmic analysis will try to isolate the element in which the swing is played and experienced.

The reference structure in this performance (Danielsen, 2006, 46) is quarter notes. That is the time signature of the song and, more importantly, it is within the quarter notes that the “swing” is carried out, with the subdivision in eighths. This latter aspect makes the quarter note the smallest temporal unit that more or less constantly has the same length in the performance. In the solo, which is in the bebop part, it feels as if the downbeat is on the half note. However, the swing is still carried out in the quarter
notes, which is the pulse. The half notes are referred to as downbeats, and the quarter notes in between as upbeats. The eighths between the quarter notes are the offbeats.

**A performative principle**

Performers of notated music are expected to know everything the notation does not tell (Cook, 1987, 227). Which set of performing principles the performer is expected to know depends on the musical style, tradition and culture. In jazz performances, the performer is left with almost endless freedom to create the meaning through the manner of the music. This especially concerns the typical performative areas, such as rhythm, accentuation, articulation, dynamics and sound. Whereas the harmonic context more or less can be read in the lead sheet, the rhythmic context resides in performance. This does not mean that, for example, harmonic content is unaffected by performance or that the theoretical concepts are enough to represent and understand it. It simply means that the theoretical concepts of harmony are so widely known and practiced among listeners, performers and analysts that it remains a meaningful tool of pedagogy and communication of music.

For understanding the governing rhythmic principles for this performance, the analysis will start with an investigation of the accompaniment and the performance by the complete band. However, throughout this chapter, it is necessary to frequently return to defining the governing principles at the same time as the performance is analyzed with regard to the same principles. This naturally follows on the fact that the performance itself decides the principles by which the rhythmical performance is analyzed. The more that is discovered about the rhythmical elements of the performance, the more is discovered about the rhythmical principles or structure, and vice versa. An important part of this analytical dualism is the identification and continuous adjustment of the internal structures.

**Internal structures and instability**

In her book *Presence and Pleasure: The Funk Grooves of James Brown and Parliament* (2006), Anne Danielsen does rhythmical analyses of grooves in funk music and shows how the grooves are structured, performed and perceived. Even if Danielsen’s book particularly focuses on funk, there are several theoretical and methodological principles, which are relevant when dealing with other music as well, for example bebop (bebop and funk have musical and cultural roots in the African-
American tradition). Danielsen’s main point is that in performance and perception of a groove the rhythmic impulses combined with your musical (and cultural) background will create an internal structure that the groove plays on. This internal structure will both give a framework within which the groove can be organized, and provide references which the groove can confirm (and be stable) or contradict (and become unstable). An important task for the rhythmic analysis of this thesis will, therefore, be to identify possible internal structures and how the solo confirms or contradicts them.

To find the internal structures, and what contradicts them, the analysis must investigate the hierarchy between the rhythmic impulses. In swing, it is common that the soloist has the most freedom to challenge internal structures (hence, when Charlie Parker turned the beat around, the rest of the band had to stick to plan). However, the rhythm section often plays outside the beats as well, with fills or breaks to compliment the solo/melody. Such fills are essential to the style, as they provide rhythmic accentuations as well as filling in where the soloist creates space. At the same time, it is important that the accompaniment leaves space for the soloist to fill. This interplay between a soloist and the band is important to the experience of the form in the solo itself. In addition, the interplay demands an agreement in the band on the hierarchy of the layers in the groove. If the main pulse is heavily accentuated in the band, a heavy accentuation of offbeats in the soloist can create tension.

When a possible internal structure is identified, the analysis can discover how the solo relates to this. Is it confirming or contradicting? Richard Waterman (1948, quoted in Danielsen, 2006, 46) uses the term offbeat phrasing on the type of melodic timing where the accent is placed not on the downbeat and upbeat, but on the offbeat. In this thesis, it will be referred to as syncopation or if repeated over a long stretch of time, as counter-rhythm. As mentioned, both melodic phrasing and the accompaniment can contribute to the offbeat layer of rhythm. The heavy, first downbeat of a bar, i.e. the One, is easy to find, but it might not be emphasized very strongly. The ambiguity caused by a detectable metric pulse in combination with offbeat phrasing may be an important source of instability. However, if the counter-rhythm becomes too dominating it will take over the role of the main pulse. If the counter-rhythm becomes as accentuated as the main pulse, they will mix, become stable and thus dull (Danielsen, 2006, 67). Neither of these scenarios would ensure what the counter-
rhythm really is; it is a source of tension and uncertainty against the main pulse, leaving the listener longing for the reference rhythm to stabilize. Without a clear opinion on where this stabilizing (i.e. the main pulse) is placed, a lot of this tension will disappear or feel undirected, respectively.

The analysis will begin by investigating the rhythmic principles of the performance and how they may create internal structures in the performers and listeners. As for the sections in the solo that are pointed out as particularly interesting for the following analysis, the analysis will continue by searching for instability through counter-rhythms and syncopations. As mentioned, it is likely that the analysis will have to return to the question of internal structures as more information on what is stable and unstable appear.

**Detecting rhythmical details**

There are many rhythmical details that are likely to affect the experience of the solo. One of these is the swing. As the song definitely swings all the way through, Ella Fitzgerald’s notes must have some consistency in where they are placed and how they are accentuated. What is creating the swing feel? To investigate this we need to look at how she distributes the time of a quarter note between two eighths as well as the nature of the relative dynamic. In addition to the continuous swing, syncopations and counter-rhythms can be hard to pin down, especially in such high tempo. Nevertheless, these details are important to carry out this analysis.

There are simple software programs that help slow down the sound without altering the pitch. In addition, spectrograms can be used to get visual representation of pitch and timing. Such tools make it possible to better grasp details, which are not precisely detectable in regular listening. It is important to point out that this thesis never uses spectrograms or manipulated records of the performance in the analysis. They are mere tools to help decide more accurately what is heard on the original record.

**Rhythm in “How High the Moon” (1960)**

The source for understanding the rhythmic principles in the performance is the performance itself. In repetitive genres such as swing and bebop, many of such principles are articulated early in the performance and are consistent throughout. In performances such as “How High the Moon” (1960), the band’s accompaniment
provides the content in which these principles can be found. It is common to associate rhythmic details with the drums in particular, but also in the performance of the other instruments. The rhythmic analysis will, therefore, begin dealing with the consistent rhythmic information that is found in the accompaniment. From there the analysis will continue with the most characteristic feature, the swing, before turning attention to the vocal performance in particular. However, to introduce the analysis, a brief comment on the sections of the performance preceding the actual solo follows.

In the intro, before Ella Fitzgerald starts to sing, the rhythm is unmistakably swing as the drums start and the ride marks the feel. The eighths swing and they are clearly unequal. When she delivers the head, Fitzgerald swings the melody in time with the ride. During the performance the unevenness in the eighth subdivision is varied. After the head, they “double” the tempo and the relative length of the eighths becomes more equal. With Fitzgerald’s roots in mind, this is expected if one sees the head as a swing performance and the double tempo part as bebop.

The rhythmical principles governing the performance are perhaps easiest to find in the accompaniment, where the role of the different instruments usually is easy to find. This can give a good overview of governing principles, before focusing attention on the vocal solo alone.

The *accompaniment*

As already mentioned, the ride cymbal immediately establishes the swing groove. It is very common in swing/jazz music that the swing groove comes from a cymbal; thus, it should be familiar to most jazz listeners. This rhythm usually consists of marked quarter notes with the occasional eighths (Kernfeld, 1995). This remains consistent throughout this performance of “How High the Moon” (1960), thus providing a stream of repetitive subdivisions that different rhythmic patterns can be played on. Throughout the performance, different drums play the swing groove. The hi-hat and ride is most commonly used, but the snare drum also marks the swing now and then. The tempo is very fast in this performance. The accents on the ride are sometimes hard to distinguish from one another. This is, of course, also due to the fact that the ride sound has a long sustain if the player does nothing to mute it.

There is no doubt on where the downbeats are. They are marked by several of the instruments in the band. Generally, however, it sounds like there is more weight on
the upbeats (second and fourth quarter), and the offbeats. Thus, the groove resembles a backbeat, which usually gives the music a drive forward. The downbeat, bars and phrases are manifested as structural units by the accompaniment. All the instruments support the symmetrical division. The bass drum can be heard at the first downbeat of every fourth bar and, in addition, at every second bar where tension builds up (for example in the transitions and the bars preceding them). The double bass also plays a standard jazz pattern of articulating every quarter note, and some of the offbeats. Like the bass drum, the double bass also emphasizes the first downbeat of every other bar in some of the transitions. This ends up being a contrast to not articulating any of the first downbeats and their preceding offbeats, which works as a pick-up, elsewhere in the chorus.

Both the guitar and piano has a riff-like playing where one motif is repeated throughout one or more phrase or chorus. Sometimes this means sustained or shorter chords on downbeats, upbeats and anticipated downbeats, other times there are short figures of eighth notes of broken chord that are repeated or sequenced. Neither the piano nor guitar is experienced as particularly dominating in the audible performance. This gives them a lot of freedom to emphasize the metrical pattern as well as play counter-rhythmic figures. There is a lot of syncopation in the piano and guitar and many chords are played offbeat, yet most often the first downbeat of strong bars is articulated. The piano and guitar are most audible when they function as fill where the soloist has a break, e.g., between phrases and motifs. They, thus, support the form the solo creates.

The accompaniment serves two functions for the solo. One is to maintain the reference structure (the pulse) through the continuous groove and the symmetrical division with other marks. The other function is to establish the subdivisions, both in the continuous groove and in temporary, counter-rhythmic riffs. The continuous groove is the swing, which is essential to such jazz and is, of course, one of the things that Fitzgerald had an impeccable feeling for. Since it is so dominant in the genre in general and in this performance particularly, the content of the swing in “How High the Moon” (1960) needs to be further investigated.
The swing motif

Listening to any of the choruses, the solo never feels at a standstill. Even outside the transitions and where tension builds up, the music is moving or, rather, swinging forward. It is common to think that the triplet subdivision (Kernfeld, 1995, 5) is itself the swing. However, we have established that there is a lot more to it than that. When you listen to the performance of “How High the Moon” (1960) it is not very easy to perceive what exact relative length of the eighths the band or Ella Fitzgerald has. However, there is no doubt to the listener that the music is swinging forward at every moment of the performance. So where does the sensation of swing come from, and how does the solo participate in the creation of this trait?

The cymbal’s part of the groove is the most characteristic part of swing and, thus, a good starting point. The cymbal mostly accentuates every quarter note as well as every other offbeat. Both the temporal and dynamic qualities of the groove affect the sensation of rhythm. On all instruments, there is a common, repeated pattern for both accentuation and note length. The heaviest accent seems to be on the upbeats, which makes it feel like the beginning of the motif of which the groove consists. From there it goes through the offbeat, to the downbeat. A new repetition of this motif starts on every upbeat. This motif is referred to as the swing motif.

![Image](Picture 10. Illustration of the different beats and the swing motif in a bar.)

The upbeat is the heaviest accent. In addition, the upbeat sound is muted shortly after the attack. This means that before the offbeat is played, there is a short period where the sound of the swing motif is absent. This short silence seems to give even more emphasis to the upbeat accent. The muting of the sound is a choice of the performer and this way of playing the upbeat is done almost identically throughout the performance. Sometimes, for example in Chorus 10, the upbeat is more clearly muted quickly after the attack. This is probably already important to the swing, but what is more important, is that it becomes and stays important to the swing in this performance.
The eighths in this performance are almost equal in length and the tempo is so fast it is hard to decide the actual relative length of two eighths in a quarter. Listening to a slowed down recording tells that the second eighth is a bit shorter than the first, as expected. There is no doubt that the groove is “swinging”. The offbeat eighth, which is played between an upbeat and a downbeat, is lighter than the heavy upbeat. In addition, the offbeat, contrary to the upbeat, is allowed to ring into the next attack, which is on the downbeat. The fact that the offbeat is allowed to ring into the next attack makes it appear almost as an anticipation of the downbeat. However, the downbeat is accentuated in every repetition of the motif, but remains the lightest of the three beats. The downbeat is also allowed to ring till the next attack. Since the upbeat that follows has a much heavier attack, the sustain of the downbeat works as an emphasizing pick-up to the upbeat.

The swing motif can, therefore, be described as a movement from the upbeat to the downbeat through an eighth note. This movement has a descending accentuation from the quickly muted upbeat, through a ringing offbeat to a ringing downbeat. The descending dynamic makes the offbeat essential to the experience of the downbeat. The offbeat anticipates the downbeat, and comes out as more important. The downbeat is nevertheless articulated. Furthermore, the downbeat delivers a brief rest through being sustained, and makes sure that there is a symmetric and familiar pulse in the groove; the quarter notes. The upbeat clearly has the loudest attack and is muted quicker than the other beats. The muting creates a big contrast to the loud attack. At the same time, the offbeat and the downbeat have a lower attack. On these beats, the cymbal also is allowed to ring so the volume descends very slowly, almost muting the following attack. This makes the downbeat more inaudible than the other attacks and, therefore, does not offer a full resolution, but rather demands that the motif is repeated. The rest of the band to a large extent confirms this “hierarchy” of the beats in dynamics and phrasing.

No matter how subtle the downbeat attack is, the internal structure created from the repeated swing motif leaves a steady downbeat and a sufficient confirmation of where the stable metrical structure is.
Rhythmic accentuation in Fitzgerald’s singing

As already found, Ella Fitzgerald partly supports the periodic structure the lead sheet constitutes. Her phrases give a symmetrical division together with the accompaniment. She also contributes to the swing in the performance. This contribution has to do with both her timing and accentuation.

In the beginning of Chorus 1, Ella Fitzgerald uses the vocables “dee-yoo”, which largely consists of vowel sounds, and the exact placement in time is hard to decide. Nevertheless, the temporal placement of the different sounds and phonemes is important to Fitzgerald’s sense of swing. The feeling of swing is present right from the start where the above vocables are used. The change in sound from her vocal tract happens so quickly, repeatedly and timed with the accompaniment, that she is able to swing with sounds that can be hard to distinguish from one another. With these particular vocables, the “dee” is on the offbeat, giving the offbeat a consonant attack as opposed to the following beat. Her singing here, thus, contains a motif of an offbeat and a beat, which gets its proper start with the “d” phoneme at the start of the offbeat.

Many times, Fitzgerald sounds like her attacks are well prepared. Sometimes, the sounds are so well prepared that you can hear the sound starting before the beat, yet the actual pitch and vowel stabilizes closer to the beat, on it or right after it. In general, she tends to prepare the beginning of the phrases with a slide in pitch, thus, confirming the preparation of the downbeat in the swing groove. Mostly, her tonal attack arrives on the beat or ahead of the beat. This means a lot of sound producing activity has been done prior to the beat itself.

Several times during her performance, Fitzgerald sings sounds that are not easily grasped within the traditional forms of the representation of music. In the transcription, I may have notated a full-length quarter note, because that is the pitch she sings and the length of which it is sustained, although there is important rhythmic information that is not included. With help from a subtle change in pitch, through accentuation or use of a consonant or different vowel a rhythmic signal is given that is not so easily notated or at all dealt with in terms of traditional treatment of musical material. In addition, some of these rhythmical implications in experience seem also to implicate a change of pitch that in fact is not really audible. When we arrive at bar
5 in Chorus 9, we get a completely different example as Fitzgerald sings “A-Tisket, A-Tasket” (Fitzgerald, 1938) with lyrics over four bars. Those lyrics have more explosive consonants and more distinct motifs that make the rhythm more apparent again.

Where the swing motif in the performance in general consists of an upbeat, an offbeat and a downbeat, the solo constitutes its own motifs for creating swing. These motifs are created by vocables that are repeated for a short while, a phrase or even longer. The solo’s shorter motifs support the hierarchy in the swing motif. In addition, the effective production and preparation of sounds in Fitzgerald’s vocal tract, makes the solo support the temporal placement of the beats. It is easy to imagine that a slower or inconsistent transition from one sound to another would challenge the swing feel. This is also experienced in phrases where the solo uses sounds and pitches that cannot be easily placed.

The Chorus in the Middle

So far, we have arrived at some guiding principles for how rhythm is played during this performance of “How High the Moon” (1960). In the structural analysis, we found that Chorus 5 has a certain role in that it with its form gives an overall symmetrical division of the solo up to Chorus 10. Chorus 5 stands out from the rest of the solo in that the phrases have more rhythmic, riff-like characteristics, rather than the virtuous, swinging lines that characterize for example choruses 4 and 6. There are many interesting features in Chorus 5 that need scrutiny. The melodic structure of the phrases is very different from the rest of the solo. The first phrase, that goes through bars 1–4, and is sequenced in bars 5–8, is in essence rhythmical rather than melodic. The fact that the chorus with the most repetition is also the one with the most rhythmical theme makes this an interesting starting point for exploring how Fitzgerald uses rhythm for creating form in her solo. The analysis of this chorus will start with how the phrases are constructed. During the whole solo, the phrases seem to begin and conclude with tension and release. Since Chorus 5 contains typical examples of the general periodic division in Fitzgerald’s solo, its phrases can possibly give answers to how this is done. The analysis of this chorus will correspondingly go through the different phrases in this chorus. First, we will look into what I consider
the theme of this chorus, bars 1–8 and 17–24. Secondly, we will look at the phrases in bars 9–12 and 25–28 and the transitions.

*The theme*

![Transcription of Chorus 5 theme phrase.](image)

After a rhythmic pattern of sustained notes, the theme phrase is completed with a descending, broken triad in eighths and then a sustained note on the first downbeat of the fourth bar. The descending triad is a minor chord of the preceding dominant, and the sustained note on which the phrase ends is the minor third (which was a major two bars before). The tonal content in these phrases is very consonant with both the chords and melodic expectation derived from previous choruses and the head.

The sequenced phrase consists of five sustained notes, distributed over three bars, and then a shorter motif that fills out the third bar and ends on a sustained note on the first downbeat of the fourth bar. The fast tempo leaves only two beats per bar. Because the guitar is playing the figure alongside the solo, there is a clear emphasis on the rhythmical figure. The first three notes are placed on the downbeats, making it a very metric motif compared to what the solo otherwise contains. The fact that the notes are sung with a certain accentuation and with an even, long period between them makes the first phrase of the chorus stand out immediately.

After the three notes on downbeats, the solo starts a syncopated rhythm. The three first notes have established an expected accent of the downbeat, but the fourth note arrives sooner. The fourth note is first perceived merely as an anticipated fourth downbeat. However, as the fifth is sung, the feeling is that the pace is higher, and that the solo has introduced a counter-rhythmic pattern. The counter-rhythm consists of a pattern that groups the eighths into 3+3+2 rather than 4+4, which is the case in most bars. She does not sing the first downbeat of the third bar, but instead sustains the last note of the melodic cell, which was accentuated on the upbeat before. The sustain has a dynamic development and becomes stronger. We have a four-over-three figure, but the last note of the figure, which should be on the offbeat after the first downbeat of
the third bar, is not accentuated in the solo. However, at the first beat of the third bar, the band returns to the swing groove.

![4:3]

*Picture 12. Illustration of the four-over-three figure in Chorus 5 theme. Small eighth notes marking the missing accent.*

There are two important forces at work in the phrase, which affect the rhythmic experience up to this point. As we know, a counter-rhythm often destabilizes and demands resolution. The first force is the downbeat pulse being challenged by the solo’s four-over-three pattern. The latter pattern manages to destabilize the phrase and is not resolved in the solo. However, the swing groove, which, as we know, confirms the main pulse, takes over in the band from bar three. At the next chance it gets, in the pick-up to the fourth bar, the solo confirms the stable pulse. Eventually the phrase ends on the first downbeat of the fourth bar.

The second force is simply the speed. This force presupposes that we have one melodic idea in this phrase. The idea is sustained, strong notes that are different from the rest of the solo. This idea is prolonged during the phrase, as the solo approaches its usual characteristics of fast succeeding notes. By the sustained notes getting shorter during the phrase, the idea is simply speeded up, before the vocal finally returns to the original eighth note virtuosity in the concluding motif of the phrase. In this context, the descending triad at the end of the phrase represents a compromise between the original downbeats and the counter-rhythmic pattern, consisting of two downbeats and one offbeat in between.

Both these forces suggest that the phrase has a direction. The phrase contains tension and release. None of these forces rely on tonal tension and release, but on the rhythmical content. It is clear that both the harmonic and melodic simplicity makes the chorus stand out. In addition, the theme phrase has a development dependent on rhythmical tension in the syncopations. However, the phrase seems to contain tension and demand release from the beginning, long before the counter-rhythm is introduced.
Why is it that we experience direction during the whole course of the phrase? We will return to this question after looking at the remaining phrases in Chorus 5.

**Transitions and their preparations**

The analysis of the form in the lead sheet showed that the preparation for a new half form lasted for seven bars. One of the important characteristics of the transitions in the vocal performance is, on the other hand, that it confirms the four-bar phrase structure and the symmetrical division. Most of the time, the phrase structure contradicts the long harmonic preparation of the tonic. Just as the lead sheet, Chorus 5 has different melodic structure in the theme and the last two phrases of the half form. This clear separation makes the next to last phrase appear more significant. For example, much tension is experienced at the end of bar 12, where the phrase ends on the offbeat after the first downbeat. This creates some space before the pick-up to the next phrase begins. However, the transition does not resolve this tension. The transition has the same melodic structure as the phrase before. Both have one melodic cell each of two bars, which is sequenced and that starts and ends with syncopations. The transition, thus, sustains the tension from bar 12.

As in the theme, these phrases clearly have direction and movement between tension and release, between syncopated rhythms and the pulse. The melodic cells in the last eight bars are also started with syncopated pickups. The syncopations, thus, wrap up the metrical structure. The metric confirmation in the transition also includes accentuation of the swing subdivision. By doing this, the transition, like the ending motif of the theme, compromises between the metrical structure and the counter-rhythmic tendencies. The alternation between the syncopation and the pulse, which is one of the forces at play in the theme, happens faster in the last eight bars. The fast alteration between tension and release increases tension in itself. We get very strong downbeats in every other bar, at the beginning of each melodic cell, because they are wrapped in syncopated motifs. The downbeats are not allowed to rest for long and the hinting of the strong downbeats increases the demand of resolution in a strong, final One. In bar 16, where the last melody ends, there is only space and suspense demanding release. This way of building tension becomes obviously useful, when the new repetition of the theme begins with the heaviest One during the whole solo. It seems that the rhythmical structures in the melody are used to create an eight-bar preparation of the repetition.
In the second half, bars 25–32 are different from the corresponding bars of the first half chorus. The phrase resembles the one in bars 9–12, but it is distributed out in a triplet quarters. The triplets in this phrase are not even, but the feeling is definitely, and perhaps therefore, polyrhythmic. Given that the subdivision of the pulse (quarter notes) is not triplet eighths, but rather slightly uneven eighths, the quarter triplets feel extremely counter-rhythmic. Fitzgerald slightly extends some of the downbeat and confirms the metrical structure, rather than singing a strictly precise counter-rhythm. The small emphasis of some notes gives a false feeling of resolution, and when the resolution is interrupted, the phrase becomes even less stable. This unstable phrase almost stumbles into the most metrical phrase we have had in a long time. The very metrical transition is, thus, destabilized from the beginning. Both half choruses in Chorus 5 show examples of how Fitzgerald uses the full course of the harmonic preparation of a new repetition to create tension in her vocal performance. This must be a very important reason for why the solo is experienced so periodic. The solo does as the lead sheet and makes sure that a new repetition of a chorus or a half chorus is in greater demand than the repetition of a phrase or a motif.

**Rhythmic tension in Chorus 5**

Throughout Chorus 5 we have phrases with different rhythmical characteristics. These different rhythmical patterns are experienced in different ways to create direction, tension and release. There are phrases of both metrical confirmation and tendencies toward counter-rhythmic patterns.

There is a significant alternation between the syncopation and the pulse/downbeats in the vocal melodic cells throughout this chorus. The analysis is made with the presumption that syncopations and counter-rhythm itself creates tension. Correspondingly, the prejudice is that metrical confirmation stabilizes the music. This would explain why the alternations between the syncopations and the pulse offer much excitement. However, the experience of the phrases in Chorus 5 is that tension and direction exist from the first downbeat of the chorus. In the first phrase, Fitzgerald goes from singing on the downbeat toward including syncopations on the upbeats and offbeats. The fact is that the four-over-three figure does not increase tension by being a syncopation. Rather, it feels like it is promising an approaching resolution from a tension that was created from the first bar of the phrase. What separates the first bar from almost everything else in the solo is the absence of the
swing motif. There is only the downbeat, which is the weakest part of the swing motif. The absence of the swing motif is a destabilizing pattern force. However, as more and more offbeats and upbeats are included, the swing motif is gradually more and more implied. The resolution is achieved when the swing groove starts in the band in the third bar, and is confirmed by the solo in the concluding motif.

In the phrase in bars 9–16, Fitzgerald accentuates the pulse, as well as opens and ends each melodic cell with syncopated rhythms. Helped by the constant swing groove in the accompaniment, these syncopated rhythms have several functions. First, they confirm the style of phrasing with the solo alternating between metrical and syncopated rhythms. Second, the syncopated pick-up increases the weight of the first downbeat on the bar, giving the phrase a direction from the beginning. In the continuation of the melodic cell, the pulse is accentuated and denies a proper confirmation of the groove. This contradicts the direction from the syncopated pick-up and extends its tension. Similarly, the ending syncopation leaves something unresolved and makes room for the next melodic cell. This is especially noticeable in bar 12, where the syncopation ends on an offbeat that is not part of the swing motif. The silence that follows is extremely tense. Third, the syncopated rhythm stabilizes the accentuated pulse since the shorter melodic cells in bars 9–16 are only occasionally and symmetrically “burdened” with the absence of the swing motif. Contrary to the theme, the last phrases depend on the swing motif from beginning to end, and the short absences of syncopations are “disappointments”, which build tension toward the transition.

A necessary conclusion to draw at this point is that it is not whether we have a metrical or syncopated rhythm that explains the level of tension. It is how far the music is from confirming the swing motif. The swing motif, including its subdivision and dynamic structure, as well as the openness and need for repetition is extremely important to the internal structure of the solo. When the swing motif is completely absent there is a destabilizing effect creating tension, while the direction toward resolution increases as it is more and more implied in Fitzgerald’s phrases. A total rhythmic resolution arrives only when both the accompaniment and the solo confirm it. Total resolution in this context does of course not mean a standstill. It means a stable state of being in the groove, as the swing motif demands repetition by being repeated.
Arriving at the swing motif as the most important internal structure in Fitzgerald’s solo has consequences as the rhythmical analysis continues. The triplets in bars 25–28 have a strong emphasis on the downbeats, and cover up the swing motif almost completely. It feels extremely staccato, and tension builds up as the quarter triplets are sung throughout the four bars. The extended downbeats give false hopes for resolution. When we finally stumble into the first downbeat in the transition it carries a lot of weight as a potential resolution for the existing tension. However, the swing motif is still absent in Fitzgerald’s solo and denies a stable groove. This tremendous suspense of tension has a clear direction toward the beginning of the next chorus, where she counters it with a long, melodically virtuous phrase of swing motifs.

**The Swing Motif and the Transitions**

From the structural analysis, we know that the harmonic development in the choruses emphasizes the openness of the transitions and turnarounds of each chorus. This creates a claim for resolution: There is a demand for a new chorus to start since the previous one is ending without resolving to the final tonic. As the rhythmical analysis has shown, this goes for the swing groove as well. It is constructed so there is openness in every repetition; one swing motif demands another to follow. This feeling of going forward seems essential to the form and gives each moment of the performance a sense of purpose. Musicians playing solo over the changes of a song use the scale material provided from the changes and, thus, support the openness and need for resolution that the changes provide.

The structural analysis leaves no doubt that the transitions are essential to the creation of form, both within each chorus and in the large-scale development. In the transitions we have a harmonic tension, which creates the need for a new repetition of the chorus. However, the structural analysis had trouble explaining how the solo creates tension, while containing consonant notes and apparently simple melodic motifs. The new insight into the swing motif as internal structure makes it possible to approach some of the other questions that were left unanswered in the previous chapter.

For example, in the ending transition of Chorus 3, Fitzgerald breaks out of the more melodically virtuosic lines that have dominated up to this point. Together with the band, she sings a rhythmical motif on the same note twice, which emphasizes the same motif with the chords in the chromatically falling turnaround. This ending
transition is identical with the transition ending Chorus 9, and has a similar character with the ending transition of Chorus 6. The transition of Chorus 3 contributes to the grand character of the middle chorus group; the beginning of Chorus 4 seems like a virtuosic climax so far.

Chorus 5 has in common with most of the transitions and Chorus 10 that the melodic structures are tonally quite straightforward. These structures are usually also dominated by rhythmic patterns in the solo or accompaniment. Chorus 5 is experienced with tension and release, with movement, form and drive forward. The ending transitions of choruses 1, 2 and 7 all have two bars of successive motifs of eighths. In these bars, the melodic and dynamic movement are clear from the low start to the high motif of the last two bars. Except from these six bars, the ending transitions have one thing in common; the swing motif never appears in its complete version. There are many phrases, which have counter-rhythmic patterns. However, all these fail to include a whole movement from an upbeat, through an offbeat to a downbeat.

Choruses 3, 6 and 9 play an important role in the large-scale development. Their rhythmic patterns are typical rhythmic breaks, and call for resolution through a new confirmation of the internal structure. At the beginning of this chapter, it was mentioned that the accompaniment in swing and bebop performances often marked the periods of 4, 8, 16 or 32 bars. By doing this, the music removes the swing groove and ends up with a lot of tension. The ending transitions of these choruses, pictured on page 46 constitute this with their rhythmic pattern and quite heavily mark the ending of a period and a larger section, i.e. the chorus group. This tension should be released when the groove starts again, at the beginning of a new period and section. However, as Choruses 2 and 6 are both succeeded by a new chorus group, the ending transition of Chorus 9 is succeeded by Chorus 10. The rhythmic tension built up during the nine transitions and the harmonic tension from the cadences get no final resolution before the solo introduces something completely different.

**Chorus 10: a Break, Resolution or Climax?**

“I guess I better quit, while I’m ahead”, Fitzgerald sings in the next to last phrase of Chorus 9. The ending transition is a repeated break, with no swing motifs and with a significant suspense of tension. Up till this point, the swing groove has pushed
forward and increased tension by being absent. In addition, the openness of the swing motif itself and the harmonic development have built up a lot of tension during nine choruses that has yet to be resolved. After the ninth chorus, instead of proper resolution, the solo enters a completely different section that can be perceived as both a break and a climax. Chorus 10 is longer than any of the other choruses and is different from the rest of the performance. In this deviant chorus, Fitzgerald no longer relies on the harmonic structure that has been the basis for the performance so far. The internal development of this chorus seems to come from rhythmic characteristics.

The structural analysis showed that the harmonic development through dominant relations that we know from the rest of the choruses is absent in Chorus 10. The temporal aspects of the swing rhythm are further altered in Chorus 10, leaving close to even eighths. However, the important dynamic characteristic of the swing motif is still evident and ensures the openness because of the weak One. This groove still needs to be confirmed in order for the groove to remain stable. Fitzgerald uses straightforward rhythmic content in this chorus and collaborates well with the swing motif in the drums. She uses syncopated motifs now and then as a tool of phrasing and not as an increase of tension. The first phrases of Chorus 10 prove that the interaction between the solo and the drums has a different ground for creating tension than was the case with the full band in the other choruses. Fitzgerald does not confirm the swing motif; rather she sings the One and the quarter notes. However, the swing motif in the drums is able to compete with Fitzgerald’s accents and stabilizes the phrase without confirmation in the solo. The fact that the vocal accents in these phrases have soft consonants in the word “high” and that Fitzgerald sings with less dynamic volume explain why the drums are able to dominate. The two tools for tension, tonal center on the dominant and absence of the swing motif are no longer sufficient to explain the form of the solo during Chorus 10.

The elaboration of the rhythmic material is what is striking particularly in an embodied listening experience. The interaction between Ella Fitzgerald and the drummer is important here. However, the rhythmical interaction in Chorus 10 is a bit different than with the swing motif. In Chorus 10, the rhythmical interaction and development happens on a larger scale, in the organization of the chorus and division of phrases.
A new organization in Chorus 10

Chorus 10 is longer than any of the other choruses and contains more phrases. In choruses 1–9, the form of the solo is dependent on the succession of choruses of equal length. However, there are other deviating qualities in Chorus 10 that are more significant to the form of the solo than its length. The chorus can be divided into parts, but these are based on experienced themes and phrases rather than on symmetrical divisions based on equal weight and length. In the beginning of the chorus, Fitzgerald prolongs the symmetrical organization from the chorus form. After three four-bar phrases with the word “high” as lyric, the symmetrical division is interrupted. At first, the fourth phrase is experienced as the need of a four-phrase theme, although with different characteristics. It has counter-rhythmical tendencies and Fitzgerald uses nonsense-syllables. However, as the next phrase appear it is clear that the fourth phrase started a new group of phrases. At this point, the drums have started participating in the marking of the phrases. Phrases six and seven have a bigger element of counter-rhythm. The drums end the phrases with an answer, and both the drums and the singer are back on the “correct” downbeat of the next four-bar phrase. The tendencies toward counter-rhythm do create some confusion. However, there is no obvious resolution when the One is found. It seems that the expectations from the internal structure has been disturbed on a more fundamental level than the repetition of the swing motif.

From phrase 8 on, the solo has a new character. Fitzgerald adds distortion to her voice, a quite exhaustive singing technique. The rhythmic pattern in these phrases contains more swing motifs than in the first part. When the following phrases arrive, the solo forms a coherent part consisting of four phrases of four bars each. In these phrases, Fitzgerald does not use traditional melodic techniques, but rather subtle changes in sound (between a vowel, an \( n \), and \( ng \)) and pitch (small alteration of the pitch downward) and dynamics to give rhythmic distinction. She emphasizes the downbeats and anticipated downbeats and articulates subtly some quarter and eighth notes. The rhythm sounds like a riff, and the repetition of the rhythm in the second phrase makes this association stronger. The metrical structure is apparent, but the concluding motif from the drums in the fourth bar removes weight from the first downbeat. Because of this, the phrase demands resolution and the expression is that of a break or build-up that prepares something “heavier” and more structurally
significant. If this was a riff in a rock n’ roll performance, this “heavier” could be a chorus with a full band and emphasis on the first downbeat. In “How High the Moon” (1960), this build-up prolongs and contributes to the ongoing tension of the chorus which is yet to be resolved. More phrases follow, but none of them resolve the tension built up in the previous phrase.

Up to this point the drums have marked the four-bar phrase structure of Chorus 10, as is usual, and every new phrase has confirmed a four-bar phrase structure. Here, the drums stop marking the four-bar structural units and continue only with the hi-hat swing motif of a subdivided upbeat + downbeat: eighth + eighth + quarter. This already becomes significant in the next phrase. The expectation is that the next phrase will start on the first beat after the previous phrase has ended. Instead, the phrase starts one downbeat too late. The hierarchy of the downbeats that follows from the division into bars is challenged and it sounds as if Fitzgerald has turned the beat around. The beginning of the phrase us very unstable and is experienced with a lot of tension. However, there is no periodic division at a higher scale than the downbeat in the accompaniment. This means there is no set period to which we would expect the turned beat to resolve to. Instead, the extra beat is forgotten at the end of the phrase and it ends after eight downbeats. What first sounded like a turning of the beat, simply ends up being an added downbeat between two eight-downbeat phrases. The solo continues with more unpredictable placement of the phrases. In other words, she is approaching the structure of the swing motif. In a song form, these missing downbeats could give rest to the phrase ending. At the end of this phrase, as Fitzgerald’s attacks become almost undetectable, the distortion in her voice gradually disappears. In one way, the four-bar structure is no longer dominant, even though hints toward such a structure easily evoke expectations of such. The phrase’s internal form and goal decides the structure.

At this point, it seems as though the expectations of a symmetrical division and clear rhythmic accents have almost disappeared. Toward the end, Fitzgerald begins to quote the title song again with ascending “highs” in an unclear timing. In these phrases, all expectation of their length and melodic structure seem to be gone. Each of the “highs” belongs to one downbeat in the drums. However, Fitzgerald times them ahead of the downbeats and anticipates her “high” a little more for each downbeat, making a pulse that goes slightly faster than that of the hi-hat. Another phrase arrives that has
ascending “highs”. But instead of offering a slightly faster pulse, as Fitzgerald did in the last, similar phrase, she stretches each note and makes a counter-rhythmic pattern of an extended four-over-three figure (four “highs” over six downbeats). The different rhythmical structures of the phrases are quite stable, even though the groove is hardly confirmed. With the last two words, Fitzgerald returns to the symmetrical phrase structure of the original performance, though in half tempo, and gives the phrase structure for what follows in the Coda. Even though these phrases are stable, the Coda offers a great deal of resolution.

Another level of internal structure

The whole chorus works as a transition away from the strict phrase structure that dominates the performance, and to an open structure, which allows “almost anything” to happen. Many of the phrases in Chorus 10 are within the four-bar structure. However, as she goes along, Fitzgerald alternates, adapts and changes the metrical structure that governs her phrases. She is still confirming the internal structure of the song and the style, but also moves away from it. The phrases of Chorus 10 show that the performance probably has another level of internal structure, in addition to the swing groove. The phrases are confusing when they contradict a symmetrical division and especially when they challenge the grouping of downbeats into two downbeats per bar. Given the analysis of Chorus 10, the performance seems to have another level of internal structure. This level is from the phrases in a symmetrical, periodic division down to the pair of downbeats. This division is contradicted in Chorus 10 and this creates confusion and tension. When a phrase contradicts this structure, the intuitive notion is to find the easiest way back to the symmetrical division. Therefore, a phrase stabilizes toward its end, even though it began at an odd place. Toward the end of Chorus 10, the phrases start to be of such varied lengths, that every phrase decides its own expectations. In the last phrases, the internal structures are established as symmetrical, yet at half tempo. This development in Chorus 10 opens for anything to happen, and specifically it prepares for the Coda and “Smoke Gets in Your Eyes” (Harbach and Kern, 1933).

Rhythmic Analysis: Summary and Comments

The rhythmic analysis has provided further insight into how form is created in the solo. Through the introductory investigation of the rhythmic context, several
governing principles for the performance were identified. For example, the pulse and meter is almost always audible and easy to find for the listener. This makes the performance intelligible to most listeners. The analysis also revealed other governing principles, such as the swing and periods, as well as different layers of expectations through internal structure and a form of tension and release. Ella Fitzgerald’s performance is essential to the experience of these factors.

The swing
Possibly, the most important governing principle for the performance found in the analysis is the swing. The swing is mandatory to the style and we found that it is created by the interplay between the members of the band combined with the band’s consequent emphasis on the upbeat and offbeat. The swing motif starts on the upbeat (the second or fourth quarter in a bar in this performance), continues on the following offbeat (a short eighth) and ends on the downbeat (the first or third quarter note in a bar). The analysis showed that the swing motif is created by both temporal and dynamic details. First of all, it specifies a certain relative length of the two eighths in a quarter note, as well as the micro-rhythmic placement of the main pulse. In addition, it has a slightly descending curve of volume. The upbeat is the most emphasized and usually gated, i.e. quickly muted after the attack; the following space increases the emphasis on the upbeat. The eighth and downbeat are usually allowed to ring into the next attack of the swing motif. Ella Fitzgerald accentuates the upbeats and the eighth notes (especially before downbeats) to confirm the swing groove. Ella Fitzgerald’s ability to swing seems to come from her way of emphasizing upbeats and offbeats rather than the One. In addition, her ability to repeatedly place her sounds at the same exact position in the swing motif makes the solo confirm the groove throughout the solo. A displacement, however small it might be, would decrease or alter the effect the swing motif has on the listener to stay in the groove. Identical repetitions are crucial to this experience.

Discovering the details of the swing motif, the analysis pointed toward a possible reason for why the solo is constantly pushing forward. The motif itself is constantly denying the listener a resolution with a heavy One. Performed “correctly” in this performance, the swing motif makes sure there is a constant need for stabilizing. This sensation pushes the music forward because of its openness. This is essential to the experience of form, as the need for the music to continue is an important
characteristic of the solo. The One is constantly accentuated, but never enough to compete with the steady emphasis on the upbeats and offbeats. In addition to Fitzgerald’s lead vocal, the cymbal and the fills from the piano and the guitar emphasize the most important parts of the swing motif: the upbeat and the following offbeat. When the bass drum or solo heavily accentuates the One it cannot compete with the consistent tension in the swing motif in other instruments, thus, the One offers no resolution.

During the analysis of the sections and periods with increased tension, it became clear that the swing motif is essential to the form. In addition to its openness demanding continuous repetition, the repetitions make the swing motif an important internal structure for the performance. Thus, the swing motif is important for creating and meeting expectations and, thus, the experience of form on a larger scale as well.

Counter-rhythms and internal structures
Ella Fitzgerald participates in the swing rhythm in most of her solo. She also uses syncopations and consistently puts emphasis on offbeats in her phrasing. In Chorus 1, she ends most of her phrases on offbeats. Several quarter notes in a row are usually followed by a syncopated motif.

Chorus 5 is rhythmically very different from the rest of the solo. In this chorus, the downbeats are articulated to a much greater extent than is usual. The accompaniment contributes to this, which makes the characteristics of this chorus very obvious. The rhythmic analysis of this chorus showed that the confirmation of the main pulse actually increases the tension. When a phrase concludes with a syncopated motif, this is experienced as resolution, since it is approaching the internal structure of the swing groove. From this, it is clear that the absence of the swing motif in this chorus creates tension. A new investigation of the ending transitions in the other choruses showed that the swing motif is important to tension and resolution in all parts of the solo. In the structural analysis, the transitions stood out as melodically simple. In the rhythmical analysis we have found that this simplicity allowed for increased rhythmic tension.

As suggested above, this rhythmic tension is linked to how the internal structure created by the continuing swing feel, i.e. the constant flow of swing motifs, is downplayed. When I speak of the internal structure created by the swing motif it
includes all the performative details of the motif. As the analysis made clear, we expect both the descending dynamic from the upbeat to the downbeat and the particular, temporal placement of the attacks. The music is destabilized when the dynamics of this motif is challenged or is absent. Syncopations and counter-rhythms are often typical reasons for unstable rhythms, but for “How High the Moon” (1960), this analysis shows that such rhythms can work in more than one way. Syncopations and counter-rhythms create tension to the degree that they challenge the metric structure. However, if the swing motif is absent in the context, syncopation will stabilize the music by including more important parts of the swing motif. This is obvious in Chorus 5, where we first have only downbeats, and then get a syncopation, which approaches the internal structure of the swing groove. They diminish the One and emphasize the offbeat and upbeat.

**Phrase structure and form**

In Chorus 10 the solo articulates, for the most part, the swing rhythm. When the swing motif is contradicted it is done subtly, with less articulation than in some of the above examples. However, the analysis of Chorus 10 shows that many of the phrases cause us confusion. Here the solo seems to destabilize the music without challenging the swing motif. What is confusing in Chorus 10 are the ways in which the phrases start to vary in length and begin and end at illogical places.

The analysis of Chorus 10 implies that we have a second important structural layer governing the performance, in addition to the swing motif. The solo, supported by the accompaniment and common expectations to the genre, has a periodic, symmetric organization of phrases. From the 32-bar song form, this division goes all the way down to one bar, divided in two downbeats. Each level of symmetrical division has a One in each repetition with the possibility of resolution. This hierarchical form is also an important internal structure.

In chorus 10, this second layer of internal structure is challenged and tension is created. The phrases start on the wrong downbeat and their duration seems arbitrary. After a phrase has produced tension by contradicting the symmetrical division, the internal structure adjusts, as there is no marking of the original structure. Chorus 10, thus, consists of phrases that constitute their own internal structure. The phrase that follows first contradicts the hierarchical structure and then constitutes a new one.
Rhythm, form and harmony

After analyzing Ella Fitzgerald’s “How High the Moon” (1960) with regard to form, harmony and rhythm, we know a great deal about her performance. In some parts of the song, the analyses support the same conclusions, while in other they complement one another. One example of the first is the two kinds of framework, one found in each of the analyses, which contribute to the same form. In the structural analysis we found a harmonic development from the lead sheet, which was dependent on the full 32-bar song form to be concluded. In the performance, the last four bars were continued the cadence so that the harmonic development demanded the beginning of a new development. The song form could not be divided into smaller, harmonically independent units, as tonal resolution was not provided until the next repetition. The melody in the lead sheet contributed to this openness by starting and ending at different places than the intermediate modulations. In the rhythmical analysis a similar, continuous openness was found in the swing motif. It contributed to a constant drive forward. It is safe to say that this openness is important to the experience of form, and is supported by several principles in the music.

In a slightly different way, the analyses of form and rhythm also support one another when it comes to the periodic organization of the solo. This is to a large extent also due to the given framework of the lead sheet and musical style. The symmetrical division is true to the performance tradition and is supported by the written intermediate modulations and melody in the lead sheet. Throughout the performance, the solo participates in both this periodic division as well as the consistent openness described in the previous paragraph.

In addition to these continuous governing principles, the analyses have provided answers to how Ella Fitzgerald organizes the solo. The structural analysis could easily find the different sections of the performance. However, it was the rhythmical performance that could tell us how the solo creates tension and release in and between these sections. This happens through alternating between presence and absence of the swing motif. The structural analysis, on the other hand, could reveal that the important periods, such as the transitions, contributed to a possible large-scale development. The transitions could be grouped together by their melodic structure. Choruses 1–3, 4–6 and 7–9 were the three groups. The rhythmic analysis provided different insights into how the periods contribute to a large-scale development.
Large-scale development

The rhythmic analysis offered insights into two aspects that are important to the large-scale development. The first is that Chorus 5 not only contributes to the large-scale development by being a contrast to the other choruses, but also by being a climax of rhythmic tension. The second is that Chorus 10 functions as more than a break. In the analysis of form in the previous chapter, we quickly found that Chorus 10 was different from the rest.

Tension is rhythmically and harmonically built up during nine choruses. In Chorus 10, some of the tension is removed, but not resolved. Replacing the openness of the harmonic development is a new kind of openness. This is the unpredictable organization of phrases and melody. Chorus 10 ambiguously functions as both a break and a climax. The tension keeps building up, but the new openness also makes it possible for the solo not to return to the original song form. Instead it includes a section of a completely different song, “Smoke Gets in Your Eyes” (Harbach and Kern, 1933), actually a whole a unit of that song with tonal resolution.
CHAPTER 4 Conclusions and Discussions

My investigation has resulted in more knowledge about Ella Fitzgerald’s performance of “How High the Moon” (1960) and insights into what creates form in her solo. It has also become clear that different analytical approaches find different information on the subject. The analyses that are done in this thesis have isolated certain aspects of the musical performance and investigated them in detail. In my discussion I will look more closely at the conclusions from my analyses and their shortcomings. After that, I will emphasize some areas where precisely the combination of methods has proven valuable in order to reveal the complex interplay in this performance. Finally, I will point to elements in the performance that would demand other methods than those used in this thesis in order to be properly investigated.

Form in the vocal performance

The structural and rhythmic analyses have contributed to approaching the initial questions about Fitzgerald’s performance in different ways. During the analyses, we discovered several governing principles that are most likely important internal structures for the performance. These internal structures can be summarized as being 1) the harmonic development from the lead sheet, 2) the symmetrical organization of sections, choruses and periods in the performance and the lead sheet, and 3) the swing groove with the temporal and dynamic details specific for this performance. These internal structures are the main sources of expectations of form in this performance. The first two structures have to some extent their origins from the original composition, while the third is based on the performance itself. These structures are the framework Fitzgerald both constitutes and confirms or contradicts through her performance in order to create tension and resolution.

Both analyses pointed to the significance of the transitions. The structural analysis found a common characteristic for the transitions and, in particular, the ending transitions. This similarity ensures a symmetrical division with two half choruses within each chorus. The rhythmic analysis could, however, explain how the rhythmical content of the transitions creates tension, which, in turn, creates a demand for resolution through a new repetition of a half chorus. Fitzgerald’s consistent melodic performance meets the expectations of the symmetrical structure, but her performance also creates expectations for another repetition. The demand for a new
repetition comes from the rhythmical tension through her contradiction of the swing groove.

In both analyses, it was clear that Fitzgerald mostly confirms the structural expectations generated by the harmony, rhythm and symmetrical form. Fitzgerald rarely deviates from all these structures at the same time. When she does, like in bar 25–26 in Chorus 7, it lasts for a very short time. From my investigation of the vocal solo, it seems that there are mainly two sources of tension produced by how Fitzgerald deviates from the basic structural schemes, that is, when she departs from the swing motif and when she contradicts the symmetrical division. The structural analysis showed that Fitzgerald’s tonal choices mostly confirm the chords and contribute to stabilizing the harmonic development. The rhythmic analysis, on the other hand, showed that her rhythmical choices are more varied and are used to create tension and resolution. The rhythmical analysis of Chorus 10 showed the ways in which she deviated from the symmetrical division to create instability.

This means that the two analytical approaches contributed in two very different ways to the understanding of the creation of form. The structural analysis explained the solo’s form through pointing out its repetitions and variations of motifs, phrases and sections. This explanation of the form was strongly connected to the harmonic development as represented in the lead sheet as well as the sectional organization of the performance. Foremost, it showed how the choruses are linked together as bigger sections and contribute to a large-scale development. The vocal solo is tonally consistent, yet has a melodic development. The large-scale development is something that the rhythmic analysis alone probably would be less suited to investigate. The rhythmic analysis rather explained how the vocal solo creates expectations and either fulfills or disappoints them. However, the large-scale development found in the structural analysis only dealt with the nine choruses that have a harmonic development that is in accordance with the lead sheet. The rhythmic analysis of Chorus 10 discovered that the phrases were destabilized when the internal structure of symmetrical division was contradicted. This source of tension explained the form of Chorus 10 and the resolution at the beginning of the Coda.
The arguments and their weaknesses

Contrary to much contemporary musicological analysis, I limited the extent of the analyses in order to see what the methods could tell about Fitzgerald’s performance. I did not have much focus on interpreting the analytical results and linking them to a contextual meaning. My interpretations are evident in my research questions and the focus on Fitzgerald’s solo as well as in my selection of the elements that were analyzed in detail. I selected elements that were interesting to me as a jazz singer and analyst and the methods were selected accordingly. Through my analysis, I wanted to investigate how Fitzgerald created form in her vocal solo in “How High the Moon” (1960). My first notion was to look at what I perceived as the obvious sources of form: the harmonic and sectional organization of the original song and the performance. With their well-known and established terminology, the traditional methods used in the structural analysis became my starting point.

The structural analysis started with an investigation of the song form and harmonic development in the lead sheet. As expected, the structural analysis could say a great deal about the harmonic development. The main conclusion of this analysis was that the full song form had to be completed in order for the harmonic development to have final resolution. The harmonic development in the lead sheet got a significant share of attention in the structural analysis. This analysis did not have its basis in a listening experience, but rather in a presupposition that the harmonic content in the lead sheet affected the form of the solo. The harmonic development in the choruses ensures an openness that is important to shaping form in the solo. This openness is emphasized by Fitzgerald’s transitions and their rhythmical tension. The harmonic analysis of the written lead sheet was, thus, confirmed by the analysis of her performance. The harmonic analysis could tell us that the choruses have this embedded openness as part of their structure and that Fitzgerald confirms it in her performance. It is possible that this insight would have been achieved without the detailed harmonic analysis of the lead sheet. Nevertheless, the suggested experience from this analysis was true to the actual experience of the solo.

The structural analysis continued to investigate the sectional organization of the performance and Fitzgerald’s melodic structure within the phrases and sections. The analysis pointed out how certain sections are different from the rest. Chorus 5 has a very clear periodic division and rhythmical phrases compared to the melodic
virtuosity that dominates the rest of the solo. The same goes for the transitions, while Chorus 10 has its own organization without the harmonic development. However, the structural analysis could not account for what function these differences have in the overall performance. They were just recognized as being different. I could have included the genre specific practices of performing solos over a chorus and, thus, elaborated on the melodic structures in the transitions. At the same time, my analysis underlines what a traditional analysis can say about Fitzgerald’s vocal performance and what it cannot. My structural analysis with traditional methods can clearly say much about coherence, stability and organization of Fitzgerald’s performance, in addition to the harmonic development in the lead sheet. The coherence is based on the solo’s relation to structures constituted by factors outside the solo. The structural analysis could only partly account for how the solo itself generates structures. It showed how melodic structures are used to create form through repetition and variation, but not how these structures create expectations through the building of tension. According to the structures found in the structural analysis, Fitzgerald performs according to these and does not particularly create tension and expectations through her solo. She rather confirms the expectations provided by the performance as a whole.

The conclusions from the structural analysis worked as a starting point for the rhythmic analysis. The rhythmic analysis explained how tension and resolution was an important tool for creating form in the solo. After a thorough investigation into the distinctive phrases of Chorus 5, I found that the constant flow of swing motifs constitutes stability in the vocal performance. The swing groove is the basic internal structure of the performance and drives the performance forward by its circularity, described in “Chapter 3 Rhythmic Analysis”. This insight explained how the solo creates expectations for new repetitions and resolutions. The rhythmic internal structure provides a tool, independent of the harmonic development from the lead sheet, with which Fitzgerald could make tension and resolution.

The rhythmic analysis also contributed to revealing the coherence in Fitzgerald’s solo. Her tonal and melodic coherence is supported by the rhythmic coherence in her virtuosic lines of succeeding swing motifs. The analysis of rhythmic stability and instability became very important to understanding Fitzgerald’s construction of form in general.
The principle that internal structures are either confirmed for stability or contradicted for instability made me look more closely at the destabilization in Chorus 10. The method of identifying rhythmic patterns and counter-patterns was not useful in this chorus. The swing motif in the drums is very dominant here and combined with Fitzgerald’s mild accentuations they give no grounds for creating competing patterns for destabilizing the groove. The investigation of the destabilization and stabilization within each phrase, however, showed that the phrases themselves created expectations for a highly symmetrical division. When the phrases in Chorus 10 contradict this division, the phrase is destabilized. The inconsequent phrasing in this chorus maintains the openness that the swing groove and harmonic development provided in the preceding nine choruses. At the same time, Chorus 10 seems to remove the harmonic and periodic specifications of this openness. The tension in Chorus 10, thus, makes it possible for the “Smoke Gets in Your Eyes” (Harbach and Kern, 1933) ending to be a huge resolution, without meeting any of the expectations of harmonic and periodic structures from Choruses 1–9.

The analysis of Chorus 10 shed light on the relationship between the harmonic/melodic and rhythmic aspects, and accordingly the need for both analyses. The phrases in Chorus 10 are unstable only at the beginning and each of them is able to stabilize itself. This must be due to the absence of symmetrical division on a larger scale than the swing motif. In the other choruses, the harmonic development ensured symmetrical periods. In Chorus 10, there are no competing internal structures to Fitzgerald’s phrases. This suggests that the performance relies on a crucial relationship between tonal, formal and rhythmic structures. When one of the structures disappears, the others are allowed to dominate without being contradicted. In Chorus 10 Fitzgerald’s melodic structures dominate. Instead of adapting to a structure in order to stabilize the phrase, she stabilizes her phrases by forcing the structure to adapt to each phrase. This shows that there are several internal structures that coexist and are dependent on each other. In Chorus 10, the absence of one structure makes the other structures function differently. Accordingly, one analytical approach alone cannot explain the different layers of tension and resolution, coherence and surprise in the vocal performance. Several methods were needed to discover how form is created and experienced in Fitzgerald’s solo.
Through structural and rhythmic analyses I have investigated the means by which Fitzgerald ensures coherence throughout the solo. Important aspects here were Fitzgerald’s participation in the swing groove and the harmonic/melodic development. The rhythmic analysis in particular also pointed to elements in the solo that create tension and release, that is, creation of expectations and fulfillment through resolution or by sustaining the tension with accordingly greater demand for resolution. So far I have discussed the results from one analysis up against the results from the other. The combination of the two analytical approaches provides additional insight since the different methods contributed in different ways to the understanding of the performance. The structural analysis was useful in order to approach aspects of the performance, such as the sectional organization and the harmonic development. The rhythmic analysis was useful when approaching other aspects that were not explained by the first analysis, such as tension and resolution. All this is in agreement with Cook’s (1998) conclusion that the choice of analytical method must depend the aims of the analysis.

**Limitations and Further Investigation**

The methods in my thesis only deal with certain aspects of the musical performance. However, I chose the methods based on aims and what elements I was interested in investigating. For example, the transitions were early in the thesis pointed out as important to the experience of form. They also proved important to the form through their embedded tension and the large-scale development through their changing melodic structures. However, other elements might have been discovered as important if other phrases in the choruses had received as much analytical attention. The melodically virtuous lines in many of Fitzgerald’s phrases are a significant characteristic that makes the solo exciting and impressive. The different themes could be objects of an investigation of the form as theme-and-variations, where the difference is carried out within an overall coherence of similarity. Instead, this thesis has had more focus on the obviously deviating parts, such as the transitions and Choruses 5 and 10.

One of my choices has been to look at Fitzgerald’s solo partly isolated from the rest of the performance. The thesis has identified some of the structures that come from outside Fitzgerald’s solo and that I saw as important to investigate the solo, such as
the harmonic development in the lead sheet and the swing groove in the accompaniment. Through Fitzgerald’s confirmation, these structures ensure coherence in the performance. This coherence includes a constant need for repetition because of the openness of both the harmonic development and the swing motif. However, neither of the analyses properly takes into account the interplay between Fitzgerald and the other band members. It is obvious that this interplay contributes a great deal to the experience of form. The sections with rhythmic tension are examples of the importance of interplay, and the evidence of this culminates in Chorus 10. Here, the interplay completely changes the conditions for the ways in which the solo is able to create form, as there are no competing patterns to Fitzgerald’s melodic structures. The interplay is, however, most significant in the repeated elements, such as the band’s interpretation of the harmonic development and the micro-rhythmic aspects of the swing motif. In his article, “Swing Ratios and Ensemble Timing in Jazz” (2002), Friberg finds that the different instruments time the swing differently in a performance. Kernfeld (1995) and Prögler (199) also points to the relative timing between the band’s members as essential to the groove although the details seem to vary. This aspect is not dealt with in this thesis. Fitzgerald’s timing is regarded as one of her best musical assets. An investigation into the micro-rhythmical details of how she times the swing compared to the rest of the band could give valuable insights into a vocal approach to the swing groove.

Since the analytical methods in my thesis were selected because of their suitability to what I thought was most significant to my initial questions, they disregard several aspects that were not included in my investigation. Of course, many of the disregarded aspects probably affect the creation and experience of the form in Fitzgerald’s solo as well. Such aspects include Fitzgerald’s physical vocal techniques, her audible genre-specific origins and her quite explicit references to other performances and the extra-musical sphere. These aspects were touched upon in “Chapter 1 Introduction” in my introductory opinions on Fitzgerald’s performance and in my presentation of more recent theory on musical analysis. However, this was not followed up as my focus concentrated on the construction of form through certain musical elements. In conclusion, I want to comment on some of the disregarded aspects and their possible contribution to the creation and experience of the form in Fitzgerald’s solo.
One of my main interests prior to defining my research questions was to find out how Fitzgerald performs this impressive solo. At that point, my interest was not limited to her choice of melodic material and sense of rhythm. It included other technical skills that this performance necessitates, such as that for the particular physiological activity needed to articulate and time the vocal sounds in the high tempo of this performance. It is, after all, Fitzgerald’s singing technique that enables her to carry out the form my analyses have investigated. A study into the physiological and musical skills that are needed to execute this solo could probably tell a lot about what characterizes Fitzgerald’s performance. The technical abilities of a singer or any musician have a huge impact on the creation of musical material and, thus, the musical form. In “Chapter 1 Introduction”, my attention is directed toward the formal, harmonic and rhythmic elements and the questions of vocal technique appeared less important to my immediate experience of form. Nevertheless, this subject would be particularly interesting combined with possible insights into the micro-rhythmical details of Fitzgerald’s singing, her choice of pitches and her melodic structures. If an analysis, as Cook (1998) claims, has most use as a means of education, a study of the technical demands would also be valuable to any analysis of a performance.

Throughout the analyses I have commented on a few aspects outside the performance and the song. Mainly, this has concerned the musical traditions and jazz styles in which this performance can be said to have its roots. The historical and musical contexts could have been more apparent during the analytical processes than they are in this thesis. Ella Fitzgerald has performed in and influenced many different genres and has achieved great acclaim for this. My analytical results show that her varied musical roots are visible in this seven-minute performance of the popular song “How High the Moon”. Many of her melodic motifs, especially in Choruses 4 and 6, are typical bebop motifs, with fast, large leaps in pitch and melodically virtuous lines. Other elements, such as the symmetrical division and coherent phrasing are from the swing and popular song tradition. It is a bebop performance in technique, tempo and details, but the organization and tonality represent the characteristics of a swing performance. Fitzgerald’s musical background is evident in so many ways in this performance. As Walser’s views (2003) presented in “Chapter 1 Introduction”, cultural and musical contexts are always affecting the creation and experience of form even though an analysis evidently isolate musical elements from this context.
Nevertheless, in this particular performance by Ella Fitzgerald, the references to the musical and cultural contexts are so explicit that I see it as the most important subject that has been neglected in my analyses. Therefore, the following and final arguments will extend it thorough consideration.

Coherence and Surprise: Intertext and Signifyin’
In the New Grove Dictionary of Jazz, it says about Ella Fitzgerald that “as an interpreter of popular songs she was […] was unrivalled in her rendition of light material and for her ease in slipping in and out of the jazz idiom. She influenced countless American popular singers of the post-swing period and also international performers (…)” (ed. Kernfeld, 2002, “Ella Fitzgerald”) The discussions throughout this thesis show that my analytical results have been true to my experience of Fitzgerald’s solo. This means, as we know, that the analytical methods in this thesis are able to tell certain things about the performance. There are, however, some intuitive responses to Fitzgerald’s vocal performance that are too important to be completely omitted from the thesis. This has to do with her way of performing, the manner in which the musical material is presented. Her roots in the different jazz genres have already been mentioned, but her manner of performing has far more stylistic references than those pointing in the direction of bebop and swing music. For example, the first phrases with distortion on her voice in Chorus 10 could have been a riff in a rock n’ roll performance in the ‘50s. Toward the end of the same chorus, Fitzgerald introduces chromatic motifs with new characteristics. These are examples of Fitzgerald making both technical and tonal choices that contribute to making Chorus 10 an even more different chorus from the others. The references throughout the solo can be both musical, for example, in rhythm, sound or melody and verbal with, for example, lyrics from other songs.

In a solo full of nonsense syllables, the most apparent references are when she suddenly includes intelligible lyrics from another song, or perhaps as some sort of joke. These references emerge as pleasant surprises and are experienced almost as a tease for the listener to keep his interest. The teasing addresses the listener’s expectations and must be very important to how Fitzgerald maintains excitement for seven minutes without supposedly losing ‘all but the most devoted listener’ (Kernfeld, 1995, 43). An investigation of the different ways she refers to other performances and
other associations throughout her solo is likely to reveal how her manner of performing a vocal solo affects the listening experience.

Norman Davis writes: “It has often been pointed out that Ella had a reservoir of proven material that she could draw from as needed, specific routines or lines and passages in some songs that she could and would sing the same way, or very close to the same way, anytime she programmed the numbers in a performance.” (2006, 85) When Fitzgerald uses lyrics in between nonsense syllables, these are direct quotations or references from her or others’ previous performances or just verbal comments from Fitzgerald on the performance itself or something outside the performance. This is something Fitzgerald was known to do and a characteristic of her manner of performing vocal solos. The solo in “How High the Moon” (1960) contains many references. An example of a quote is, of course, when she sings the original melody of “Ornithology” (Parker, 1946) in Chorus 2. She also uses its melodic material in the transitions of the same chorus. The melodies in many of the other choruses have been used in Fitzgerald’s earlier performances of “How High the Moon”. The last chorus group has a lot of references and verbal jokes. It starts with Fitzgerald asking, “what do you say we [scat solo continues]” in Chorus 7, while the ending transition of Chorus 9 is preceded by a humorous “I guess I better quit while I’m ahead”. Fitzgerald often used humor and self-mockery in her performances. “Lady is a Tramp” (Fitzgerald, 1960), performed at the same concert as “How High the Moon” (1960), is a good example of this.

In more recent year, popular musicology and a more varied take on musical analysis, which was commented on in “Chapter 1 Introduction” have contributed to an expansion on the field that musical analysis investigates. For example, extra-musical aspects, such as visual elements, social and cultural contexts affect the musical experience. Analytical methods cannot grasp in correct detail all the aspects that listeners actually perceive and how it is perceived. Methods and language, such as those used for the purpose of this thesis, are not able to represent music and musical experience to the full extent. According to Barthes (1977), Text is not something fixed, but a “process of demonstration” and is “experienced in an activity of production” (1977, 157). When Fitzgerald refers to other performances, genres and her associations she has no control over how this is perceived. The references feed the listener with so many possible associations that an infinite number of experiences and
interpretations emerge. This goes beyond the experience of the musical elements that I have analyzed in this thesis. Of course, these elements are also part of the Text.

The manner of Fitzgerald’s performance has been perceived in certain ways. In particular, we know from “Chapter 1 Introduction” and the quote of John McDonough on page 12 in this thesis that her singing has been labeled in ways to explain the characteristics of her manner of performance. Close to everything in this thesis is part of her manner of singing; all of it is part of the acclaimed and impressive artistry of Ella Fitzgerald. However, the quote specifies what her audience often called her style of singing: instrumental, as opposed to vocal. The cultural context in which this distinction probably was conceived is described in “Chapter 1 Introduction”. Fitzgerald’s solo in “How High the Moon” (1960) is probably a good example of her texts that has become labeled as “instrumental”. This is a label I find very difficult because of its two implications:

1) The voice is something essentially different as sound producing tool in music than other instruments, i.e. the voice is not a musical instrument.

2) A vocalist being “instrumental” means the vocalist is capable of doing something we do not expect vocalist to do, while it is a matter of course for all other instrumentalists.

Her label as an instrumental vocalist is interesting in an intertextual perspective. Her manner of performing is something that “everyone” agrees is unusual for a vocalist. The fact that she was musically and technically skilled and able to create form in the manner of the many elements investigated in this thesis is a big reason for why she was and still is celebrated. My admiration of her singing is also because I value her performances in a special way. However, why this “special” tends to be described as instrumental is a puzzle to me. The fact that she participated in the bebop genre, which was thought as being unsuitable for vocalists, may be part of the reason for this. Possibly, it also has to do with her extensive use of scatting in her performances. She does not “only” deliver the lyrics on top of the music provided by her band members. However, today it would be impossible to seriously suggest that a vocalist, regardless of the sounds used, verbal or non-verbal, is not part of the musical experience. “Instrumental” is a label that I understand is meant as a positive description of her ability. For a further investigation into her manner of performance,
it could be useful to identify the musical elements she uses that earn her this label. Such an investigation should not aim to justify the label, which I still see as problematic and even unnecessary. Rather, such an investigation should aim to understand at the set of associations the musical elements investigated in this thesis and other musical elements evoke. This could be done, as Walser suggests (1993), with the theory of signifying, which enables us to approach and study a style of music on its own terms. This way one could find alternative, more appropriate and truer ways of describing what Fitzgerald’s manner really is. Her performance is not instrumental (if the voice was not an instrument); it is vocal. Furthermore, it is musical and in common with any other musical performances, it contains musical elements that can be investigated and understood.

The chosen analytical approaches in this thesis, that is, analyses of structural and rhythmic aspects are capable of dealing with some important aspects of a vocal performance of this kind, whereas it fails to describe others. The methods of structural and rhythmic analyses contribute to insights into how Fitzgerald creates form in relation to the harmonic, formal and rhythmic structures. However, they also neglect certain areas, which has been made clear in this chapter.

My first motivation was to investigate vocal jazz music. My assumption was that this would be different from the analyses of the instrumental or “instrument-neutral” structures I had performed so far during my education. In that regard, the topics under “Limitations and Further Investigation” are important. The elements that the structural and rhythmic analyses investigated in this thesis are musical elements that could have been investigated by these methods no matter what instrument performed them. My analyses can say much about the form in the solo, but it is obvious that other methods are needed if I want to perform an analysis that deals with what separates a vocal performance from a performance by a different instrument. This was not the main goal of my thesis and so, in this chapter, I have mentioned topics that could deal more specifically with what separates Ella Fitzgerald’s manner of performing with her instruments from others’ manners of performing with other instruments. Ella Fitzgerald is an extraordinary performer and one that should be studied by analysts and performers. Her extraordinary skills and manner of performance reach far beyond the small sample I have touched upon in this thesis. Luckily, musical analysis has a number of methods that can be used to understand her artistry better.
Bibliography

Music


Other songs that was performed by Ella Fitzgerald at the concert recorded on Ella in Berlin: Mack the Knife (1960) has reference to composer and year when mentioned in the text.

Literature


APPENDIX: Transcriptions of transitions

Half-chorus transitions: bars 12/13-16
Ending transitions: bars 29-32

Chorus 1

Chorus 2

Chorus 3

Chorus 4

APPENDIX: Transcriptions of transitions

Half-chorus transitions: bars 12/13-16
Ending transitions: bars 29-32

Chorus 1

Chorus 2

Chorus 3

Chorus 4