STRUCTURAL ORGANIZATION IN SELECTED SONGS FROM CHARLES IVES'S 114 SONGS

by

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ABSTRACT

Charles Edward Ives was the first twentieth-century North American composer to write from a purely American perspective. His music also anticipated many of the stylistic features which characterize later twentieth-century music. This study begins with an examination of secondary literature to show how other scholars have interpreted Ives's music. Few projects have dealt with the question of coherence in Ives's music, in large part due to the seemingly disjunct nature of the music. Unity and coherence were overriding concerns to Ives, as is evident in his writings which are strongly steeped in transcendental philosophy. The second part of the thesis presents analyses of four songs from the 114 Songs: "The Cage," "Ann Street," "Like a Sick Eagle," and "At the River." Linear techniques in concert with the labelling system of pitch-class set theory are the principal analytical tools used to investigate the songs. The analyses begin from the premise that each song contains an underlying compositional plan and is a coherent whole.

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RESUMÉ

Charles Edward Ives fut le premier compositeur nord-américain du vingtième siècle a composer d'une perspective purement américaine. De plus, par les traits stylistiques de sa musique, Ives a devancé plusieurs des traits qui caractérisent la musique de la fin du vingtième siècle. Cette étude débute avec un examen de la littérature afin de démontrer comment d'autres érudits ont interprété la musique d'Ives. Peu de projets ont traiter la question de la cohérence dans la musique d'Ives, en grande partie dû au manque apparent d'homogénéité dans sa musique. L'unité et la cohérence furent les soucis dominants d'Ives, comme c'est évident dans ses écritures qui sont fortement enracinées dans la philosophie transcendentale. La deuxième partie de cette thèse presénte les analyses de quatre chansons de 114 Songs: "The Cage," "Ann Street," "Like a Sick Eagle," et "At the River." Des techniques linéaires ainsi qu'un système d'étiquettage du "pitch-class set theory" sont les principaux outils d'analyse utilises pour examiner les chansons. Les analyses commencent du point de vue que chaque chanson contienne un plan fondamental pour sa composition et qu'elle soit un tout cohérent.

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ACKNOWLEDGEMENTS

The origin of this analytic investigation of Charles Ives's music began several years ago. One day while sitting in the audio room at the University of British Columbia, I had put on a record by this "obscure" American composer, Charles Ives. Immediately, I was struck by the richness, pathos and the simplicity of the composition. The work was The Unanswered Question. I became obsessed with Ives's music; I listened to every recording the library had and read all the books, articles, and liner notes that were available. Around that time, it came clear that I was not dealing with some eccentric American composer, but a composer of craft, skill, and intellect. I wanted to know more.

During my tenure at McGill University, I have had the good fortune to fall in the path of two exceptional musicians, Professor Bo Alphonce and my thesis advisor Professor Don McLean. Professor Alphonce's seminar, entitled Mathematical Properties and Sets in Music, was the first seminar I enrolled in at McGill. From this seminar I became better acquainted with the music, ideas behind the music, and the theories that accompany it. I first met Professor McLean in a course that he taught, entitled Introduction to Schenkerian Techniques. I was struck by his enthusiasm for music and teaching. He always had time for students no matter how small the problem may have been. With my own work, he has been indispensible as an advisor and, at times, a counsellor. Many times he pointed me in the right direction when I have gone off on some far-flung tangent. I cannot thank him enough.

Many people have supported my graduate studies and thesis work ranging from my colleagues at McGill, the staff of the Marvin Duchow Music Library, to Wallace T. Berry who originally suggested that I undertake graduate studies. Six

people, in particular, I must thank personally: my parents, Henry and Ruth Wiens, and my brother and sister, Eric and Barbra - altnough they did not understand what I was doing with this 'strange" music, their support was unconditional and much needed; Nathalie Pearson for her love, support and, above all, for believing in my ability when I did not; and Derek Aronoff for helping me see straight.

INTRODUCTION

THE STATE OF IVES RESEARCH

Charles Edward Ives (1874-1954) occupies a distinct position in the history of Western art music. Often viewed as an isolated, eccentric American who peddled insurance during the week and composed music sprinkled with quotes from popular tunes on the weekend, Ives has become recognized as an integral participant in the development of twentieth-century music on this continent and throughout the world.

Ives was one of the first American composers of stature and many of the studies on Ives and his music have focused on his life. It was not only Ives's compositional practices which were unique, specifically through his employment of quotation and paraphrase; the way in which he lived, viewed society, and philosophized about the world around him were also engagingly idiosyncratic. His ideas about music and life were presented, in Essays Before A Sonata as well as his other writings. Transcendentalism, in particular the works of Ralph Waldo Emerson and Henry David Thoreau, greatly influenced his life and many of its trends are reflected in his music.

The evolution of Ives's compositional style is also linked to his transcendentalist views. Unique to his style was the systematic usage of quotation. Composed into the very fabric of his works are quotations from popular tunes and historically significant art works, as well as paraphrases and emulations of past composers. One of the earlier studies by Henry and Sidney Cowell has focused on the many aspects of his compositional style.[1] Frank Rossiter's Charles Ives and his America places the Ives phenomenon

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[1]Henry and Sidney Cowell, Charles Ives and His Music. 2nd edition. (New York: Oxford University, 1969).

within the American one.[2]

The most comprehensive study on Charles Ives and his music is J. Peter Burkholder's 1983 doctoral dissertation, The Evolution of Charles Ives's Music: Aesthetic, Quotation, and Technique.[3] Burkholder provides a clear picture of Ives's evolution as a thinker and the roots of his compositional practices and techniques.

Burkholder's dissertation is divided into three sections: (1) Ives's Artistic Aims and Their Development; (2) Ives's Uses of Existing Music and; (3) Techniques: Traditional Roots and Contemporary Parallels.[4] Part I traces Ives's development as a composer by examining the growth of his personal philosophy. Burkholder asserts:

> The first step in an examination of the evolution of Charles Ives's musical method must be to gain an understanding of his reasons for writing music, both aesthetic and personal.[5]

Essays Before a Sonata is Ives's personal testament and is considered to be his definitive statement of aesthetic

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[2]Frank R. Rossiter, Charles Ives and his America (New York Liveright, 1975)

[3]J Peter Burkholder, "The Evolution of Charles Ives's Music Aesthetics, Quotation, and Technique " (Ph.D dissertation, University of Chicago, 1983)

[4]In turn, each of these sections have been the source of subsequent publications
Part I
Burkholder, Charles Ives New Haven Yale University Press, 1986

Part II
Idem, "'Quotation' and Emulation Charles Ives's Uses of His Models " Musical Quarterly 71 (1985) 1-26

Part III
Idem, "The Critique of Tonality in the Early Experimental Music of Charles Ives " Music Theory Spectrum 12/2 (Fall 1990) 203-223

[5]Burkholder, dissertation (1983), p 10

philosophy and purpose.[6] However, the Essays do not tell the complete story. Ives researchers often ignore the fact that the Essays came at the end of Ives's compositional career and thus represent the culmination of his philosophical thinking.[7] Moreover, Burkholder argues that Ives's aesthetic program and compositional intentions varied widely, not only in the different stages of his career, but also in the different pieces on which he worked - often at the same time. Burkholder uses the Essays as the starting point of his examination of Ives's aesthetics.

Following the examination of the many dimensions of the Essays, Burkholder scrutinizes the origins of Ives's thoughts. He begins by taking a "Second Look" at the history and effect of Transcendentalism on Ives and his family.[8] In the following two chapters, Burkholder partitions Ives's compositional life into six parts, returning to, and, concluding with, the writings of the Essays.[9] Through this examination process, Burkholder effectively traces Ives's growth as an artist.

In Part II, "Ives's Uses of Existing Music," traditional understandings of Ives's employment of quotation as a compositional tool are questioned. For the most part,

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[6]Charles Edward Ives, Essays Before a Sonata, and Other Writings. edited by Howard Boatwright New York W W Norton, 1964 The Essays were first printed separate from the Concord Sonata by Knickerbocker Press of New York in 1920 In the 1964 reprint of the Essays, the editor Howard Boatwright added two other essays "Some 'Quarter-tone' Impressions" and "Postface to 114 Songs " Subsequently, Boatwright gathered the rest of Ives's writings (both musical and non-musical); these were published in 1974 as Essays Before a Sonata, The Majority, and Other Writings (New York: W.W Norton, 1974)

Burkholder, dissertation (1983), p 13.

[8]Ibid , pp 39-84

[9]Ibid , pp. xiv-xv Chapter 3 "The Development of Ives's Ideas to 1902 (1) Early Musical Training, (2) Apprenticeship I: Yale (1894-98), (3) Apprenticeship II First Years in New York (1898-1902); and Chapter 4 "The Development of Ives's Ideas After 1902" (4) Innovation and Synthesis (1902-1908), (5) Mature Works (1908-1917), (6) The Writing of the Essays and After

musicologists have argued that Ives's use of quotation was a kind of stunt, a way of providing variety and humour in the setting of "serious" music, and a way for Ives to differentiate himself from the European composers of his time. Burkholder believes Ives's compositional style employs methods similar to those used by his European counterparts. Ives's compositional style is very much a part of the musical mainstream of his time.[10]

In Part III of his dissertation, Burkholder highlights the main components of Ives's compositional technique and draws parallels to the techniques of his contemporaries. The four chapters of Part III constitute the four main areas of Ives's technique. Central to Burkholder's argument in Part III is his belief that

> there is one unifying theme, one unifying process which underlies all aspects of Ives's growth as a composer: a progressive intensification of exaggeration of musical techniques and assumptions he inherited from both classical and vernacular musical traditions of the later 19th century, a development of common, almost universal procedures and beliefs towards extremes.[11]

This quotation sums up Burkholder's understanding of Ives's

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[10]Burkholder argues that the primary compositional aesthetic of this epoch was the modelling of one's music upon the music of the masters. The founder of this new compositional practice was Johannes Brahms. Brahms was able to assimilate a variety of traditional approaches into his music, for example Schütz, Bach, and Handel as the models for his choral music and Bach, Mozart, Beethoven, Chopin, and Schumann as the models for his instrumental music and songs (Burkholder, p. 476.) By modelling his music on that of the masters, Brahms was able to create a direct line of traditional continuity between himself and the past.

All those composers influenced by Brahms, specifically Schoenberg and Ives, adopted Brahms's form of emulation. However, Ives differed from Brahms and Schoenberg in the methods of emulation he used. Where Brahms and Schoenberg emulated the masters by taking the key ingredients from their music and assimilating them into their compositional style, Ives paraphrased (Burkholder, p. 482.) Most researchers assert that Ives's paraphrasing was only for effect, however, Burkholder shows that this process actually works at deeper structural levels.

[11]Ibid., pp. 462-63. Part III breaks down as follows: (1) Chapter 9 "The Paradigms for Ives's Evolution" including a section on Ives's usage of existing music, (2) Chapter 10. "Layering and Articulation, Process and Form;" (3) Chapter 11 "Harmony, Melody, and Rhythm," and, (4) Chapter 12 "Generative Systems, Organic Unity, and Economy of Means."

compositional techniques, process, and philosophy. The four chapters of Part III build upon this statement and provide a more unified understanding of Ives's compositional technique.

By moving from the question of aesthetics, through the problems of quotation, and finally to a discussion of compositional technique, Burkholder demonstrates convincingly that Ives not only had a unified and clear approach to composition but also that his music was very much a product of his time, perhaps marvelous, but not nearly as strange or anomalous an occurrence, as has often been maintained.

Research that deals with theoretical issues raised by Ives's music has been limited. Only in the last ten years have scholars discussed his compositional method in any detail; three scholars, in particular, Lawrence Starr, Lora L. Gingerich, and J. Philip Lambert have done significant work.

In 1977 Lawrence Starr published two studies: "Style and Substance: 'Ann Street' by Charles Ives" and "Charles Ives: The Next Hundred Years -- A Method of Analyzing the Music"[12] In both articles Starr asserts that the study of Ives's music has been hampered by a process of analysis which presumes homogeneity. He believes that the music should be understood as essentially heterophonic and that analytical models should reflect this fact.

> ...[Ives] embraced stylistic heterogeneity as a <u>basic principle</u> of musical composition and deliberately set about writing music that would reveal the artistic viability of this principle.
>
> In other words, the varying styles in an Ives piece are form-making.[13]

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[12]Lawrence Starr, "Style and Substance: 'Ann Street' by Charles Ives." <u>Perspectives of New Music</u> 15/2 (Spring-Summer 1977): 23-33.
Idem, "Charles Ives" The Next Hundred Years -- Towards a Method of Analyzing the Music " <u>Music Review</u> 38 (May 1977): 101-111.

[13]Ibid., p. 102.

In the Perspectives of New Music article, Starr examines the song "Ann Street" from the 114 Songs; in the Music Review article, he studies the third movement of the Concord Sonata, "The Alcotts." He identifies the different component "styles" within the boundaries of each piece.[14] In turn, the ordering of the "styles" defines and articulates the form of the piece.

In "The Alcotts" five styles and eight style areas, i.e. sections of the piece, are defined. The styles are ranked from "a purely diatonic, triadic style" to "a style of writing in which triadic elements derivable from a single diatonic scale are combined with other elements not related to that scale to produce a 'polyphony of groups.'"[15]

Starr's rationale for this analytical model stems from his understanding of Ives's philosophy, in particular Ives's definition of substance and manner.[16] He argues that one must examine the manner, i.e. the actual notes and rhythms which constitute a given work, in order to have any hope of understanding the substance of the piece. For Starr,

> ...the stylistic pattern that exists on the surface of the piece is not unrelated to the subtler sources of musical unity and coherence at all; rather, the surface 'manner' helps illuminate the inner musical 'substance.' ... the stylistic pattern is **itself** a basic source of unity and coherence, despite any initial impressions to the contrary.[17]

Thus, once we have grasped the manner of a given Ives song we will be able to understand clearly the substance.

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[14]Starr, Music Review, p. 103

[15]Ibid., pp 104-05.

[16]Ives, Essays, pp. 75-77.

[17]Starr, Perspectives of New Music, p. 33. For Starr, it appears that substance can be found in the music rather than being entirely extra-musical experience.

However, as Ives points out in his Essays, one can write a piece of music based entirely upon manner. Could this be the case in either one of these pieces?

Starr's method does not address the compositional rationale of the stylistic ordering. Instead, he leaves the reader with a 'divided' analysis which sheds light on the compositional manner of the styles but which leaves us in the dark concerning the work's coherent musical substance.

One of the more original analytical approaches to Ives's music has been the models devised by Lora Louise Gingerich. In both of her publications, Process of Motivic Transformation in the Keyboard and Chamber Music of Charles E. Ives and "A Technique for Melodic Analysis in the Music of Charles Ives," Gingerich focuses on the identification and the transformation of significant surface melodic/motivic structures in Ives's non-vocal music.[18] Current methods of melodic/motivic analysis, Gingerich claims, are frequently

> either too general or too vague to provide insight into the structure of an entire work, yet describing the relationships among melodic motives throughout an entire piece can be a tedious task resulting in unwieldy prose.[19]

By first identifying this problem of analytical tools, Gingerich develops her own analytical methodology and terminology. In all, she delineates fifteen operations, or transformations which, in turn, define and label the type of motivic transformation that the melody has undergone.[20]

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[18]Lora Louise Gingerich, "Processes of Motivic Transformation in the Keyboard and Chamber Music of Charles E. Ives." (Ph.D dissertation, Yale University, 1983).

Idem, "A Technique for Melodic Motivic Analysis in the Music of Charles Ives." Music Theory Spectrum 8 (1986): 75-93.

[19]Ibid., (1986): p. 75.

[20]Idem, (1983), pp. 23 - 49. The fifteen transformations are: TRANSPOSE, INSERT, DELETE, SHARP, FLAT, EXPAND, CONTRACT, UP12, DOWN12, ADD12, SUB12, INVERT, INVERTALL, EXCHANGE, REORDER.

Other terms which Gingerich frequently uses are: pitch, motivic string (an ordered series of pitches), interval type (the directed distance in

Among her fifteen transformations are traditional operations such as transposition (TRANSPOSE, DOWN12) and inversion (INVERT) as well as a variety of new ones (e.g., INSERT and DELETE).[21]

Although Gingerich's analytical methods set out to describe surface motivic transformation in admirable detail, they are, in large part, unable to provide information on the issues of larger structural coherence and compositional integrity which I seek to demonstrate in this study.

In his dissertation, Compositional Procedures in the Experimental Works of Charles E. Ives, and in subsequent articles, "Aggregate Structures in Music of Charles Ives" and "Interval Cycles as Compositional Resources in the Music of Charles Ives," J. Philip Lambert provides Ives scholarship with another way of examining the music.[22] Lambert is concerned with the identification and explanation of intervallic structures in Charles Ives's experimental works Many of Ives's experimental compositions, those works which are often entitled "Study" or "Exercise," were based on intervallic constructions.[23] In these works, the interval is

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semitones from one pitch to another, the distance is represented by an integer, positive if the second pitch is higher and negative if the second pitch is lower), interval string (the intervals between adjacent pitches of a given motivic string) Gingerich's analytical models are patterned after those found in David Lewin's Generalized Musical Intervals and Transformations (New Haven and London Yale University Press, 1987)

[21]Gingerich, (1986) 77-78 INSERT The transformation INSERT (<p,i>,x)=y inserts the pitch p between the (i - 1)th and the ith order positions of the string x The pitch p thus becomes the ith member of the new string y.

DELETE The transformation DELETE (i,x)=y removes the ith member of the motivic string x to form the new motivic string y

[22]J. Philip Lambert, "Compositional Procedures in the Experimental Works of Charles E. Ives " Ph.D. dissertation, Eastman School of Music, 1987

Idem, "Aggregate Structures in Music of Charles Ives " Journal of Music Theory 34/1 (Spring 1990). 29-55

Idem, "Interval Cycles as Compositional Resources in the Music of Charles Ives." Music Theory Spectrum 12/1 (Spring 1990) 43-82

[23]Ibid., p. 44.

the primary compositional resource.

For the most part, these experimental pieces utilize two types of intervallic structure, either separately or conjointly: (1) permutation of a certain intervallic cycle, and (2) a process of shifting from one interval or group of intervals to another over the course of a work.[24] The interval cycle can be found as a single cycle or in combination with another cycle.[25] As an example of a single cycle, Lambert presents mm. 24 and 25 of Largo Risoluto No. 1, in which the first violin's melody is composed of the pitch classes 492705A3816B.[26] The interval between each of these pitches is a perfect fourth or interval cycle 5. By comparison, a combination cycle makes use of two different intervals (such as a major and minor third, interval cycle 4 and 3 respectively) which are in turn alternated according to a set pattern.[27]

Following the definition and identification of the intervallic methods that are used by Ives in his compositions, Lambert then discusses interval cycles as compositional sources. The methods that Ives employs go far beyond simple linearizations of interval cycles; cyclic structures serve as the source for melodic and harmonic ideas. In turn, these melodic and harmonic structures serve

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[24]Lambert, (1990), pp. 44-45. The precedent for such research dates back to George Perle's explanation of Alban Berg's music, in which Perle argues there is a "master array." More recently, Elliott Antokoletz has presented similar arguments for Béla Bartók's music specifically the string quartets.

[25]Ibid , p. 45.

[26]The use of modulo 12 integers here corresponds to the system commonly used by Allen Forte, Robert Morris, and others. C=0, C#/Db=1 .. Bb=A, and B=B

Allen Forte, The Structure of Atonal Music. New Haven: Yale University Press, 1973.

Robert Morris, Composition with Pitch-Classes. New Haven: Yale University Press, 1988.

[27]Lambert (1990), p. 54.

structures serve as the source for melodic and harmonic ideas. In turn, these melodic and harmonic structures serve as the means of distortion of the source cycles. The substructure may be preserved and highlighted while suppressing the source set. However, the source set must exert the ultimate control over the melodic and harmonic structures - it is the basis of a given composition.

Lambert's analytical method is largely restricted to pieces in the experimental category. Compositions which do not have the interval (or interval-class) as principal compositional resources require other approaches.[28]

THE APPROACH OF THIS STUDY

Few studies have dealt with the question of coherence in Ives's music; that they have not done so is in large part due to the music's seemingly disjunct nature. Ives's music is often analyzed as the arrangement of disjunct sections within the boundaries of the larger composition. Unity and coherence were predominate concerns to Ives, as is evident in his writings which are strongly steeped in Transcendental philosophy. The challenge Ives's music poses is to articulate the nature of the underlying unity.

In recent years this disjunct view of Ives's music has been challenged. In his article "Spatial Form in Ives," Robert Morgan argues:

> The problem with Ives is not, as is frequently maintained, that he uses a number of different procedures that are perhaps interesting in themselves but are somehow incompatible with one another and thus incapable of producing a unified musical statement. The

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[28]Lambert (1990), pp. 66-67.
In his other article from 1990, "Aggregate Structures in Music of Charles Ives (Journal of Music Theory 34/1 (Spring 1990): 29-55.), Lambert takes a somewhat different approach to Ives's experimental music. Other Ives studies, such as J. Peter Burkholder's "The Critique of Tonality in the Early Experimental Music of Charles Ives" (Music Theory Spectrum 12/2 (Fall 1990): 203-223.) and Nachum Schoffmann Ph.D disseratation, "The Songs of Charles Ives" (Hebrew University of Jerusalem, 1977), take more traditional analytical approaches to Ives's music.

> problem, rather, is that we have not yet found the analytical key for discovering how these procedures relate to one another and, more important, to a unifying compositional vision.[29]

Four of Charles Ives's songs are analyzed in this thesis. All four are from his 1922 anthology, 114 Songs. The analyses were conceived within a historical context of the late nineteenth and early twentieth century. Ives's compositional approach must be understood as an outgrowth of nineteenth-century practices in concert with his own idiosyncratic compositional approaches. In his discussion of substance and manner (Essays Before a Sonata "Epilogue," Chapter 3), Ives characterizes the philosophical motivation behind his music. Substance and manner are described as

> Substance in a human-art-quality suggests the body of a conviction which has its birth in the spiritual consciousness, whose youth is nourished in the moral consciousness, and whose maturity as a result of all this growth in then represented in a mental image. This is appreciated by the intuition, and somehow translated into expression by "manner" - a process always less important than it seems, or as suggested by the foregoing.[30]

For Ives, substance is the idea behind a given work of art while manner is the means, the tools, through which substance is expressed. Substance cannot simply be translated into musical terms; substance is always extramusical. What this thesis illuminates is the musical means, the manner, through which the substance of a work is expressed.

Linear and pitch-class analysis form the basis of the analytical models used in this thesis. Pitch-class analysis is valuable for the labelling of structures which fall outside of traditional nomenclature. Linear analysis was

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[29]Robert P. Morgan, "Spatial Form in Ives." In An Ives Celebration, edited by H. Wiley Hitchcock and Vivian Perlis. (Urbana: University of Illinois Press, 1977), p. 156.

[30]Ives, Essays, p. 75.

chosen as the core analytical method for a number of reasons: the unfolding of pitch(-class) structures and registral events during the course of a given work can be tracked; the relationship between structures that occur on melodic and harmonic planes can be highlighted; and, linear analysis concentrates on the progression of events in the order that they appear and cohere in a given work.

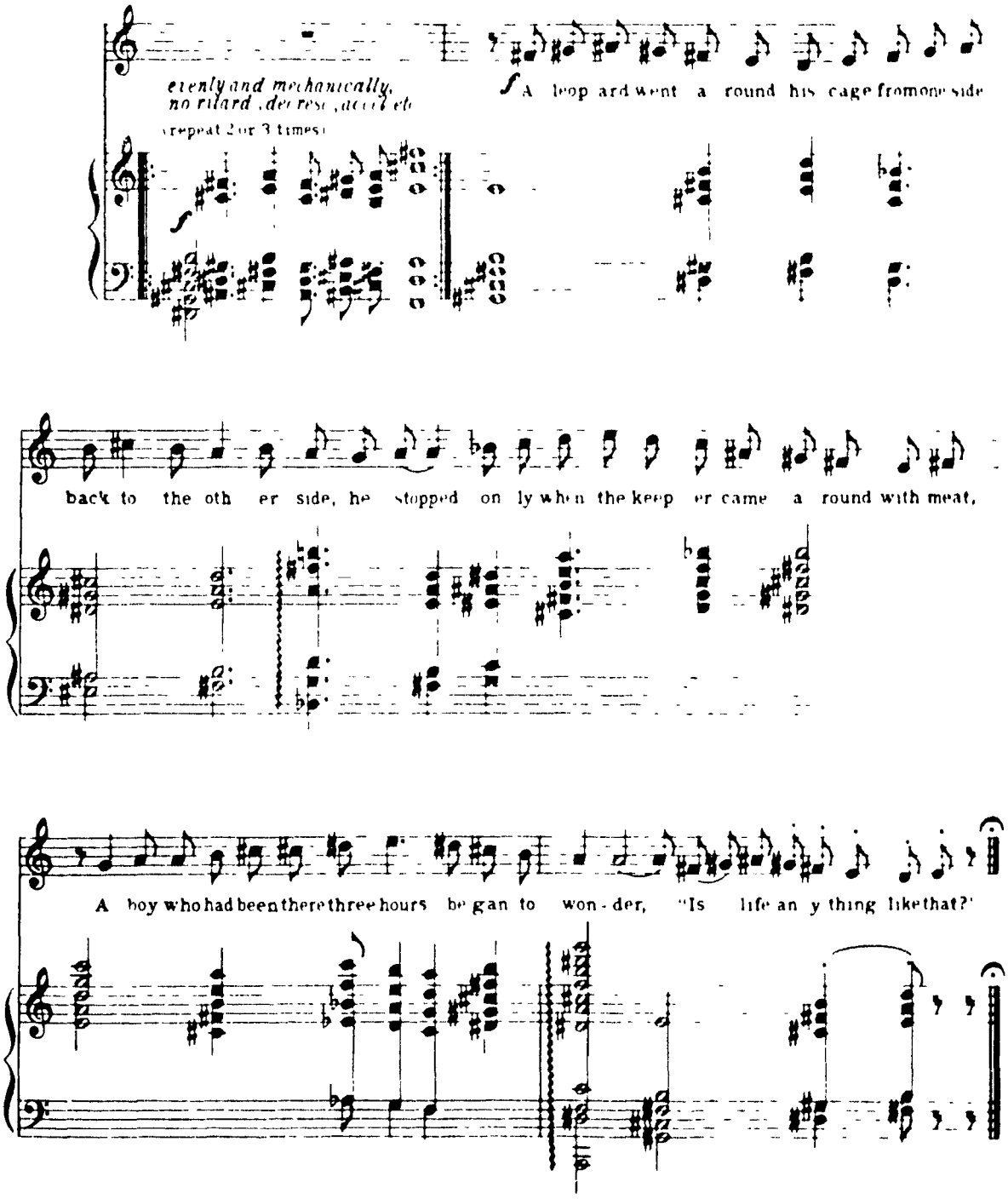
Two of the songs analyzed in the thesis, "The Cage" and "Like A Sick Eagle," are representative of the experimental, atonal side of Ives's compositional output. They employ atonal structures. The other two songs, "Ann Street" and "At the River," are grounded in traditional idioms. Both of these songs are in a "key" and use conventional chordal vocabulary. However, "Ann Street" and "At the River" extend into those murky regions of tonality also found in passages of the music of late Brahms, Wagner, Mahler, and early Schoenberg. The songs are presented in the following order: "The Cage," "Ann Street," "Like A Sick Eagle," and "At the River." This order shows, at least in the mind of this author, a progression from those works which are most easily approached to those which are analytically ambiguous. Songs provide a brevity - as well as a text which often aids in analytical choices - that is not a feature of other genres. Moreover, songs are found throughout Ives creative life and offer a great variety of both experimental and traditional compositional practices. It is to an analytical discussion of the four selected songs which we now turn.

The Cage

A leopard went around his cage
from one side back to the other side;
he stopped only when the keeper came around with meat;
A boy who had been there three hours began to wonder,
"Is life anything like that?"

The Cage

(1906)



NOTE:- All notes not marked with sharp or flat are natural

"The Cage" represents the experimental side of Ives's compositional output. The poem, one of Ives's own, paints a bleak picture of a child watching a caged leopard. The leopard's relentless pacing out of its life is reflected by the voice's eighth-note and stepwise motion. At the same time, the irregular accompanimental pattern discloses the restless nature of the pacing beast.[31] The analysis will delineate and discuss the various parts of the song including its instances of word-painting. Subsequently, the analysis will consider higher-level structural issues in the song.

The text consists of five lines; the musical realization of each line encompasses a whole-tone collection. Beginning with WT_0, the lines alternate the two whole-tone collections shown in Figure 1 below.[32]

FIGURE 1

Text	Whole-Tone Collection
[Piano Introduction]	---
1 A leopard went around his cage	WT_0
2 From one side back to the other side;	WT_1
3 he stopped	"
only when the keeper came around with meat;	WT_0
4 A boy who had been there three hours began to wonder	WT_1
5 "Is life anything like that?"	WT_0

The interval of disjunction between each of the first four lines is ic1; the fourth and fifth are separated by ic3.

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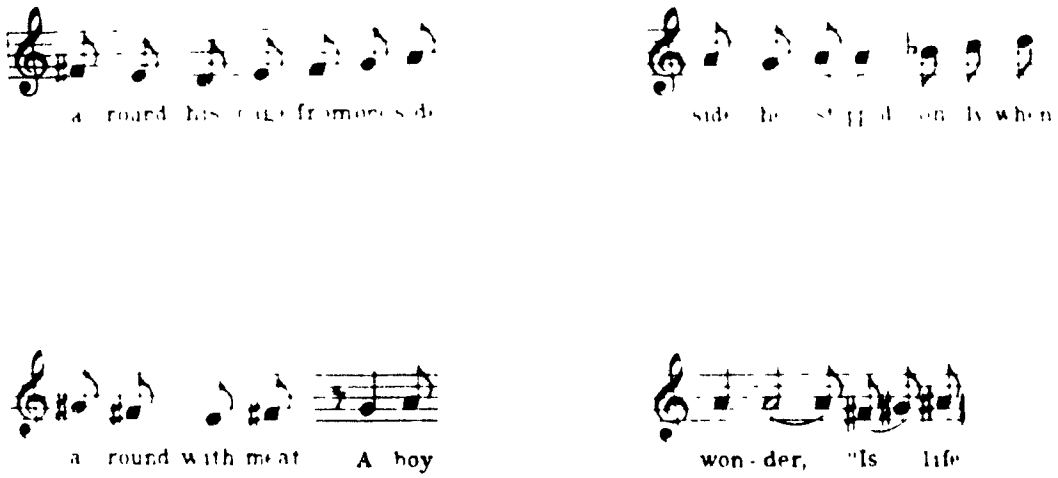
[31]Ursula Henrietta Euteneuer-Rohrer, "Charles E Ives: 'The Cage'" Neuland 1 (1980) · 47-51 Euteneuer-Rohrer's analysis of "The Cage" provides an interesting interpretation of the text by relating the text to many American historical events

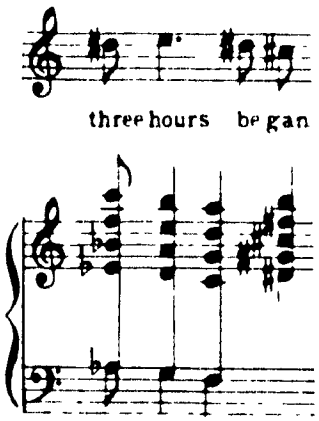
[32]WT_0 = CDEF#G#A# [02468A] and WT_1 = C#D#FGAB [13579B].

EXAMPLE 1: JUNCTURES OF TEXT LINES



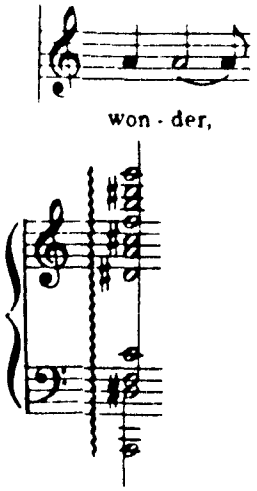
The text gives rise to three cases of word-painting which disrupt the voice's whole-tone and continuous eighth-note motion. "Stopped" coincides with the juncture of the second and third lines. Unlike the link between the first and second lines, the connection between the second and third lines is blurred. The first two words of the third line "he stopped" are set to G4 and A4, both belong to the whole tone collection of the second line (WT_1). "Three hours" is only instance in the song where ic1 is found within a given line of text and not at the end.

EXAMPLE 2: THREE HOURS



The "three hours" are perhaps symbolized by a dotted quarter-note, a duration of three eighth-notes, perhaps also by the succession of three quintal chords. The longest duration in the voice occurs with "Wonder" and is the only instance of 7-33 [012468A] in the song.[11] "Wonder" is highlighted by rolling the chord.

EXAMPLE 3: THE WONDER CHORD



The piano introduction familiarizes the listener with the harmonic and melodic material of the song and also provides a rough sketch of the overall rhythm, voiceleading, and chord progression. The accompaniment consists of a series of 5-35 [02479] pentachords. The pentachordal movement is interrupted three times, twice by 6-14 [013467] and once by a 7-33 [012468A]. The pentachords are arranged quartally (ic5); for example, the first chord: D#2-G#2-C#3-F#3-B3.

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[11]The pitch-class sets used in this analysis employ the prime forms as listed in Appendix One of Robert Morris's Composition With Pitch-Classes (New Haven: Yale University Press, 1987). The prime form set names are taken from Appendix 1 of Allen Forte's The Structure of Atonal Music (New Haven: Yale University Press, 1973)

EXAMPLE 4: THE OPENING

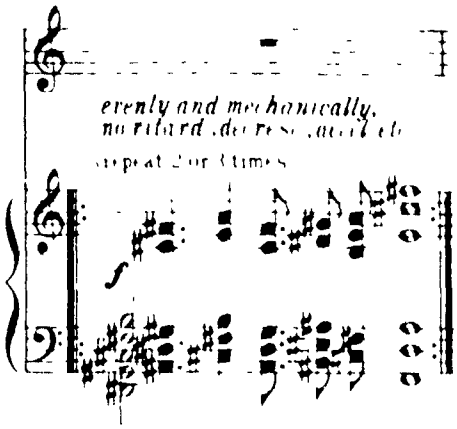
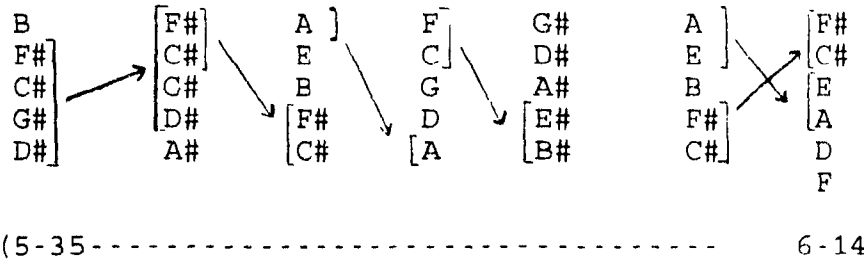


Figure 2 shows the piano introduction's chord progression; the [ ] enclose the pitches which are held invariant between adjacent chords. The -> joins the invariant subchord.

FIGURE 2
INVARIANCE BETWEEN THE CHORDS OF THE PIANO INTRODUCTION



The maximum number of pitches held invariant between two adjacent chords is four. Two transpositional operators achieve this result, T_5 and T_7. No pitches are held invariant under three transpositional operations, T_1, T_8, and T_6. The concluding 6-14 preserves four pitch-classes from the previous pentachord A, E, C#, and F#. The vertical quartal arrangement of pitches is abandoned in the 6-14 chord. The 6-14 chord foreshadows the events of the song. The three middle pitches of the 6-14 chord are a stack of two

perfect fifths (D3-A3-E4) which are later melodically presented. The upper two pitches of the chord, C#5 and F#5, are separated from the other three pitches by a major sixth. The chord's lowest note, F2, is also a major sixth away from the next closest pitch, D3. Sixths play a secondary role throughout the course of the song.

The material of the piano introduction is subsequently employed in the song itself. The first two lines of text are accompanied by the material of the piano introduction, transposed up a perfect fourth (T_5). The voice uses two different five-note whole-tone sets (5-33 [02468]). The first pentachord (2468A) is derived from WT_0 and sets the first line of text; the second (579B1) is derived from WT_1 and it sets the second line. Each of the voice's pitches are present in the accompaniment's chords. The registral position of the voice's pitches within each chord changes from chord to chord. For example, the voice's first F# is doubled an octave below by the piano; the F#3 is the third note of the chord. The voice's F#4 at "a-round" is doubled by the piano at the unison. This time, the F#4 is the second note of the chord.[34]

By eliding the setting of lines 1-2 and 3-4, Ives effectively portrays the nervous pacing of the caged leopard. Lines 1-2 could conclude with either the 6-14 chord under "side" or with the D-A-E-B-F# pentachord on "stopped"?

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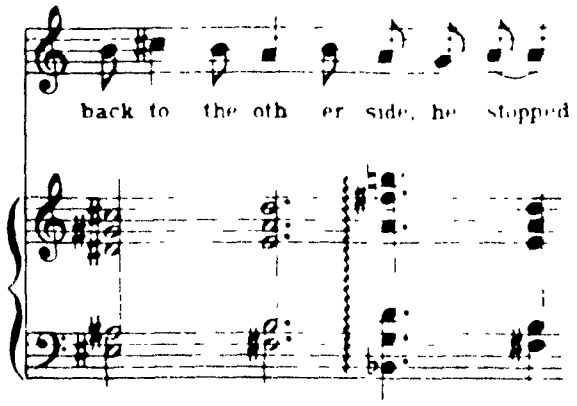
[34]Chords will be read from the highest pitch to the lowest.

EXAMPLE 5: "THE OTHER SIDE" TO "HE STOPPED"



If the accompaniment of lines 1-2 exactly followed the piano introduction, this segment would end with the 6-14 chord, setting "side." However, the eighth-note motion does not cease until "stopped." By this point the third line of text has begun. To further compound the problem, the return of the WT_0 comes after "stopped" and not with "stopped." The 6-14 chord cannot be considered the end of lines 1-2 but at the same time, neither can lines 1-2 end with "stopped."

Musically, the elision is created by the numerous repetitions of the piano introduction, establishing an expected sequence of events. The music of lines 1-2 is a transposition of the piano introduction (T_5); one expects lines 1-2 to end like the piano introduction. However when the end is reached, the events do not progress as before. The 6-14 chord coincides with the end of the second line of text at which point there is a clear break in the text. The voice's eighth-note motion does not cease at "side" but continues until "stopped." In addition, the whole-tone collection of the second line (WT_1) seeps into lines 3-4, setting "he stopped." The third line's whole-tone collection (WT_0) begins with "only when...."

In his doctoral dissertation, J. Philip Lambert analyzes lines 3-4 - beginning with the second D5-A5-E4-B3-F#3 pentachord (the fourth chord of the second system) - as a partial repetition of the piano introduction at T_3.[35] In the following discussion, reference will be made to the labelling system used by Lambert in his 1987 doctoral dissertation. The seven chords of the piano introduction are labelled A through G; the rest of the chords 1 through 22.[36] Lambert's analysis supports the assumption that lines 3-4 begins with the second D5-A4-E4-B3-F#3 pentachord at "stopped" (Lambert's chord 8). Chords 8, 10, 13, 15, and 18 are respectively T_3 of A, B, C, D, and E of the piano introduction. The pentachords that are placed between chords 8, 10, 13, 15, and 18 are transpositions of the basic 5-35 chord and comprise an expanded version of the piano introduction.[37]

E5 is the melodic apex of lines 3-4. In the first phrase (line 3), E is a member of the whole-tone collection, WT_0; in the second phrase (line 4) E is not a member of this phrase's whole collection, WT_1. The second phrase's E5 breaks the pattern of strict whole-tone motion within each phrase. A half-step normally occurred at the end of phrase where one whole-tone collection was exchanged for the other one. In line 4, the half-step occurs in the middle of the phrase with no exchange of whole-tone collections. At this point, Ives omits the quartal chords and, in their place, three quintal ones are presented (recall Example 2). These three chords each use the top pitch of the three previous quartal chords (B5-C6-A5), although not in the same order.

---

[35]J. Philip Lambert, "Compositional Procedures in Experimental Works of Charles E. Ives." (Ph.D. dissertation, Eastman School of Music, 1987).

[36]Ibid., pp. 95-96. The reader will find it useful to remember that the rolled 6-14 chord is number 7, that the chord preceding "A boy" is number 13, and that the "wonder" chord is number 19.

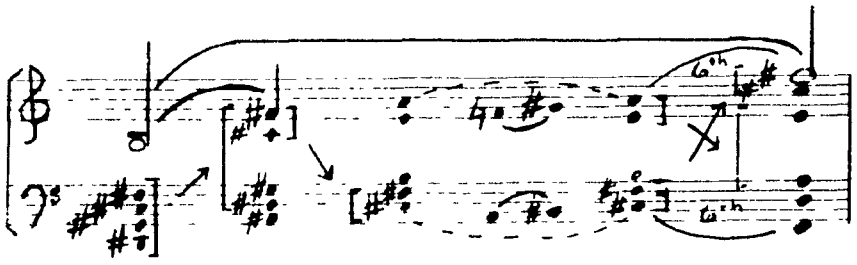
[37]Ibid., pp. 95-96.

Following the return of quartal harmony with the B5-F#5-C#5-G#4-D#4 chord, the "wonder" chord is struck and ends line 4. This "wonder" 7-33 chord is the only instance in the song where the voice and the piano accompaniment are synchronized. Moreover, this chord is also the only instance where a pitch-class complement occurs between voice and accompaniment: chord 7-33 is the literal complement of the whole-tone collection 5-33 which sets the fifth line of text, "Is life anything like that?"

The music of line 1 also sets the final one, thus, rounding the song. The boy "who had been there three hours" poses the question - "Is life anything like that?" By restating the music of the first line, Ives draws the parallel between the monotonous nature of the leopard's pacing "around his cage/from one side back to the other side" with "life." The song concludes with the third chord of lines 1-2 (D-A-E-B-F#). By not recapitulating the entire series of chords of the piano introduction and lines 1-2, the song is left with an openendedness that musically asks the boy's question.

Ic5 plays an integral role in the song's structure. All of the chords have some degree of "ic5ness." The music of lines 1-2 and line 5 are, in whole or in part, a ic5 transposition of the piano introduction. Melodically, the piano introduction moves through a perfect fifth (the perfect fourth's inversion).

EXAMPLE 6: THE PIANO INTRODUCTION



The above example exposes three perfect fifths - two in the soprano and one in the bass. On a surface level, the bass's motion mirrors the soprano's in the piano introduction. However, the deeper level progression through the perfect fifth in the upper voice is not replicated by the bass, which drops a 'sixth,' C# to F, in progressing to the final 6-14 chord.

The uppermost voice of the accompaniment leads the musical action in "The Cage" and from this point forward, will be referred to as the principal voice. This voice consistently reveals instances of ic5 unlike the other voices in the song; moreover, the instances of ic5 in the uppermost voice correspond with key points in the text. For example, lines 1-2 are delineated by a perfect fifth in the upper voice E4 to B5, highlighting "A leopard" and the "other side." The three quintal chords also support the notion of the uppermost voice as principal voice. The highest pitches of chords 12, 13, and 14 (C6, B5, A5, respectively) are the top pitches of the quintal chords. Instead of building a 5-35 chord in fourths below these pitches, Ives produces the same collection in fifths below them.

The music of lines 1-2 replicates the piano introduction

up a perfect fourth (T_5). The result is a higher level articulation of ic5. Melodically, the perfect fourth is not as prevalent as the perfect fifth. The concluding 6-14 chord of the piano introduction combines various structural elements which, in turn, are employed in the song. Both perfect fourths and perfect fifths are present in the chord as well as two major sixths (E4-C#5 and F2-D3). This interval is found in the top voice between the 6-14 chord and the preceding 5-35 chord. Other instances of the sixth are found at the conclusion of lines 1-2, and between the 7-33 "wonder" chord and the chord preceding it. At "wonder," the sixth is not major but minor (B5-G6); however, the minor sixth is also present in the bottom voice of the piano introduction between the 6-14 chord and the one preceding it.

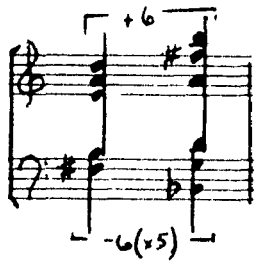
The structure of the music setting lines 3-4 can be elucidated using similar criteria. In the piano introduction and lines 1-2, the goals of the chordal progression coincided with the starting and ending points of those parts. In the piano introduction, the 6-14 chord signaled an end through its longer durational value and interval content.[38] More importantly, the primary intervals of the piano introduction and lines 1-2, the perfect fourth and the perfect fifth, are found on both horizontal and vertical planes and are embedded in their initial and final structrual points.

The major and minor sixths play a secondary role in "The Cage" (the sixths are reproduced in Example 7 below). The first instances of the sixths are situated in the piano introduction - in the 6-14 chord and the immediate motion to it. Lines 3-4 begin with the repetition of the D5-A4-E4-B3-F#3 pentachord and concludes with the "wonder" chord, 7-33 (G-D#-B-F-C#-A-C), melodic motion by perfect fourth. Upon closer examination, two instances of the B5-F#5-C#5-G#4-D#4

[38]In the case of the 6-14 chord that concludes line 2, it contrasts textually from the preceding 5-35 chords, it is rolled and also, this 6-14 chord is struck at the same time the second line of text concludes

pentachord (Lambert's chord numbers 12 and 18) emerge as important structural events. The first instance of this pentachord occurs at the end of the third line of text, reiterating the D5 to B5 motion in the upper voice that was found at the end of lines 1-2 between the 5-35 and 6-14 chords (see Example 7 below). This time the chord built below B5 is a pentachord and not the previously heard 6 14 chord.[39]

EXAMPLE 7



The second instance of the B5-F#5-C#5-G#4-D#4 pentachord moves through the same interval at a higher level. As was the case with the piano introduction and lines 1-2, important structural events are presented on the surface as well as at deeper levels. In the piano introduction and the (T_5-related) setting of lines 1-2, the upper-voice perfect fifth which spanned the whole progression was also embedded in its first two chords. Here the progression from "stopped" to the chord before "wonder" can be understood to embed the sixth, D5-B5 (acquired from the preceding two chords), within its overall motion, as summarized in Example 8.

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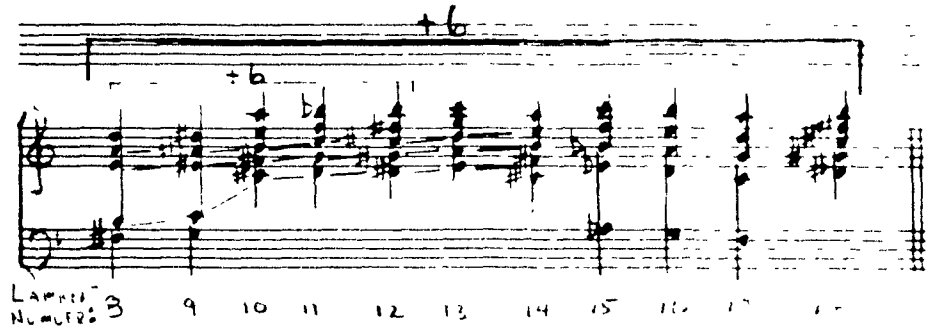
[39]The major sixth motion is also found at the conclusion of the first line of text and the last line, but in these cases the chords are reversed; the resultant interval is a minor third, the inversion of the major sixth.

EXAMPLE 8: THE STRUCTURAL VOICE LEADING OF LINES 3-4



The 7-33 "wonder" chord which follows has three primary functions. First, the chord helps the listener to differentiate between the music of lines 3-4 and the final line. The chord preceding the heptachord is the same chord that follows the E4-B3-F#3-C#3-G#2 pentachord that begins the last line; however, the two B-F#-C#-G#-D# pentachords function differently from one another. The first is a part of an ending gesture while the second is part of a surface motion which recalls the primary interval of "The Cage." If the "wonder" chord was not present at this juncture, the two chords would be indistinguishable. The second chord would be a simple repetition of the first with only the E-B-F#-C#-G# pentachord between them and not the abridged return to the music of line 1.

Second, the 7-33 chord concludes lines 3-4. The "wonder" chord differs from the other vertical sonorities of "The Cage." It is one of two rolled chords in the song, the other being the 6-14 chord setting "side;," it is the only chord that has doubled pitch-classes,[40] and, finally, it is preceded by the only barline outside the repeat marks of the piano introduction, a fact which marks it as the structural

[40]The "wonder" chord from top to bottom is G6-D#6-B5-F5-C#5-A4-D#4-C4-F3-D#3-A2.

downbeat of the song. A minor sixth separates the "wonder" chord from the preceding B5-F#5-C#5-G#4-D#4 pentachord in the top voice. This melodic motion was first observed in the bass of the piano introduction between the last 5-35 chord and the concluding 6-14 chord, C#3(Db3) to F3. A minor third (G-E), the inversion of the major sixth, joins the "wonder" chord to the last line.

Third, the "wonder" chord signals the return of the music that set line 1. The "wonder" chord is derived from the whole-tone collection and is the complement of line 5's WT_0 segment (D-E-F#-G#-A#). Moreover, this complementary heptachord is the only instance in "The Cage" where the whole-tone collection is presented in a chordal configuration. The "missing" note of the WT_0 collection, middle C, is the centrally-disposed member of the "wonder" chord.

While the perfect fourth was instrumental in the composition of the accompaniment's chords, its complement, the perfect fifth, dominates Example 9.

EXAMPLE 9: THE LARGER STRUCTURE

At the outset of the song, the bottom voice duplicates the motion of the top voice. However at the moment of repose, the bottom voice moves in contrary motion to the top one. In the piano introduction, the upper voice concludes with F#5, the lowest with F2. Similar to the motion between the first

two chords of the piano introduction, a perfect fifth is found between the first and last chord in top voice, B3 to F#5.[41] This event is not duplicated by the bass.[42]

The bottom and top voices of lines 3-4 move entirely by parallel motion. The perfect fifth is displaced by the major sixth, D to B in the top and F# to D# in the bottom voice. Instead of the leading top voice, the music of line 3 moves through a rising chromatic motion found in the inner voices of the chords.

FIGURE 3

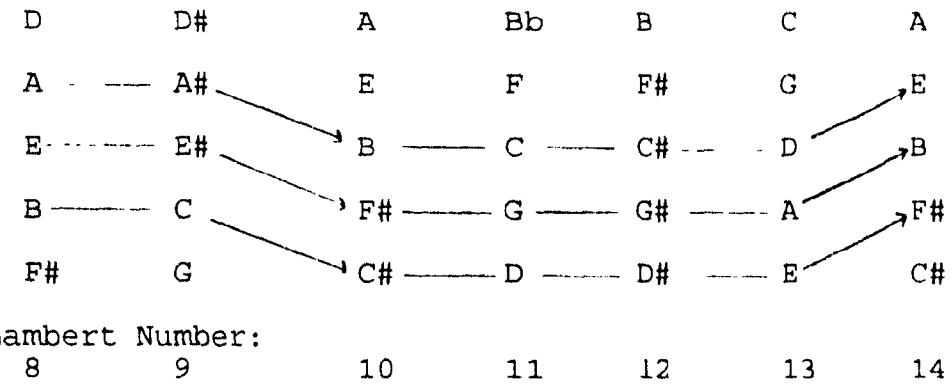


Figure 3 tracks the motion of the three chromatic voices.[43] This motion preserves the integrity ic5. Each of the chromatic voices move through an ic5: A to E, E to B, and B to F#.

By and large, the setting of line 4 replicates that of line 3. The quartal chords of line 4 (chords 13, 14 and 18)

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[41]The same situation follows in the setting of lines 1-2, a perfect fourth higher.

[42]In the bass, the interval between the first and last chords of the piano introduction (Lambert chords A and G) is a diminished third

[43]A tritone (T_6) separates chord 9 from chord 10, no pitch-class is held invariant. The vertical order of the invariant pitch-classes in chord 8 is different in chord 10: the second, third and fourth pitches of the chord 8 become the third, fourth, and fifth pitches of chord 10 The same relationship holds true for chords 9 and 11

were found initially in the setting of line 3.[44] Line 4 combines quartal and quintal harmonies. Quintal chords (chords 15, 16, and 17) are built underneath the top pitches of chords 10, 12, and 13 (A5, B5, and C6, respectively). Twice the setting of line 4 moves through a minor third C6 to A5. Following chord 17, the concluding chord of line 3 returns, B5-F#5-C#5-G#4-D#4 (chord 12) before moving to the final chord of line 4, the "wonder" chord (chord 19).

Overall, lines 3-4 moves through a perfect fourth, D5 to G6. Within this perfect fourth frame, there is series of lower level motions through an ascending major sixth, setting line 3 ("stopped" to "meat"), and a minor third, setting line 4. Line 4, itself, moves through a perfect fifth from chord 13 to 19. Both the motions by perfect fourth and fifth on the higher level in lines 3-4 preserve the integrity of the principal interval class of "The Cage," ic5.

The last line musically makes the comparison between the leopard's pacing and the boy's observation, "Is life anything like that?," recapitulating the music of line 1. The music of line 2 does not return, which ends the song with the question unanswered. Moreover, the last line ends with whole-tone collection and the first three accompanying chords with which the first line of the song began.

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[44]The reader will notice that chord 13 straddles the boundary between lines 3 and 4. Chord 12 is understood as the end of line 3; it completes the major sixth motion that began with chord 8.

ANN STREET

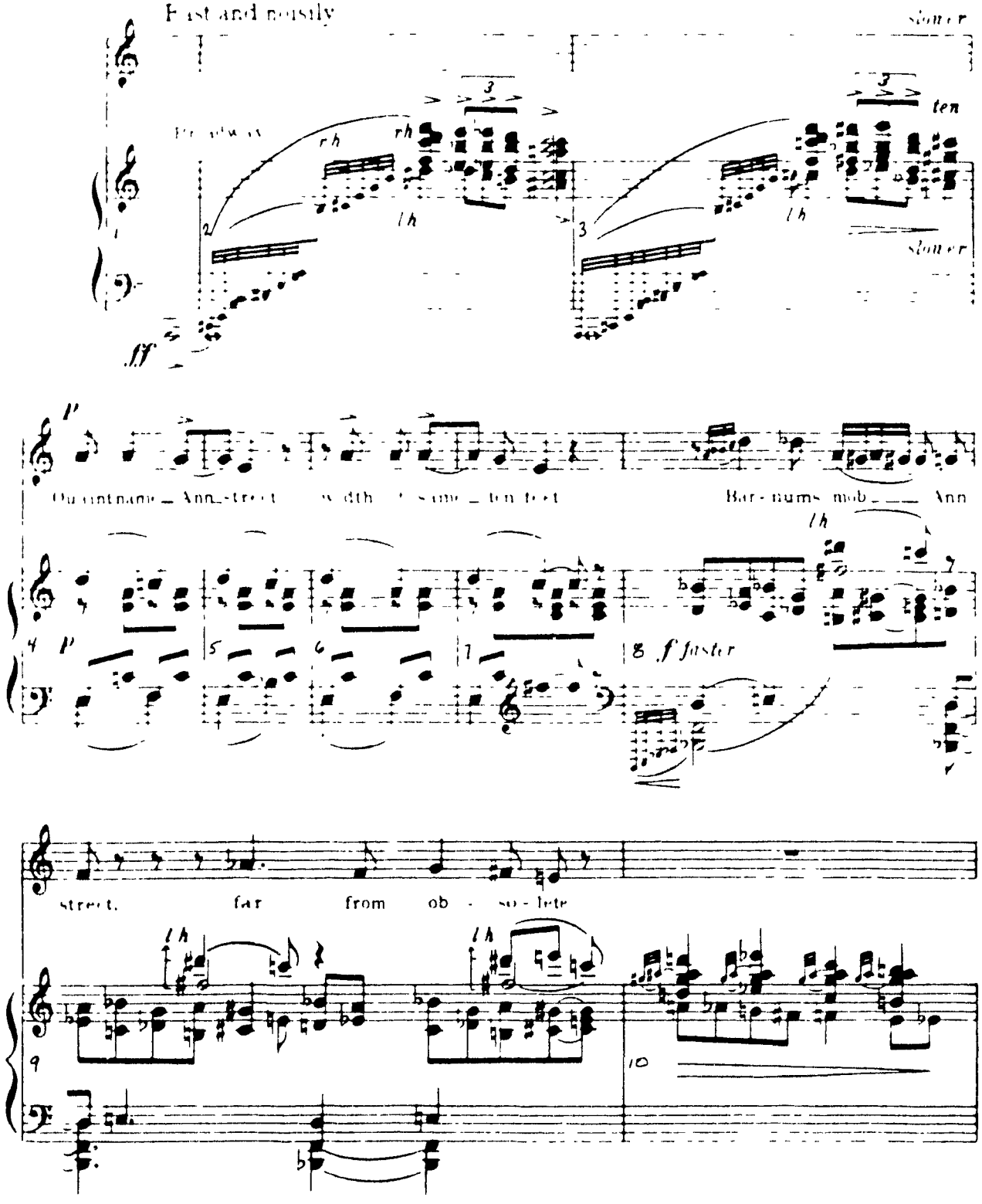
- Broadway
Quaint name - Ann Street.
Width of same, - ten feet.
Barnum's mob - Ann Street,
Far from obsolete.
Narrow, yes. Ann Street,
But business, Both feet.
- Nassau crosses Ann Street.
Sun just hits Ann Street,
Then it quits - Some greet!
Rather short, Ann Street.

- Maurice Morris
(from the New York Herald)

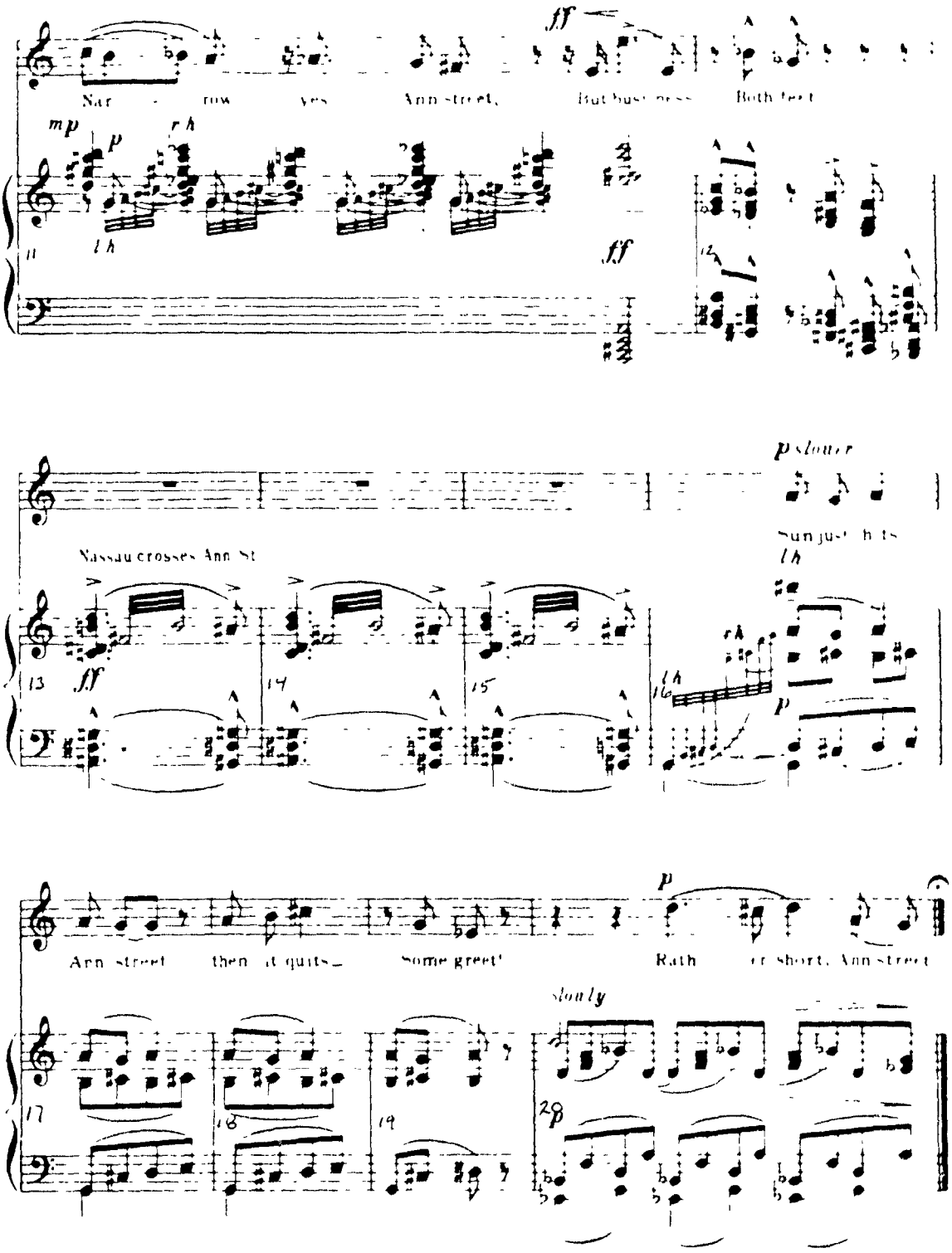
Ann Street

1921

Maurice Morris



by courtesy of "The New York Herald"


ff
Nar - row yes Ann street, But business Both feet
mp
p
rh
lh
ff
p slower
Sun just hits
Nassau crosses Ann St
lh
rh
13
ff
14
15
16
lh
p
p
Ann street then it quits— some greet' Rath er short, Ann street
slowly
17
18
19
20
p

Ives's music has often been divided into two groups: experimental works where he developed new compositional techniques, and works which synthesized his experiments with a more mainstream musical language. The blending of traditional and atonal practices was not out of the ordinary for Ives; it was analogous to the different colours available to a painter.[45] The goal of his works was to capture on the musical canvas a piece of the living world and each piece, in turn, served as a vehicle of expression for Ives's philosophical beliefs. "Ann Street" is such a work.[46]

The text of "Ann Street" was written by Morris W. Pool under his pen name Maurice Morris and published in the New York Herald. The poem describes a day in the life of Ann

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[45]Although in his writings Ives does not explicitly state that his music blends tonal and atonal compositional techniques, he often discusses the need for a language that will accurately depict the world around him The quotations below are examples of this sentiment from his writings

Charles E. Ives, Memos. edited by John Kirkpatrick. (New York: W.W. Norton, 1972), pp 49-50.

> For instance, to show how reasonable an unreasonable thing in music can be - look at a fugue. It is, to a great extent, a rule-made thing. So if the first statement of the theme is in a certain key, and the second statement is in a key a 5th higher, why can't (musically speaking) the third entrance sometimes go another 5th higher, and the fourth statement another 5th higher? "Because it destroys tonality." Having four nice different men playing tennis together doesn't always destroy personality - tonality is more of a man-made thing than personality

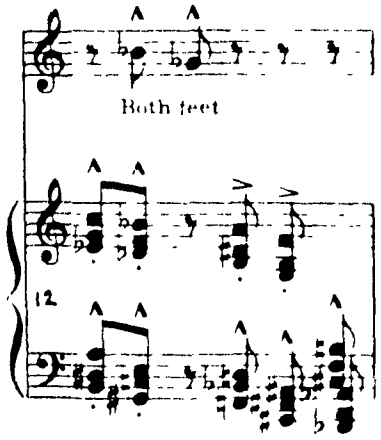
Charles E. Ives, Essays Before A Sonata and Other Writings. edited by Howard Boatwright. (New York: W.W Norton, 1964), pp 68-69. The following quote is part of Ives's description of fourth movement of the Second Piano Sonata, "Thoreau."

> At a distance over the woods the sound acquires a certain vibratory hum, as if the pine needles in the horizon were the strings of a harp which it swept... a vibration of the universal lyre, just as the intervening atmosphere makes a distant ridge of earth interesting to the eyes by the azure tint it imparts . " Part of the echo may be "the voice of the wood; the same trivial words and notes sung by a wood nymph " It is darker - the poet's flute is heard our over the pond and Walden hears the swan song of that "Day" - and faintly echoes....

[46]Works such as Three Places in New England, the Third and Fourth Symphonies, The Unanswered Question, and the Second Piano Sonata also fall into this category

Street, a short but busy street. As is the case with many of Ives's settings, word painting highlights much of the musical action; for example, the increased density of the chords at "Barnum's mob" paints the clutter of people on the street. Another example of word painting is found at "both feet."

EXAMPLE 10: "BOTH FEET"



Ives illustrates the firmness of business landing with both feet by presenting a series of two chords each an eighth-note in length articulated by ^ markings in the music.

Much like the poem (and the street), the song is quite short. It lasts less than a minute. However, there are many textual and textural shifts in the song which keep the listener off-balance.

FIGURE 4

SECTIONAL DIVISIONS IN "ANN STREET" BASED ON CHANGES IN MUSICAL IDIOM[47]

Section	Text	Bars
1	(piano introduction)	1-3
2	Quaint name - Ann street. width of same, - ten feet	4-7
3	Barnum's mob - Ann street, far from obsolete.	8-10
4	(piano interlude) Narrow, yes, Ann street, But business, Both feet.	10-12
5	(piano interlude - Nassau crosses Ann St.)	13-15
6	Sun just hits Ann street, then it quits - Some greet! Rather short, Ann street...	16-end

The six sections are created primarily by sudden alterations in harmonic vocabulary. These alterations are, in turn, defined by the presence or absence of referential pitches in the piano part, by the intervallic relationships established between the voice and the piano part, and by the level of dissonance. Also, most of the harmonic shifts coincide with rhythmic changes in the music, and/or with changes in the accompanimental and vocal texture, as well as tempo fluctuations.

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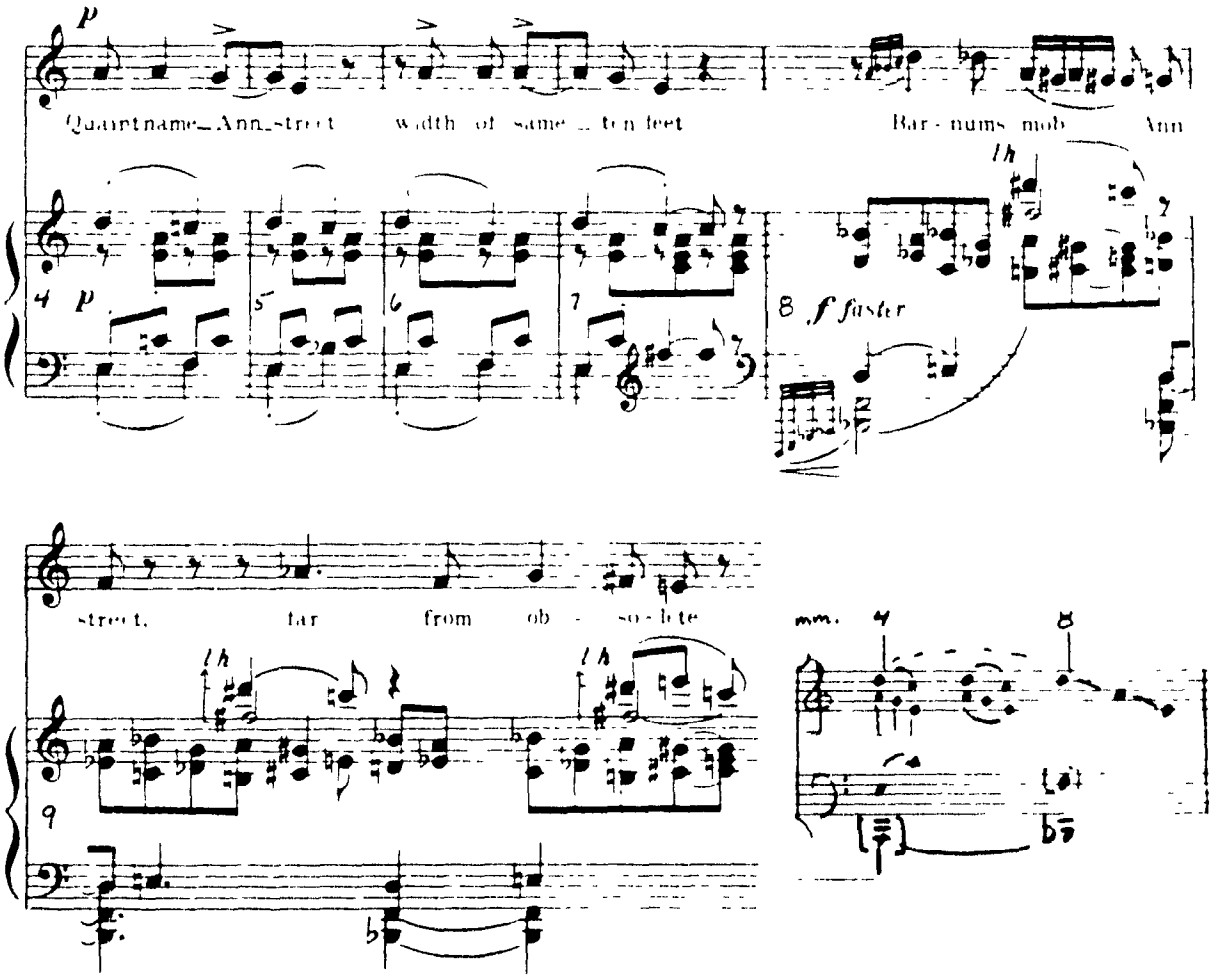
[47]Lawrence Starr, "Style and Substance: 'Ann Street' by Charles Ives" Perspectives of New Music 14/15 (Spring-Summer 1976-77): 31. Starr's delineation of the song is similar to my own. Starr separates measures 11 to 12 into three sections, my section 4, and measures 16 to 20 into two sections, my section 6.

Starr's second analysis focuses on the textural differences of the song He argues that this type of an analysis should be used as the prototype for further investigation of Ives's music Starr bases his analytical model largely upon his interpretation of Ives's discourse on substance and manner found in the Essays Before a Sonata. Starr concludes that the surface details, i.e. the manner of the song, reveal structural factors in the music which are not revealed otherwise and will consequently uncover other dimensions of the music.

Recurring intervallic and motivic sonorities play a crucial role in the structure of "Ann Street." These structural features can be found both on the vertical and linear dimensions of the song. The majority of these are most easily found in the vocal line.

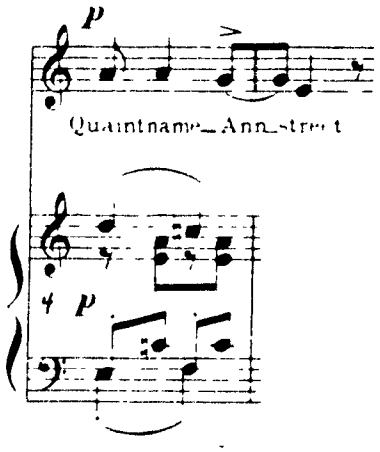
EXAMPLE 11: MM. 4 TO 9, PLUS GRAPH



The first four measures of the vocal line, "Quaint name - Ann Street./width of same, - ten feet.," contain two two-measure segments, mm. 4-5 and mm. 6-7, each encompassing a descending perfect fourth (ic5), A4 to E4. In turn, each ic5 is segmented into two smaller intervals: a descending major second (ic2), A4 to G4, which is followed by a descending minor third (ic3), G4 to E4.

Mm. 4 to 9 establish A as the principal pitch of the song. Two ic5's surround A, one above and one below. Although D5 is not present in the voice in mm. 4 to 7, it is articulated throughout the passage by the piano.

EXAMPLE 12: M. 4



The three pitches, D5-A4-E4, are presented as a chord by the piano in m. 4, anticipating the forthcoming vocal line.

In mm. 8 and 9 ("Barnum's mob - Ann Street, far from obsolete."), the melodic line encompasses two descending ic5's: D5 to A4 and A4 to E4.

EXAMPLE 13: BARNUM'S MOB, PLUS GRAPH (vocal line only)

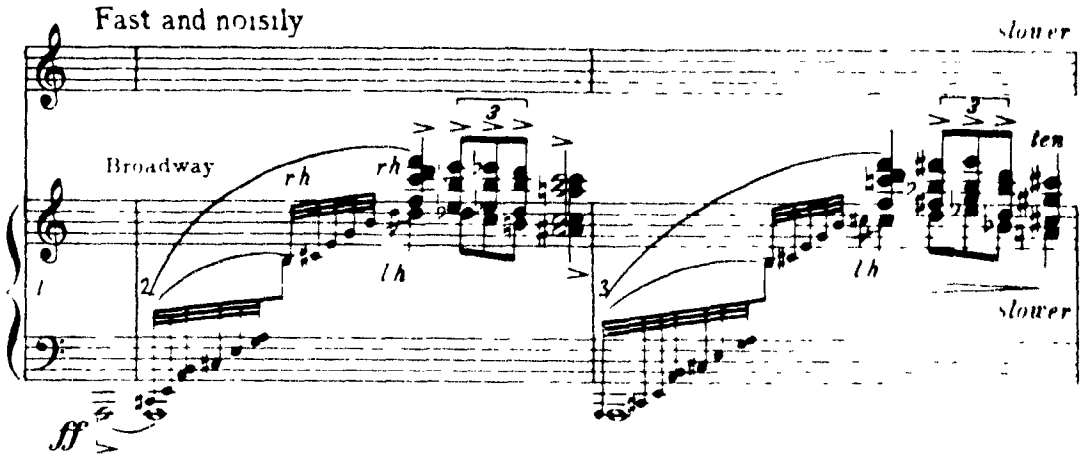
Each of the descending ic5's is partitioned further by an ic1: D5-Db5-A4 and A4-G#4-E4.

The descending ic5 plays several roles in the structural

formation of "Ann Street." The interval is found on many different planes - horizontal, vertical, surface, and deeper structural levels. Ic5 is the principal interval class of the song. In "Ann Street" and other less traditionally oriented works, triads do not function like their common practice counterparts. Often, in their place one finds other chordal constructions that serve as the principal pitch(-class) structure, such as the D5-A4-E4 chord in m. 4 of "Ann Street." One difficulty with this music lies in the identification of the referential sonority.

Ic5 is first presented by the piano in the three-measure introduction.

EXAMPLE 14: THE PIANO INTRODUCTION



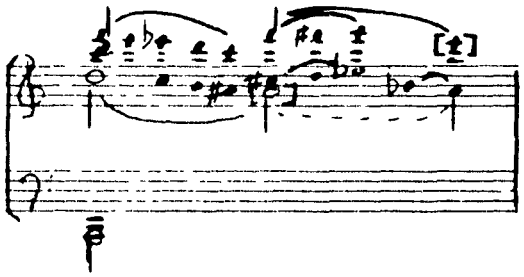
As the song opens, A is clearly articulated in the bass and moves quickly through an arpeggiated (elongated) minor sixth gesture, A1 up to F6. Once the F6 is attained the upper voice descends a perfect fourth (ic5) by step through E6 Eb6-D6 to C6. This gesture is subsequently repeated in m. 3, with variation. Instead of resolving the F6 directly to C6, the top voice moves chromatically upward to G6 and then it leaps down by perfect fourth (ic5) to D6 before concluding on C#6 on the last beat of m. 3.

The ic5, F6 to C6, is the first instance of the

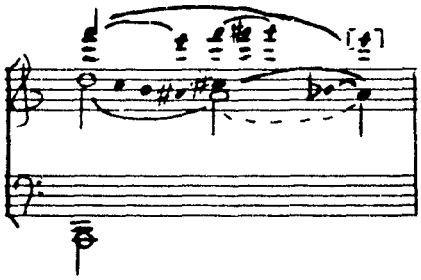
principal ic. This particular ic5 plays a subsidiary role to its two primary occurrences in the vocal line: D5 to A4 and A4 to E4. Ives does reveal the principal ic in the introduction but at a deeper level.

EXAMPLE 15: THREE GRAPHS OF THE OPENING GESTURE

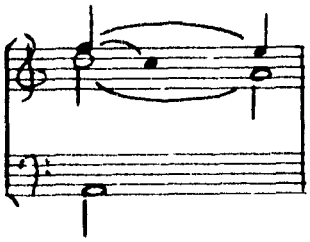
(a) mm. 1-3



(b) mm. 1-3



(c) mm. 1-3



In Example 15(a), the graph highlights the surface instances of F6 to C6 and F6 to E6 in the top voice as well as exposing the principal ic5 (D5 to A4) in the bottom voice of the treble clef in mm. 2 and 3. The opening arpeggio introduces D5; at the point of articulation, Ives covers the D5 with four notes, F5-C6-D6-F6. The D5 grace note preceding this chord focuses attention on the D5. In m. 3, A1 and the arpeggio are reiterated. Although registrally displaced, the reappearance of A1 completes the motion from D4 to A4, introducing the principal ic5 motion of the song (see Examples 15 (a) (A4 in brackets), (b), and (c)). The A4 is maintained throughout m 3. A1 to F6 is arpeggiated as before; however this time, the lowest note of the chord is C#5 instead of D5. The C#5 moves upward to Eb5 before

leaping down to Bb5 and ending with A4; as was the implied case in mm. 2-3. The top voice moves in parallel motion to the right hand's bottom voice. Example 15(c) shows the middleground articulation of the principal ic of the first three measures, D5-A4.

In mm. 4 to 7, the D5-A4-E4 trichord is partitioned into two segments: the upper dyad, D5 to A4, to the right hand (a duplication of the same dyad of the introduction) and A4 to E4, in the voice. Each ic5 is partitioned by the addition of a major second (ic2) below the first note; thus, each larger ic5 frame contains a major second, A4 to G4, and a minor third, G4 to E4 (recall Example 12).

The pitch-class content of mm. 4 to 7 is derived from the A-G-E and D-C-A trichords of the melody and right hand respectively. Both of these trichords have the same prime form, [025]. Two pitch-classes are foreign to these two trichords; both pitches are found in the left hand. In m. 4, the F3 functions as an upper neighbour to the E3 and in m. 5, the Bb3 acts as a lower neighbour tone to C4. At first glance, the F3 of m. 6 appears to reiterate the upper neighbour motion of its predecessor. However in m.7, a F#5 follows the E3. Instead of a simple neighbour tone motion, the F3 is part of an ascending chromatic motion, E-F-F#.

In m. 8, the vocal part opens with D5, the top pitch of the principal chord, concluding with E4 in m. 9.[48] The vocal part reaches the middle pitch of the principal chord, A, in m. 8 on "mob." At this point, Ives blurs the articulation of A4 by alternating it with G#4. The G#4 begins the motion down to the concluding E4 on "obsolete" (recall Example 13).[49]

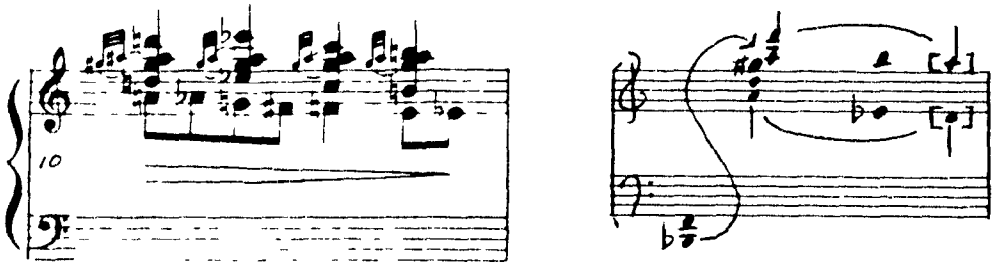
---

[48]Note that the D5 of the melody is preceded by a grace note slide which begins with A4

[49] Although not present in the melody in m. 9, A4 is the main pitch at this juncture. It is found in the right hand. The piano's A4 reinitiates the motion down to E4 at the end of m. 9.

M. 10 joins sections 3 and 4 and belongs to neither section. Ives encapsulates the musical action that has occurred up until this point in this measure.

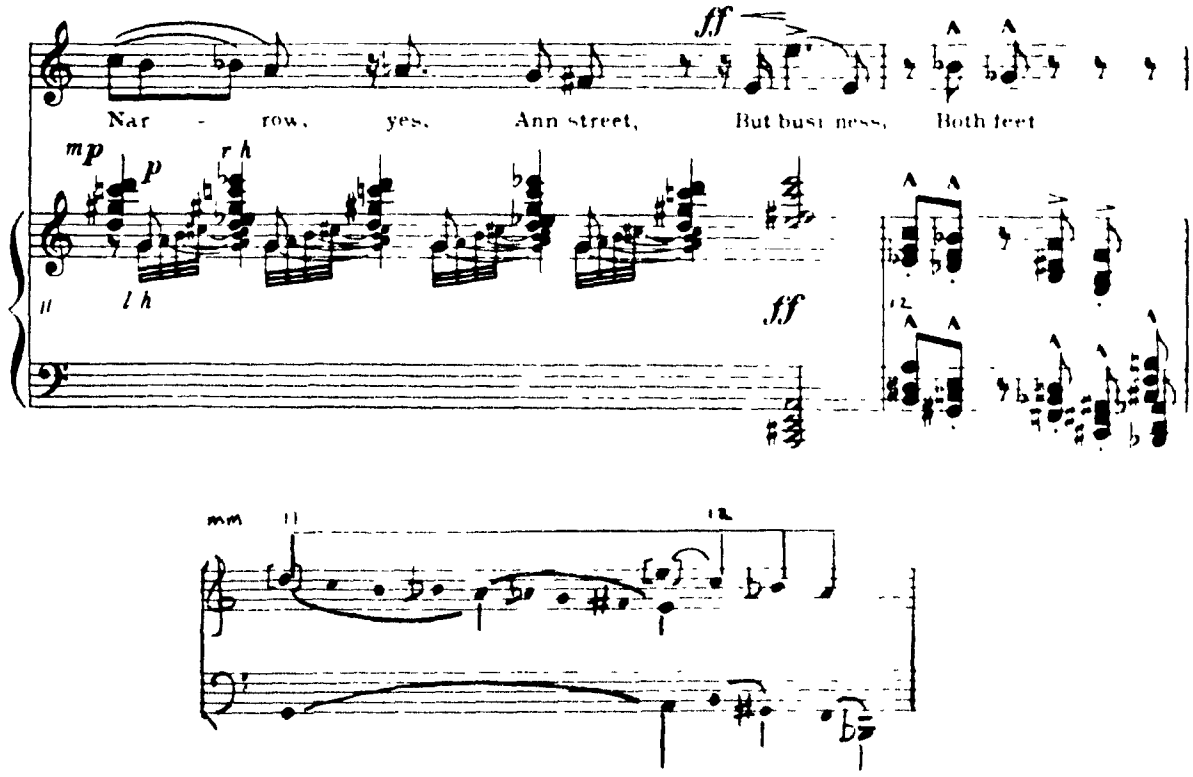
EXAMPLE 16: M. 10 AND GRAPH



The descent from D6 to A5 is given in the top voice of the right hand and is doubled at the octave by an inner voice. The descending motion to A is broken off at B on the fourth beat of m. 10. The descent from A4 to E4, found in the bottom voice, is extended in this measure down to Eb4. It is this descent, from A4 in m. 10, that joins section 3 and 4. In fact, the descent does not terminate with Eb4 but rather with the D5 of m. 11. D connects the sections 3 and 4, eliding the division between the two sections. The elision is shown in Example 16 by a square-bracket around D4 which shows the termination of the descent; the arrow connects Bb1 to the A5.

Section 4 - "Narrow, yes. Ann Street,/But business, Both feet." - is comprised of structural elements similar to those found in section 3 (see Example 17 below).

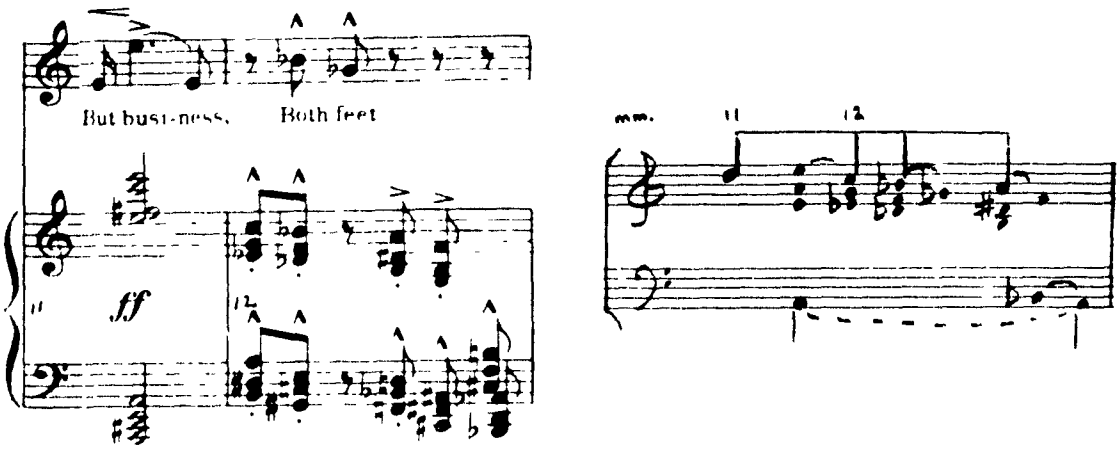
EXAMPLE 17: MM 11 AND 12 AND GRAPH



The opening D5 is presented by the piano, not the voice, and is the first note of the descending line. "Narrow" encompasses the first ic5; the second ic5 - A4 to E4 - takes longer to reveal itself. The arrival of E4 on "But business" is announced by a sudden change of dynamics, from mezzo piano to fortissimo, plus an octave displacement of E from E4 to E5 back to E4.

Sections 4 and 5 are metaphorically and musically connected by "Both feet." Signifying business's extroverted manner, the piano's stamping chords straddle the two sections before settling on the chord built upon A2 in m. 13. The motion to section 5 begins with the E5 of "But business." This melodic descent from E5 to A4 differs from other descents found in the song. For the most part, the ic5 motions from D5 to A4 and A4 to E4 move directly to their respective goal pitches.

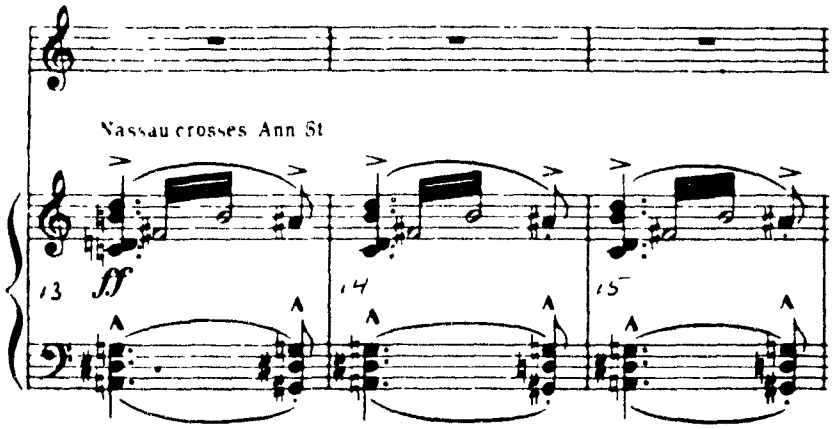
EXAMPLE 18: "BOTH FEET," PLUS GRAPH



In this case, the motion down to A4 is sprinkled with subsidiary pitches that are a third below the main pitches, Bb4 and Gb4.

Mm. 13 to 15 which sets "Nassau crosses Ann St." reclaims D5. Unlike previous sections, these three measures reinforce the right hand's D5 as well as the bass's A2 by exact repetition.

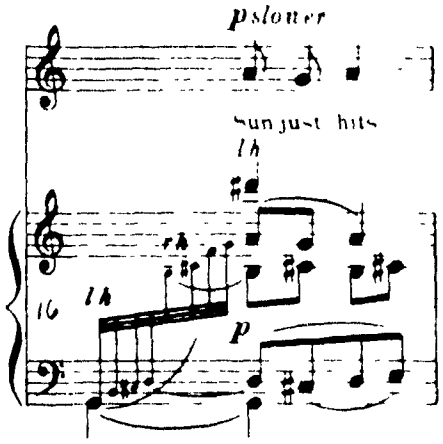
EXAMPLE 19: "NASSAU CROSSES ANN ST."

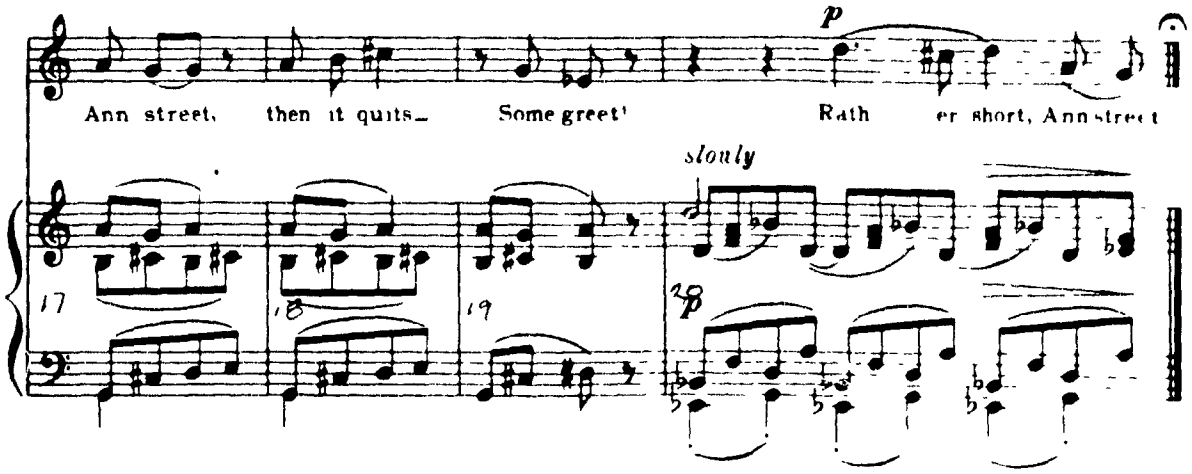


The oscillation between the bass's A2 to G#2 concludes in m. 16 with G2. The arrival of G2 coincides with the appearance of A4 in the voice and right hand. The ic5 between mm. 13 and 16 is filled in by two secondary pitches, B4 and A#4.

With the reappearance of A4 in m. 16, the motion downward by ic5 to E4 would seem inevitable. Ives, seemingly aware of this possibility, feints the motion to E4. Just before E4 is expected, he turns the music in another direction.

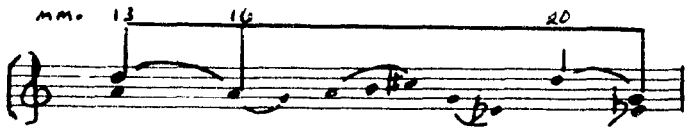
EXAMPLE 20: "SUN JUST HITS..."





The motion towards E4 happens not just once but three times over the course of the last five measures in the melody. The first occurs in m. 17; instead of continuing down to E4, Ives brings back A4 in m. 18 which then ascends by step to C#5. The second feint is found in m. 19 where the skip down from G4 overreaches E4 by a half-step, landing on Eb4. The third feint is found in the final measure of the song and is similar to the first one. In this case, Ives concludes the song with G4, giving the piece a "shortened" feeling effectively painting the last line of text, "Rather short, Ann street...." In m. 20, D5 is reclaimed one final time in the melody before moving to the final G4, summarizing the musical action of "Ann Street."

EXAMPLE 21: GRAPH OF MM. 13 TO END (melody only)



Example 21 shows the unfurling of the D5-A4-G4 trichord. This trichord of pitches challenges the other trichord, D5-A4-E4, as the primary melodic structure of the song.[50] From the beginning up until m. 12, E has been a key pitch-class component. After m. 12, and especially in mm. 17 to the end, E is used sparingly and it does not carry any significant structural weight.[51] Rather, it appears that Ives employed a tetrachord as the primary chord of the song not a trichord.

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[50]These two trichords have the same prime form: [027]. The employment of the [025] and [027] trichords is similar to the usage of the quartal and quintal chords in "The Cage." In both cases, Ives exploits the complementary relationship of the perfect fourth and fifth (ic5).

[51]In all, two E's are found between mm. 13 and the end, mm. 17 and 18. In both cases, the E can be interpreted as an incomplete upper neighbour tone.

At the beginning of the song, G played a subsidiary role, the means of dividing the ic5 from A to E. In the last section, Ives eliminates E4 as the goal of the descent and replaces it with G4.

In order to enrich and expand the musical palette, Ives blends traditional tonal compositional procedures with newer atonal ones.[52] The two compositional methodologies of "Ann Street" will be discussed separately, the tonal elements first. Traditional tonal sonorities form the foundation of this song; three pitches, and consequently three triads, constitute the background harmonic support for "Ann Street." The three pitches and their essential chordal members (enclosed in brackets) are as follows: A(C#E), Bb(DF), and G(BD). The Bb and G triads, respectively, act as upper and lower neighbours to the tonic A triad.

A is reinforced by traditional means as the tonic throughout the song. A is the first pitch-class of the song and is quickly followed by a C# and E, thereby, completing the triad on A. Section 2 (mm. 4 to 7: "Quaint name Ann Street...") emphasizes the dominant region of A, E. The third section (mm. 9 to 10: "Barnum's mob Ann Street...") harmonically moves away from A. The Bb-triad becomes the primary harmonic sonority in this section. A is returned in at the end of m. 11 and continues into in the static fifth section (mm. 13 to 15: "Nassau crosses Ann Street.").

Even in an atonal sense, A operates as the central pitch of "Ann Street." The atonal techniques do not function on the same level as the tonal ones, but seem to operate closer to the surface of the music. By using pitches which are "outside" the key of A, Ives is able to blur the boundaries of A as the key. The D-A-E trichord defines A as the referential pitch-class. In the most frequently used

[52]Charles E. Ives, Memos. edited by John Kirkpatrick (New York W W Norton, 1972), p. 50.

form, D5-A4-E4, both D and E are a perfect fourth away from A (an index number 6 with pitch-class 9 as its centre), effectively surrounding A.[53] D and E act as satellites to the central A. A is constantly reaffirmed as the referential pitch by frequent descents from D through A ending with E. Moreover, Ives presents this trichord on the harmonic and melodic planes, further reinforcing the centricity of A.[54]

Two passages need further discussion. Both are transitional, joining one section to another. M. 10 links sections 3 and 4; as was shown previously in the discussion, this measure does not belong to either section. The seamlessness of this passage is achieved by two of the voices. Ives initiated an upper voice at the end of the second section (m. 7) in the piano's left hand which started with E3-F3 motion, continued through F#5 (a transfer of two octaves), and subsequently reached G#5 in m. 10. The former upper voice of section 1 now becomes the middle voice in this measure. The G#5 resolves at the final chord of m. 11 on the A chord. The lowest voice of m. 10 completes the chromatic descent to D4; however, the goal D4 is transferred up an octave at the start of m. 11 and begins a new descent to E4.

From a voice-leading standpoint, the second passage is more complicated than the first. M. 12 is a small-scale reiteration of the larger A-Bb-A bass motion, coupled with the last two notes of the descending step motion from the E5 of m. 11 (recall Example 18). The first A is found at the end of m. 11 and the second one at the beginning of m. 13.

---

[53]The D-A-E trichord, with its index number of 6 and its axis of symmetry pc 9 (A), has as its other axial possibility pc 3 (D#/Eb). The role of this pc will be addressed later.

[54]Throughout the course of "Ann Street," Ives presents the structural motives on both the horizontal and vertical planes. For example, the first chord of m. 4 combines two instances of ic5, D-A-E. This chord, along with the inner voice of the right hand and the voice offers three different instances of the same motive in the span of 4 measures; moreover, the D-A-E chord anticipates the next phrase, mm. 8 and 9.

These two statements of A are the outer boundaries of the A-Bb-A motion. The bass, like the soprano, composes through a series of thirds (ic3 and ic4). Common tone motion plays a role in this passage. The bass's C# can be understood as a hold-over from the C# of the A chord of m. 11. The Bb (A#), for the most part an inner voice throughout this passage, becomes the bass note on the last eighth note of m. 12. Subsequently, the Bb completes its neighbour-note function with the A2 of m. 13.

At a deeper level, Ives constructed "Ann Street" around a simple neighbouring motion, an A triad that moves in parallel motion to a Bb triad (mm. 8 to 11) and returns to the A triad (end of m. 11). Once the A triad is reaffirmed in m. 11, the music proceeds to its ultimate goal, the G triad of m. 16. As previously discussed, the motion to G recalls the ic2 motive, A4 to G4, of m. 4. Each of the triads are located at key structural points within the song. The opening A triad establishes the key pitches and sets, the "tonality" of the song. The arrival of the Bb triad in m. 8 coincides with an increase in dissonance and chord complexity. The reappearance of the A triad at the end of m. 11 is synchronized with the fortissimo arrival of the registrally displaced E's on "But business." Following the return of A, the dissonance is relaxed and the subsequent music clarifies the centricity of A in mm. 13 to 15 through a lower neighbour chord motion (A to G# and back to A).

The Bb does not move directly back to A. A chord complex built upon G is placed between the two in m. 11. Unlike the other two, the bass of this complex is found two octaves higher (G4). G foreshadows the bass motion in the last two sections as well as the technique which was used to attain the bass's Eb in the final section.

EXAMPLE 22

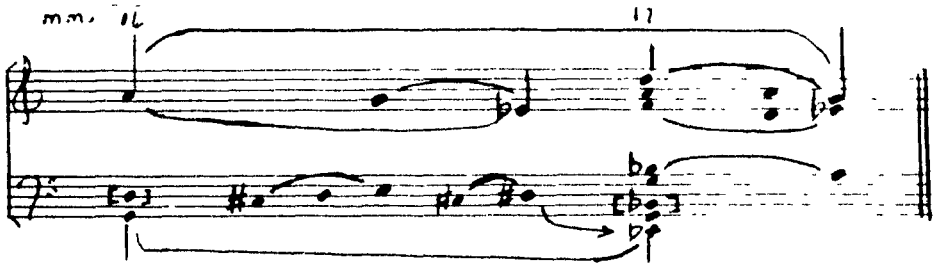
In Example 22, G5 is achieved through a 5-6 motion from the basic Bb-D-F triad which precedes it. 5-6/6-5 motion plays a key role in the song, especially at deeper levels. All three of the structural chord complexes, those built on A, Bb, and G, have accompanying 5-6/6-5 components, presented melodically or harmonically.

In m. 16, the arrival of bass's G2 coincides with the return of the opening melodic motive A4-G4-E4. However, as was previously discussed, the expected motion to E4 in the melody is never realized. In order to preserve a part of the D-A-E perfect fourth motive, Ives modifies the A-G-E motive; the motive becomes D-A-G. A4 and G4 are reestablished at the beginning of the last section. Two of the feints to E4, the C#5 and the Eb4 in mm. 18 and 19 respectively, both impinge on D, as lower and upper neighbouring tones, respectively. D first arrives in the right hand of the piano in the last measure and three beats later in the vocal part (note the now explicit neighbouring C#!). Once the D5 has been achieved, the melody quickly descends to G4 ending the song.

Harmonically, the final section of "Ann Street" parallels the action of the melody. Instead of concluding with harmonic material that supports A as tonic, the harmony steps downward to G in m. 16 and ultimately to in the last measure. Eb is realized through a 5-6 motion, much like the G4 of m. 11. Three times the bass hints at the Eb through the figure G2-C#3-D3-E3. In m. 19, the Eb(D#) is placed on a strong beat. G, which was the root of the chord in mm. 16 to

19, is retained in m. 20.[55] Added to the G is an Eb, a major third below; a Bb is also added, completing the Eb triad. The bass's Eb2 of m. 20 is foreshadowed in the melody of m. 19 (a major third in the melody (G4 to Eb4)) and in the left hand (an augmented fifth in the bass (G2 to D#3)).

EXAMPLE 23: GRAPH OF FINAL SECTION



Structurally, G2 is the more important bass pitch of the two in the last section and the harmonic goal of this passage. In Example 23, G is established at the beginning of the final section and the bass reaches down for the Eb at the end of the piece.

As was noted earlier, Eb (pc 3) is the other possible axis of symmetry resulting from the index of inversion of the D-A-E trichord with A as the referential pitch-class.[56] Not only is Eb figured prominently at the end of the song, but it is also found at the moment of structural and metaphorical intersection; from the E's "business" to the D#/Eb of "Both feet," to where "Nassau crosses Ann St.," and where the "Sun just hits" the D#6 (m. 16).

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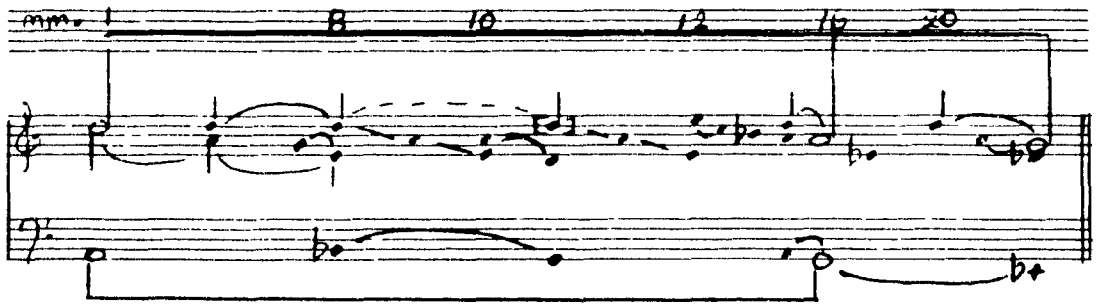
[55]The term, root, should be thought of in the traditional sense of the word, i.e., a triad in five-three position.

[56]See the discussion and footnote number 53 on p. 47.

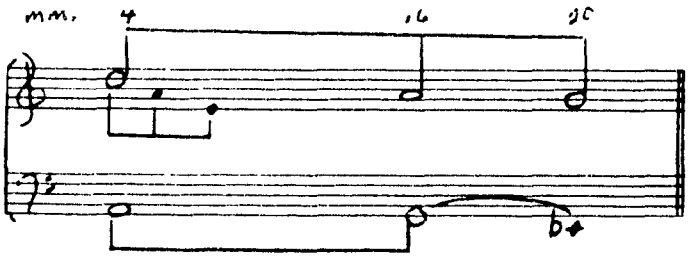
The two graphs of Example 24 propose middleground (labelled Example 24(a)) and background structures (labelled Example 24(b)) for "Ann Street."

EXAMPLE 24: MIDDLEGROUND AND BACKGROUND SKETCHES

Example 24(a)



Example 24(b)



Half notes are used to represent the main bass and soprano pitches in Example 24(a). The first unobstructed D5 occurs at the beginning of m. 4 and has been selected as the structural D5 of the soprano in Example 24(b). Like the subsequent D5's, m. 4's D5 moves the principal motive D-A-E, all instances of which are shown in Example 24(a). The song's melody is a hybrid of the two primary motives D-A-E and A-G-E, the resultant structural motive being D5-A4-G4. At a local level, A4 is established in m. 16 and quickly

moves down to G4 foreshadowing the background motion. G4, the melody's last note, concludes the song.

Harmonically, "Ann Street" opens in a referential area built over A2 and concludes with G2. A2, and its constituent members, form a large portion of the song. In m. 16, A2 is displaced by G2, reminiscent of opening melodic motive. By not returning to A2, the shift to G2 in m. 16 leaves the song "rather short" - much like "Ann Street."

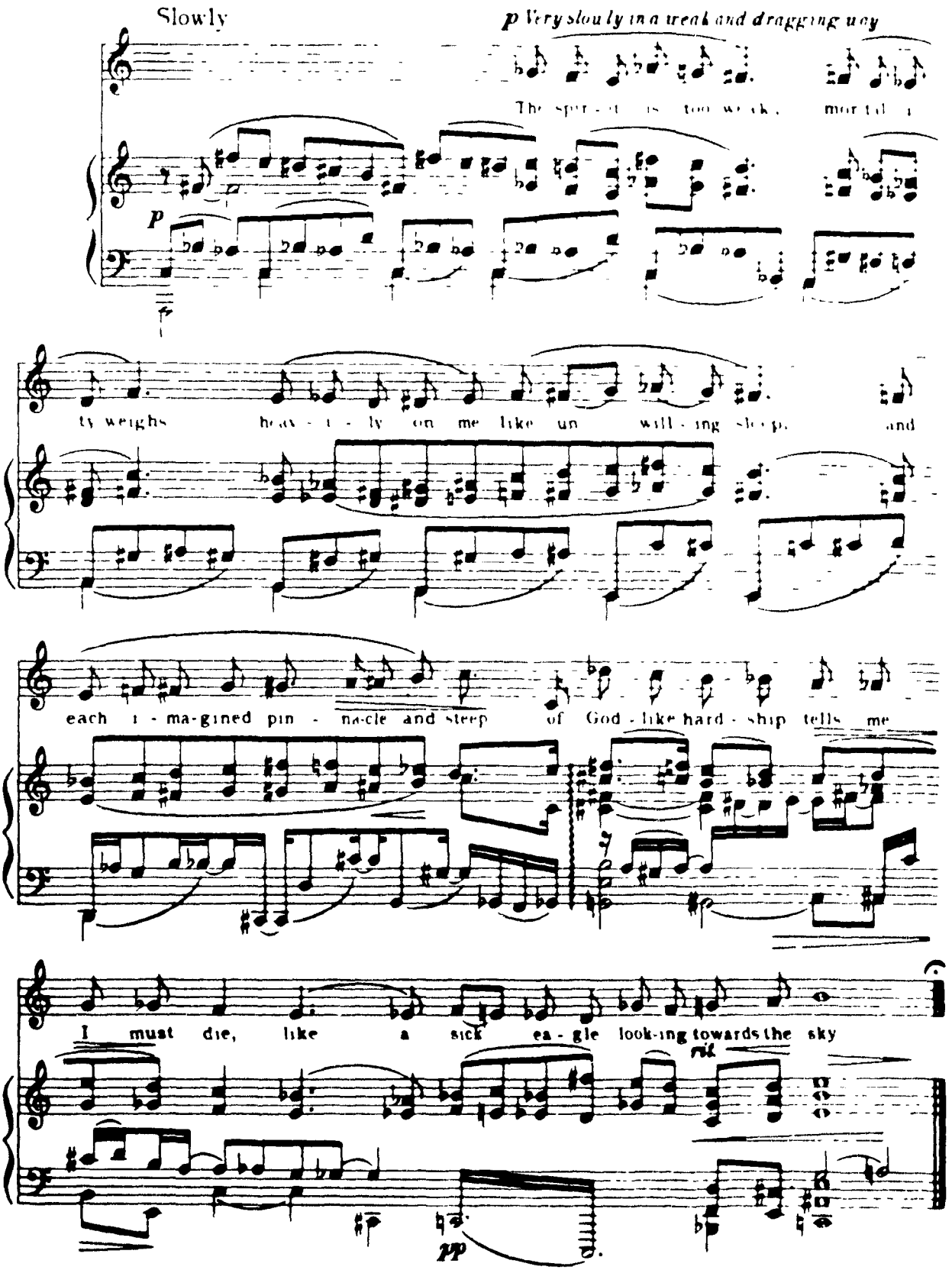
Like a Sick Eagle

The spirit is too weak; mortality
   Weighs heavily on me like unwilling sleep,
   And each imagined pinnacle and steep
Of God-like hardship, tells me I must die,
Like a sick eagle looking towards the sky.

Like a sick eagle

(1920)

Keats



The compositional method of "Like a Sick Eagle" is closer to "The Cage" than "Ann Street." Traditional tonality is absent from this song as it was from "The Cage." Instead, Ives creates the song's syntax through careful presentation of pitch material (i.e., recurring chords and pairing of pitches, etc.). The choice of compositional method seems motivated by Ives's interpretation of the text. In "The Cage," the piano's 5-35 chords and the meandering whole-tone collections of the melody symbolize the caged animal. In "Ann Street," the scumbled traditional tonal sonorities capture the landscape of the busy New York street.

The text of "Like A Sick Eagle" is drawn from a sonnet by John Keats, entitled On Seeing the Elgin Marbles for the First Time. Ives uses only the first five lines of the sonnet. The two texts are reproduced in Figure 5.

FIGURE 5

KEATS

My spirit is too weak -- mortality
   Weighs heavily on me like unwilling sleep,
   And each imagin'd pinnacle and steep
Of godlike hardship, tells me I must die
Like a sick Eagle looking at the sky.
   Yet 'tis a gentle luxury to weep,
   That I have not the cloudy winds to keep,
Fresh for the opening of the morning's eye.
Such dim-conceived glories of the brain
   Bring round the heart an indescribable feud;
So do these wonders a most dizzy pain,
   That mingles Grecian grandeur with the rude
Wasting of old Time -- with a billowy main --
   A sun -- a shadow of a magnitude.

IVES

The spirit is too weak; mortality
   Weighs heavily on me like unwilling sleep,
   And each imagined pinnacle and steep
Of God-like hardship, tells me I must die,
Like a sick eagle looking towards the sky.[57]

---

[57]John Keats, The Poems of John Keats, sixth edition edited by E. de Sélincourt (London: Methuen and Company, 1935), p. 275. In Ives's adaptation I preserved the layout of the poem but substituted Ives changes for Keats's words.

The temperament of the two texts is somewhat different. Keats's sonnet describes the poet's mortality when confronted with the beauty of Greek art. Ives's truncated version reflects his personal philosophical and spiritual beliefs by focusing on the relationship between God and the universal mortality of the human body and spirit.[58] Several words are changed, altering the original meaning of the text: "My spirit" becomes "The spirit," shifting the emphasis of the text from a personal experience to a general one; "godlike" becomes "God-like," and "Eagle" becomes "eagle" in Ives's version. By using the lower case "e" for "Eagle" and by capitalizing "God," Ives creates a hierarchical order in the song; the "eagle" is subordinate to "God," a creation of the Almighty.

The setting of "God" is the focal point and the climax of "Like a Sick Eagle." The music after "God" concludes the song by releasing the tension which was built up to this point. Musically, Ives articulates "God" in a number of ways: the voice's highest pitch, Db5, is approached from a minor ninth below (C4-Db5), the only large leap in the voice; the Db5 is accompanied by the thickest vertical sonority of the song (G2-E3-B3-C#4-F#4-C#5-F#5); and the chord is rolled (cp. "Wonder" in "The Cage").

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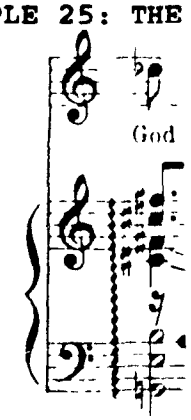
[58]Nachum Schoffman, "The Songs of Charles Ives" (Ph.D. dissertation, Hebrew University of Jerusalem, 1977), pp. 44-45. Schoffman argues that Ives placed the wrong date on this song, "mistakenly connecting it with his wife's illness and his own loneliness during the time she was in the hospital" thereby showing "his thoughts about 'intimations of mortality' were very different from those of Keats."

EXAMPLE 25: THE "GOD" CHORD

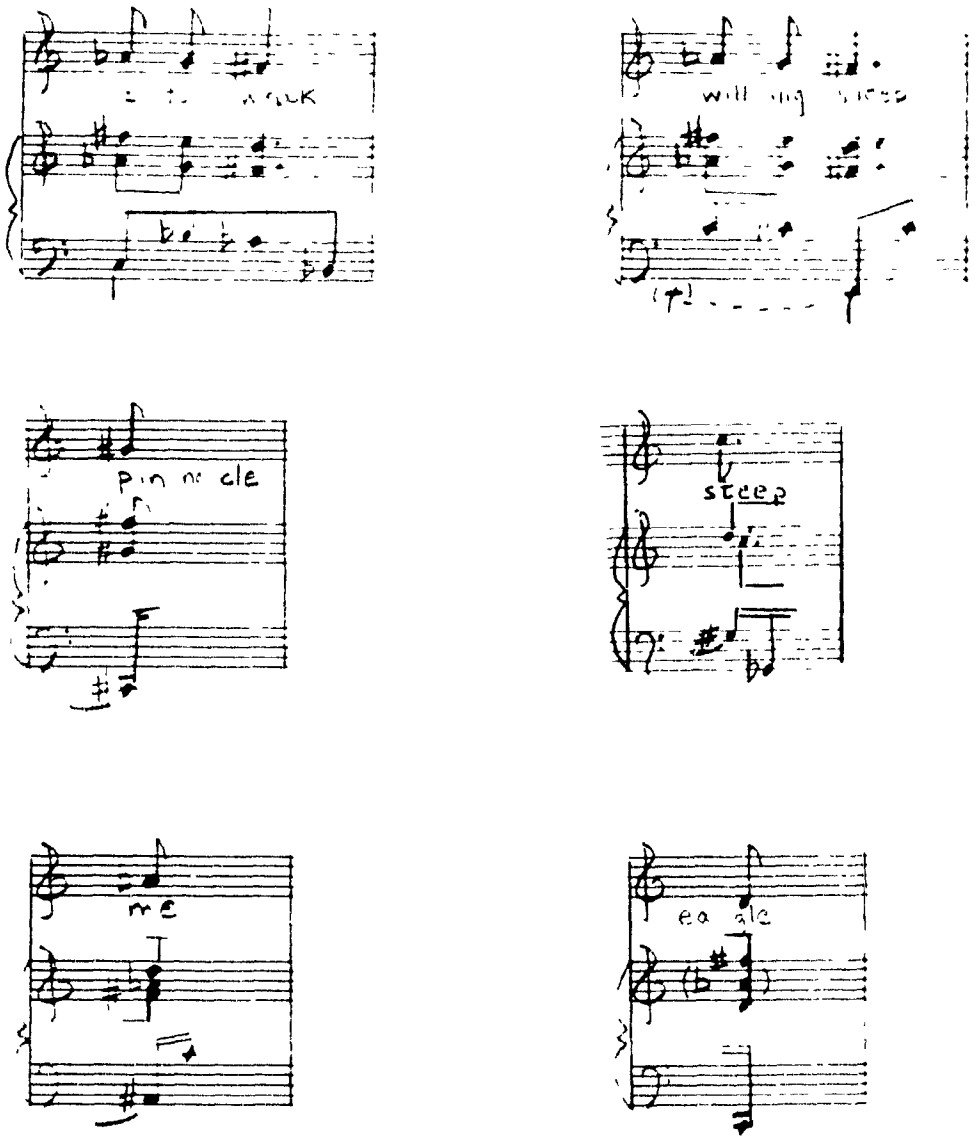


The "God" chord's five pitch-classes play a major role in the composition. The "God" chord is, in fact, a synthesis of the two referential collections of the song. C# and F# are members of the first referential collections and are often accompanied by C, D, and Ab (Example 26 below will show these instances). This referential collection is mainly comprised of pitch-classes from WT_0 collection (02468A). The first referential collection dominates the music leading up to the "God" chord. Following this, the three other pitch-classes, E-G-B, displace the first referential collection. The traditional triadic sound of this collection contrasts with the dissonance of the other referential collection and represents a dissolution of the tension. Ives preserves the character of the two referential collections by placing the C# and F# into the right hand of the accompaniment and the E-G-B in the left hand.

The two referential collections accompany key textual words and phrases. The first collection, C-C#-D-F#-Ab, is found at six places, listed in Example 26 below. Ives treats the two collections differently; the first referential collection is treated as a pool of pitches from which he can choose certain elements in order to construct the appropriate sonorities, harmonic and/or melodic. The first referential collection does not operate as a single set-class, unlike the second referential collection. Instead, the various compositional procedures and techniques that Ives used in

this song - wedges, retained tones, recurrent voice leadings, etc. - are designed to arrive on trichord/tetrachord subsets of the first referential collection at significant textual structural points, as illustrated in Example 26.

EXAMPLE 26: INSTANCES OF FIRST REFERENTIAL COLLECTION [01268]

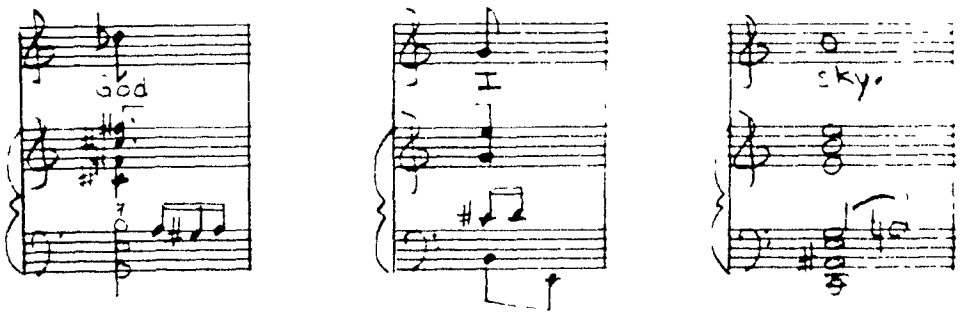


The C-D-F#-Ab (0268) tetrachord subset of the first referential collection is found at "is" and "weak." The E-G-Bb (47A) trichord and the bass's Bb are understood as non-constitutent members of the first referential collection, non-harmonic tones. This trichord serves as an intermediary step (a passing chord) between the two instances of the C-D-F#-Ab tetrachord. A similar situation is found at "willing sleep." The C-D-F#-Ab tetrachord reappears with the first syllable of "willing" and "sleep." The intermediary trichord has changed; now it is C#-E-G (147). Both of these chords are over a pedal E2 in the bass. At "pinnacle" a different subset, F#-G#-C# (681), is employed on the first syllable. It is soon followed by another subset of the first referential collection at "steep," C-D-G# (028) before moving on to the "God" chord. Thus, "pinnacle" moves from its fourth-chord configuration (G#-C#-F#), through the passing (minor and diminished) sonorities back via the whole-tone collection at "steep" (C-D-F#) to the combined fourth-chord and E-minor triad at "God-."

Two instances of the first referential collection occur after the "God" chord. The first is found at "me" and contrasts with the following harmonic setting of "I" which is accompanied by the second referential collection. At "me," the bass's A# extends the whole-tone subset of the first referential collection (0268) by one pitch-class; now, the subset is (0268A). The second occurrence of the first referential collection sets "eagle." Although it is not present at "eagle," Ab (pc 8) is implied through an inner voice motion that began locally with C5 at "sick" and proceeds downward by step, C5-Bb4-(Ab4)-Gb4-F4-E4.

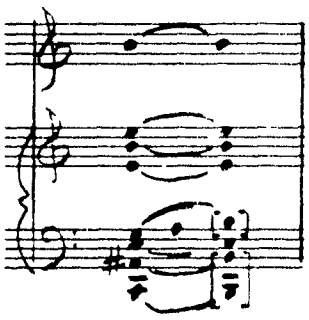
The second referential collection is found in three places, all of which occur at or after the "God" chord.

EXAMPLE 27: INSTANCES OF SECOND REFERENTIAL COLLECTION [037]



Upon first glance, the presentation of the second referential collection at "sky" appears to be an irregular form of this referential collection. However, if each pitch that lies outside of the chord were to move by step to the next pitch the second referential collection would emerge.

EXAMPLE 28: RESOLUTION OF THE FINAL CHORD



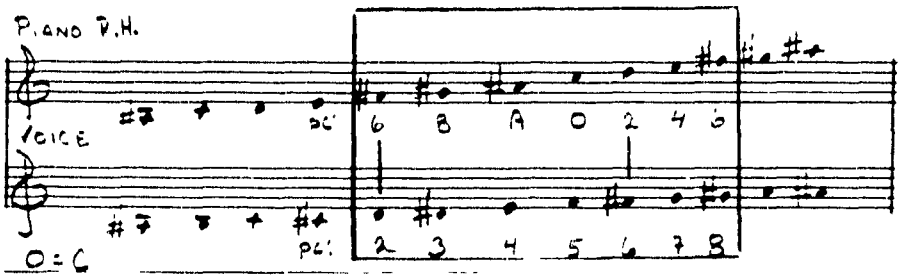
Ives alludes to this resolution of the final chord in the melodic motion which precedes it. The G3-A3-B3 motion is found in the right hand and voice, G4-A4-B4.[59] The bottom two voices of the left hand move by contrary motion to B,

[59]The piano is comprised mainly of four voices which shall be referred to as soprano, alto, tenor and bass.

resolving like the augmented sixth of an augemented sixth chord.

There are four principal levels, which, for the most part, all move in a strictly synchronized eighth-note motion: the vocal part (which is doubled by the piano), the piano's soprano voice, the tenor (the top voice of the left hand), and the bass.[60] The top two voices move in parallel motion, the voice (and alto) by minor second (ic1), the soprano by major second (ic2). The combination of the chromatic and whole-tone scales creates a wedge; at the widest point the two voices are an augmented sixth (minor seventh) apart and major third at their closest point.[61] In Example 29 below, the complete wedge is given; a box is placed around the pitches that are used in the song.[62] The top staff contains the accompaniment's soprano and the bottom staff, the voice and the alto.

EXAMPLE 29: THE WEDGE



[60]Schoffman (1977), pp. 38-39.

[61]J. Philip Lambert, "Compositional Procedures in Experimental Works of Charles E. Ives" (Ph.D dissertation, Eastman School of Music, 1987), pp. 110-50

[62]Ibid., p. 88 and Schoffman (1975), p. 39.

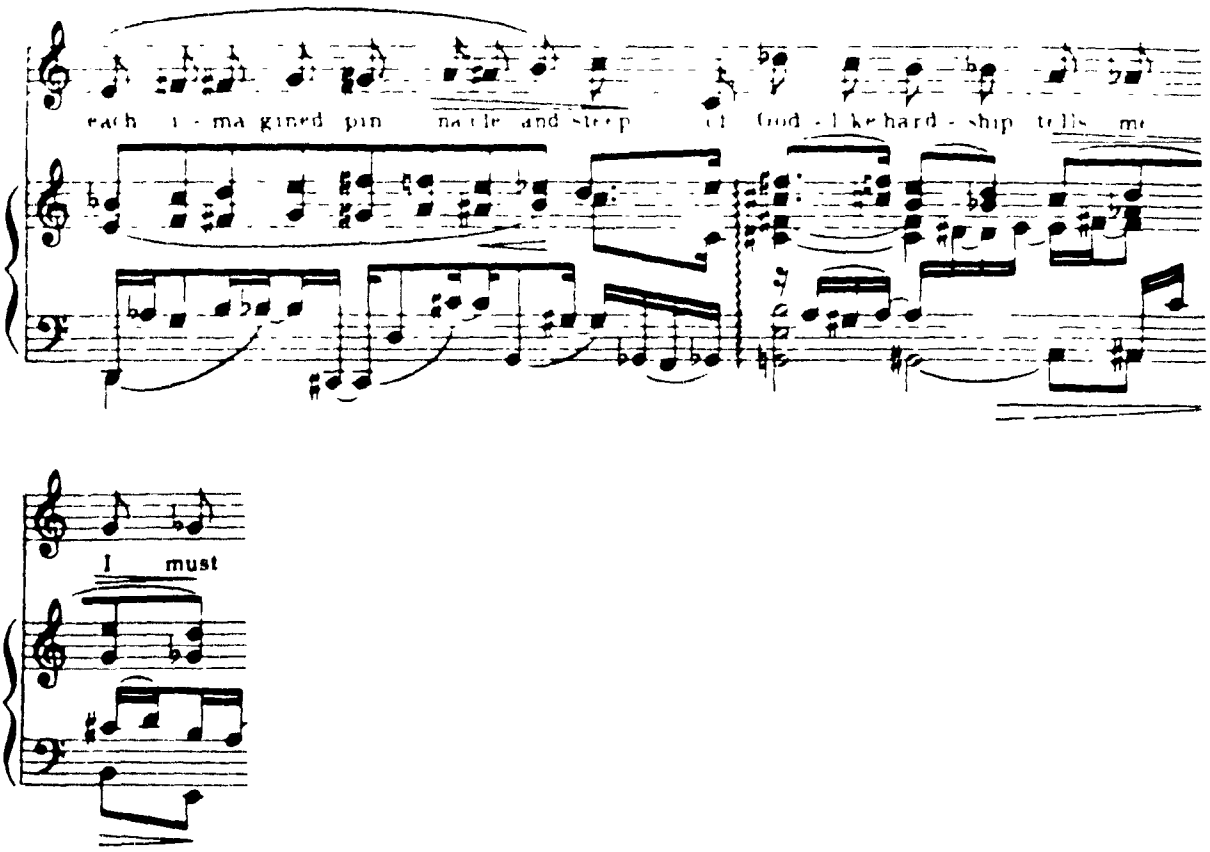
A number of wedges frequent the song, not all drawn from the above Example 29. For instance, the song opens and concludes with a wedge which has Ab (G#) at its extremities. This wedge and others will be discussed subsequently.

Only one dyad is repeated within the wedge, D-F#, indicated by the two vertical lines in Example 29. D and F# are constituent members of the first referential collection and consistently appear at the significant textual-structural points. Moreover, F# is found at both extremities of the principal wedge segment of the song (recall Example 26). "Pinnacle" peaks on F# (combined with G# and C#). At "steep," the wedges collide on C and D, with G# in the bass and Gb immediately after; at "of God-like," the C and D converge on C# and also pass through E to the high F#. The C on "of," however, also splits in the alto register to B-C# and invokes a wedge motion to WT_1 (C#-D#-F-G-A-B). This motion accounts for the bass G-natural and the subsequent tenor A, while it retains the E and the F# of the preceding WT_0 subsets.

After opening with A1, the bass voice moves up to C3 and begins a diatonic descent, concluding on the last chord with C2. Ives indicates the bass voice of "Like A Sick Eagle" by down-turned stems.[63] For the most part, the bass's descent is unbroken. The only deviation from the descent occurs between "pinnacle" and "I."

[63]The only exception to this rule is the Bb2 which is found in the first system under the word "weak." The Bb2 is the last note of this eighth-note cluster and proceeds directly to the next bass note, A2

EXAMPLE 30: "EACH" TO "I"



The D2, found at the beginning of the third system at "each," is not followed by C2. Instead, the bass moves up to G3 which, in turn, moves up chromatically to B2 under "I." Following "I," the bass continues on to C3 and subsequently descends to the concluding C2.

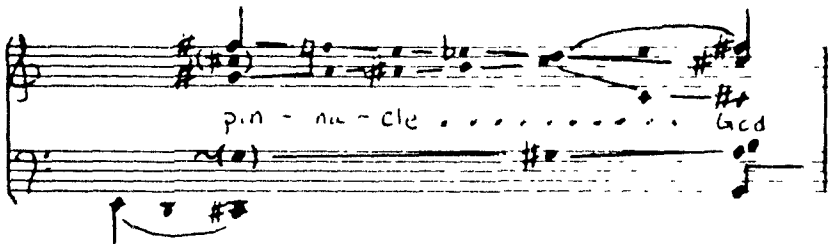
In comparison with the three other voices, the tenor part plays a smaller role. This voice moves mainly by whole-tone motion, intermingled with the occasional chromatic motion. The tenor takes on a more significant role in the third system, especially after the "God" chord and the ensuing wedge (see Example 32).

The "God" chord divides "Like A Sick Eagle" into two parts. The first part 'composes into' the "God" chord; the

second 'composes away' from this chord. Composing into the "God" chord is achieved by consistently using the first referential collection and adding more dissonance as the climatic "God" chord is approached. By the time the "God" chord is reached, the first referential collection has been reduced to two pitches, C# and F#, which are blended together with the second referential collection. The subsequent music composes away from the "God" chord. The triadic second referential collection replaces the first one. This exchange relaxes the dissonance heard in the first part.

Two secondary chromatic wedges in the upper two voices announce the progression to and away from the "God" chord. The first chromatic wedge begins at "pinnacle" and concludes with the "God" chord (see Example 31 below).

EXAMPLE 31: "PINNACLE" TO "GOD"



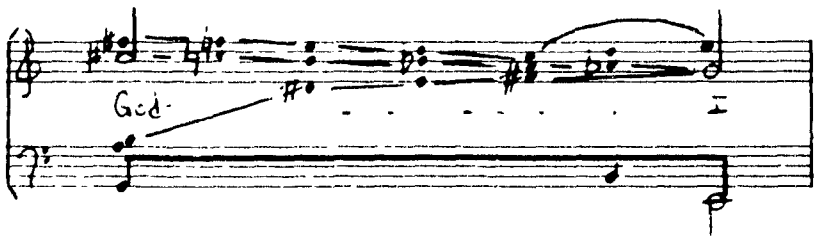
This chromatic wedge accelerates the motion towards "God." Coupled with the chromatic wedge, beginning with "each" (the start of the third system), Ives varies the previously consistent eighth-note motion of the four voices by syncopated sixteenth-note motion in the left hand. This wedge begins at "pinnacle" with an allusion to the initial referential collection, F#5-G#4-C#2.[54] Subsequently, the upper two voices start to contract by consecutive minor seconds and terminate with the C#5 inner voice at "God." A small wedge - one reminiscent of the song's primary wedge -

[54]F#5 is the highest pitch of the song; along with the C#, they foreshadow the climactic F#-C# at "God- "

begins at "steep" with D5. As shown in the above Example 31, the D5 completes the descent to C#5 at "God" while commencing a whole-tone motion to F#5. The melody's C5, the other pitch at "steep," leaps down an octave to C4 to establish the lower C#4.

Beginning with the "God" chord, a second chromatic wedge moves the music away from the first referential collection and towards the second one. Immediately following the "God" chord, the voices begin to contract towards the second referential collection. Coupled with the pitch wedge, the uniform eighth-note motion is restored. The second referential collection emerges at the beginning of the fourth system on "I." Only the C# and D, which are part of the tenor, lie outside of the second referential collection and continue the sixteenth-note motion.

EXAMPLE 32: "GOD" TO "I"



The bass moves up chromatically from G2 at "God" to the B2 on "I"; subsequently, the bass leaps downward to E2. Two of the inner voices, the tenor which moves by sixteenth notes and the melody, both conclude with the G4 on "I."[65] The tenor starts at the "God" chord with the half-note B3.
After a lower neighbour note motion to A3-G#3-A3, the tenor leaps up a tritone to D#4 from A3 and consequently moves by

[65]The melody's A4 ("tell") is not doubled the piano part under "tell", the only instance in the song where the piano does not double the voice.

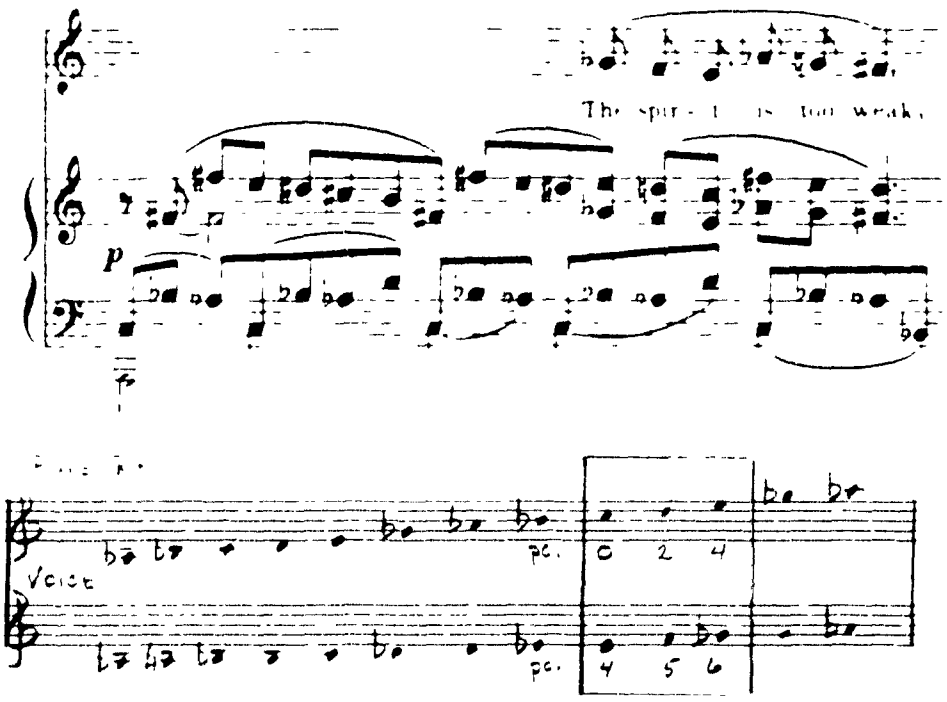
step. The soprano begins a chromatic descent like the melody; at "tells" the soprano proceeds upwards by major second, resuming its previous whole-tone character, to E5 at "I."

The majority of "Like A Sick Eagle" comprises a whole-tone/chromatic wedge - the soprano of the piano moving by whole-step and the alto/vocal part by half-step. In theory, this wedge would begin with a unison A# and terminate with A#, the final A#'s being an octave apart. Ives only uses a portion of this wedge in the song: a major third at its narrowest point, D-F#, and a minor seventh at its widest, G#-F# (see Example 29, p. 61).[66]

The song does not open with this wedge. Ives delays the introduction of this wedge by placing another one before it. The song opens with a short piano introduction; the alto voice is not present. The alto part always doubles the voice and, therefore, is not needed here. The soprano moves by minor and major second. With the entry of the voice, the soprano converts to strict whole-tone motion. The voice enters on Gb4, a pitch heard frequently in the soprano, and subsequently descends by consecutive minor seconds to E4.

[66]The component pitches of the wedge's dyads will be labelled from the bottom to the top.

EXAMPLE 33: THE OPENING TO "WEAK" PLUS WEDGE



At the same time that the vocal part begins, the upper voice of the accompaniment begins its whole-tone portion of the wedge; however, this is not the wedge which comprises most of the song (the opening wedge is shown in Example 33 above). Immediately following these first three dyads, the top two voices are adjusted in order to accommodate the song's main wedge.

The main wedge commences at its widest point, F#5-Ab5, and descend to narrowest point, F#4-D4, on the final syllable of "mortality" at the beginning of the second system.[67] A series of ascents and descents wend forward to "pinnacle" where an entirely chromatic wedge drives to the climatic "God" chord.

The main wedge is reinstated at "I" and is dovetailed into the conclusion of the local wedge which b[illegible]n at the "God" chord. The wedge contracts to its narrowest point, D-

[67]Lambert (1987), p 88

F#, on the second syllable of "eagle" (here, the interval is a compound major third). The concluding phrase of the song, "looking towards the sky," is set to the opening wedge of the piece (recall Example 33). The E-G dyad, found at "I," is preserved but between inner voices. By concluding with the opening wedge, Ives is able to round off "Like A Sick Eagle." The return of the opening wedge links musically the opening line "The spirit" to the final one "looking towards the sky."

The bass provides overall structural unity to "Like A Sick Eagle." On the one hand, the bass can be understood as a diatonic descent from C3 down to C4 which is preceded by an anacrusis A1, the bass's first pitch.[68]

EXAMPLE 34: BASS GRAPH (cp. SCHOFFMAN)

At "each imagined" (beginning of the third system), the continuous descent of the bass is broken off; an ascent commences up to C3 at "die." Immediately following this C3, the previous register is reinstated with the C#2 before concluding with the C2 at "sky."

While this analysis describes the bass's contour, it does not delineate the function of this voice and its role in the overall fabric of the song. In the above analysis, it is difficult to determine points of arrival and, consequently, to compare structural points. The role of the bass's opening A1 is downplayed, reducing it to an anacrusis. However, Ives has given this pitch durational emphasis. While this

[68]Schoffmann (1977), p 40.

observation is somewhat crude, Ives consistently links pitches of long duration with key structural points in the song (for example, the "God" chord, the bass at "sick eagle," and the closing chord at "sky").[69]

EXAMPLE 35: OPENING BASS AS PROLONGED A

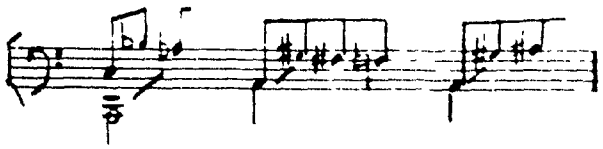
In Example 35, A1 is followed by a leap of a compound minor third up to C3. Subsequently, the music descends through Bb and returns to A. In this portion of music, A is the structural pitch, not C.

At this point, the distribution of the pitch-class content of the first referential collection needs clarification. Earlier on in the discussion, the first referential collection was said to consist of the pitch-classes C-C#-D-F#-Ab. Two other pitch-classes, A and E, accompany the first referential collection. These two pitch-classes along with C are usually found in the left hand and function as the song's bass.

A is confirmed as the bass's structural note by a tenor gesture. The opening A1 is accompanied by three tenor pitches: C, Bb, and Ab. When A is returned at "mortality weighs" (including the repetition of A2 at the beginning of the second system), the same three pitch-classes reappear with A.

[69]In all seven pitches in the bass are given longer durational values than the others the opening A1, the C3 which immediately follows the A1, the A2 setting "mortality weighs," E2 under "unwilling sleep," the G2 and G#2 at "God-like hardship," the C2/C1 tremolo at "sick eagle," and the final C2

EXAMPLE 36: THE THREE BASS A'S



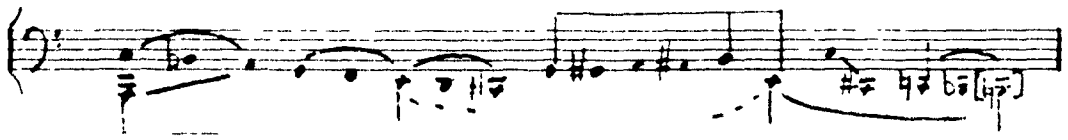
The song begins with A1 in the bass and C3 in the tenor. The tenor leaps up to Bb3 and is followed by Ab3. This descending gesture is repeated with the return of A. At "mortality," the bass's A2 is preceded by Bb2 (an octave lower than the previous Bb); A2 is followed by G#3 in the tenor. The same three pitch-classes are reiterated at the beginning of the second system. Following this gesture, the bass descends through G2 and F2 to arrive at the next structural bass pitch, E2. Similar to A, E2 is of greater duration than the other bass pitches which surround it and, like the bass, E2 is accompanied by its own series of tenor pitches. An ascending tenor motion begins with G2 ("heavily"), F#3 to G#3. At this point, a diverging wedge is found between the tenor and bass. It continues with F2 of the bass and G#3-A3-A#3 in the tenor. The wedge concludes in the bass with the arrival of E2; the tenor carries on chromatically (C4-C#4-D4) until it reaches E4 at the beginning of the third system.[70]

The next structural bass pitch coincides with the setting of "God." While a lot of rhythmic action is found on the surface of the music in the third system, the higher level bass motion is uncomplicated. The D2 and C#2 which

[70]Note that B3 is absent from the chromatic motion from G#3 to E4 in the tenor part. The due B3 would have produced a complete E minor triad between the first two syllables of "un-will-ing."

precede the "God" chord's G2 are part of the minor third descent from the previous E2 ("unwilling sleep").

EXAMPLE 37: OVERALL BASS MOTION



The G2 commences a chromatic ascent away from "God" to the B2 of "I." At this point the bass leaps down a perfect fifth to claim the E2, a member of the second referential collection. Subsequently, the bass attains C3 - continuing the motion which began with the "God" chord's G2 - before switching registers to reach C#2 and, consequently, C2.

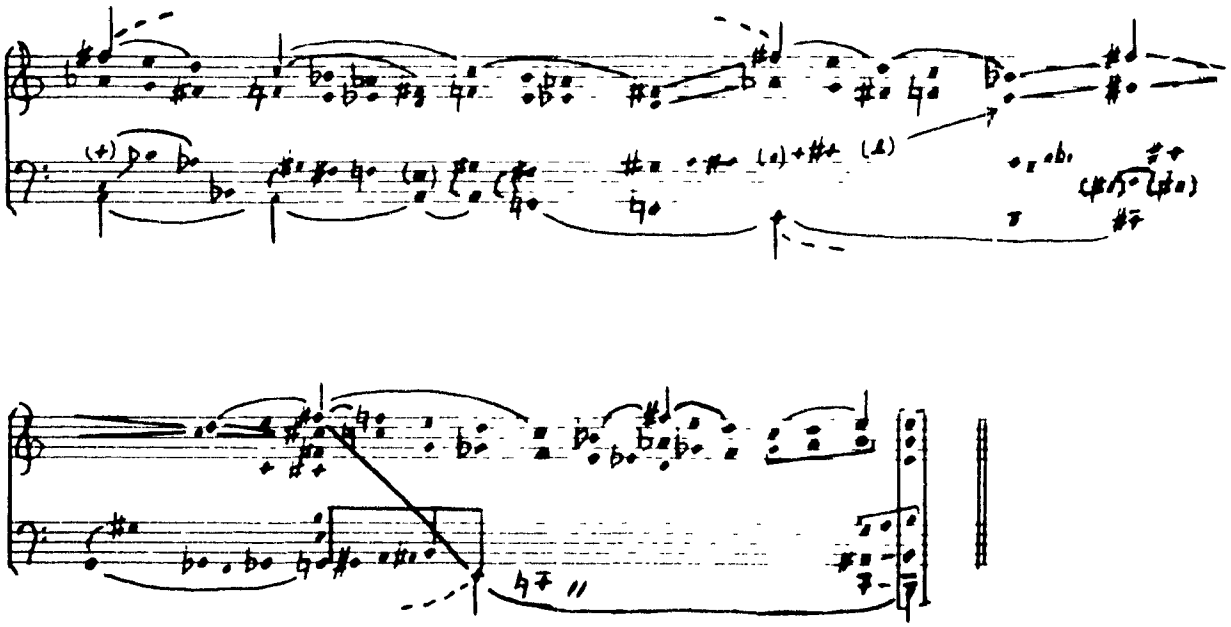
The "God" chord's bass note, G2, begins a motion through the second referential collection; the other two pitches, B2 and E2, follow at "I" and "unwilling sleep," respectively. In fact, this motion through the second referential collection is similar to an auxiliary cadence (shown by the beamed notes in Example 38 below).[71] At "I," the leap down a perfect fifth from B2 reclaims E2 as the primary bass note. Following this point, the bass concludes with C2 found in the final chord of the song. As was the case with "Ann Street,"

[71]Heinrich Schenker, Der Frei Satz, translated and edited by Ernst Oster (New York and London: Longman, 1979), pp 88-89 (figure 110) and pp 112-14 (figures 130 and 131). Further discussion on the auxiliary cadence will follow in the analysis of "At the River." Although the auxiliary cadence "In Like a Sick Eagle" lacks the tonal context of the one in "At the River", the motion through the second referential collection "In Like a Sick Eagle" corresponds to three significant textual points in the song. The situation is complicated by the tonal nature of the second referential collection, a minor triad, in an atonal context. Ives uses this collection to represent the look heavenward by the eagle and away from the mortality of earth, represented by the atonal first referential collection.

Ives has cut the ending of "Like A Sick Eagle" short. The left hand of the final chord of the song is an unresolved augmented sixth (see discussion on pp. 60-61). The bottom two voices can be considered "unresolved" for they are not members of the second referential collection which is clearly found in the other voices of this chord. The resolution of this augmented sixth would neatly attain B in both voices by moving outward by half-step from C2 and A#2. The other unresolved voice, the top part of the left hand, would complete its upward motion by resolving to B3 from A3.

Overall, "Like A Sick Eagle" comprises the progression from the first referential collection to the second. The first referential collection is primarily reserved for the part of the song leading up to the "God" chord while the second referential collection is found in the part following the "God" chord.

EXAMPLE 38: OVERALL GRAPH



The motion from the first referential collection to the second is most clearly represented by the bass. The song opens with the A1 of the first referential collection continuing through E2 and concluding with B1, a member of the second referential collection. The auxiliary cadence, G2-B2-E2, restores E2 as the principal bass pitch; this time as a member of the second referential collection. The B3 which was absent from the tenor's chromatic motion in the second system is now present with the bass's E2. Following the return of E2, the bass moves down via C to the implied final B1. In the treble, there are constant lower level presentations from F# by consecutive major second to D and to E. The motion from F# to D is part of the first referential collection and F# to E effects the replacement of the first collection by the second one. On a higher level, the overall motion of the song comprises the second of these two lower level motions. This motion, like that of the bass, proceeds through the first referential collection to the second one, both of which effectively portray the plight of the sick eagle.

At the River

Shall we gather at the river,
Where bright angel feet have trod,
With its crystal tide for ever
Flowing by the throne of God?
Gather at the river!

Yes, we'll gather at the river,
The beautiful, the beautiful river,
Yes, we'll gather at the river
That flows by the throne of God.
Shall we gather? Shall we gather at the river?

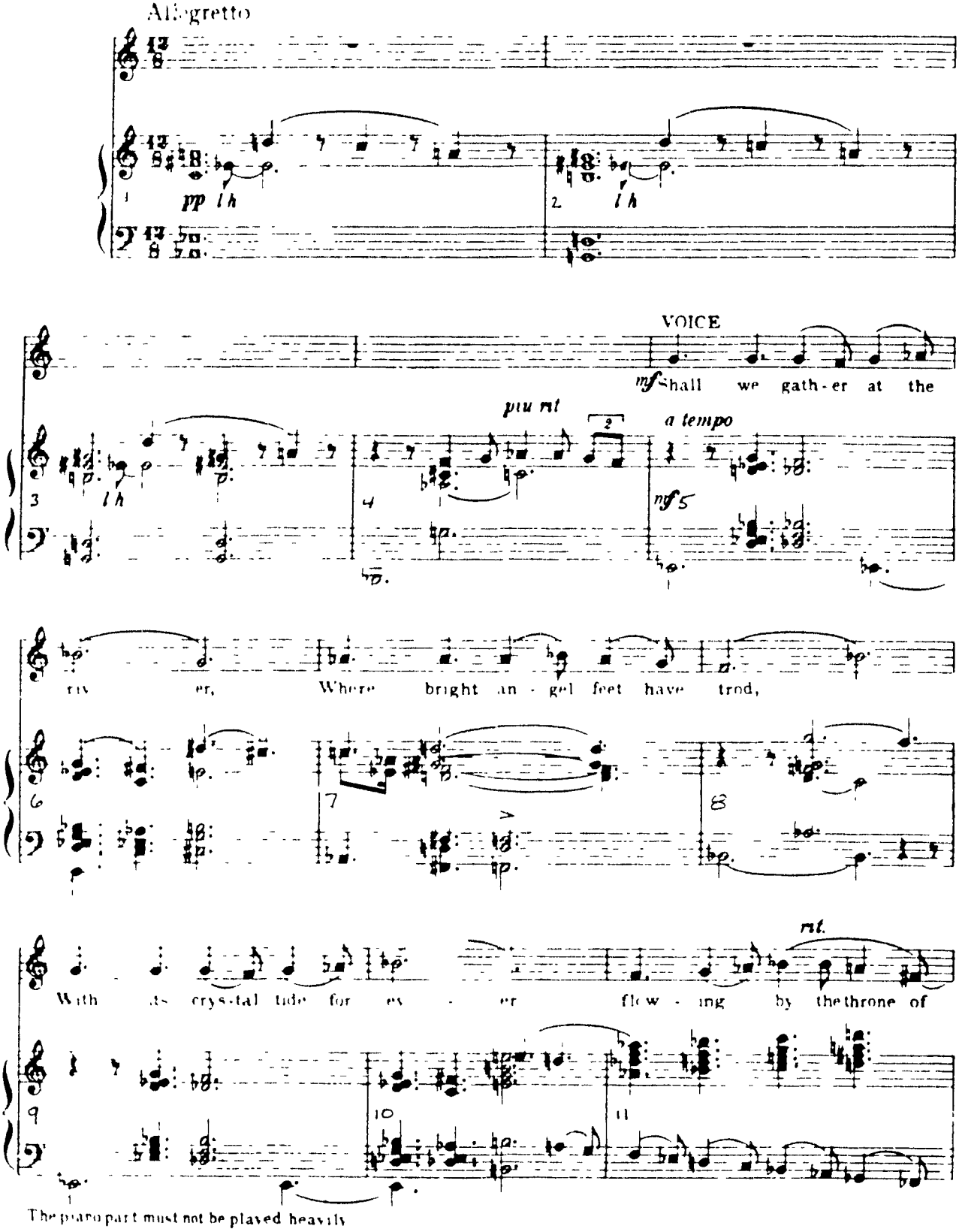
- Robert Lowry

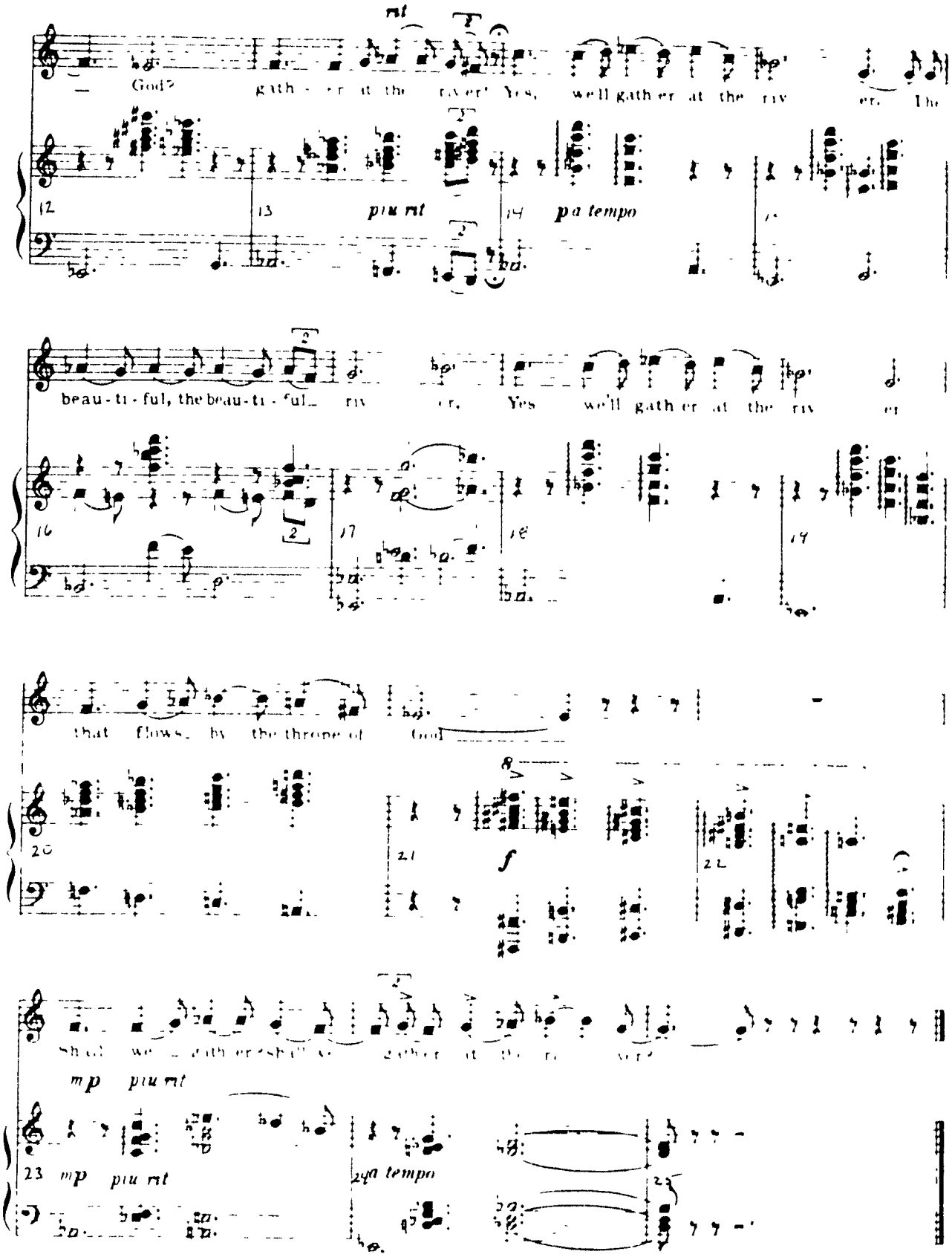
At the River

from 4th Violin Sonata

1916

Robert Lowry

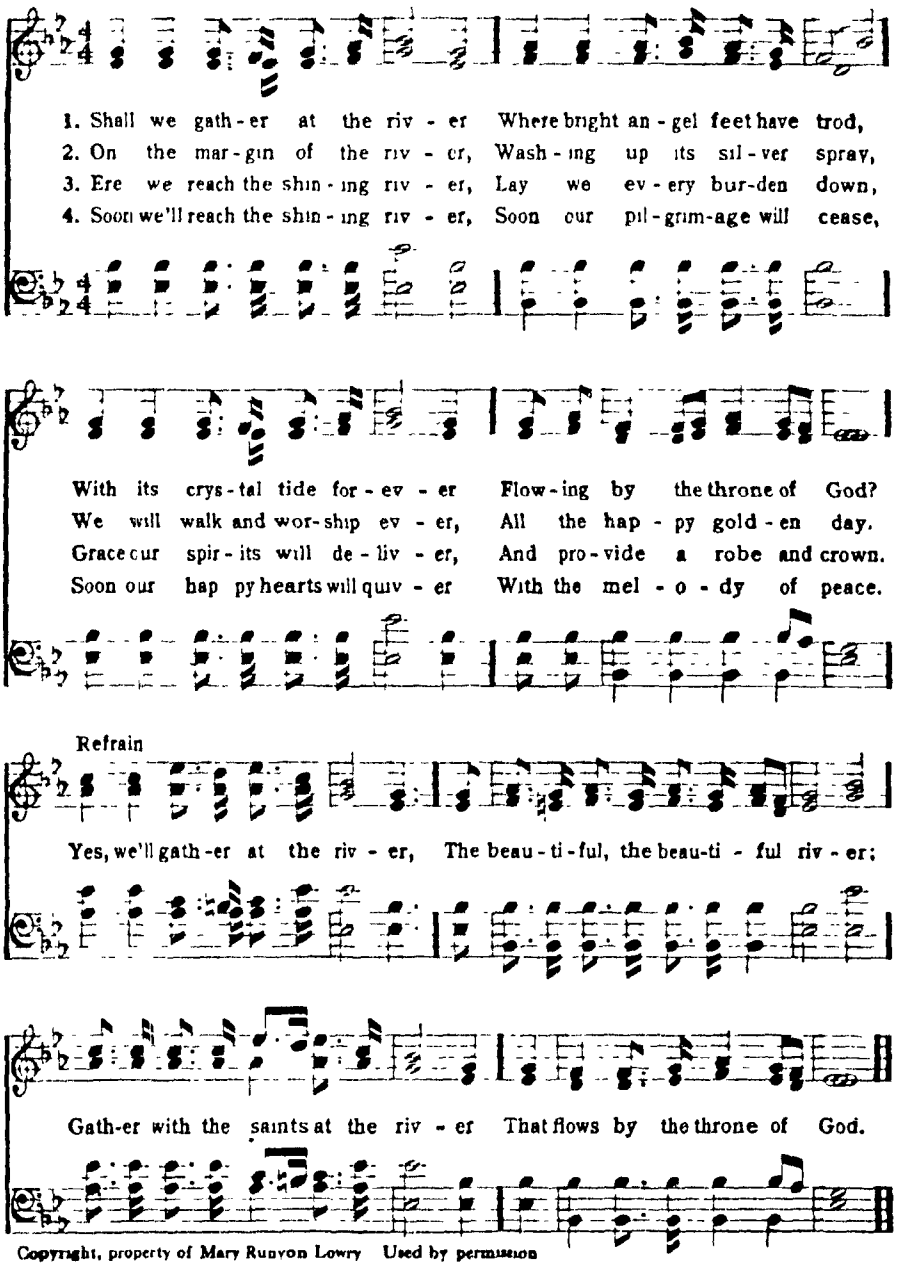



God?
gath - er at the riv - er? Yes, we'll gath er at the riv er. The
12
13
più mf
14
a tempo
beau - ti - ful, the beau - ti - ful riv er. Yes we'll gath er at the riv er
16
17
18
19
that flows by the throne of God
20
21
f
22
mp più mf
23 mp più mf
24 a tempo

555 Shall We Gather at the River?

8.7.8 7. With Refrain

ROBERT LOWRY ROBERT LOWRY



439

"At the River" is one of four of the 114 Songs based on hymn tunes; all four of these songs are transcriptions Ives made from his own works.[73] The quotation of familiar tunes is an integral component of Ives's compositional style, one which he used throughout his compositional career. Emulation is not uncommon in the history of music. Johannes Brahms, Gustav Mahler, and Arnold Schoenberg were all influenced and emulated the music of composers who preceded them.[74] Ives's emulation method differs from those of Brahms, Mahler, and Schoenberg in that the listener is able to hear readily the prominent quotations and is invited to search for the hidden ones. The entwinement of these two manners "leads [the listener] beyond the piece itself and into his or her own inner life, where music is transformed through memory and dream."[75]

> ...even Ives's collages are not random: the tunes which appear on the surface of an Ives work are usually its source rather than a purely foreign element. When one treats the borrowed material as elements of the composition itself, one can analyze a work of Ives as if it were an organic unity, without reference to extramusical implications.[75]

In Robert Lowry's hymn there are four verses and a refrain, Ives only used the first verse.[76] Ives tailored the

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[73]The other three songs are "Watchman'", text by John Bowring, "His Exaltation", text by Robert Robinson, and "The Camp-Meeting", text by Charlotte Elliott (in part). "At the River" is drawn from the third movement of the Fourth Violin Sonata

[74]Robert P Morgan, "Mahler and Ives." Nineteenth Century Music 2/1 (1978/79) 72-81

[75]Burkholder (1983), p 487. Burkholder's assertions are supported by an article by his advisor, Robert P Morgan, "Ives and Mahler" Nineteenth Century Music 2 (1978): 72-81.

[75]Burkholder (1983), p. 485.

[76]All four verses are presented below.

> Shall we gather at the river,
> Where bright angel feet have trod,
> With its crystal tide for ever

text to his own philosophical views. Ives picks up on Lowry's question mark at the end of the first line of the first verse. At this point in the hymn, Lowry is questioning if the river where the congregation of man has gathered is the one which flows by God's throne. At the end of the first verse, Ives adds the line "gather at the river!" The exclamation mark emphatically suggests: "Yes, we shall gather at the river!" At the conclusion of the song, the assertive cry of this line has been dropped. Instead, both parts of the reiterative final line - "Shall we gather? Shall we gather at the river?" - are closed by question marks.

Lowry's original hymn divides into two sections, verse and refrain, and lies completely in the key of E-flat major. Each of the two sections comprises two four-measure phrases; perfect authentic cadences are found at the end of the second and fourth phrases and an imperfect authentic cadence at the end of the third phrase (the hymn is found on p. 77). Each phrase can be divided into two smaller segments of two measures encompassing one line of text.

Ives retains the profile of the hymn in his setting. However, several alterations are made to the tune. The

---

Flowing by the throne of God?

Refrain

Yes, we'll gather at the river,
The beautiful, the beautiful river,
Yes, we'll gather at the river
That flows by the throne of God.

On the margin of the river,
Washing up its silver spray,
We will walk and worship ever,
All the happy golden day

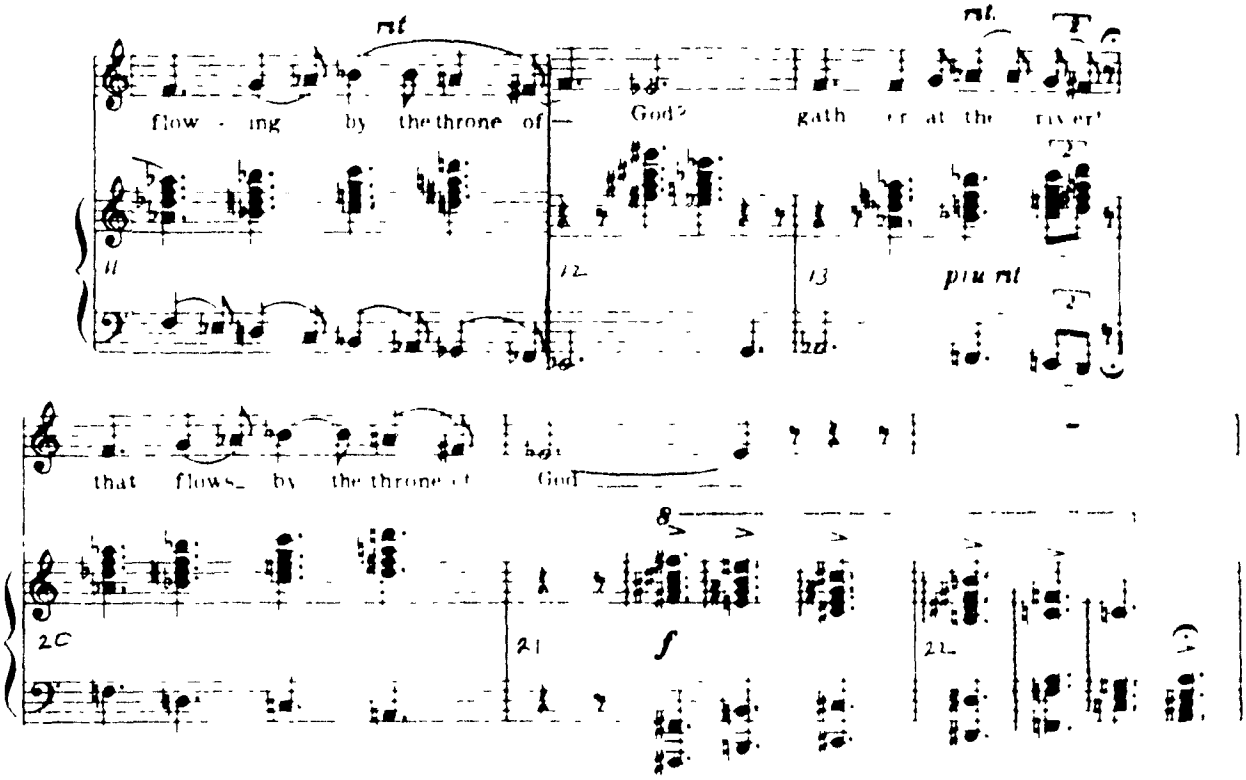
Ere we reach the shining river,
Lay we every burden down,
Grace our spirits will deliver,
And provide a robe and crown.

Soon we'll reach the shining river,
Soon our pilgrimage will cease,
Soon our happy hearts will quiver
With the melody of peace.

original metre of 4/4 is replaced by the compound metre, 12/8. The last two measure segments of phrases two and four are altered (compare mm. 9-12 of the song to mm. 5-8 of the hymn and mm. 18-21 of the song to mm. 13-16 of the hymn). In Ives's adaptation, the two eighth-notes pickup is omitted and the corresponding line of text is compressed into two measures.

The authentic cadences of the original are omitted from Ives's adaptation. In place of these endings, Ives adds a cadential formula of his own design (see Example 39 below).

EXAMPLE 39: MM. 11-13 AND 20-22



Like the original hymn, the second and fourth phrases of the song conclude with the tonic Eb in the melody (mm. 12 and 21). However in the song, the music preceding the final Eb raises doubts whether the music is indeed going to terminate on the Eb. The two notes which preface the Eb, Ab and F, are replaced by A-natural and F# respectively. These two pitch-classes lie outside of the diatonic Eb tonality and their

presence at the moment of cadence aid in illustrating the central "question" of the song.

Immediately following both cadences, "gather at the river" is restated. At the end of the verse section (mm. 5 to 13), the reiteration of this line answers the question "By the throne of God?" The second time, at the end of the refrain, "gather at the river" answers the assertive statement "Yes we'll gather at the river that flows by the throne of God" with the question, "Shall we gather? shall we gather at the river?" The assertive statement is musically undermined by an immediate move away from Eb which would have reinforced the ending of the vocal part. Moreover, Ives does not conclusively end the song; Eb does arrive in the bass in m. 24, but the accompanying pitches do not support Eb.

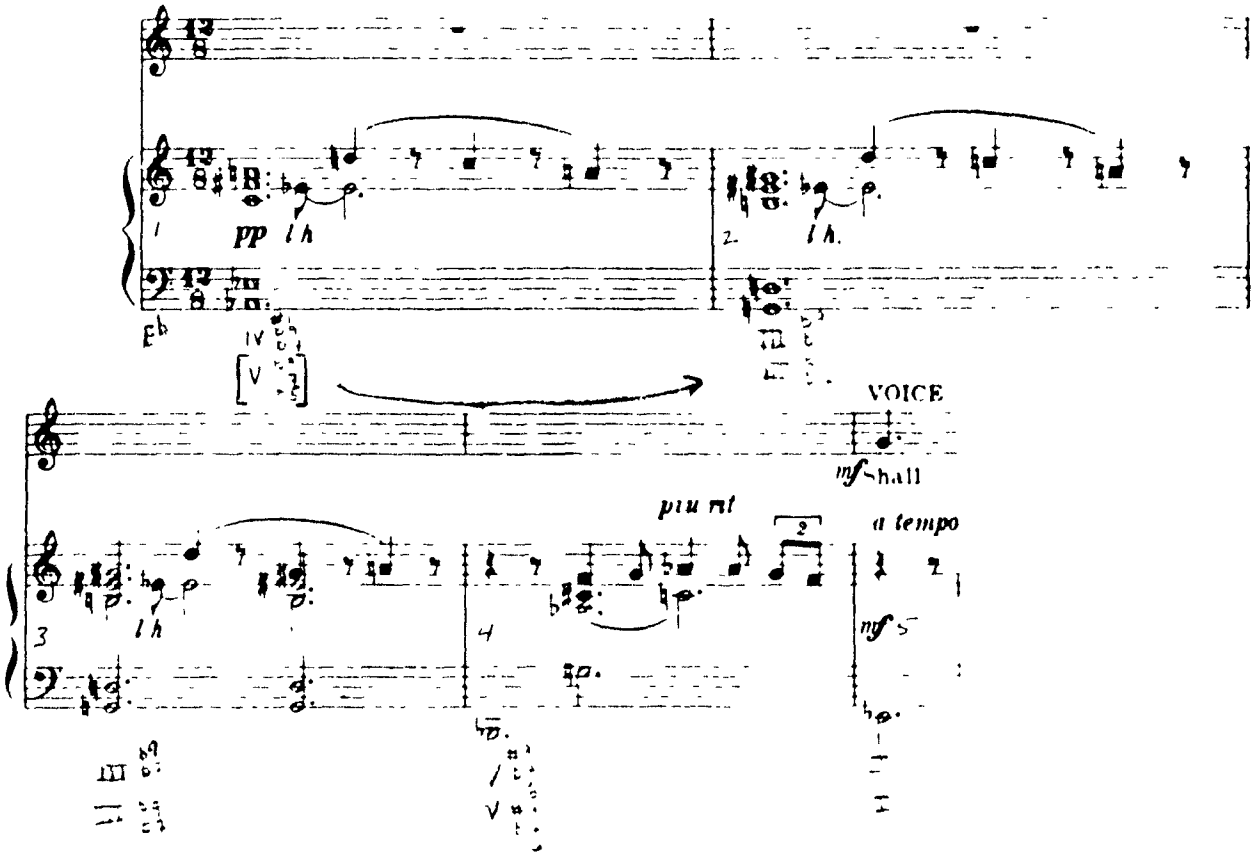
Ives's interpretation of the text is reversed from Lowry's original. In the hymn, the first verse posed the question which was subsequently answered by the chorus in the affirmative. In Ives's setting, the question is immediately answered by "gather at the river!" at the end of the verse portion of the song; at the end of the chorus, the hymn's conclusive ending is omitted and is replaced by the inconclusive one. This rearrangement literally asks the question: "Shall we gather at the river that flows by the throne of God?" Similar to the other three songs in this thesis, "At the River" addresses the existence of a higher being and, consequently, a higher order. This song deals directly with existence of God, as did "Like A Sick Eagle." By ending the song in this manner it would appear that Ives is not entirely convinced humankind shall "gather at the river that flows by the throne of God."

"At the River" consists of four main sections. The verse and the chorus portions, mm. 5-13 and mm. 14-21 respectively, constitute the majority of the song and are enclosed by an introduction (mm. 1-4) and concluding (mm. 21-25) passages. The song is organized around the key of the

hymn, Eb major; though, it is difficult to speak of the song being "in" the key of Eb. The accompanimental passages do not clearly articulate the key; instead, the accompaniment is composed "around" rather than "in" the key of Eb. The harmonies used in the song often feature ninths, elevenths, and thirteenths which greatly expand the basic triads; as well, the harmonies occasionally omit some, or all, of the fundamental components of the elementary triad."

The extensions to and omissions from the basic triad obscure the concise labelling of the vertical sonorities.

EXAMPLE 40: THE INTRODUCTION



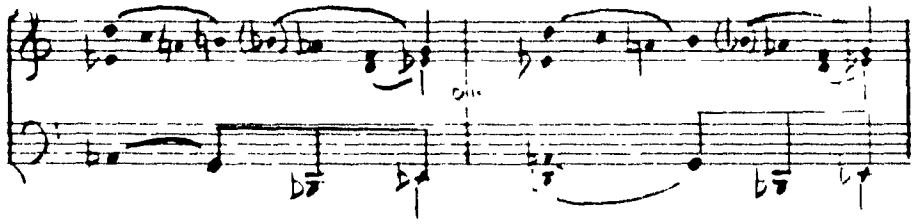
"Arnold Schoenberg, Theory of Harmony, translated by Roy E Carter (Berkeley: University of California Press, 1978), pp. 255-56.

Idem, Structural Functions of Harmony, edited by Leonard Stein (New York: W W Norton, 1969), pp 44-50 Much of the ensuing discourse on Ives harmonic treatment is based upon discussions found in the two books quoted above.

The first chord of the song, (from the bottom to the top) Ab-Eb-C-F#-A-D, can be labelled at least two different ways which are shown in Example 40 above. Both interpretations delineate the first chord as a predominant harmony.

In the bass, the tonic Eb and its accompanying harmonic members arrive at the beginning of the verse section of the song (m. 5) when the voice enters. The introduction is almost entirely composed of predominant harmony, giving the introduction a sense of "backing into" the bass's Eb at m. 5. Ives achieves this phenomenon through the ambiguous extended harmony, the predominant harmonies, and an auxiliary cadence."[8]

EXAMPLE 41: LINEAR REPRESENTATION OF THE INTRODUCTION



[8]Heinrich Schenker, Der Frei Satz, translated and edited by Ernst Oster (New York and London: Longman, 1979), pp 88-89 (figure 110) and pp. 112-14 (figures 130 and 131) In the quote below, Schenker details the harmonic direction of the auxiliary cadence. Also provided are the parts of the figures from Free Composition that relate directly to "At the River."

> From our experience of the ascending arpeggiation we understand, in retrospect, that the fundamental tone is C in all such cases, especially since C appears The voice-leading is "closed off" from what precedes it that is, the IV, III, and II are related only to the forthcoming I, they point only to it However, despite the degrees which belong to the forthcoming root, the space up to its actual entrance belongs conceptually to the preceding harmony In a sense, the territory of the previous harmony provides a base for the preparation of the following one (p 88).

With the auxiliary cadence, Ives is able to present linearally the tonic triad (Eb-G-Bb) in the bass before its vertical representation and arrival in m. 5. The auxiliary cadence moves the ambiguous introduction firmly to the key of Eb.

Eb is not totally absent from the introduction. Ives buries the pitch consistently in an inner voice throughout this passage; it is the first pitch added after the first chord has been struck. Although Eb is not harmonically significant in the same sense as a bass or soprano pitch, the insistent repetition of Eb in an inner voice foreshadows its reinforcement as the tonic and key of the song at m. 5.[9]

Two Roman numeral analyses of the introduction are presented in Example 40. In the first case, the first chord functions as the subdominant of Eb; the soprano's D and A are interpreted as the raised eleventh and flattened ninth, respectively. In the second case, this chord functions as the dominant of the subsequent mediant chord (mm. 2 and 3). The root of this chord, D, is placed in the soprano along with the fifth and seventh of the chord, C and A respectively.

The soprano's D initiates a descent that eventually concludes with the G of m. 5, shown in Example 41. The descent is divided in half; both halves move through a minor third. The Bb is presented in m. 4, but not in the soprano. Instead, Bb is placed in the bass, firmly setting the dominant of the song's key. The soprano picks up again in m. 4; this time the A-natural moves down to Ab (the seventh of the dominant) and subsequently down through G and F,

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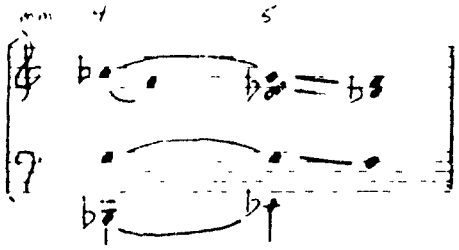
[9]A similar situation is found in Claude Debussy's Prélude à L'Après-midi d'un faune. The opening flute solo does not clearly delineate a key (the keys of G# or C# minor are certainly "better guesses" than E major at this juncture). In m. 4, the harp and woodwinds (2 oboes and 2 clarinets in A) sustain a A#-C#-E-G# chord. In the midst of this chord, the horn plays an E which foreshadows the coming E major tonic, which is only clearly established with the added sixth at m. 21.

anticipating an Eb. The supporting harmonic pitches of m. 4's dominant chord are not at all clear. The compositional technique that Ives employs here and throughout the song are akin to the drawing technique of scumbling.[80] Ives achieves this affect by delaying a pitch of presented chord or by anticipating the pitch.

EXAMPLE 42: MM. 4 AND 5



In m. 4, the third of the dominant chord, D, has been omitted, leaving the chord without the leading tone. D is found in the next measure along with the tonic chord. From a chordal standpoint, the D is simply an added seventh to the tonic harmony. This is only half of the picture. One must also consider the contrapuntal component of the song, in this case, the suppression of the D until m. 5. Throughout the course of "At the River" Ives delays expected pitches and then incorporates them as extensions to the harmony of the ensuing chord.

The verse section of the song, like the hymn, divides into two phrases, mm. 5-8 and mm. 9-13 respectively. The first phrase ends on dominant harmony and the second on the tonic. For the most part, the first two measures of the verse's first and second phrases are identical. Due to the

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[80]Philip Babcock Gove, Webster's Third New International Dictionary of the English Language, third edition (Springfield, Massachusetts G & C Merriam, 1971), p 2044 The application of the term "scumbling" to musical situations of this type was coined by my thesis advisor, Don McLean. Webster's second definition of scumble is: "to soften the lines or colours of (a drawing) by rubbing lightly (as with a stump or a finger).

goals of the two phrases, the last two measures of the two phrases are fundamentally different in their attainment of the phrases's harmonic goals. In comparison with the second phrase, the first phrase moves in a straightforward manner to the goal dominant. The second phrase, which opens like the first, strays from Eb at the end of m. 10. An E minor chord (E-G-B) in six-four position is presented and is immediately followed by a series of four chords. These chords are coincident with the substitution of A and F# for Ab and F in the vocal part. The final chord of the series, D F#-A, strongly suggests the motion to an Eb triad, an outgrowth of the parallel triadic motion which began in m. 11. The motion to Eb occurs first in the bass and then the voice. However, the resolution of the D F# A in the piano's right hand to an Eb chord is thwarted by the insertion of the chord, F# A#-C# G#. This measure is immediately followed by a little codetta which repeats the music of m. 11. Here, the music does not resolve to Eb in any of the parts, undercutting the affirmative punctuation of the text.

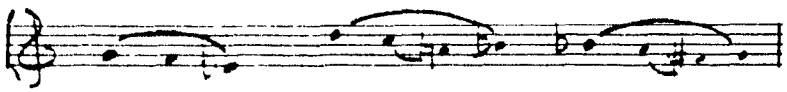
In comparison to the verse section of the song, the harmonic language of the chorus is more direct with less dissonance and added chordal members. Also, many of the chorus section's chords are composed of fourths rather than thirds. Two phrases comprise the chorus part of "At the River." Similar to the Lowry's hymn, the chorus's two phrases (mm. 14-17 and mm. 18-21) both end on the tonic. The first phrase is less complete than the second from a melodic standpoint for the first phrase closes on the mediant and then leaps to the dominant of the tonic chord; the second phrase closes on the tonic. In m. 20, the series of four chords which were found in m. 11 (the end of the second phrase of the verse section) also concludes this phrase. The last two bass notes of m. 20 are different than their predecessors. Instead of Bb and Gb, C and A are presented. The former pitches are clearly in the Eb major orbit; C and A

are not. Additionally in m. 21, Ives does not provide the accompanying Eb harmony necessary for a definitive Eb conclusion. Instead, the music resolves deceptively over the course of mm. 21 and 22.

Following the deceptive close, a short codetta ensues. It, too, reiterates a portion of the previous text: "Shall we gather?/shall we gather at the river?" Unlike the codetta to the verse section, the chorus's codetta does not repeat the chordal series. Instead, it brings back material that is reminiscent of the majority of the song's music. The closing harmony is anything but conclusive. The tonic Eb is the last bass pitch (m. 24) but subsequent harmonies of m. 24 dilute the conclusive weight of this final tonic. Moreover, the voice does not end with the tonic. In its place is the third of the tonic triad, G. The song concludes by stepping "out-of-the-frame" of the harmonic model delineated by the hymn by concluding with the third in the soprano and reflects the trend in the nineteenth-century away from the classic perfect authentic cadence.

The higher level techniques used by Ives throughout the course of "At the River" are centred around a three-note motive. This motive is underpinned by traditional harmonies which are enriched through extensions to the basic triadic unit. Other techniques, such as common tone relations (or progression), are also used in concert with the descending motive.

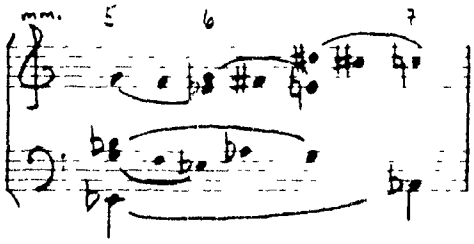
EXAMPLE 43: THE MOTIVE AND SOME OF ITS TRANSFORMATIONS



The motive itself has many guises. In its simplest form, the motive is a series of three pitches descending a major third from the mediant degree to the root of a major triad. Ives transforms the motive a number of times throughout the course of the song. Sometimes the motive only descends a minor third or a major second, but it always comprises a minimum of three pitches.

The motive is continuously dovetailed into another instance of the motive throughout the course of the song. Through this method, Ives creates many of the extensions to the basic triadic units.

EXAMPLE 44: MM. 5-6, BREAKDOWN OF THE VOICE-LEADING

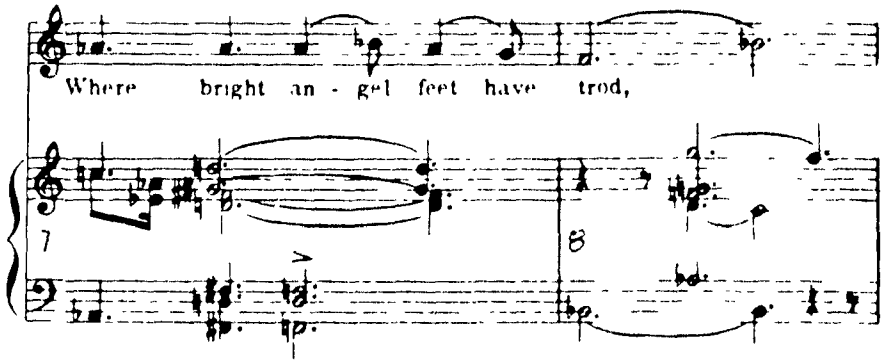


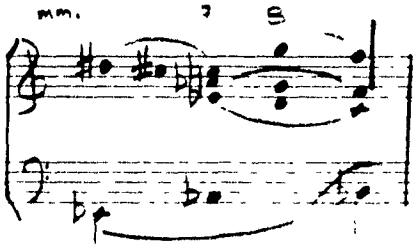
In mm. 5 and 6, the motive (G-F-Eb) is in the top voice of the piano's right hand. The concluding Eb is in an inner voice in m. 6 while another motive begins. This time the motive is transformed from G-F-Eb to G-F#-E; again, the last note of the motive is found in an inner voice and another motive (D#-C#-C) begins on top of the E. The motive is also found in other voices. For example, in m. 5, the accompaniment's soprano, doubled by a tenor voice, presents a transformed version of the motive (Eb-D-Db) wherein the first two pitches are presented simultaneously. In m. 6, the Eb which was the last note of the soprano's motive is also the first note of the alto's motive, Eb-D-C.

Ives also uses the motive in the soprano of the introduction, although transformed. The constant insistence upon A-natural in the introduction strongly suggests the resolution up by half-step to Bb. By omitting the Bb, Ives skirts both the tonic and the dominant of the key. Moreover, Ives does not resolve the A-natural to Bb. Once the Bb has been reached in the bass, the soprano quickly elides to Ab, the seventh of the dominant seventh chord.

In m. 7 and 8, the motive has been spread out to encompass two measures instead of two beats. Both instances of the motive begin underneath the C5 of m. 7 and are found in the right hand.[81]

EXAMPLE 45: MM. 7 AND 8





[81]The C5 is the last pitch of the soprano's D#-C#-C motive of m 6 and 7.

The first instance of the motive begins with the Eb4 of the first beat of m. 7 proceeding through D4 and concluding with C4 of m. 8. The duration of the motive's second note, D4, is greatly elongated. Ives doubles the D4 in the upper voice. The doubling of D4 preserves the upper register which is used in the following measure.

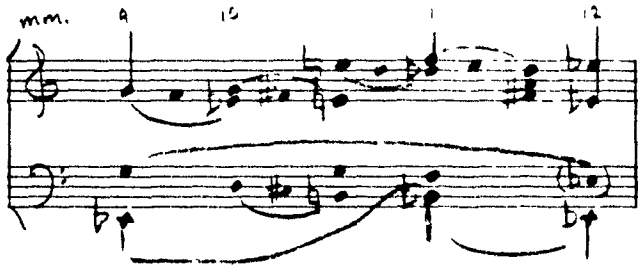
The second instance of the motive in mm. 7 and 8 is an expanded form of the original. In its simplest form the motive would be presented as Ab-G-F. However, there is an F# accompanying the G# (the chromatic equivalent of Ab). This F# suggests a possible Ab-G-F# presentation. Nevertheless immediately following the F#, the music moves to a G-F dyad which is doubled up an octave melodically. The Ab is also placed together with the G-F dyad in the left hand, thus, providing a compressed presentation of the motive.

The second part of the verse section opens exactly like the first. The first measure and one-half (mm. 9-10) prolong the Eb tonic harmony through the various manifestations of the basic motive. From the second half of m. 10 to the end of the verse section in m. 13, the second phrase continues on its own course. This change of direction is largely due to the change of harmonic goal - tonic in the second phrase, in contrast with the dominant goal of the first. Accompanying the change of goals is Ives's transformation of the original hymn (see pp. 78-81 for the discussion of the changes to the hymn tune). Ives also recasts the original authentic cadence of the hymn. The Eb's are preserved in the outer voices of m. 12 but the accompanying harmony is not placed in a strong metrical position; hence, a weakened authentic close.

The changes begin with the E-G-B chord of m. 10 beat 3. In m. 6, the chord at the parallel juncture was C#-G-B-E-D#. The three middle notes of this chord are preserved in m. 10; in the bass, the C# is replaced with a B and an E replaces the D# in the soprano. In both cases, the chords are achieved by a common tone, G, from the preceding tonic chord.

The motive plays a role in the presentation of the E-G-B chord. The G-F#-E and Bb-Ab-G figurations are like those of the first phrase. Added is a D-Db-B figure which attains the bass note of the chord. The top note of this chord, E5, is the first pitch of another instance of the motive which, in turn, dovetails into the cadential gesture.

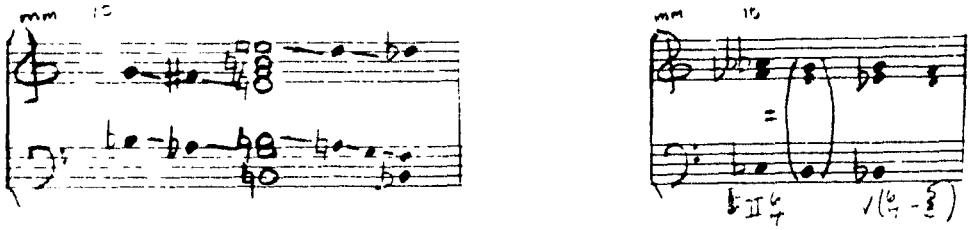
EXAMPLE 46: MM. 9-12, BREAKDOWN OF THE VOICE-LEADING



The series of four chords, which commences the cadential gesture, has buried within its midst another instance of the motive, F-E-D. This case is quite similar to the one found in the introduction. In that situation, the motive feinted a leading-tone motion to Bb. Here, the D's (D5 and D6) strongly suggest the resolution up to Eb5 and Eb6. Eb's are found in the next measure but they are attained through motions from F# to Eb in the voice and by descending fifth in the bass, Bb down to Eb. Ives does present Eb5 and Eb6 in m. 12 but the chord is delayed by another chord, F#-A#-C#-G#, before it resolves to the tonic chord on the third beat of the same measure. The end of the verse section is quickly followed by a repeat of the cadential gesture in m. 13; however, this time Eb is not attained and the chorus ensues.

The E-G-B chord of m. 10 functions as a Neapolitan chord in second inversion (the chord would be spelled as Fb-G-Cb in Eb). The bass note, B2, resolves to Bb2 of m. 11 while the soprano, E5, begins a stepwise motion down to Db5.

EXAMPLE 47: MOTION TO AND FROM THE CHORD OF M. 10



The chord results from a common tone motion from the third, G, of the preceding tonic chord. Direct motion from the tonic chord is interrupted. The chord, Db-Eb-Ab-C-F# (m. 10 beat 2), plays a secondary role, the means by which the soprano's motives (G4-F#4-E4 and Eb4-D4-C4) and the bass's motives (Bb3-Ab3-G3 and D3-Db3-B2) are presented.[82]

The E minor triad of m. 10 obscures the expected motion to the dominant chord. Even though the B2 acts as the bass of the Neopolitan chord, the presentation of the entire E minor triad on top of B2 startles the listener for, up until this point, all of the music has been grounded in Eb. But instead of lingering in this realm, Ives quickly returns the music to Eb.

The E minor chord foreshadows the alteration of the melody at the end of m. 11, the close of the verse section. Here, the Ab and F of the hymn have been omitted; in their place, Ives has added A-natural and F#. Following the motion from these two pitches, the melody closes on Eb of m. 12. Unlike the motion to the dominant in m. 8, the route taken to the tonic is less direct. In part, the close selected by

[82]G3 could have been placed in the bass, a result of the motion from the tonic chord and the motive (Bb-Ab-G). However, the G3 is omitted, perhaps, in order to save this pitch for the ensuing diatonic descent of m. 11.

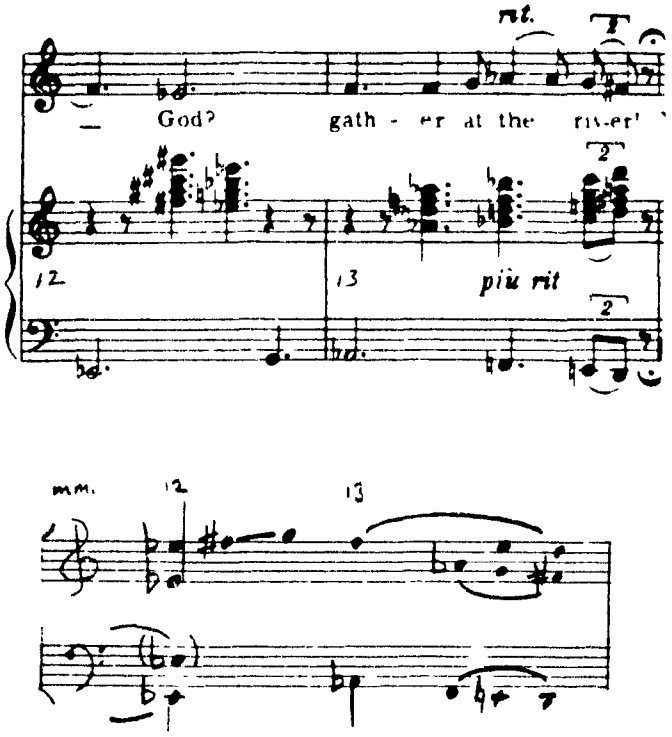
Ives at this point reflects his interpretation of the text. The verse section closes with the question " ... flowing by the throne of God?" It would seem inappropriate for Ives to close such a line with a clearly articulated authentic cadence. Instead, the final Eb is rhythmically delayed. In addition, the motion from A to F# strongly suggests resolution to G instead of Eb. The motion from the fifth to the third of the dominant chord is a typical resolution to the root of the tonic triad. In this case, A and F# coupled with the D-F#-A chord temporally act as the dominant of G. However, the D-F#-A chord is part of a series of four triads that move by ascending parallel motion up to Eb and the melody immediately falls to Eb4 in m. 12 instead of G4.

From the standpoint of the text, m. 13 provides the verse section with a conclusive end. Musically, m. 13 leaves the verse section open-ended for it repeats m. 11 with minor variations, the music which preceded the tonic. This measure provides a smooth link to the ensuing chorus section. The chorus, like the verse, divides into two phrases (mm. 14-17 and mm. 18-22) plus a small codetta (mm. 23-25). Both phrases close on the tonic, the first one on the mediant in the soprano and the second on the tonic; except for a few alterations, the first two measures of the phrases are identical. In m. 15, the melody has to accommodate the text. The second syllable of "river" falls on the naturally accented third beat while "the," the first word of the next line of text and an article, is placed in a metrically weak position on the third eighth-note of the fourth beat which acts as the anacrusis to m. 16. The line does not require an anacrusis in m. 19 and the whole bar serves to set "river." Additionally in m. 19, the two chords in the right hand which follow the second beat's chord, Bb-F-C-D, are different than those chords found in the same metrical position in m. 15.

The descending motive which was so prevalent in the verse section is absent from the first half of both phrases.

True, an expanded form of the motive is found in the melody, Eb-D-C-Bb (mm. 14-15 and mm. 18-19), but the total involvement of the motive in all of the voices is not found in these two parts. In its place, Ives hints at a new motive, one that ascends (F#-G) rather than descends. This motive can be derived from the series of four chords of m. 11 and 13; however, in the midst of these chords is the descending motive.[83] The ascending motive arises from the right hand's two chords, F#-A#-C#-G# and Eb-G-Bb-Eb, of m. 12 and m. 13.

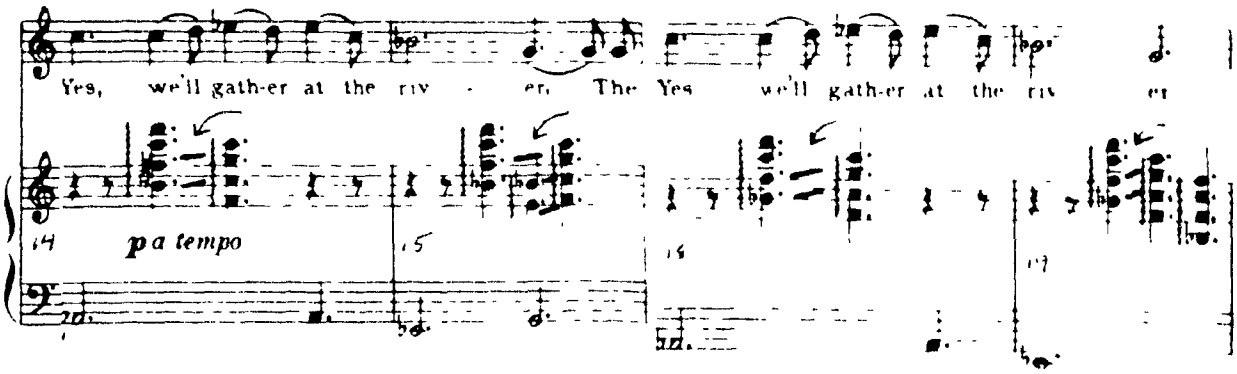
EXAMPLE 48: MM. 12 AND 13, BREAKDOWN OF THE VOICELEADING



[83]The ascending motive can be followed through Ab5-Bb5-C6-D6 in the subsequent measure. However, Ives does not pursue this avenue in the ensuing chorus section.

Similar to the motive found within the series of four chords, the ascending motive is found in the middle of these two chords. The F#5 rises to G5 while the A#(Bb) is held in common between the two chords and the G#6 falls to Eb6.

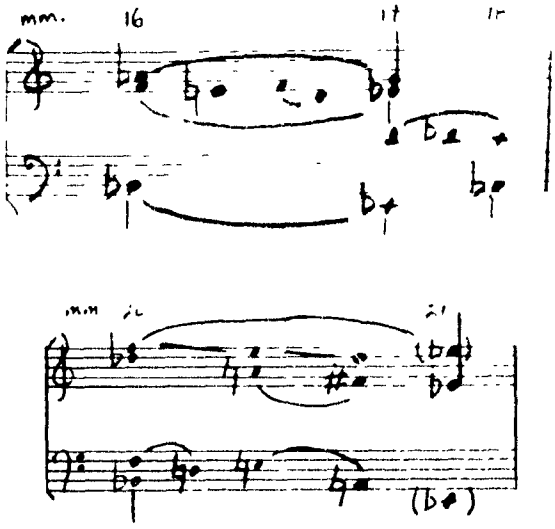
EXAMPLE 49: INSTANCES OF THE ASCENDING MOTIVE



In the chorus section, the ascending motive is found in the right hand of measures 14, 15, 18, and 19.

Immediately after presenting the new motive in mm. 14-15 and mm. 18-19, the descending motive returns in mm. 16-17 and mm. 20-21 in a number of voices.

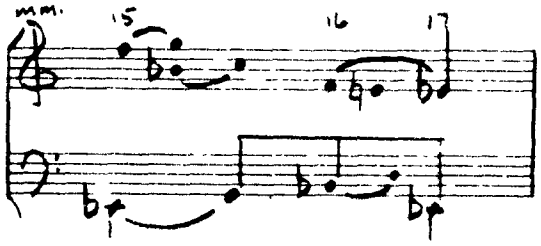
EXAMPLE 50: GRAPH OF MM. 16-17 AND MM. 20-21



In mm. 16 and 17, the motive is found in the alto and tenor voices of the accompaniment. The motives in this part of the chorus are dovetailed in a manner similar to what we found in the verse section. For example, the concluding Eb4 of the F4-E4-Eb4 motive of the right hand also serves as the first pitch of the Eb-D-Db-C motive.

Harmonically, the music of the chorus section is reminiscent of the song's introduction. The only significant difference between the two passages is the second chord of the progression. In the introduction, the progression went IV-III-V-I while in the chorus section the two phrases use a tonic chord in place of the mediant chord of the introduction. In the first phrase of the chorus section, the bass arpeggiates the tonic chord of m. 15 and the ensuing dominant chord.

EXAMPLE 51: POSSIBLE AUXILIARY CADENCE

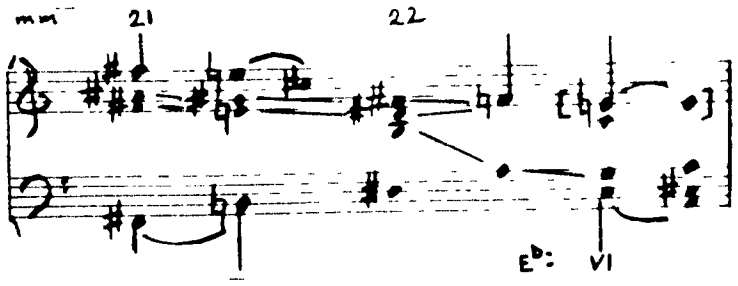


By presenting the chords in this manner, Ives suggests the auxiliary cadence of the introduction, thus, connecting the opening and closing of the song.

In the second half of the second phrase, the series of four chords return. This time the bass is altered; the first two pitches, F3 and D3, were a part of the gesture in m. 11 but the second two pitches, C3 and A2, are new. The Eb arrives on the first beat of m. 21 but the bass is not in concert with the voice. The concluding Eb is absent from the bass.

Following the arrival of Eb in the melody, the accompaniment apparently departs from the established tonic key At first glance it appears the music of mm. 21 and 22 are not at all linked to Eb. In fact, these two measures are an elaborate deceptive cadence.

EXAMPLE 52: MM. 21-22



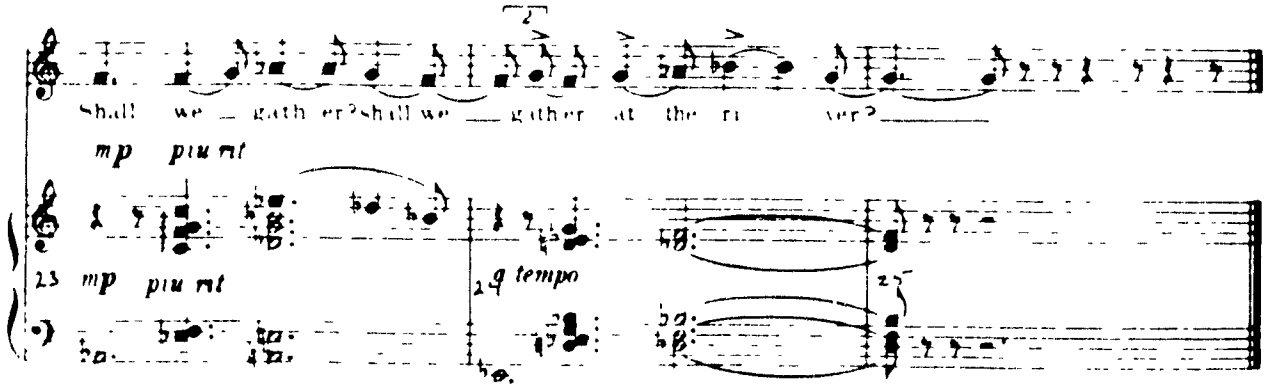
The descending motive is found in the top voice; the F#5 is transferred down an octave to F4 and concludes with a implied E4. The bass moves up from F#2 to B2 which then arpeggiates to D#3, the C#3 is a passing tone. The D#3, in turn, functions as the leading tone to E3. In the inner voices, there is consistent descending motion that begins with the F#4 of the first chord in this passage. After the first chord of m. 22, the continuous descent in this voice is abandoned and resolves up to F4 along with F#4.

In the key of Eb, the usual deceptive resolution is to C; in the major mode the standard resolution is to a c minor chord and in the minor mode to a Cb major chord. In this song, Ives employs a C major chord in this passage, the modally mixed version from the major mode. However, this chord does not conclude the passage but is its penultimate chord. Instead, the passage closes with the modally mixed deceptive chord of C major, A. The soprano of the A major chord retains the supposed E of the previous chord while the A2 and the C#3 are a result of motion from the C3.

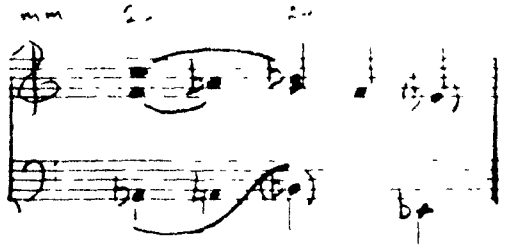
In the ensuing codetta, the mediant of the A major chord, C#, provides the transition back to Eb by being reinterpreted as Db. Db is not a foreign pitch to the song and has been used quite frequently throughout "At the River" as part of the descending motive and as the seventh of the chord built on Eb (e.g., m. 4, the chord is Eb-G-Bb-Db). The codetta is reminiscent of the verse's codetta, in that, it follows the close of the section by repeating a portion of text. In the verse's codetta, the text was repeated in order to end the verse section with an assertive close. The chorus's codetta answers the previous statement, "Yes, we'll gather at the river that flows by the throne of God." with a question, "Shall we gather? shall we gather at the river?" This ending leaves the song open-ended and doubtful of its textual goal.

Ives confirms this sentiment through the music. Eb does return at the end in the bass but the toric is absent from the final chord. The descending motive is found within the codetta but not to the extent it was used in the verse section; the compressed version of the motive (from m. 5, Eb-D-Db) returns in m. 24. In the reduction of Example 53, the 'normal' voice-leading is shown rather than what acutally occurs. Doubt is also expressed through the rhythmic setting of the text in this passage. The beat is often displaced by ties, accents, and the duplet of m. 24.

EXAMPLE 53: THE CODETTA



EXAMPLE 53 (CONTINUED)



A variant of the auxiliary cadential progression of the opening is the underlying progression in this passage. This instance of the auxiliary cadence, which undermines the dominant, is based on an incomplete harmonic progression, ii$^{\circ}$-V-I, a reworking of the downward motion of the IV III V I progression of the introduction. The incomplete harmonic progression in concert with the upward motion musically portray the concluding question, "shall we gather at the river?"

CONCLUSION

In this thesis, I have focused on the overall structural organization of each of the selected songs by first examining the surface details and subsequently relating these findings to the entire song.

The piano introduction of "The Cage" delineates the harmonic material as well as the boundaries of the melody. All of the chords in the song are in some way interval-class(ic)5 based; the 5-35 chords, which constitute the majority of the chords of the song, are themselves, of course, a simultaneity of four consecutive ic5s (e.g., D#2-G#2-C#3-F#3-B3). The pitch-classes of the uppermost ic5 of the first chord, F#3-B3, become the outer limits of the melodic motion through ic5, (here as perfect fifth) B3 to F#5, in the piano introduction. Each of the subsequent settings of lines 1-2, 3-4, and line 5 move through ic5. With the setting of lines 1-2, the entire piano introduction is transposed up by ic5 (T_5) and serves as the accompaniment. In the music of lines 3 4, the motion is through an ic5, D5 to G6. The final chord of the line 4, the "Wonder" chord, is not the usual 6-14 but the only instance of 7-33 in the song. This 7-33 chord synthesizes in a transcendental, God-like moment of "Wonder" the melody's 5-33 and the harmony's predominate 5-35 pitch-class sets; moreover, the "Wonder" is the literal complement of the 5-33 pitch-class set that comprises the melody of line 5. The final line which returns the three chords of line 1 also moves through ic5 but on a smaller scale.

In "Ann Street," the principal harmonic and melodic components are derived from the [027] trichord. There are two [027] trichords used in the song: D-A-E and D-A-G. The first trichord is primarily employed on the surface levels. The second trichord constitutes the deeper structural level of the song, beginning with D5 of m. 1 through the A4 in m.

16 and concluding with the final G4. The bass employs a portion of the second trichord, beginning with the opening A1 and concluding with the G2 of m.16, which supports the higher level melodic motion. Two [025] trichords, A-G-E and D-C-A, utilize the invertibility of the ic5s (A-E and D-A) shared by the [025] and [027] trichords. The interchange of perfect fourth for perfect fifth in this song is similar to the exchange of quartal harmonies for quintal harmonies in "The Cage."

In "Like a Sick Eagle," the primary motion is from one referential collection to another. This motion effectively paints the text: the first referential collection [01268] represents the mortality of the sick eagle that is slowly sinking to earth; the traditional-sounding second referential collection [037] depicts the eagle's heavenward look. The pivotal "God" chord commences the dissolution of the first referential collection and the emergence of the second referential collection. This process is achieved by melodic motion in the bass through a structure that resembles an auxiliary cadence. The first referential collection returns a few times after this point but the second referential collection dominates and concludes the song.

The compositional process in "At the River" is centred around a descending motive which, in its simplest form, comprises three notes (G-F-Eb). Ives's version of the melody preserves the hymn tune in the vocal part (though not in its entirety, as discussed in the analysis of the song) while providing a new accompaniment that is best described as beginning around the key of Eb rather than in Eb. This phenomenon is best illustrated by the opening motion through the auxiliary cadence in the introduction and in the multiple interpretations of its harmonies. The definite, authentic (imperfect and perfect) cadences of the original are replaced by endings that leave the song inconclusive, endings which eloquently paint the question of the verse and of the

chorus's codetta. In the verse, instances of the descending motive are stacked upon one another to generate chords. In the chorus, Ives hints at a new ascending motive, but it is not fully established. The descending motive is used in this section and eventually affirms its dominance. Following a brief excursion away from Eb, the song concludes with a codetta which is reminiscent of the traditional hymn's plagal cadence.

The materials used by Ives in each of the songs are quite different. However, there are many similarities between the songs, especially when one has examined the compositional technique behind each song. In each of the songs, Ives defines the materials that are to be employed at the beginning of the song; the materials are usually quite short and concentrated. Principal motivic elements are manifested on both surface and deeper structural levels in the song. These motivic elements are found on both melodic and harmonic planes. For example, the top dyad of the opening 5-35 chord in "The Cage," F#3-B3, is found between the first and last chords of the introduction, B3 to F#5. The same holds true for "Ann Street" (the D-A-E [027] trichord), "Like a Sick Eagle" (the various instances of the referential collections in the melody and harmony), and the instances of the descending motive in the melody and in the harmony of "At the River."

Before closing, I would like to add a short critique of the analytical techniques employed in this thesis. The employment of linear analysis techniques in concert with labelling of pitch-class set theory served as the principal investigative tools in this thesis. The primary aim in using these tools was to illuminate the overall as well as the surface organization of the songs. With these short pieces, linear analysis successfully illustrates the links between the surface and deeper levels as well as the similarities

between the harmonic and melodic components of a given piece.

The difficulties with techniques employed in the thesis are many. Unlike the music of the Common Practice era (1700-1850), the musical language and syntax employed by composers since the end of the nineteenth century has become increasingly diffuse, almost to the point where composers seem to work with independent musical languages. This development is most evident on the surface level where disparate stylistic features proliferate. A common set of analytical tools capable of disclosing synthetically the coherence of a given work remains lacking. Instead, analysts must seek the patterns of the composer's style and reflect in their analyses the way in which these patterns aid a work's structural organization. I have, in this thesis, pursued analytically the underlying compositional idea of four Ives songs and have endeavoured to reveal in them a structural coherence which lies at the heart of his compositional and philosophical approach.

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