

**GREEN IDEAS**

by

**Lisa Cay Miller**

**B. Mus., University of Calgary, 1990  
M. Mus., San Francisco State University, 1999**

**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF**

**DOCTOR OF MUSICAL ARTS**

in

**THE FACULTY OF GRADUATE STUDIES**

**(Music)**

**THE UNIVERSITY OF BRITISH COLUMBIA**

**April 2007**

**© Lisa Cay Miller, 2007**

### ABSTRACT

Green Ideas is a work of approximately sixty minutes duration scored for two violins, viola, cello, double bass, electric guitar, piano, and drum kit. It presents musical portraits of some of the vocalizations made by infants in their first two years. Phonetic, prosaic, inflective, tonal, semantic, and interactional elements of early communication are abstracted and used for musical inspiration. The work employs varied degrees of composition and improvisation in its six sections, with each section focusing on a single component of early language emergence.

## TABLE OF CONTENTS

Abstract.....	ii
Table of Contents.....	iii
List of Figures.....	iv
I. INTRODUCTION	
1.1 Linguistic Inspiration.....	1
1.2 Challenges.....	2
1.3 Musical Inspiration.....	3
II. ORGANIZATION	
2.1 Division of Linguistic Concepts into Movements.....	6
2.2 Unifying Elements.....	6
2.3 Instrumentation, Duration.....	11
2.4 Use of Improvisation Strategies.....	12
2.5 Overview.....	14
III. MATERIAL OF INDIVIDUAL MOVEMENTS	
3.1 I Cry.....	16
3.2 Truck.....	32
3.3 Scribble Talk.....	37
3.4 Singing.....	46
3.5 Sleep Furiously.....	51
3.6 green ideas.....	56
IV. CONCLUSION	
4.1 Historical Context.....	64
4.2 Aesthetic Statement.....	66
V. BIBLIOGRAPHY	
5.1 Bibliography.....	67
Musical Score of <i>Green Ideas</i> .....	70

## LIST OF FIGURES

Figure 1: Transformation of interval structure .....	7
Figure 2A: Permutation series – Harmonic plan .....	8
Figure 2B: Permutation series – Harmonic plan (continued) .....	9
Figure 3: General transformation of timbre, texture and meter/pulse .....	10
Figure 4: <i>Green Ideas</i> Overview .....	15
Figure 5: <i>I Cry</i> Permutation sets .....	16
Figure 6A: Crying - Phrase structure .....	18
Figure 6B: Crying - Phrase structure .....	19
Figure 7: Crying - Period structure 1 .....	21
Figure 8: Reduction of the Cooing section .....	26
Figure 9: Reduction of the Cooing and Babbling sections .....	29
Figure 10: Rhythmic durations of upper strings in the Babbling section .....	31
Figure 11: <i>Truck</i> Permutation sets .....	34
Figure 12: Reduction of the chords, soprano and bass lines from <i>happy sigh</i> Cue 1 .....	35
Figure 13: <i>Scribble Talk</i> Permutation sets of Motherese .....	38
Figure 14: Examples of chords not included in Motherese .....	39
Figure 15: Reduction of the bass line from Motherese .....	39
Figure 16: Prosody: Notated and graphic phrase from cues 1 and 2 .....	41
Figure 17: Prosody: Notated and graphic phrase from cues 3 and 4 .....	42
Figure 18: Stress-timing: text phrases .....	43



## LIST OF FIGURES continued

Figure 19: <i>Scribble Talk</i> Summary .....	45
Figure 20: <i>Singing</i> Melody .....	46
Figure 21: <i>Singing</i> Permutation sets .....	47
Figure 22: Opening of <i>Singing</i> .....	47
Figure 23: Harmonic reduction of A section .....	48
Figure 24: Four-note melody of the middle section .....	50
Figure 25: <i>Sleep Furiously</i> Harmonic fields .....	52
Figure 26: Bass line reduction .....	52
Figure 27: Reduction of Cue 1 .....	53
Figure 28: Reduction of Cue 2 .....	54
Figure 29: Reduction of Cues 3 and 4 .....	54
Figure 30: <i>green ideas</i> : Framework of ritornello theme .....	56
Figure 31: Fully formed ritornello theme .....	58
Figure 32: Pitches in the ritornello theme .....	58
Figure 33: Varied forms of the ritornello theme .....	59
Figure 34: Homophonic chordal sections .....	61
Figure 35: Phrasing of the chordal sections .....	62

## I. INTRODUCTION

### 1.1 Linguistic Inspiration

*Green Ideas* explores some of the basic characteristics of early communicative strategies. The gradual emergence of language faculties forms the inspiration for this piece. This work is a representation of newborn vocalizations and the utterances of a young toddler. Sources range from the first cries of an infant to the initial use of syntax. Early stages of language acquisition - crying, cooing, babbling, use of phonemes, prosody, singing, conversational strategies and word order - are abstracted through musical means. The degree to which the music is related to the original sources varies throughout the work. *Green Ideas* is in six largely independent parts, each focusing upon a specific linguistic development. In addition to the programmatic references to language emergence, the work is meant to present a recital of contrasting yet cohesive musical vignettes.

The title *Green Ideas* comes from the phrase *Colorless green ideas sleep furiously* coined by the linguist Noam Chomsky in 1957 to demonstrate grammar beyond semantics and the need for more structured syntactical models in the study of linguistics. The quizzical reactions of very young children to this grammatically correct but nonsensical phrase demonstrate their natural ability to understand communicative logic independent from meaning. In addition to the poetic quality of the sentence, Chomsky's innateness hypothesis has inspired *Green Ideas*. The theory hypothesizes that language is an intrinsic and biologically invariant aspect of the human race. This helps to explain the spontaneous rapid emergence of creative language faculties in children.<sup>1</sup>

---

<sup>1</sup> The phrase is discussed in Gene Searchinger, Director, *Discovering the human language colorless green ideas*, 1995.

## 1.2 Challenges

Any communicative system contains logical construction. Using one to represent another (in this case, music to represent speech) can be problematic; cultural and historical references that inevitably accompany an art form may conflict with attempts at representation of verbal communication. Especially challenging is the depiction of lexical items. It is difficult to find a musical representation of a word. For example the use of the word dog to represent the animal is itself arbitrary and an effort to create a musical representation of an abstraction may be ineffectual. It may be possible to use the sound of an utterance as the point of departure for inspiration. It may also be feasible to create a sound that represents the fear of dogs, so lexical representation could include emotional references as well as purely sonorous allusions. Contextual relationships may be represented; a sonority framed by other sounds presents associative links between depictions of lexical items and generates larger meanings.

Musical representation of syntax is also problematic. According to Schafer, "Language is communication through symbolic arrangements of phonemes called words. Music is communication through arrangements of tones and sound objects. Ergo: Language is sound as sense. Music is sound as sound."<sup>2</sup> The two systems display intricate organization. However, the functions of the two types of communication differ. An attempt to embody one system within another would create compounded complexity; consistency and clarity may be difficult to achieve. For this reason, the inspirational focus of *Green ideas* is primarily upon language performance, an examination of utterances produced (the 'sounds'), rather than the system of governing principles (competence).<sup>3</sup> Representation of the rules of language is largely avoided; the first five movements focus upon pre-grammar verbalizations. The last movement, *green ideas*, uses basic word order in its conception solely as inspiration rather than as an attempt at literal depiction.

---

<sup>2</sup> Murray Schafer, *When Words Sing* (Toronto: Bernadol Music Ltd., 1970), 3.

<sup>3</sup> R. L. Trask, *A Student's dictionary of language and linguistics* (New York: Oxford University Press, 1997), 48.

### 1.3 Musical Inspiration

The combination of composition and improvisation in *Green Ideas* marks an important stage of my artistic development. I have been active as a contemporary composer and performer/improviser for the past sixteen years. Until recently, I have kept these disciplines separate. *Green Ideas* is the first large-scale project that intentionally combines them. Composition and improvisation are used simultaneously, in alteration or singly depending upon the musical and programmatic effects desired. The vital contribution of improvisation to the final realization of *Green Ideas* may be the most unusual aspect of the work as a doctoral thesis in composition. In addition to contemporary composition techniques (use of constructed scales, motivic and timbral development, ritornello form, contrasting movements, etc.), the work embraces potentiality through the interpretational and compositional input of the performers.

Improvisation forms a significant part of the work as a way of representing some of the principal design features – characteristics present in all languages – best expressed by employing flexibility. Open-endedness (the property of language by which there is no limit to the number of different things we can say),<sup>4</sup> stimulus freedom (the property of language which allows us to say anything at all in any circumstances)<sup>5</sup> and the depiction of conversational strategies especially encourage the allowance of multiple realizations and the input of the performers. The work is meant to present an organic, limitless state and improvisation allows for the depiction of infinite possibility. The members of the ensemble are offered differing degrees of freedom in each movement based upon the interactional and expressive function of the aspect of language examined in each section.

The sanction of open-ended performance, persuasion of potential and the denial of complete control as necessary to composition are aligned with the philosophies of John Cage. Aleatoric principles were embraced by Cage as a way to free the material of a composition from the

---

<sup>4</sup> Trask, *SDDL*, 157.

<sup>5</sup> Trask, *SDDL*, 208.

composer. In *Music for Piano* (1952-56) and *Concert for Piano and Orchestra* (1958), compositional chance operations were intensified with the inclusion of the momentary inclinations of the performers, as a way to further encourage intentionlessness. However, there is a fundamental difference in the philosophy towards the creation and realization of *Green Ideas*. The intention of the composer is still an essential part of the work; even though surface details may vary, the form and much of the material is determined by preformed, deliberate structures. The creative input of the performers is also encouraged and expected. Indeterminate notations, planned patterns and fields of change, and the inclusion of the intuitive reactions of the performers link *Green Ideas* with John Cage's *Solo for Voice I* (1958) and Karlheinz Stockhausen's work of the 1960s, such as *Plus-Minus*, *Prozession* and *Spiral*. The vital contribution of the interpretation of the ensemble in the later movements of *Green Ideas* is aligned with the visual representation and collectivism of Louis Andriessen's compositional techniques in pieces such as *Worker's Union* (1975). More specific references to various works in relation to individual movements of *Green Ideas* will be made in Chapter Four.

Since interpretation is a vital element of the compositional process, it may be useful to make comparisons to improvisatory ensembles. The combination of composition and improvisation as a formative aesthetic is present in the formation of many ensembles whose philosophies have influenced *Green Ideas*: MEV- Musica Elettronica Viva, a Rome-based American collective (1966 – present), and the Dutch ensembles Joost Buis Astronotes (1990's – present), Bik Bent Braam (1986 – present) and the Instant Composers Pool (1960 – present). The combination of varied styles and creative spontaneity through conduction of the New York based Burnt Sugar The Arkestra Chamber (1999 – present) demonstrates a similar attitude towards the inclusion of multiple sources and the importance of ensemble invention as found in *Green Ideas*. A basic tenant of the conception of the work is shared by the member directed group improvisation of the Globe-Unity Orchestra and the Spontaneous Music Ensemble (1960s – 1994); the planned inclusion of the input of the performer in the final realization of the music places their contribution at an elevated creative level. This points toward a socio-political attitude towards performance and creation, a move toward universal self-expression and a departure from the composer as sole creator. This

corresponds with the mandates of AMM, the British improvisation group (1965 – present), Los Angeles Free Music Society - ALAFM, (early 1970s – present), the Spontaneous Music Ensemble (mid 1960s to 1994) and Vancouver's Now Orchestra (1977 – present).

## II. ORGANIZATION

### 2.1 Division of Linguistic Concepts into Movements

*Green Ideas* is constructed in six movements: *I Cry*, *Scribble Talk*, *Truck*, *Singing*, *Sleep Furiously* and *green ideas* (the movement will be referred to using lower case characters). Each is largely independent from the others; the individual movements present separate verbalization portraits. This approach is representative of sensory experience before the development of significant memory; young infants exist almost entirely in the present and vastly different emotional and communicative states are typically unconnected.

The order of linguistic concepts represented by each movement generally follows a number of the principal early communicative stages as they appear in most infants. *I cry* uses crying, cooing and babbling for inspiration. *Scribble Talk* explores prosodic inflection and *Truck* explores phonemes and the emergence of the two-word stage. *Singing* is inspired by a brief melody. *Sleep Furiously* explores pragmatics, the context of an utterance, which demonstrates an older baby's ability to understand environment and circumstance. Lastly, *green ideas* is an abstraction of early syntax.

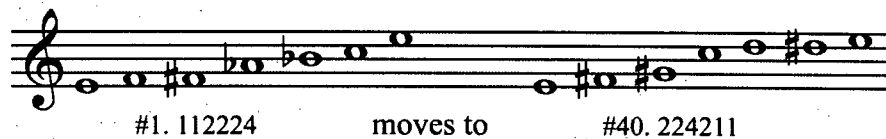
### 2.2 Unifying Elements

Despite the largely autonomous nature of the six individual sections of *Green Ideas*, there are elements that occur throughout the work, such as: the blurring of formal boundaries, layering, repetition and gradual expansion. In addition, the principal generating material is taken from a harmonic system that permeates the whole. A group of six intervals, which encompass the span of an octave, are arranged in a permuted series. The sets from this series are used as the fundamental pitch content of *Green Ideas*. The innateness hypothesis states that the human language capacity is an independent part of our mental facilities and not merely a reflection of our cognitive abilities and it is present in our basic genetic makeup as a natural

part of our development.<sup>6</sup> The permuted series forms a metaphor for this theory; it contributes to the structure of the work (much like the deep level of communication Chomsky was searching for) and could be considered part of the human condition.

The interval sets are arranged to create collections that move from those that contain smaller intervals at the bottom of the collections and larger intervals at the top to the inverse. The upward movement of the larger intervals creates a broadening in sound, even though the entire span of the collection is not extended. Within the permuted series, the number and types of intervals remain constant. There is in essence one reordered interval collection, even though diverse pitch collections result (see Figure 1).

Figure 1: Transformation of interval structure



This expanded use of limited material is meant to reflect duality of patterning - a fundamental property of human language by which a small number of meaningless elements are variously arranged into a much larger number of meaningful elements.<sup>7</sup>

For the most part sets are assigned to movements chronologically much as linguistic development occurs in a comparable order in most infants. Within each movement, sets are used in varied manners; individual sets are used to delineate formal sections, sets or combined sets create fields for improvisation, or a number of sets are assembled together and used for an entire movement. The exceptions to ordered use illustrate the nonlinear aspects of organic development and the abstraction of the generating material represent the non-tangible aspects of human intelligence and creativity (see Figures 2A and 2B).

<sup>6</sup> The innateness hypothesis is discussed by Noam Chomsky and other linguists in Gene Searchinger, Director, *Discovering the human language; colorless green ideas*, 1995.

<sup>7</sup> Trask, *SDLL*, 73.



Figure 2A: Permutation series – Harmonic plan

## Green Ideas - Harmonic plan

part 1

Movement:

I. Sets delineate formal sections.

IA. Crying IB. Cooing

#1.112224 #2.114222 #3.121224

IB. Babbling

#4.121242 #5.121422 #6.122124

#7.122142 #9.122241 #10.122412 #11.122421

II. Sets combined for brief pitched portions of the movement.

II. [m][b][t] II. happy sigh

#13.124212 #14.124221 #15.141222 #17.142212

#18.142221 #19.211224 #20.211242 #21.211422

III. Sets delineate formal sections.

III. 1

#22.212124 #23.212142 #24.212214

III. 2 III. 3 III. 4

#25.212241 #26.214122 #27.214212

#28.214221

IV. Non chronological use of sets.

(IV.) (IV.) (IV.)

#8.122214 #12.124122 #16.142122

Figure 2B: Permutation series – Harmonic plan (continued)

## Green Ideas - Harmonic plan

part 2

Movement:

V. 2-3 sets combined to create harmonic feilds.

V. 1

#29.221124

#30.221142

V. 2

#31.221214

V. 3

#32.221241

#33.221412

#34.221421

V. 4

#35.222114

#36.222141

#37.222411

V. 4a

#38.224112

#39.224121

#40.224211

VI. Linear use of sets abandoned. Abstracted use of set structure in bass line.

#41.241122

#42.241212

#43.241221

#44.242112

#45.242121

#46.242211

#47.411222

#48.412122

#49.412212

#50.412221

#51.421122

#52.421212

#53.421221

#54.422112

#55.422121

#56.422211

While the varied treatment of the generative pitch collections in each movement disguises the permutation of the series to differing degrees, it is designed foremost to generate material and inspire the composer. However abstractly realized, transformation of the pitch series is symbolic of linguistic development. More concretely, intervallic broadening is matched by an expansion of surface details: the first three movements use growth as a formal principle, while later movements use wider registers, a broader range of dynamics, more regular and active rhythms and textures and more expansive melodies.

In addition to the harmonic process that permeates *Green Ideas*, timbre, texture and rhythm also undergo gradual transformations. There is a general move from abstraction (extended techniques and less regular textures and rhythms) in the first three movements toward more traditional presentation of harmony melody and meter in the last three (see Figure 3).

Figure 3: General transformation of timbre, texture and meter/pulse

General transformation of timbre, texture and meter/pulse

Movement	I. Cry	II. Truck	III. Scribble Talk	IV. Singing	V. Sleep Furiously	VI. green ideas
<b>Timbre</b>	Un-pitched extended techniques → pitched material → harmonics	Un-pitched (with a brief pitched section, <i>happy sigh</i> ).	Pitched	Extended techniques → pitched	Pitched	Pitched
<b>Texture</b>	Ensemble interpretation of graphic symbols (largely at the same time) → loosely imitative → oscillating pattern	Layered	Disjointed monophony and harmonic units → more concurrent presentation (not necessarily connected)	Melody accompanied by extended techniques → more traditional homophonic texture.	Heterophony and accompanied solos	Contrapuntal ritornello section.
<b>Meter/pulse</b>	Large scale alteration of timbral inflections → metric → fluctuating/pulsing	Unmeasured (except <i>happy sigh</i> )	Unmeasured → brief sections implying meter	Largely measured	Metric blurred by varied simultaneous tempi	Metric ritornello section

The last movement presents timbre, texture and meter in the most traditional musical sense, using pitched melody and harmony, a contrapuntal texture and metric organization to present

a tightly knit ritornello theme. The entire work can be seen as a multi-layered presentation of the emergence of organized language, musical vocabulary moving from sonorous expression to a more controlled musical syntax.

### 2.3 Instrumentation, Duration

The instrumentation of *Green Ideas* is integral to the conception of the work. The ensemble consists of two violins, viola, cello, piano, electric guitar, acoustic bass and drum set. The most direct instrument for the depiction of vocalization, the human voice, is intentionally avoided. While imitation of verbalization is present in the work, much of the content of the work is by design conceptual rather than directly representative. Timbres which approximate vocal sounds are especially important in the first three movements; the strings were chosen to be part of the ensemble because the flexible nature of the instruments allows them to imitate the voice using extended techniques and microtonal inflection. The first and second violins, viola and cello are written primarily in the notated classical tradition. The contrabass is grouped with the strings in the first movement and is more closely aligned with the guitar, piano and drum kit in movements four, five and six (the bass does not play in movement two and the instrumentation of movement three is flexible).

The parts for piano, electric guitar, and drum set are mainly designed for improvising musicians. The drum set and electric guitar (and acoustic bass in movements four to six) were included to incorporate an alternate musical tradition and refer to jazz styles. The combination of instruments from traditionally distinct disciplines is purposeful and allows for an expanded musical vocabulary and extended possibilities. In my experience, musicians from different traditions favor divergent improvisational strategies. Classical musicians seem to prefer motivically based improvisation and jazz musicians seem comfortable with both motivic and chord/scale based improvisation. The combination of both traditions is aligned with the augmentation of the original material through improvisation.

The work is approximately sixty minutes in duration with variation in length resulting from the use of improvisation. Some of the movements are primarily composed, some contain

brief improvisatory passages, while others use a greater degree of improvisation. *I Cry* is the most composed movement and is approximately twelve minutes in duration. *Singing* and *green ideas* are mainly composed with some improvised sections (about nine minutes). *Truck* features interpretation of a graphic score (about eight minutes). The exact time spans of *Scribble Talk* and *Sleep Furiously* will be determined in each performance (from about five to twelve minutes); many musical decisions are left to the performers and the full realization of the movement will be created spontaneously.

#### 2.4 Development of Improvisation Strategies

The varied degrees of improvisation and composition found in *Green Ideas* are used to express stages of the communicative experience of an infant and young child. There is a general transformation of both the compositional and improvisational aspects of the work, moving towards greater organizational control and increased interaction amongst various streams. This represents the development of early self-involved communication to a more structured and social state. In addition to the artistic plan behind the strategies used throughout the work, practical considerations have been made towards the use of improvisation within the ensemble. Improvised sections are designed to accommodate the background of the performers. Solos may be assigned to the most experienced improvisers (*I Cry*, *Scribble Talk*, *Sleep Furiously*, *green ideas*) or performers are given interpretative choices that allow for varied improvisation strategies (*Singing*, *Sleep Furiously*). Performers should be chosen according to their experience as readers and interpreters of new music in addition to their improvisational skills. Basic improvisational musicality, sensitivity to context, knowledge of appropriate idioms, etc. is expected.

It may be useful to briefly describe the improvisation strategies of each movement (they will be discussed more at length in Chapter III). *I Cry* contains three solos (for guitar, piano and cello, although they may be reassigned to the musicians with the most improvisatory experience if desired) with written instructions indicating that the solos should be in the style of the previous music. Most of the movement is composed. The primary goal of the solo sections is self-expression in the context of the surrounding texture. There is very little

direction (the approximate length of the solo is determined) and no concurrent interaction with the rest of the ensemble.

*Truck* calls for interpretation of a graphic score. A table of sonorities delineates the manner of execution of symbols, outlines the general timbres, intensity and duration of each sound. The score represents the background structure of the music – the form, the phrasing of large gestures, density of textures, combination of material, and the approximate placement of sonorities, general registers and broad dynamics. Within these parameters, individual performers contribute slight variances to the surface details of the music: specific registers, slight modification of dynamics, density of articulation and exact placement of motives and phrases. The creative input of the performers in this movement is thus more directed than *I Cry*. There will be some amount of interaction among performers as instrumentalists should naturally alter their execution of material according to the surrounding texture created by the rest of the ensemble.

The basic structure of *Scribble Talk* is also predetermined. The performers use three parts to create the texture of the movement by following the written instructions outlining the presentation of material. They are directed to transform words and graphics into melodic/prosodic lines and rhythmic patterns and decide upon the placement of notated melodies and chords. A larger degree of notation (used in two of the three parts throughout the movement) signifies an increased degree of compositional input toward the final result. At the same time this higher level of control is matched by flexible instrumentation (the movement may be performed using three to eight instruments). There is a transformation towards increased interaction among performers present in the design of the movement. Performers are directed to move from an explorative self-expressive to a more reactive and communicative manner as the movement progresses.

The improvisation in *Singing* primarily supports a melody using extended techniques, specific pitches and registers. Creating a homophonic texture gives clarity to instrumental function. The increased focus of extemporization and interaction as the secondary nature of

accompaniment creates a close connection with the melodic strain as well as the other accompanying instruments.

The improvisation strategy of *Singing* is extended in *Sleep Furiously* as it begins with accompanied solos and moves to group improvisation. Varied material is used (chords, scales, graphic symbols and written instructions). Interaction of the ensemble becomes the primary focus of the movement, as it ends with an open improvisation by the entire ensemble.

The improvisation strategies used in *green ideas* are derived from previous movements, and form a musical review of textures and styles as well as an inspirational summary of the entire work.

## 2.5 Overview

Each movement contains its own linguistic concept, instrumentation, improvisational strategies, form, pitch centers and musical plan. Linguistic concepts follow general stages of early language acquisition. Instrumentation changes from portions of the ensemble (seven instruments in movement one, six in movement two, flexible instrumentation in movement three) to the full ensemble in the last three movements. Improvised portions of the work move from isolated solo sections to improvised accompaniment and finally towards greater freedom and increased interaction between performers. The composed portions of the work feature a general transformation from restricted yet flexible repetitive material to a broader and more regular range of expression. The combined pitch centers in the first five movements of the work descend from E to B, culminating in the last movement. Movement I focuses through reiteration upon E and D and the primary pitched section of movement II creates a reference to D major. The bottom notes of the harmonic strain of movement III focuses on B through bass notes that create reiterated C and B chords. Movement IV is in A Aeolian, and finally the bass line of V leads to the tonality referred to in the last movement, which centers around B (see Figure 4 *Green Ideas Overview*).

Figure 4: *Green Ideas* Overview*Green Ideas* Overview

<b>Movement Duration Linguistic Concept</b>	<b>Instrumentation</b>	<b>1. Form 2. Principle pitch centers</b>	<b>Musical exploration</b>	<b>Improvisational plan</b>
<b>I. I Cry</b> c. 12:00 Crying, and Cooing/Babbling.	Violins, Viola, Cello, Double Bass, Guitar, and Piano	1. AB 2. E, D	Gradual transformation: from timbral alteration to a melodic/imitative texture in section A and expansion into and an oscillating texture (B).	Solos in the style of preceding music.
<b>II. Truck</b> c. 8:00 Phonemes, two- word stage	Violins, Viola, Cello, Drums, and Guitar	1. AB 2. Un-pitched/D	Motivic presentation and layering.	Interpretation of a graphic score.
<b>III Scribble Talk</b> c. 5:00 – 8:00 1. Prosody 2. Motherese 3. Stress/syllable timing.	Three to Eight Instrumentalists	1. Through-composed 2. (C) B (leads to IV)	Expansion, interaction.	Interpretation and placement of notated melodies, graphic symbols, chords and text.
<b>IV. Singing</b> c. 9:00 Singing	Full ensemble	1. ABA <sup>1</sup> 2. A Aeolian	Emergence of regular melody and homophony.	Improvised accompaniment, group solo.
<b>V. Sleep Furiously</b> c. 8:00 – 12:00 Pragmatics	Full ensemble	1. Through- composed 2. Emphasized as chordal roots: D, B, Eb, C (leads to VI)	Soloist iteration versus ensemble presentation and interaction.	Solo/group improvisation interspersed with heterophony.
<b>VI. green ideas</b> c. 9:00 Word order	Full ensemble	1. Ritornello Form 2. B	Presentation of a theme and references to material and improvisation strategies from other movements.	Varied.

The formal organization, pitch centers and musical plans of each individual movement will be discussed in more detail in the following chapter.



### III. MATERIAL OF INDIVIDUAL MOVEMENTS

### 3.1 I Cry

*I Cry* is inspired by the communication and self-expression of young infants, as found in crying, cooing and babbling. All of the instruments of the ensemble are used except the drum kit. The movement can be divided into two sections: Crying and Cooing/Babbling. The primary focus is on the color and gradual transformation of sonorities as complex abrasive timbres move to a more consonant and moderate finish. Each portion of the movement uses its own set of permutations. Crying focuses on sets 1 and 2, Cooing sets 3, 4, and 5 and Babbling sets 6, 7, 9, 10 and 11(see Figure 5).

**Figure 5:  $I$  Cry Permutation sets**

Movement:  
I. Sets delineate formal sections.

IA. Crying IB. Cooing

#1.112224 #2.114222 #3.121224

IB. Babbling

#4.121242 #5.121422 #6.122124

#7.122142 #9.122241 #10.122412 #11.122421

throughout the movement, depicting that same feature which is characteristically present in infant vocalization. Improvisation is limited only to context; soloists are directed to relate their material to the preceding music. Near the end of the movement, unaligned repeating sections create flexible articulation of oscillating material.

### Crying

Unpitched timbral sections form an integral part of the Crying section of *I Cry*. The first portion (from the beginning to measure 1) of the movement introduces a wide array of inflections: overpressure groans, cries, scrapes, and shrieks. These timbres are generally loud and abrasive, created using extended techniques. They are represented graphically in the score with a description of their manner of execution included in the directions at the beginning of the movement. For example, cries are created in the strings by: *1. Using slow glissandi and extra bow pressure and/or 2. Playing stopped harmonics high on a string, and sliding the LH down toward the nut, keeping finger position intact* (for more instructions see *I cry* directions). The opening is un-measured; events are marked by approximate time spans (see pages 77 - 81). This section is approximately ninety seconds long; the time spent on these articulations in the opening marks their importance. These types of gestures return throughout the Crying portion of the movement creating cadential closing gestures at the end of large phrase structures (see Figure 6A and 6B – timbral gestures are marked with grey boxes).

Figure 6A: Crying - Phrase structure

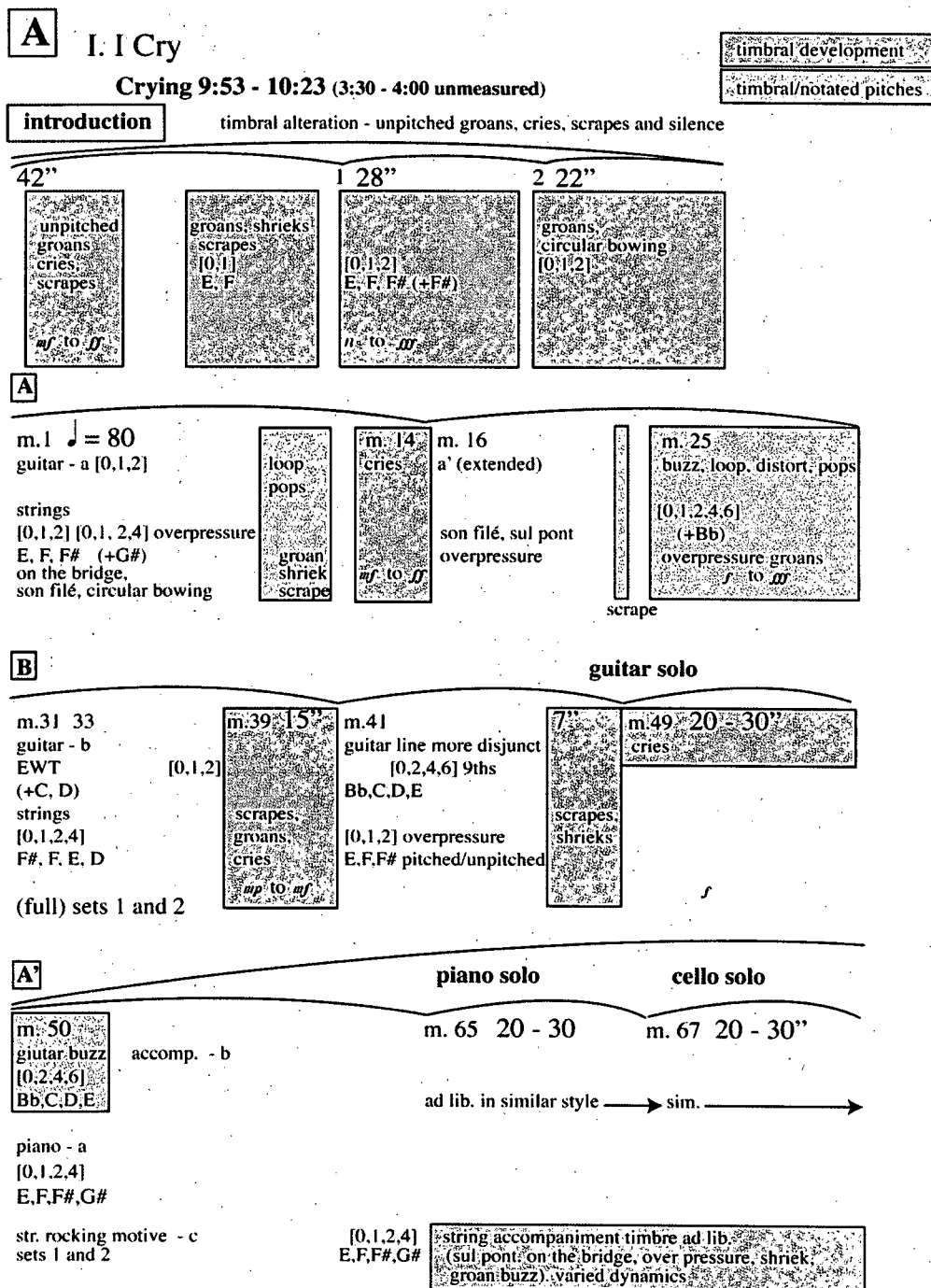
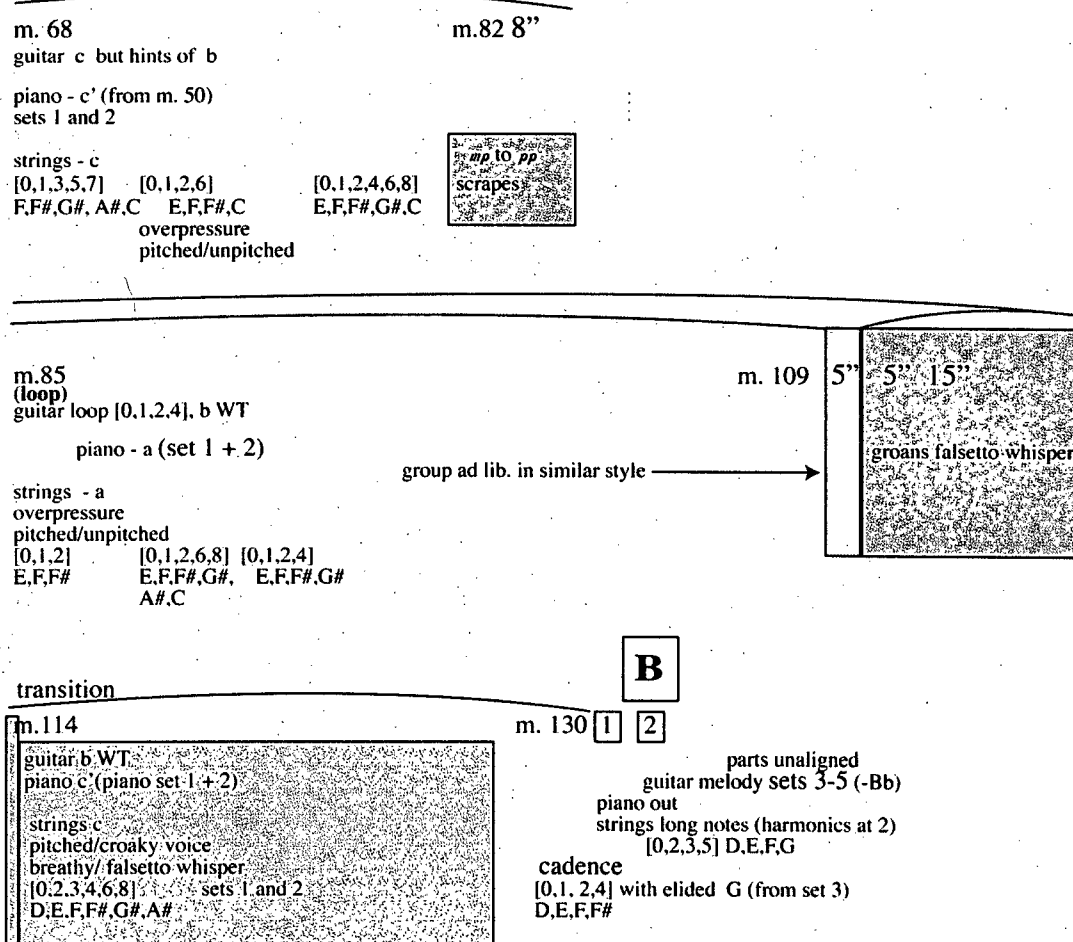


Figure 6B: Crying - Phrase structure

## I. I Cry formal plan page 2



Each time these gestures return time is suspended. Unmeasured sections, lasting from eight to fifteen seconds, focus upon unchanging timbres. Even though variation in sound will result (timbres are generally created by a number of instruments), the focus is most often upon a single sound type. Dynamics are generally very loud to medium loud until measure 39 where the opening texture returns at medium soft with a crescendo to medium loud. This dynamic contrast is even more marked at measure 82 where *scrapes* enter pianissimo, a dynamic echoed at the end of the gesture in measures 111-113. The shift in dynamics is accompanied by a gentler timbre. The *false alto whispers* of measure 112 and 113, created by half *col legno* and half *normale* bowing, or by circular multidirectional bowing (often *sul tasto*) contrasts with the opening *groans*, *cries scrapes* and *shrieks*. This demonstrates a movement toward lower dynamics and more moderate timbres.

In addition to timbral cadences, divisions of the crying section are marked by changes in pitch content, texture and by the return of material or the introduction of new material. The timbral inflection of the opening alternates with silence and sustained [0, 1 – E, F] and [0, 1, 2 – E, F, F#] clusters (see pages 77 – 81). Even though the opening section is relatively long, it has an introductory character, leading to metric presentation of a brief melodic segment in the guitar accompanied by the strings (see measure 1). The combined pitches of the guitar melody also presents a [0, 1, 2 – E, F, F#] pitch collection, the end of which is joined by a [0, 1, 2, 4 – adding Ab] sustained chord in the strings. This marks the beginning of the first phrase, which lasts until measure 14, ending with a return to a [0, 1, 2] collection in the guitar. Shortly after, the strings briefly focus upon a [0, 2, 4] chord, significant because of the focus upon interval class 2, foreshadowing the interval content of the B section of the movement. After the strings return to the [0, 1, 2] cluster with ten to fifteen seconds of timbral cries in the guitar and circular bowing in the strings, another melodic statement returns in measure 16 with an additional sub phrase in measures 20 – 23. (see Figure 7). These two segments (mm. 1- 14 and 16 – 23) are each completed by a timbral cadential gesture. The second has a more complete quality than the first as the strings and guitar arrive at the [0, 1, 2] cluster at the same time and the registral tension of the high notes in the guitar is released in measure 23. This can be seen as a larger period structure.

Figure 7: Crying - Period structure 1

The figure displays two systems of musical notation for 'Crying - Period structure 1'. The first system (measures 7-15) features a Guitar staff with a melodic line and a Strings staff with a sustained accompaniment. The Guitar staff includes dynamic markings (*mf*, *mp*, *f*, *mf*) and interval class labels [0, 1, 2] above the staff. The Strings staff has interval class labels [0, 1, 2], [0, 1, 2, 4], [0, 2, 4], and [0, 1, 2]. The second system (measures 16-23) continues the composition. The Guitar staff is labeled 'composite guitar melody [0, 1, 2, 4]' and includes a 'Low buzz' instruction. The Strings staff includes a 'Scrape' instruction. Interval class labels for the Strings staff include [0, 1, 3], [0, 1, 2, 4], [0, 1, 2], [0, 1, 3], and [0, 1, 2]. The piece concludes with a 'Cries' section in the Guitar staff.

The timbral cadence of measures 24 – 30, created by a low buzz in the guitar and overpressure groans in the strings also features layering in the guitar part (using digital delay). The guitarist is directed to *Loop and distort sound, intermittent pops and noise bursts are desired*. The pitch Bb is also added in this section. This demonstrates another process of the crying portion of the movement, the gradual addition of pitches. Notably, at measure 31, pitch class D is added in the bass and C in the guitar. The pitches presented by the strings and guitar at this point form the pitches from the first two permutation pitch sets (see Figure 5).

Contrasting material begins at measure 31 (a contrasting B section). There is a focus upon interval class two with a greater number of pitches presented by the guitar. The contrast is not extreme; formal boundaries of the movement are generally blurred and material from one section is often used in the next. Measures 31 – 40 have a similar texture and phrase structure to period structure 1, melodic units in the guitar supported by string accompaniment, concluded by a timbral cadence. The first guitar phrase presents an E whole tone collection and the second a [0, 2, 4, 6 – Bb, C, D, E] pitch class set (see Figure 6A).

The strings support the guitar melody of measures 31 – 38 with a [0, 1, 2, 4 – F#, F, E, D] pitch class set, a transposed inversion of the collection found in measure 4 (the collections share three of four pitches). Measures 35 - 37 includes a new element that was first introduced in measures 21, but appears more frequently after this point - the alteration of

overpressure and normal bow pressure in the strings in a manner imitating breathing and a more regulated change of timbre. This represents the more predictable behavior of an older infant.

Measure 49 features the first improvised solo section of the work. Through graphic representation and written instructions, the guitar is encouraged to portray *relate solo to previous material*. Interpretation of the symbol is left largely up to the performer. As stated earlier, the primary goal of the solo sections in *I Cry* is self-expression in the context of the surrounding texture. It is expected that musical associations will be made with preceding music and that aural stimulation of surrounding sonorities will provide ample inspiration for extemporization. This may be discussed during rehearsals, but as is more common in the improvising tradition, a general trust in the musicality of individual soloists is understood.

In measure 50, the piano enters with the return of melodic material from period structure 1. The string accompaniment contains larger intervallic leaps and is more rhythmically active with a larger pitch collection [0, 1, 2, 4, 6, 8]. The expansion of material represents a developing infant's ability to command more complex vocalizations as his mental faculties mature and physical abilities develop. The more distinct motives presented symbolize more variegated and controlled cries. The timbre of the strings becomes gentler and their dynamics softer in this section, with less use of overpressure bowing, and more *sul tasto* and *sul ponticello*. At the same time, the guitar continues to articulate harsher timbres, with a low buzz and varied types of distortion. Instead of ending with an ensemble timbral cadence, this phrase ends with a piano and cello solo (mm. 65 and 67) accompanied by an [0, 1, 2, 4] collection in the strings (see Figure 6A). Even though the strings are directed to use varied bowings (*sul pont.*, *on the bridge*, *overpressure* and *son filé*), there is no unified timbral cadence at the end of this phrase. These solos are undirected. The graphic symbol (a distorted staff) simply suggests, as outlined in the score directions, that *thicker lines at the beginning or ending are to be regarded as suggestions for the density, volume, or shape of the solo*. To encourage continuity, the pianist is directed to improvise in the style of the previous music, and the cello in the style of the piano solo.

A figure that first appeared as accompaniment in the strings in measures 51 – 62 becomes the primary focus of the next phrase (mm. 68 – 84). It is presented by the piano, strings and guitar in an imitative texture, at the original rhythmic value in the strings and augmented in the piano and guitar. In measures 78 – 82, the piano presents the rhythm in dotted quarters and half notes, a written *ritardando* which, when coupled by the held notes in the strings and followed by the timbral scrapes of measures 82 and 83, create a cadential gesture. The reduced dynamics of the timbral inflection and their shorter time span creates a softer gesture and a weaker cadence.

The cadence at the end of the large phrase structure found in measures 85 – 113 has a stronger quality. There is a five second rest that isolates and highlights the timbral gesture of measure 111, which features a return to a louder dynamic, and to the timbral inflection from the opening. The section leading up to the cadence is also more dynamic. The phrase structure is the longest yet, and contains a combination of material from the A section, the rising motive from measures 68 – 84 and material in the guitar similar to that found in the B section. This increased complexity is extended by improvised continuation in the strings and piano in measures 97 – 109. The guitarist begins to improvise in measure 102 using notes from a repeated phrase intensified by delay and effects. This creates the most developed and complete phrase of the movement so far (see Figure 6B).

The last phrase of the crying section (mm. 114 – 130) presents continuation of material and functions as a transitional section to the cooing portion of the piece. The segment contains material from the previous sections, whole tone collections and major ninth harmonized melodies in the guitar from section B and the rising imitative motive in the piano from measures 68 - 82. The *groans, cries and scrapes* cadential gesture in measure 111 moves after approximately five seconds to a soft buzz in the guitar and a much gentler *falsetto whisper*, a timbral inflection which is sustained across the boundary into the next phrase. In measures 114 – 130, timbral inflections (*breathy whisper, falsetto whisper* and *croaky voice*) continue to be combined with pitched material. This contributes to the sense that this entire section is an ending gesture, hinting at a prolonged timbral cadence (see Figure 6B). At the same time, a faster tempo begins in measure 114, creating forward movement and a



suggestion of a new beginning. There is a higher concentration of pitch class 2 in the string accompaniment, signifying a change in focus of the harmonic material.

The last A section of the crying portion of the movement can be broken into three structures: sub phrase 1 which ends with solos instead of a cadence, sub phrase 2, which ends with a weaker cadence and sub phrase 3 with a stronger cadence followed by a transition section. Since a strong cadence does not occur until measure 111, this can be seen as one continuous section (see Figure 6A and B).

The transition section of measures 114 – 130 ends in measure 130 in an [0, 2, 4 - D, E, F#] tri-chord in the strings and guitar. This is related to the first tri-chord of the piece [0, 1, 2, - E, F, F#]; the two collections share pitches and uniform pitch class content. It is notable that the bottom notes of these pitches are the pitches most stressed in the two sections of the piece, E in the crying section and D in the second half of the piece. The focus on pitch class D is significant because it sets apart the second pitch class set from the first. The imitative and contrapuntal texture of the previous phrases is arrested when the strings sustain this chord into rehearsal 1 (measure 131). In measure 132, using another faster tempo, the guitar introduces the pitch class G from permutation set three over the sustained cadential chord. This foreshadows a new pacing and the pitch material of the next section.

### Cooing and Babbling

Although there are various elements that occur in both the end of the Crying and the beginning of the Cooing section, Cooing begins properly at cue 2. It is at this point that the violins and viola move to upper register harmonics and the entire ensemble moves to the pitch material of the section, sets 3-5 of the permutation series. From here until the end of the movement, precise instrumental alignment is not required; a slowly shifting organic texture is the desired effect. Cues 1, 2 and 3 are given by the pianist to facilitate rough alignment. Individual parts have sections with the directions such as *repeat 1 or 2 times* or *repeat until cue*. The visual representation of the score is misleading as individual parts have the freedom to repeat differing number of times (hence the dotted bar lines and lack of measure numbers.

See pages 115 - 124). The fluctuation of phrase length will create slight variations in texture and combination of material in various performances, but the general transformation of the material will occur regardless of alignment. This forms a musical metaphor for variable, yet inevitable and nonlinear human development.

Cooing focuses upon vowel-like sonorities. The piano ceases playing in this portion of the movement, which is devoted to instruments that can produce sounds with very soft attacks and with extended sustaining capabilities. Timbres are gentle with an emphasis upon harmonics. The guitar uses primarily harmonics to present soaring melodies and is supported by restrained string accompaniment with timbral alterations, presenting a gentler version of the grating sonic shifts of the opening of the movement. Beginning at m. 130 (and ending on page 119), the varied bow techniques in the strings include: *sul pont*, *normale* and *non vibrato*, *sul tasto*, *sul ponticello with a slow bow*, *normale*, *move the bow closer to the l.h.* and *place the bow over harmonic node*. The sonorities created by these bowings become more moderate as the section progresses. While the timbre of the cooing section evolves, pitch material and registral, textural and rhythmic variation is restrained in the ensemble. These parameters remain virtually unchanged in the strings and present a repeat of the presentation of limited material found in the opening of the movement (see Figure 8).

Figure 8: Reduction of the Cooing section

Cooing

1

2 40 - 70"

3 17.5 - 30"

guitar mm. 1-3 p. 115 mm. 3-6 p. 115 + p. 116 mm. 1-3 p. 118 mm. 4-5 p. 118 + mm. 1-2 p. 119  
 guitar loop delay and effects ad lib.  
 strings  
 Sets 1 + 2 sul pont. Sets 3 - 5 normale non vib. sul tasto place bow over harmonic mode  
 sul pont. slow bow

The strings focus upon a single set of pitches in the Cooing section of the piece, an [0, 2, 3, 5 – D, E, F, G] collection arranged so that the cello and bass articulate the D in lower registers, highlighting that pitch as an anchoring note, and the upper strings use high harmonics to present the [0, 1, 3 – E, F, G] cluster. The static articulation of this sonority can be seen as an altered return of the focus on [0, 1, 2 – E, F, F#] clusters in the beginning of the movement.

Although it also exhibits a constrained registral span, the guitar uses more extensive pitch material. In the course of the Cooing section, it presents all of the pitches from sets 3 - 5 of the permutation series, presented as varied freely flowing simple melodies. At cue 2, the guitar starts with a distribution of pitches similar to the end of the Crying section (see Figure 8). It then moves to a [0, 2 - D, E] dyad on page 116 (In Figure 8 pitches are arranged according to repeating sections, labeled as page numbers). In measure 3 - 6 of page 116 and on page 117, the guitar doubles the pitches found in the strings. On page 118, the guitar line creates a [0, 1, 2, - F, G, Ab] set, another reference to the opening of the piece. This expands upwards to a [0, 1, 3, 4, 6 – D, E, G, Ab, Bb] collection on page 119. A layer of processing

and some complexity is added to the lines with a loop of the D, E phrase on page 116, which lasts until page 117, and the addition of delay and effects ad lib. from pages 118 to 120.

In cues 2 and for most of cue 3, the string durations show little variation. On pages 115 – 118, the violins and viola have tones that are generally 16 beats long. The cello and contrabass tones are 3, 4 or 9 beats. The more freely moving guitar part uses values from 2 to 7 beats long. It is futile to speak of which beats that these articulations fall upon (it is also not really accurate to refer to “beats,” “units” may be a better term), since individual parts may repeat varied numbers of times (an instrument may move to the next section before or after the others); there will not be a common pulse in the realization of the gently changing texture. It is expected that musicians will relinquish a sense of precise tempo, as indicated by the direction *Parts need not be aligned, slight variations in tempo permitted*. Nevertheless, the relative durations (longer notes in the upper strings and relatively shorter and varied values in the cello and contrabass) will still be perceivable. The repeated section before cue 4 (see page 119) contains changes in duration, register and pitch content that signal the end of the Cooing portion of the movement. The strings have shorter note values with some rests introduced in the violin and cello, slightly emphasizing their attacks. There is a shift in register downwards by the violins and viola and upwards by the cello. The pitch material is simplified; strings and guitar present a G minor triad over the continued D pedal in the contrabass. This pedal 6/4 chord (it moves to another chord with a D anchor at cue 4) can be seen as a type of weak plagal cadence ending the cooing section and leading towards the next section of the movement, Babbling.

The Babbling portion of the movement portrays the culmination of various processes of *I Cry*: the movement towards collective regularity, a general softening of timbre, and expansion to larger pitch collections and a wider registral span. The beginning of this section overlaps with the material that precedes it; much like Cooing, Babbling emerges as some elements from the previous section continue and gradually transform.

The material in the strings in the first four measures of the section is very similar to the repeating section that precedes it and the tempo and dynamics remain constant. The most

important new element in this portion of the movement is the more regular reiteration of phrases and chords, a musical metaphor for babbling. This is introduced by the entrance of the piano at cue 4, which serves as an aural signal to roughly align the ensemble and to indicate arrival at the Babbling portion of the movement. From this point, the piano part contains repeated arpeggiated chords. They are iconic, relentless, oscillating with minimal changes between altered versions.

The repetition of arpeggiated chords in the piano is matched by repetition of phrase structure and motives in the other instruments. From cue 4 to the end of the movement, the material is organized into four repeating sections, each with a length of four measures (in the score they are each assigned to a page; sections of the Babbling portion of the movement will be referred to using page numbers). This may appear to be an even division of content, but each instrument can repeat their material a different number of times, creating simultaneous variations in the length of phrases (the first three are marked from *2 or 3 times* in every part and the last has varied instructions for each instrument). This purposeful inclusion of divergence, coupled with the continued variations in tempo from the Cooing section will create an effect almost impossible to notate, a fluctuating poly-phrased texture with an inherent openness for up to eight different pulsations of both tempi and phrase length.

The timbre of the ensemble remains fairly constant in the Babbling section. The strings and guitar articulate harmonics at soft dynamics and the dynamic range of the piano chords is medium soft to medium loud (with the sustain pedal depressed throughout). The movement thus far has had limited variation in pitch content with concentration upon timbral inflection. In the Babbling portion of the movement, the focus shifts from timbral variation to larger pitch collections and faster harmonic rhythm. More pitches are used simultaneously (including octave doublings) and a shorter amount of time is spent on note groupings (see Figure 9).

Figure 9: Reduction of the Cooing and Babbling sections

The musical score reduction shows two staves: guitar (top) and strings (bottom). The Cooing section (measures 115-119) is marked with a box '2' containing '40 - 70\"/>

Below the staves, the following instructions are listed:

- Sets 1 + 2: *sul pont.*
- Sets 3 - 5: *normale non vib.*
- sul tasto*
- place bow over harmonic mode*
- sul pont. slow bow*
- Sets 6 + 7
- how pos. normale*
- Set 9
- Set 10
- Set 10 + 11

In Figure 9, pitches of each repeating section (each page of the score) have been combined; the composite nature of the realization of the repeating sections will create concentration on complete collections. This will most likely be framed by overlapping boundaries; some instruments will move to the next repeating section before others. Nevertheless, focus upon pitch groupings will result and will last from approximately seven to twenty seconds. Five sets are used in the Babbling section, which has a duration of approximately two to three minutes, a faster harmonic rhythm than the rest of the piece (five sets are used in the crying part of the movement, which has a duration of approximately ten to ten and a half minutes). Pages 120 and 121 use pitch sets 6 and 7, page 122 uses set 9, page 123, set 10 and page 124, sets 10 and 11.

The pitch material of the Babbling section is arranged above a bass line (in the piano part) that oscillates from a D to G, and E to G and then remains on G. After the prolonged iteration of D as an anchoring tone in the Cooing section, ending on a chord constructed above a G creates a gentle subdominant-like finish (see Figure 9). This was foreshadowed in the G minor passing 6/4 chord just before cue 4 and by the quality of much of the evolvment of the movement, which slowly progresses rather than creates a strong sense of unrest or motion, in related sections, which gradually merge into one another instead of using abrupt or drastic contrasts. The use of the pitch E as a bass note on page 122 is also noteworthy, a reminder of the focus upon E in the crying section of the piece.

There is a general expansion of register in the strings and piano during the Babbling section. The note collections are full and wide-spread with many adjacent pitches, much like the clusters of semitones and whole tones in the rest of the movement. The collections also become denser at each repeating section, using more pitches and octave doublings. The guitar line presents the reverse process. The spans of the guitar melodies (following a rest in the first two repeating sections) diminish and use fewer pitches (see Figure 9).

Within this general pattern, there is oscillation of registral expansion and contraction between pages 120 and 121 and 122 and 123 (see Figure 9). In addition to the downward and upward movement of the bass notes (mentioned above), the top notes of each collection move upwards and downwards. This is an augmented version of the oscillation found in individual parts. For example, on page 123, the bottom note of the piano part, in its repeated realization, will move back and forth between the low G and E. On the same page, each string part uses two notes and moves up and down between them. The combined layers created by the instrumental lines, each at a slightly varied tempo and with different phrase lengths, will create a complex pattern, a multilayered, pulsing, kaleidoscopic texture of organic contrasts within determined boundaries, regular yet irregular at the same time.

While the piano presents a constant rhythmic pulse of reiterated whole notes (with a few half notes), the patterns created by the changing durations of tones in the upper strings slowly evolve in the Babbling section. Their unaligned parts become more rhythmically active with a greater number of shorter tones in the middle page of the section, and then return to lesser activity. The string parts begin with 4 attacks in each part lasting from 2 to 7 quarter beats long on pages 120 and 121. The repeating section on page 122 has the most active texture: 5-8 articulations, from an eighth beat to four quarter beats long. Page 123 features a slight reduction in activity and the last page of the Babbling section is even less active than the first (see Figure 10 - The numbers in the first four rows represent quarter note durations, those with an R after them signify rests. The value row represents the range of the length of the notes, in quarter beats. The number row states the range of the number of attacks per page).

Figure 10: Rhythmic durations of upper strings in the Babbling section

## Rhythmic durations of strings in Babbling section

	Page 120	Page 121	Page 122	Page 123	Page 124
V. 1	3) 2R 4 1R 3 (3	4) 5 3 1R 3 (1	1) 3R 2 .5 3.5 2 3 (1	2) 3R 1 .5 3.5 2R 3 (1	8R 2 5 1
V. 2	2R 6 6 2R	2R 6 3 5	1R 3 1 3 4 4	1 3 1 3 3R 2 2 2R	3R 2 3 3 5R
Vla.	4) 7 5	6 2 4 2R 2	1R 1 1 1 2 3 .5 4.5 2	1R 3 3 2R 1 2 2 2R	1R 3 3 2R 5 2R
Vc.	3 5 5 3	1) 2 4 1R 3 4 (1	1) 2 4 1R 3 5	3 4 1R 3 4 1R	2R 1 2 3R 3 3 2
value	2 - 7	2 - 6	.5 - 5	.5 - 4	1 - 5
#	2 - 4	3 - 5	5 - 8	4 - 5	3 - 5

Throughout the Babbling section, the contrabass functions as a rhythmic anchor to the string section with repetition of a regular pattern which is 6, 3, 3, and then 4 quarter notes long (the bass part uses pitches in a manner similar to the bottom voice of the piano part, oscillating between D, G and E).

Lower dynamic levels and a movement to fewer parts further highlight the lessening in activity of the last repeating section. The movement ends with the gradual reduction of instruments directed by instruction in the parts; guitar: *stop after about 30'*, viola and bass: *repeat once more after guitar stops*, vln. 2: *repeat once more after viola stops...* piano: *stop last* (refer to page 124).

The Cooing and Babbling portions of the movement form the B section of *I Cry*. Although this section of the movement contrasts with the A section (it is shorter, uses a faster harmonic rhythm with less drastic timbral changes and features a composite texture instead of a contrapuntal/homophonic one), there are also similarities between the two parts of the movement. Both exhibit growth as formal principles (of pitch collections, of rhythmic activity and of textures) and focus for extended periods upon static harmonies, timbral variation and development. Both feature development from limited materials, to more expansive melodies and imitative texture in Crying and to collective oscillation/pulsation in Cooing and Babbling.



### 3.2 Truck

*Truck* is inspired by vocalizations made by my son, Caden Smith, at approximately four months of age, which occurred with regularity and referred to specific nouns or verbs. The consistent use of these sound effect-like utterances made them effective communicative tools to those familiar with them. The sonorities included in this movement represented *bike, duck, rake, excavator, shoes, sweep, sleep* and *truck*. These are presented by primarily extended techniques of mostly indefinite pitch, chosen to approximate as closely as possible the sounds made by my son. The movement features the guitar, drums, violins, viola and cello. *Truck* uses a graphic score in five parts (cued by the pianist). The use of graphic notation (and hence interpretation of symbols) encourages slight variation in articulation and phrasing which is appropriate for the depiction of speech sounds; while the specific sounds or phonemes of my son were consistently recognizable, there were slight variations in his vocalizations.

*Truck* can be divided into two main parts, cues 1 through 2 and cue 3 to the end. Part 1 focuses on two basic motives, presented with limited development through simple expansion of register and denser iteration. Cues 3 and 4 use pitched material and layering to present longer and more complete phrases. Cue 5 features reduction in complexity, instrumentation and dynamics to the end of the movement. Boundaries are blurred with overlapping entrances and exits (for example, the guitar begins 20 seconds after cue 1 and the drums end 30 seconds after cue 2. See *Truck*, page 128). Directions for the movement are included on the previous page, a catalog of sonorities and their manner of execution. These detailed instructions call for somewhat accurate execution of sound types, motivated by the desire to recreate the sounds made by my son. This also enables musical combination, juxtaposition and evolvment of specific sonorities. The graphic score contains motives presented, their transformation, continuation and layering. Transformation is shown by enlargement of symbols and text and by the placement of symbols high or low on the score to represent register in cues 1 and 2. The overlapping of symbols in cues 3 - 5 represents layering. Arrows signify freely improvised continuation of a motive (see *Truck*).

The sonorities in the first section of the movement are short, dry and unfocused, using rhythmic cells and imprecise relative registers (lower moving to higher) without specific pitch associations in the guitar and strings. All of the instruments increase the density of iteration of their material; complexity is created through increased repetition of motives and expansion of registral spans.

The first portion of the movement (cues 1 and 2) concentrates upon phoneme-like sounds, simple, brief, non-pitched low to mid register sonorities articulated with limited expression. The evolution of a sound meant to point things out [da] combined with one meant to signify a truck [ta] created an early form of my son's first consistent and very enthusiastic phrase [da tuk], *the truck*, figures prominently in the piece. The growth of the two-word phrase is mirrored in the development of the movement; textures develop from simple to more complex. The drums begin with isolated one-note figures [da] on the larger (lower) drums with mallets and hands surrounded by lengthy periods of rest. This solo articulation lasts for approximately thirty seconds. After cue 1 more articulations of the same motive are added and by twenty seconds after cue 1, the entire range of the drum kit is used. Implied variation in the [da] motive in the drums is achieved through the use of different fonts of varied sizes.

While the drummer begins to develop the [da] figures, the strings and guitar present the *bike* motive (a short rhythmic cell performed *col legno*). As the guitar extends its *bike* motives upwards, the registral span of the string section motives also expands. There are four bikes in the string section of the score – each instrument may choose a line and follow the direction of the line (upwards signifying a higher register, downwards lower) or may jump from line to line at will. The guitar part contains three lines. Again, it would be possible to follow one line, to jump from line to line, or to create a multilayered version. The gentle climax created by registral expansion and denser articulation occurs approximately half way between cues 2 and 3, reinforced by an increase in dynamics (see *Truck*, page 128).

As mentioned, most of the material of *Truck* is unpitched, permutation sets are combined for only two brief portions of the movement. The transition to the more sustained tones of beginning of the second section of the movement is created by the addition of short pitched

sounds in the strings just before cue 3. Sonorities that approximate emerging consonants use permutation sets 13 - 15: bilabials: [m] - low overpressure groans in the cello and viola, [b] - short down bows in all the strings, [p] - short up bows and the laminal [t] - dampened fingernail *pizzicato* notes. These figures are largely unconnected, pointillistic iterations of simple phonemes. Shortly after cue 3, the strings perform the harmonic/melodic portion of the movement. It is entitled *happy sigh* and is in three parts. The pitch content of *happy sigh* is taken from permutation sets 17 - 21 (see Figure 11).

Figure 11: *Truck* Permutation sets

II. Sets combined for brief pitched portions of the movement.

II. [m][b][t] II. happy sigh

#13.124212 #14.124221 #15.141222 #17.142212

#18.142221 #19.211224 #20.211242 #21.211422

*happy sigh* presents an imitation of my son's verbalizations that had recognizable falling tonal contours: *Daden* (a form of his name, Caden) a perfect fifth, *baby* a sixth, and *da tuk* a more dissonant and enthusiastic seventh or ninth (these intervals are approximations of the original sound sources). Part 1 consists of a completely notated eight-measure homophonic phrase using the *baby* and *daden* motives harmonized in four parts. Reduced to their closest form, the combination of these linear motives produce alternating D major and G minor triads with added seconds (see Figure 12).

Figure 12: Reduction of the chords, soprano and bass lines from *happy sigh* Cue 1

Reduction of chords

Soprano line:

Bass line:

Root position chords

In the realization of the first cue of *happy sigh*, the D and G chords are voiced in root position only once, in the sixth measure. Nevertheless, a tonal centre of D major with a minor IV chord is clearly established. This is achieved through the pitch content of the passage and the contours of the bass and soprano lines which outline, with motion in fifths, the subdominant, dominant and tonic scale degrees of the key, the soprano line for most of the phrase, and the bass line at the end of the phrase. The last chord of the phrase, the G chord over a D root, is an echo of the prevalent subdominant motion and last chord of *I Cry*.

Part 2 of *happy sigh* consists of a homorhythmic texture created by superimposing pitches chosen by each instrumentalist from lists of note groupings upon a rhythmic motive. This two-note motive has a falling contour followed by a rest, each note should be three beats long. The ensemble should play together, at a new and faster tempo. Section 3 of *happy sigh* also uses lists of possible pitch groupings but with independence of velocity in individual parts (see *happy sigh*, page 129). There are three sets of two-note groupings to choose from. The pitches from permutation sets are arranged in falling sixths in group A, falling fifths in group B and falling sevenths in group C. The performers are directed to choose from list A and B for cue 2 and from all three groups for cue 3 (while concentrating on list C). Compositional control is gradually relinquished in *happy sigh*; cue 1 is completely composed, cue 2 allows performers to determine which notes are played, and in cue 3, performers decide upon note choice and tempo. The harmonic content of *happy sigh* will gradually become less controlled as the section progresses; the inevitable variation in content

of the last two cues will contrast with the simple alternating chords of the first section of *happy sigh*. Dynamics become louder throughout *happy sigh*, tempos become faster, and cue 3 focuses upon the largest interval span, execution of the material will undoubtedly become more dynamic as the section progresses.

After completing the *happy sigh* section of the movement, the strings return to interpretation of graphic material, beginning with the representation of shoes, created by overpressure bowing, fast to slow on the bridge to form a buzzing sound, moving from a pitched to an unpitched sonority. They then present a fricative phoneme, [f], by rubbing the body of their instruments or hands in a circular motion.

Cues 3 and 4 present increased intensity and complexity. This is achieved by denser presentation of motives, both consecutively and simultaneously, louder dynamics, and layering of longer, more sustained and connected phrases. The ensemble presents uniform material in cues 1 and 2, the moderate development of simple motives. The texture in cues 3 and 4 of *Truck* becomes more complex; while the strings present *happy sigh*, the shoes and [f] motives, layering and looping in the electric guitar and more complex phrases and layering in the drums generate additional streams to create a more multifaceted whole.

At cue 3, while the strings perform the *happy sigh* music, the guitar introduces the *duck* sonority, created by dragging a bolt slowly across the strings, sampling and lowering the sound. This is intensified approximately thirty seconds later by the addition of looped *sweep* and *shoes* motives (made by placing a radio and vibrator across the strings). Duck, a modified voiceless velar sonority develops naturally into *rake* and *excavator* as they form more intensified versions of a similar sound: *rake* - bow across strings, *excavator* - brillo pad scrunched on strings (Refer to *Truck* directions, page 126). At cue 3, after a rest, the drummer focuses upon short iterations of separated sounds, [ta], using the sticks on the cymbals and hardware of the drums. This is related to the presentation of the [da] motive from cue 1. At cue 4, the drum part contains its most developed phrases: multilayered representations of *sweep* - sizzle cymbals, [da tuk] - a full sound that employs the entire drum

kit and includes both [da] and [ta] figures and *truuuck* - a long full improvised phrase using the entire drum kit (see *Truck*, page 128).

At cue 5 the dynamic level of the ensemble is diminished; the strings and drums move to softer fricatives, [f] and [v], created by rubbing sandpaper, crinkling newspaper, and by rubbing the body of the stringed instruments. The guitar fades to the depiction of a single phoneme, [s] (radio across the strings) and the movement ends with an improvised cello solo, representative of individual expression.

### 3.3 Scribble Talk

Scribble talk - incomprehensible speech produced by young children, consisting of meaningless noises with an occasional recognizable word, but usually with good intonation.<sup>8</sup>

*Scribble Talk* presents an investigation into prosodic inflection and interaction. The movement features flexible instrumentation; it may be performed by three to eight musicians. The score consists of a set of written instructions and three separate parts: 1) Prosody - representing patterns of stress and inflection, 2) Motherese - depicting the supportive sounds of caregivers<sup>9</sup> and 3) Stress-timing - symbolizing the regular stressed syllables of speech. Each is considered a guideline for interpretation and extemporization. Prosody is expressed through a number of melodic phrases, using both traditional and graphic notation. Motherese is presented using a harmonic framework and Stress-timing by rhythmic interpretation of a group of transcribed utterances (loosely transcribed by myself except for Apabouyé oyé oyé pabouyé, uttered by French baby Jeanne observed by de Boysson-Bardies).<sup>10</sup> Individual performers may play one part or a combination of two or three parts as long as the representations of prosody, motherese and stress-timing are all present in any given performance.

---

<sup>8</sup> Trask, *SDDL*, 194.

<sup>9</sup> B. de Boysson-Bardies, *How Language Comes to Children* (Cambridge: The MIT Press, 1999), 81.

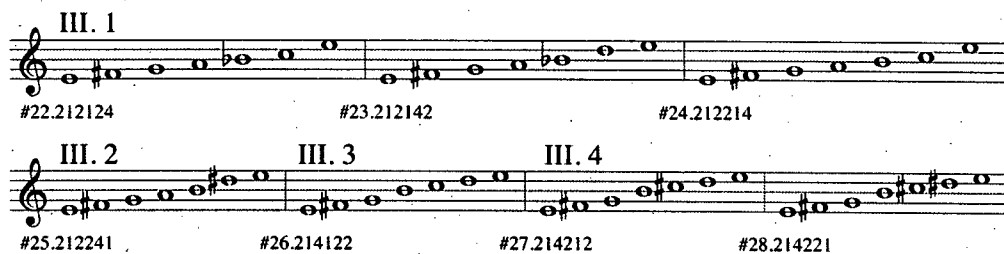
<sup>10</sup> *Ibid.*, 49.

The movement is in four cued sections. The first section focuses upon inflection of phrases alternating with silence, chords and breath-like sounds. The second cue features the beginning of reactive phrasing combined with chords, whisper, breathy and nasal articulation. The third section adds accentuation and more interaction and the fourth presents longer more expressive phrasing and the most interrelated texture.

The pitch sets used in the Motherese part delineate formal sections. The harmonic framework uses sets 22 - 24 in the cue 1, focuses upon set 25 in the cue 2, set 26 in cue 3 and sets 27 and 28 in cue 4 (see Figure 13).

Figure 13: *Scribble Talk* Permutation sets of Motherese

III. Sets delineate formal sections.



The Motherese part begins with statements of single chords surrounded by rests in cues 1 and 2 and moves to more successive harmonies and ostinato-like repetition in cues 3 and 4. The available chords from each cue were created using several pre-compositional parameters. The voicings of each section concentrates upon specific intervals: seconds in cue 1, fourths in cue 2, fifths in cue 3 and finally sixths in cue 4 (see *Scribble Talk* Motherese, page 67 of the score). The successive bottom notes of chords outline two triads, a C triad and a B triad, the quality to be determined by the pitches from the permutation sets used in each section. A minimum of three pitches is necessary in each chord. If lower chord members are missing from the permutation set, the voicing is not included. Figure 14 shows chords omitted from the Motherese part following these pre-set limitations.

Figure 14: Examples of chords not included in Motherese

3 c. 1:30 - 2:00

voicings

scale

The bottom staff contains the permutation set used in this section (set 26). The third and fifth chords on the staff are not included in the final part as the A is not present in the permutation series; a bottom member in each chord is missing. This method is used to produce fewer chords; economy of material is important in the movement and a large proportion of silence is desired. Because of the set limitations, this approach also creates varied numbers of chords available for each section and altered composite bass lines (see Figure 15).

Figure 15: Reduction of the bass line from Motherese

1

2

3

4

Figure 15 shows a reduction of the lowest notes of all of the chords from Motherese. The first measure on each staff shows the pitches of each section arranged into C and B chords. The



composite bass notes of each cue are shown in the second measure. Those notes with black note heads in the first measure represent chords that contain almost identical pitches due to repetition created by the intervallic structure (compare the fourth and sixth chords of Figure 14). In this case only the lower voicing is used in the composite collections. An exception to this is found in cue 4. This cue uses harmonies built with stacked sixths, the collections above both D and D# duplicate the chord built above the B. Nevertheless, B is considered a more significant pitch than both the D and D#, as the emphasis on B in the first three previous cues cause it to be heard as a prominent pitch. It can be seen that as the movement progresses, there are fewer notes in the collections, that the selection of C and B triads create composite bass lines that lead to B, the most stressed pitch of the movement. While the lower foundations of each cue become more focused, the registration of the harmonic framework expands due to the larger interval content of consecutive sections (see *Scribble Talk Motherese*, page 137). At the same time, the prosodic interaction amongst instruments becomes more complex.

The music for the melodic part of the movement, Prosody, consists of 'scribbly' motives that imitate the inflection and phrasing of the type of speech-without-words that very young infants use. The prosodic strain uses pitches from all of the combined sets (22 – 28) and in two pages. The first page is used for cues one and two, the second for cues three and four. Page one consists of four notated phrases and four graphic representations. It is expected that the musicians will leave a great deal of space in the first half of the movement. Each phrase may be played once and it is not necessary to play them all.

The notated phrases in the prosodic part have a higher accented note generally at or near their beginnings (which may reach a dynamic level of mezzo piano) and represent vocal phrases as defined by Fónagy and Magdics: "a rhythmical unit, a sound sequence governed by a stressed syllable (generally the first syllable of the phrase). The unit of the phrase is

underlined by the rising pitch in the stressed syllable and the falling intonation of the rest of the phrase.”<sup>11</sup>

To facilitate the depiction of declination or down drift, the musicians are encouraged to let their intonation fall at the end of phrases. Microtonal variances, glissandi and gentle grace notes are welcome. Octave transpositions are also possible.

In cues one and two the prosodic part contains phrases containing two to five ‘syllables’ (represented by notes). Phrases are to be of roughly equal length. These phrases are written in three-beat segments with a quarter note equivalent to a second of time. Undoubtedly musicians will not iterate each phrase at exactly three seconds, but approximation is a desired effect as it is representative of freely executed scribble talk. Cues 3 and 4 include a greater number of phrases with up to eleven syllables, all occurring in time spans of approximately three seconds. The graphic “scribbles” allow improvisers to add their own phrases, encouraging organic and free articulation (see Figure 16).

Figure 16: Prosody: Notated and graphic phrase from cues 1 and 2



In cue 1, prosodic units are to be stated alone in a self-involved manner, musicians are instructed to avoid reacting to one another. Phrases are interspersed with rests or snuffy breath-like sounds, imitating infant breathing. In cue 2, performance is more reactive, the placement and articulation of material becomes more related to the texture created by other musicians. Some phrases may be combined in individual parts or with other instruments. In cues 1 and 2, the musician(s) performing the harmonic strain primarily react to the prosodic phrases, representing the supportive role of caregivers and their receptive communication

<sup>11</sup> I. Fónagy and K. Magdics, “Speed of utterances in phrases of different lengths,” *Lg. & Sp.* (3 1960): 179-92.

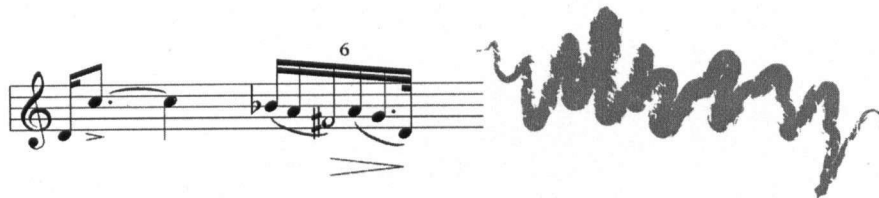
with infants. Placement of chords should relate to the iteration of melodic phrases. The harmonic strain also features a great deal of space, as each chord voicing may be stated once, in any order, with long rests between them.

The rhythmic strain makes quiet, quickly articulated, snuffy breath-like sounds in cue 1 and ceases playing in cue 2. This section features a reduction of instruments. If there are more than four instruments playing, their number should be reduced by one-half, but at least two musicians should be present. The remaining 'voices' become more interactive and a simple dialogue is presented. Musicians are to relate their material and phrasing even more closely to that of their partner(s). Differing phonation types are also added: whisper, breathy and nasal tones.

The directions for cues 1 and 2 call for a large proportion of silence. Musicians are directed to rest two thirds of the time in cue 1 and one half of the time in cue 2. The inclusion of silence in the compositional plan, the economic presentation of material, quiet dynamics and expressive limitations are meant to create a texture of gentle isolated phrases approximating the sporadic nature of early infant articulation.

Cue 3 marks the beginning of more even accentuation and the periodicity of speech. This is representative of the regular emphasis of stress-timing in speech and the increased repetition in the prosody of a developing child. The prosodic phrasing becomes more reactive and combined. Melodic segments are more numerous with more "syllables" in the notated melodies (2 - 11). The graphic motives are also more complex (see Figure 17).

Figure 17: Prosody: Notated and graphic phrase from cues 3 and 4



The harmonic strain continues as before, with a minor change: more chords are articulated in succession. The rhythmic strain begins to make short ostinato-like interpretations of the text (lasting from three to ten seconds), interpreting each text-phrase once or twice. Again not all of the text phrases need to be played. If the performer is using a pitched instrument to interpret Stress-timing, concentration upon sonorities without definite pitch is requested. Dynamics are kept at a moderate level to ensure the performer's approach is light-hearted. This is also encouraged by the use of various fonts reminiscent of children's books and comic books (see Figure 18).

Figure 18: Stress-timing: text phrases

Apabouyé oyé oyé *pabouyé*  
a bbbbbeo bbbbah

The last section of *Scribble Talk* features the most interaction among players. The musicians are encouraged to play longer phrases with more expressive articulation and to create smooth, broad contours. Sensitive counterpoint of parts is encouraged so as to create the effect of more complex communication. The expansion of phrasing is matched by the inclusion of larger intervals in the suggested voicings of the harmonic strain, as well as encouragement to expand the registers of all instruments. Dynamic levels are slightly higher, mezzo piano to mezzo forte. The instrument(s) performing the rhythmic strain is (are) directed to choose a few text phrases and play longer interpretations of them (lasting ten to twenty seconds). The harmonic strain presents more chords in succession (without interspersing rests), and may add to the ostinato-like interpretations of the stress-timing page.

A summary of the general traits of *Scribble Talk* demonstrates similarities to *I Cry* and *Truck*, the most significant of which is the expansion and growth of various elements. There is a general transition toward broader, more expressive material. The approximate durations of sections become longer. Gentle, economic self-expression moves to moderate interaction with an increase in relations, both in material of individual parts and among instruments.

Material becomes more connected with longer and more complex phrasing, involving more combined phrases. Interaction among performers becomes more prominent. Harmonic intervals and registers expand and chords are articulated more in succession. There is a development from isolation and timbral animal-like breathing sounds to bouts of periodicity, expressivity and rhythmic regularity. Dynamics move from as soft as possible to mezzo forte, with a transition from considerable periods of silence to a greater concentration of sound (see Figure 19).

Figure 19: *Scribble Talk* Summary

### III. Scribble Talk

Through composed

1 0:30 - 0:45	2 0:30 - 0:45	3 1:30 - 2:00	4 2:00
<b>Prosody</b>			
Short phrases with rests snuffy breaths	more reactive interplay whisper, breathy, nasal	more combined	longer, smooth broad contours
<b>Motherese</b>			
single chords surrounded by rests chords built in seconds [0,2] permutation sets: 22, 23, 24	fourths [0,5]  25	some chords in succession fifths [0,7]  26	more chords in succession ostinato-like repetition sixths [0,8 0,9]  27, 28
<b>Stress-timing</b>			
tacet	tacet	text inspired ostinati each once 3 - 10"	each once or twice 10 - 20"
snuffy breaths	whisper, breathy, nasal	tacet	tacet
<b>silence/sound</b>			
ensemble rests 2/3 of the time	rests 1/2 of the time	rests 1/3 of the time	ensemble plays most of the time
<b>dynamics</b>			
as soft as possible		<i>mp</i>	<i>mp</i> $\triangleleft$ <i>mf</i>

### 3.4 Singing

An aspect of vocalization whose primary function is not communication but self-expression inspires *Singing*. An eight-note melody (see Figure 20) forms the main melodic material of the piece.

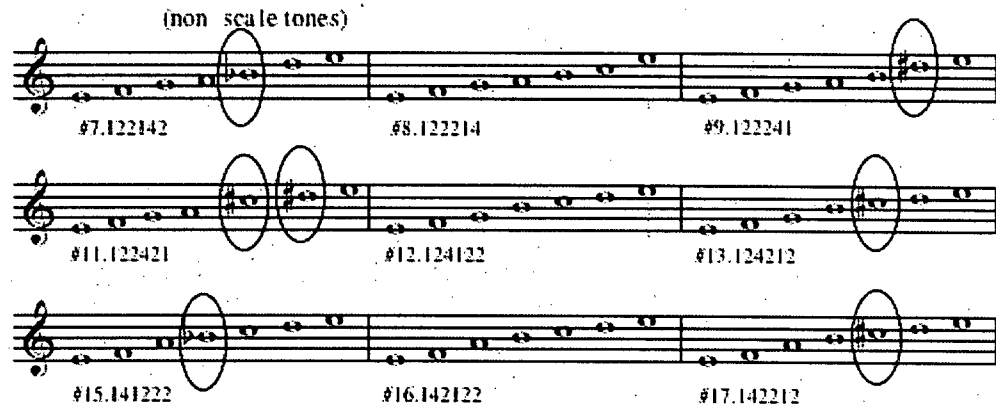
Figure 20: *Singing* Melody



Because this is a musical source (rather than a communicative utterance or verbalization), there is less separation between the inspirational sonority and the resulting material than in the other movements of *Green Ideas*. The musical representation of the cries, coos and babbles of the first movement are aurally distant from those produced by infants. Abstraction of linguistic concepts is less prevalent in *Singing* because many aspects of the movement result from a desire to reveal a simple tune.

*Singing* uses the entire ensemble. It is in ternary form with an introduction and a coda. In the first section the strings introduce variations of a melody while the rest of the ensemble improvises accompaniment. The middle section features a supported piano solo and the third section presents a fully realized polyphonic texture.

*Singing* is the only movement to use pitch material from distant sets of the permuted series. Those that contain pitches from the A Aeolian mode are used (sets 8, 12 and 16) in the first and third sections. The use of unordered selections is representative of the occurrence of singing at many stages of language emergence and the modality of the piece signifies a more tuneful intent. Pitches outside of the scale are provided by the neighboring sets (the circled pitches from sets 7, 9, 11, 13, 15 and 17). I will refer to them as non-scale tones. They will be employed to add color in the first and third sections and they form the basis of the modality of the middle portion of the movement (see Figure 21).

Figure 21: *Singing* Permutation sets

The movement begins with improvised non-metric interpretations of the singing melody by the guitar and second violin and accompaniment in the drums and prepared piano. Ringing tones are created on the cymbals and the pianist is instructed to play the non-scale tones in the extreme registers of the piano. Extended techniques are used in the drums and piano to separate the non-scale tones through timbral means and to mark their instrumental function as secondary (see Figure 22).

Figure 22: Opening of *Singing*

Violin 2

c. 20'

c. 20-30'

c. 10'

c. 20-30'

Restrict range - repeat notes, change note order, use varied tempi, timbre, delay, and effects.

Guitar

Restrict range - repeat notes, change note order, use varied tempi, timbre, delay, and effects.

Piano

Insert screws between strings of pitch classes Bb, Db and Ebs in very low and very high registers.

15<sup>th</sup>

*p* Very sparse and quiet.

use ped.

Drums

Pull end of stick across cymbal to create ringing tones.

*p*

Very sparse and quiet.



After approximately seventy to ninety seconds, the violist establishes regularity with a metric notated version of the melody (at measure 1), transposed an octave higher. Improvised accompaniment in the second violin, guitar, piano and drums continues in the manner of the opening while the violist performs variations of the melody. At cue 2, the accompaniment is modified: the second violin begins to play some notes a quarter-tone flat, the guitar drops in pitch and shortly fades out of the texture, the drums begin to imply varied tempi in short bursts and the piano begins to add chord voicings in A Aeolian mode with the non-scale tones as added pitches. In cue 2, the violins present isolated pitches from the eight-note melody using harmonics (again an octave higher). This demonstrates the beginning of a process of the first large section of the movement (which lasts until cue 4), the gradual expansion of register (see Figure 23).

Figure 23: Harmonic reduction of A section

Figure 23 is a harmonic reduction of the A section, showing three systems of musical notation. The first system includes measures 51, 60, 63, and 67, with cues 1, 2, and 3 marked. The second system includes measures 76, 83, and 94. The third system includes measures 79 and 89. The score is in 4/4 time and features various chord voicings and melodic lines.

System 1 (Measures 51-67):

- Measure 51: pno. + cb. (continues to m. 89)
- Measure 60: quartet together
- Measure 63: six against four
- Measure 67: m. 67

System 2 (Measures 76-94):

- Measure 76: m. 76
- Measure 83: m. 83
- Measure 94: m. 94

System 3 (Measures 79-89):

- Measure 79: 8NM cello, m. 79 bass line
- Measure 89: m. 89

The string section states variations of the melody from measure 27 to cue 4, altered in various manners. Cue 3 becomes more complex as it progresses, as layers are added and rhythmic phrasing becomes less regular. Beginning at measure 43, declination (the gradual lowering of the pitch of the voice during an utterance)<sup>12</sup> is presented in the first violin and cello, through the transposition of portions of the melody a quartertone flat. In addition, notes from the non-scale set are inserted to add color. At measure 52, harmonics return in the first violin and the cello, this time accompanied by a larger registral span of the section (see Figure 23). The strings continue to be grouped into two layers, (violin 1 with the cello, and violin 2 with the viola) until measure 60 where homophony continues in the strings until just before cue 4.

Measure 51 marks the entrance of the piano and bass. Their variations of the melody are stated in a lower register (this continues to measure 89), which extends registration downwards. While this stream continues, the strings continue to drift farther away from the original source of the melody, presenting harmonics in measure 63, a chord using more added notes in measure 67 and from measure 76 to cue 4, a concentration on the non-scale tones and even greater expansion of register. At measure 79, the bass line which figures prominently in the last A section of the movement enters. The process of expansion and addition of layers culminates in the measures 91 – 94. The strings present a large registral span, the guitar begins to dramatically drop the pitch of a looped figure, and the piano improvises in the extreme registers of the instrument.

At cue 4 (measure 95), a transitional improvisation section emerges from the expanded melodic material. It consists of combined extemporization in the style of the material leading up to cue 4 with an even greater expanse of register of the ensemble. The strings continue in the style of the previous music, and then add high harmonics and high notes articulated *sul ponticello*. The bass and the guitar use the non-scale tones to create low repeated figures, and the pianist and drummer improvise in the extreme registers of their instruments (see measure 95). This extended focus upon the broadened gestures facilitates movement towards the next

---

<sup>12</sup> Trask, *SDDL*, 63.

section in an elided cadence, as the beginning of the contrasting middle section overlaps with the end of the first.

Approximately five seconds after cue 5, the bass begins material from the next section, followed by the drums and the piano. The timing of these events occurs at the discretion of each player while the rest of the ensemble continues cue 4. Letter E proper begins when the bass, drums and piano have all moved to the written material. The framework of the middle section consists of a simple two voice eight-measure phrase. The drummer is instructed to perform a polymetric pulses, and to imply a four-beat pulse against the 6/8 notated meter. While the bass and drums present this framework, the rest of the ensemble is directed to *generally blend into the texture of the ensemble, and occasionally add varied versions of the four-note melody (in the style of the previous music)*. The version of the four-note melody in this section is altered to match into the non-scale tones (see Figure 24).

Figure 24: Four-note melody of the middle section



The contrabass is directed to perform the written music with the option of dropping out or changing style, with the expectation that the bass line will be brought back near the end of the improvisation section (this will be cued by the soloist). The strategies of this section allow for a great deal of freedom. Multiple versions of this portion of the piece will differ greatly.

While the transition from the first section to the next is gradual and purposely blurred, the third portion of the movement begins abruptly. The pianist will cue the last eight bars of the eight-measure phrase in letter E. Letter F features direct modulation to A Aeolian. A metric modulation from a dotted quarter note pulse to the initial slower quarter note pulse creates a sudden yet settled return to the tuneful singing melody.

Simultaneous statements of the eight-note melody are presented in the last portion of the piece using multiple rhythmic values, half notes, quarter notes, dotted quarter notes, etc. (see measures 114 - 155). The most complex occurrence of this is at letter I where there are simultaneous statements of the melody in dotted quarter notes, half notes, dotted half notes and dotted whole notes by the ensemble. This occurs over a twelve-bar form consisting of two articulations of a ten-beat bass line followed by a two-measure rest. Even though there are numerous concurrent metric pulses in this section created by the consistent iteration of varied note values, this is the most homophonic and evenly phrased portion of the work. This is representative of effortless childlike singing. This symbolism is also presented by the modal nature of the piece, ternary construction, and regular phrase lengths. The coda section (measures 153 to the end of the movement) focuses upon the continuation of the eight-note melody by the strings, guitar and piano, using improvised changes of tempo and articulation.

### 3.5 Sleep Furiously

The title *Sleep Furiously* is taken from the Noam Chomsky phrase, chosen to provide poetic inspiration. The movement portrays the dramatic opposition and interrelation of speaker and environment, of solo iteration and group feedback. The soloist is considered the speaker and interaction among players represents the context of his/her speech. The directions, created to guide improvisatory sections, outline the maxims of conversation (a set of rules governing the behavior of speakers in conversation).<sup>13</sup> Improvisation plays a vital role in *Sleep Furiously*, in the context of an emerging interactive texture.

*Sleep Furiously* employs the full ensemble. It is through composed in four sections, each with a featured soloist or soloists, with a gradual shift from individual to collective improvisation. Material from sets 29 through 40 of the permuted series (see Figure 2B, page 9) forms the basis of the harmonic structure of the movement. The notes in the series are rearranged to create harmonic fields with a conscious effort to create a varied progression of chords, and differing scales. The first and third parts of *Sleep Furiously* use one chord and

---

<sup>13</sup> Trask, *SDDL*, 138-139.



movement: melodic and rhythmic material, accompanimental patterns, contrapuntal lines, timing of sections and many other parameters are determined by the collective input of performers. Every performance will generate varied surface material and proportions. The encouragement of multiple possibilities is included as a representation of the human potential for completely original utterances and limitless invention, a phenomenon augmented by group interaction. Musical improvisation is similar in this way to speech; it is limitless, bounded mainly by interaction and understood content. A musician or speaker may depart from the collective language in a group but as the context for both are social (ensemble improvisation and verbal communication) speakers are more likely to attempt to match their input with the rest of the ensemble/social setting. The musical depiction of the creation of utterances within boundaries is relatively straightforward. Like *Singing*, the movement is closely linked with its inspirational source.

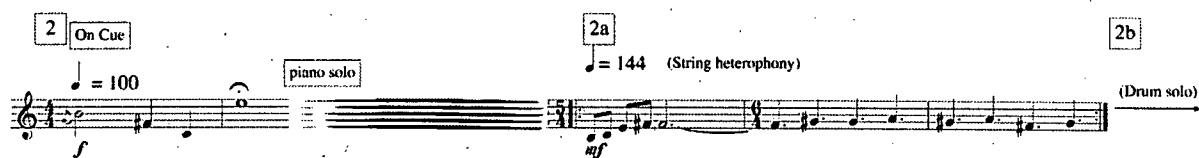
The movement contains combinations and juxtapositions of unison melody, heterophony, simple counterpoint and extemporization. In different performances, solos may be reassigned to performers most comfortable with improvisation. The first section is in three parts: a melodic phrase presented by the ensemble, a solo portion and a heterophonic section (begun by the soloist and joined by the ensemble, see Figure 27).

Figure 27: Reduction of Cue 1



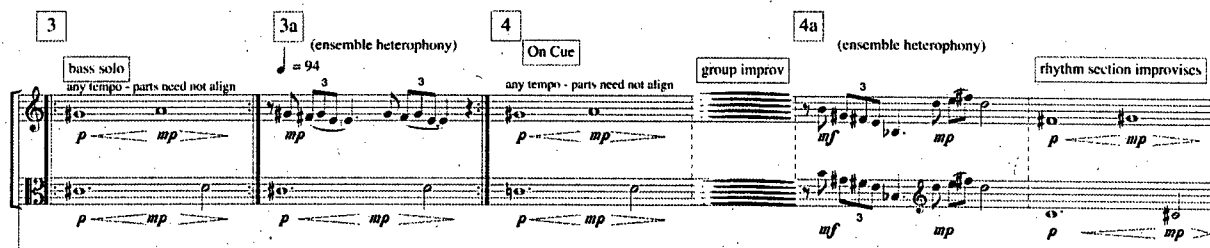
Sections 2, 3 and 4 feature more blurred boundaries. Section 2 begins with a melodic phrase and a solo followed by heterophony (cues 2 and 2a) much like the opening, but is followed by another solo over the same harmony and continued heterophony in the strings (cue 2b). After the drum solo begins, the strings move to the next chord of the harmonic field (see Figure 28 and page 185).

Figure 28: Reduction of Cue 2



Cue 3 does not begin with a melody but with a solo accompanied by sustained notes in the strings, a texture which continues during and after the melodic cue that ends the solo. Cue 4 continues the sustained notes in the strings using a new harmony. A group improvisation is next, followed by the last heterophonic statement and a final improvisation. The very clear boundaries stated at the outset of the movement - melody, solo, heterophony - become less clear as the movement progresses, solos are combined with heterophony, accompanimental patterns continue from solo passages to heterophonic passages. This imitates organic growth, as multiple stages of development often occur simultaneously and at different rates (see Figure 29).

Figure 29: Reduction of Cues 3 and 4



For full realization of cues 1 to 4 refer to the score. At cues 1 and 2 the ensemble begins together, but all other entrances are staggered or unaligned. Exits are often staggered with optional continuation (see pages 180 - 183). This is to create malleable boundaries and flexible shapes which can accommodate the moment and nevertheless maintain their form. Each section also contains numerous options for accompaniment and solo performance: chord symbols, scales, graphic symbols, and rhythmic and melodic motives, which can be found on the bottom staves of the score and in each part. In improvised sections, musicians

choose from these options while reacting to the texture created by the rest of the ensemble. Extemporization is based upon the material provided while keeping in mind the role of the instrument (soloist or accompanist in section 1, 2 and 3) and conversational strategies: interruption, turn taking, completion points, echolalia, echo questions, overlaps, pauses, etc (in section 4). These strategies occur naturally for professional musicians; they are trained to cultivate these concepts when improvising and interpreting material.

One of the challenges of performing this work may occur with the diverse abilities resulting from experience in different traditions. Some musicians may be most familiar with chord/scale theory and others may be more comfortable using graphic or motivically based improvisation. The preferred approach is one that allows for the greatest ease of performance, encouraging the maximum degree of stimulus freedom. For this reason alternate improvisatory plans are provided. This permits spontaneity and provides various extemporization methods. It is conceivable that musicians will naturally gravitate towards improvisation in a style they have the most experience in, and will perform as they sound best. The multiple sources for inspiration also increase the possibility that the desirable effect of numerous distinct layers in performance will result.

In the last part of the movement (cue 4), the roles of soloist and accompanist meld and interaction becomes the focal point. The result may be orderly or chaotic, dense or sparse, fast moving or slowly transforming, depending upon the group dynamic. This open-endedness denotes one of the most fascinating design features of the human language faculty - unlimited potential.



### 3.6 green ideas

*green ideas* uses the first completed phrases of a young child as inspiration and is written for the entire ensemble. The movement is in ritornello form alternating composed tutti sections with varied solo sections.

The ritornello portion of this movement contains the most structurally conceived melodic and harmonic material of the work. It refers to syntax, not in a functionally grammatical sense but rather as a symbolic reference to word order. References to “meaning” are created using phrase length, harmony and melodic contours. The six-measure phrase can be divided into two three-measure segments. The ritornello purposefully contains incongruent elements intended to mimic the peculiarity of the *Colorless green ideas sleep furiously* sentence. Ambiguity is created by the accentuation, by changes in pitch content and by contrasting contours of individual lines (see Figure 30).

Figure 30: *green ideas*: Framework of ritornello theme



The notated meter follows the accents of the soprano line: 2/4, 3/4, 4/4, while the bass line creates those accented groupings in reverse. In the first sub-phrase, four beats focus upon B Aeolian (the tonic), the next three beats F# altered dominant (the dominant) and the last two beats E altered dominant (the subdominant root with dominant quality). In the second phrase these harmonies are presented again, but the harmony remains on the dominant chord.

The harmonies outlined most clearly by the bass (but present in the soprano voice as well) are loosely representative of an ordered verbal segment. They are symbols for three word classes: subject, verb and object. Tonic function represents the object, dominant the verb, and

subdominant the subject. These are representations imposed by the composer and could easily be interpreted in other ways. Once again, the material is useful mainly for poetic inspiration rather than literal representation. There are some functional ambiguities present in this theme: the dominant quality of the subdominant and harmonic retrograde (tonic - dominant - subdominant) in the first three measures. Following the stated representational symbolism of these harmonies, this would present an OVS (object, verb, subject) word order. English commonly uses SVO organization. The harmonic retrograde is a deliberate attempt to present organization which functions conversely to expectation. If words were used to represent the theme, the sentence would be *(The) ball kicked (the) boy* instead of *(The) boy kicked (the) ball*. It is difficult to represent syntax with another complex language (tonal harmony); this is meant to be primarily a harmonic illustration of lyrical nonsense rather than literal meaning.

The fully formed ritornello contains four contrapuntal lines whose contours, rhythmic accents and harmonic content are unaligned, creating further ambiguity. There is a dynamic directional quality in the upper voices of the theme. as the contours and accents of these lines create phrases that convey a sense of forward movement. The bass voice, while producing a steady pulse, uses pitches that revolve around themselves through fragmented repetition, producing an inertness that is opposed to the propulsive gestures in the upper lines. The dichotomy of these opposing impressions of motion/stasis is another representation of conflicting images in the *colorless green ideas* phrase. Additionally, the presentation of what would seem to be a theme and the limited development of that material adds to the sense of unfulfilled expectation (see Figure 31).

Figure 31: Fully formed ritornello theme



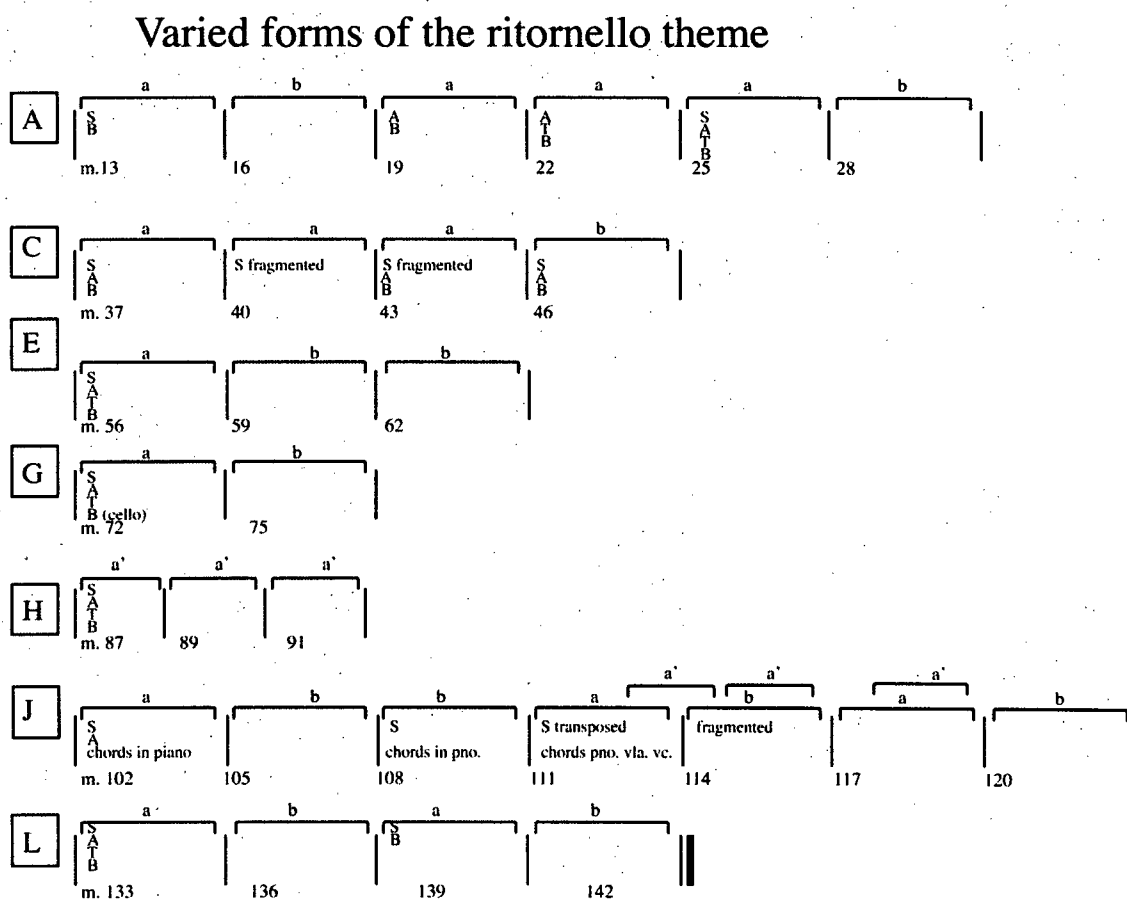
It is in this last movement of *Green Ideas* that the use of the permutation sets becomes the most abstract. Chronological, grouped and formal use of the sets becomes largely abandoned and pitch construction more freely controlled, collections primarily chosen to create contradicting allusions. The pitch content of the bass line of the theme is the most closely related to the permutation series. It uses a combination of pitches taken from permutation sets 41 – 47 (see Figure 32).

Figure 32: Pitches in the ritornello theme

These pitches are arranged to highlight a characteristic present in many forms of the permutation series, the concentration of pitch classes 1 and 2 at either ends of the set. This is

present in the very first permutation set, and in set 40, the last set used in *Sleep Furiously*. The remaining contrapuntal lines of the ritornello theme use varied collections. The simultaneous iterations of these dissimilar groupings create a further intensification of the divergent nature of the theme. The Soprano line uses the aggregate, the alto the aggregate missing two pitches and the tenor line is in B Aeolian. Throughout the movement the ritornello sections appear in varied forms (see Figure 33).

Figure 33: Varied forms of the ritornello theme



The fully formed ritornello emerges gradually after an introduction by the bass and piano. This is elided with the end of the last movement. The strings continue the sustained notes from the end of *Sleep Furiously* while the piano presents a harmonic progression that is joined by the first iteration of the bass line (see measure 1). At letter A, the soprano line of

the melody enters, followed in the next six measure phrase by the alto line, then alto and tenor lines and the fully formed ritornello appears in measures 25 - 31. The ritornello that begins at rehearsal C features fragmentation of the melody in the strings and piano in measures 43 - 48 and does not include the tenor line.

At letter E (m. 56), the ritornello is presented with an added three-measure sub-phrase, a slightly modified version of the second portion of the ritornello. Letter G features one statement of the fully formed four-part theme with the cello presenting the bass line instead of the contrabass. Instead of its regular three measure phrase division, the ritornello is divided into two measure sections, as the first portion of the ritornello is extended and transposed in the piano at letter H (m. 87). Multiple versions of the melody are transposed, fragmented and layered over piano chords at letter J (mm. 102 - 122). This is the only statement of the ritornello that does not include the bass line. At the last ritornello, beginning at letter L, two statements of the theme are presented, the full contrapuntal theme followed by the melody in octaves, this time including the bass line. This brings the end of the movement, which occurs unexpectedly, with unresolved dominant harmony and a rising contour resulting in unsettled registral and harmonic tension.

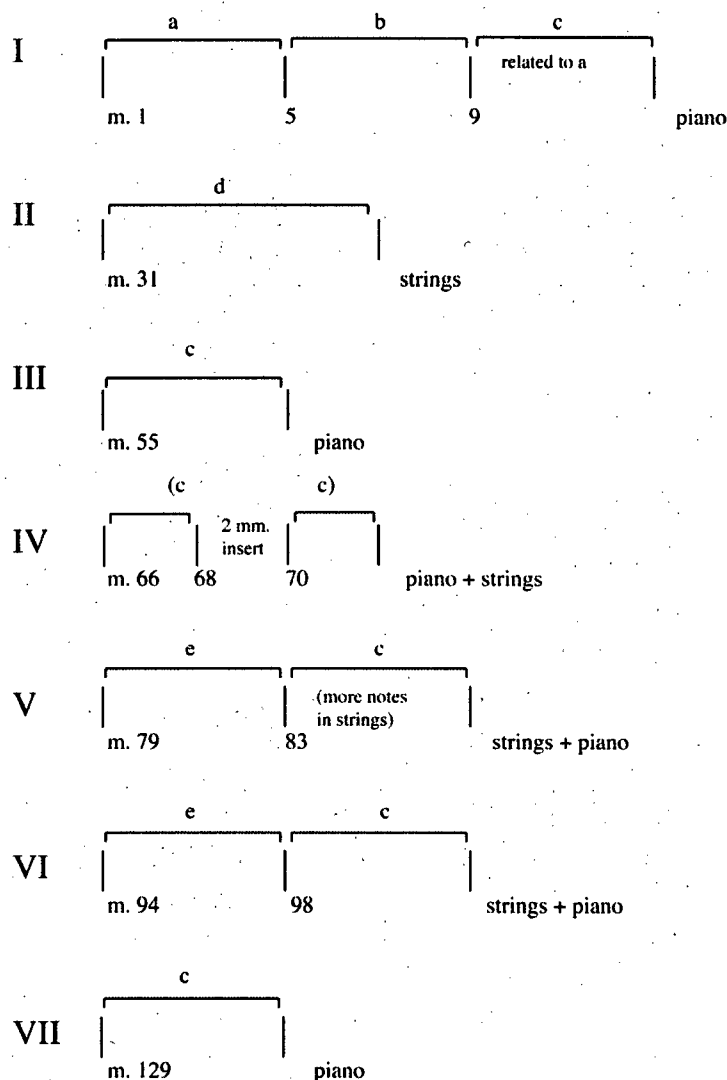
Brief homophonic chordal sections are used throughout the movement to introduce the ritornello. They feature less active textures than the ritornello with faster harmonic rhythms and consistently create sudden transitions to the return of the theme. These sections are found in the piano introduction, between the first two statements of the ritornello theme (mm. 31 - 36) and at the end of each solo section. There are five phrases used in the homophonic chordal sections (see Figure 34).

Figure 34: Homophonic chordal sections

Figure 34 displays five musical staves (a-e) illustrating homophonic chordal sections. Each staff shows a piano accompaniment in 4/4 time, featuring homophonic chordal textures. The staves are labeled a, b, c, d, and e, and each contains four measures of music. The key signature is one sharp (F#), and the time signature is 4/4. The staves show various chordal textures, including triads, dyads, and full chords, often with a bass line that provides harmonic support.

Similar to the varied presentation of the ritornello theme, the homophonic chordal sections combine these four phrases in varied combinations, stated by the piano alone, or piano and strings. There is a practical purpose for the homophonic texture of the chordal sections, the regularity of attacks allow the pianist and strings to musically cue the entrance of the ritornello theme. Figure 35 shows a reduction of the phrasing of the chordal sections.

Figure 35: Phrasing of the chordal sections



The ritornello theme alternates with improvised sections. The improvisational passages refer to material or processes from earlier movements. The first occurs at measure 49, a graphically aided reference to the timbral screams and shrieks of *I cry*. The comic book fonts, melodic cues and graphics found in the improvisation section in measure 65 create a return of the prosody and syllable timing of *Scribble Talk*. The open cello solo (at measure 78) accompanied by the *bike* motive in the strings and guitar is an allusion to *Truck*. In measure 93 the strings and guitar freely improvise in the style of *Singing*. Finally, the last

improvisation section features an ensemble rubato interpretation of the harmonic progression that forms the basis of *Sleep Furiously* (mm. 123 - 128). The reuse of processes and concepts serves as a metaphor for memory and a summation of language skills developed in a child's first years. The return of material from other movements also operates as a musical review and functions formally to summarize and unify the disparate movements by offering references to earlier movements, memory aids to some of the main fabric of the work.



## IV. CONCLUSION

### 4.1 Historical Context

The communicative journey presented by *Green Ideas* reveals distinct approaches in its six separate movements. As the compositional techniques, improvisational strategies and resultant musical materials demonstrate considerable contrast, comparisons of various works to specific movements of *Green Ideas* may be informative. Associations can be made with similar approaches taken by other composers towards text as inspiration, the representation of phonation, of sound and with differing methods used to notate musical indeterminacy.

Even though the instrumentation of *Green Ideas* does not include the voice, vocal properties form a fundamental part of the conception of the work. The sonic use of phonemes and sound effects in *truck* can be linked to the experimental vocal music of the middle of the twentieth century. One of the earliest significant associative examples would be Maricio Kagel's *Anagrama* (1957-8) whose reduction of the text to phonemic components is coupled with directions for varied manners of speech: stuttering, guttural, nasal, falsetto, breathy or whispery voice, dentilization and labialization. Luciano Berio's emphasis on sonic elements and onomatopoeic connotations of the text in *Circles* (1960) also bears comparison. The various modes of delivery of the piece, the disjointedness emphasizing the pseudo-meaningless indicated by the text and buccal play are similar to child-like efforts to communicate. John Beckwith's *Canada Dash - Canada Dot* (1956-57) and *Gas* (1969) also bear mentioning, for the vocal simulation of bird sounds, tree-cutting and traffic noises, similar to the depiction of trucks, bikes, ducks, etc. in *Truck*. Cathy Berberian's *Stripsody* (1966) also includes a collection of imitative sounds; those made by a released coil, a dropped ping-pong ball, a toy airplane, eating, drinking, an alarm-clock, a telephone, animal sounds, water dripping, and so on.

Modern vocal music that explores the compositional potential of phonation bears resemblance to *green ideas* in the abstraction of communicative vocalizations. Gyorgy Ligeti's *Aventures* and *Nouvelles Aventures* use chains of phonetic sounds taken from the

International Phonetic Alphabet manipulated for the acoustic properties and affective connotations. While affectation of sound is used minimally in *green ideas* (mainly in the cries and shrieks of *I cry*, meant to convey the sense of instinctive discomfort experienced by those in close proximity to infant's cries), the sonorous use of various phoneme sounds is one of the focal elements in the movement *Truck*. Giles Swayne's *Cry* (1979) features the use of non-verbal text (abstract phoneme sequences) vowel series, sustained fricatives and tongue trills. The sections of Betsy Jolas's *Sonate a 12* (1970) are characterized by their phonetic materials with a large variety of phonemic and CV duplet sound sequences, many of which resemble children's vocal games. Themes from childhood also link various works with *green ideas*, such as Pauline Olivero's *Sound Patterns* (1964), with text of childlike buccal sounds. The magical inner life of remembered childhood is presented through the use of effect and quotation in George Crumb's *Ancient Voices of Children* (1970).

The representation of sound forms a vital component of *Green Ideas*, especially in the first three movements where varied 'voice' qualities form an important parameter. These can be found in Peter Maxwell Davies' *Eight Songs for a Mad King* (1969) and Dieter Schnebel's *AMN* (1958/66) and *Madrasha II* (1958/67-68), which exhibit extended vocal techniques such as audible breaths, whispers, creaks, breathy, harsh and ventricular voices. The prosodic development in *Scribble Talk* and the development of phonemes in *Truck* resemble Luciano Berio's non-verbal communicative idiom his vocal and instrumental works such as *Sinfonia* and *Sequenza*.

The music of Morton Feldman, notably *Coptic Light*, is linked with the final section of *I Cry*, which uses a musical texture whose resultant patterns form the primary significance in the movement. The use of specified pitch with indeterminate durations in *Scribble Talk* associates the movement with Feldman's *Piece for four Pianos*. The graphic notation found in *Truck* allows performers to make compositional choices much as Feldman's *Projection 4*, Earle Browne's *From Here* and *Folio*, and Cornelius Cardew's *Treatise*. The aleatory passages in *Sleep Furiously* are related to those found in Lutoslawski's *Venetian Games* and the 1964 *String Quartet*. The focus upon interactional strategies found in *Scribble Talk* and *Sleep Furiously* can be associated with John Zorn's game piece *Cobra*. The music of John

Coltrane, as performed by his quartet on the albums *Expressions* and *Stellar Regions*, forms the inspiration for the use of chordal-based rubato improvisation through harmonic fields and the preponderance of atmospheres created by collective improvisation (found in *Sleep Furiously* and *green ideas*). The cued sections in *Sleep Furiously* are also similar to the primarily melodically structured framework of the music of Ornette Coleman, as found in the albums *The Shape of Jazz to Come*, *Change of the Century* and *This is our Music*.

#### 4.2 Aesthetic Statement

Language acquisition is mysterious; the permuted series used in this piece forms a metaphor for that mystery. The ensuing pitches determine the content of the piece; they may be perceivable even though hidden by the changing manner of manipulation of material. Each language skill acquired by an infant emerges at an incredibly rapid pace, yet at the same time occurs during endless hours of trial and error. The non-directional, nonlinear language of much of *Green Ideas* portrays this and hints at the altered passage of time experienced by those observing or taking part in learning through repetition. Human utterances have the potential to result in a multitude of sounds. Improvisation in the work allows for the representation of open-endedness and the complexity of interpersonal interaction. The musical plan present in *Green Ideas* functions in accordance with the linguistic program and at the same time operates independently as a purely musical construction, an intended concert of contrasting movements. Added to the representational nature of this piece and the musical program is a third stream, a personal expression of emotional reactions to the cries, screams, wails, coos, babbles, first words and phrases of my son. These generally mirrored his state: terror, joy, anxiety and laughter were all present in those first enchanting years.

## V. BIBLIOGRAPHY

### 5.1 Bibliography

Anhalt, I. *Alternative Voices: Essays on Contemporary Vocal and Choral Composition*. Toronto: University of Toronto Press, 1984.

Bartholomew, W.T. *Acoustics of Music*. Englewood Cliffs: Prentice Hall, 1945.

Berio, L. "Musik und Dichtung – eine erfahrung." *Darmstädter Beiträge*, 11 1959, 36-45.

de Boysson-Bardies, B. *How Language Comes to Children*. Cambridge: The MIT Press, 1999.

Buck, R. *Communication of Motion*. New York: The Guilford Press, 1984.

Catford, J.C. "Phonation Types: The Classification of Some Laryngeal Components of Speech Production" in D. Abercrombie et al ed. *In Honour of Daniel Jones* 1964, 26-37.

Chomsky, Noam. *Syntactic Structures*. The Hague/Paris: Mouton, 1957.

Chomsky, Noam. *Aspects of the Theory of Syntax*. Cambridge: MIT Press, 1965.

Colton, R. H. and Hollien, H. "Physiology of Vocal Registers in Singers and Non-singers" in John W. Large ed. *Vocal Registers in Singing*. 1973, 105-36.

Crystal, D. *Prosodic Systems and Intonation in English*. New York: Cambridge University Press, 1969.

De Groot, A. W. "Phonetics in its relation to aesthetics" *Manual of Phonetics*. ed. L. Kaiser, Amsterdam: North Holland Pub. Co., 1957, 385-400.

Dodge, C. "Synthesizing Speech" *Music Journal*, 34 no. 2 Feb. 1976, 14.

Farnsworth, P.R. *The social psychology of music*. New York: Dreyden Press, 1958.

Fletcher, H. "Some physical characteristics of speech and music." *J.A. Soc. Am.*, 3 1931, 1-25.

Fónagy, I. and Magdics, K. "Speed of utterances in phrases of different lengths." *Lg & Sp.*, 3 1960, 179-92.

Fónagy, I. and Magdics, K. "Emotional Patterns in Intonation and Music" in *Festgabe für Otto von Essen* Akademie-Verl. Berlin 1963, 293-326.

- Foss, L., Ligeti, G. and Schwartz, E. "Contemporary Music: Observations from Those Who create it." *Music and Artists*, 5 no. 3 1972, 11-12, 21-22.
- Fromkin, Victoria and Rodman Robert. *An introduction to language*. 6<sup>th</sup> edition. Fort Worth: Harcourt Brace College Publishers, 1998.
- Goffman, E. *Interaction Ritual: Essays on Face-to-Face Behavior*. Garden City: Anchor Books, 1967.
- Goodluck, Helen. *Language Acquisition: A linguistic introduction*. Oxford: Blackwell Publishers Ltd., 1991.
- Grégoire, A. *L'apprentissage du langage. Les deux premières années*. Paris: E. Droz, 1937.
- Guasti, M. T. *Language Acquisition. The Growth of Grammar*. Cambridge: MIT Press, 2002.
- Hirsh-Pasek, K. and Golinkoff, R. M. *The origins of grammar*. Cambridge: MIT Press, 1996.
- Karkoschka, E. "Musik und Semantik." *Melos*, 32 1965, 252-9.
- Killmauer, W. "Sprache als Musik" *Melos*, 39 1972, 35-41.
- Kaplan H. M. *Anatomy and Physiology of Speech*. New York: McGraw-Hill, 1960.
- Kostelanetz, R. ed. *Text-Sound Texts*. New York: William Morrow, 1980.
- Kupper, L. "New Possibilities of Vocal Music: Phonemes, Allophones, Phonations, Logatomes, Phonetic Microsounds" *Faire*, 4/5 1975, 31-6.
- Laver J.D. "Individual Features in Voice Quality" PHD thesis, University of Edinburgh 1975, 273-4.
- Laver J.D. *The Phonetic Description of Voice Quality*. Cambridge: Cambridge University press, 1980.
- List, G. "The Boundaries of Speech and Song." *Ethnomusicology*, 7 1963, 1-16.
- Mahl G.F. and Schulze G. "Psychological Research in the Extralinguistic Area" in T.A Sebeok et al ed *Approaches to Semiotics* London, 1964, 51-124.
- Maidom-Lampadan, Ritha. *Integrating Faith and Learning in teaching English as a second language: Possibilities in Grammar Classes*. 2000. Available from [http://www.aaiias.ede/ict/vol\\_27/27cc\\_169\\_186.html](http://www.aaiias.ede/ict/vol_27/27cc_169_186.html).
- Malmberg, B. ed. *Manual of Phonetics*. London: North-Holland Publishing, 1970.

- Matthews M.V. "Different Vocal Tract Configurations that Produce the Same Sound." *Programme détaillé*, IRCAM Symposium sur la Psychoacoustique Musicale, Paris 11-13 Juillet 1977, 50.
- Morris, Craig "His Green, Colorful Ideas Awaken Furiously." *Telepolis*, Dec. 3, 2003. Available from <http://www.chomsky.info/onchomsky/2003/203.htm>.
- Ostwald, P.F. 'Sound music and human behavior,' *Music Therapy* 1960, 107-25.
- Piget, J. *The Language and Thought of the Child*. London: Routledge & Kegan Paul, 1926.
- Pike, K.L. *Phonetics*. Ann Arbor: University of Michigan Press, 1967.
- Schafer, R. Murray. *When Words Sing*. Toronto: Berandol Music Ltd, 1970.
- Searchinger Gene, Director, Producer and Writer. *Discovering the human language* [Video-recording]; *colorless green ideas*/South Carolina ETV; Equinox Films; New York: Ways of Knowing Inc., 1995.
- Smits van Waesberghe, J. "Phonetics in its relation to musicology" *Manual of Phonetics*. ed. L. Kaiser, Amsterdam: North Holland Pub. Co., 1957, 372-84.
- Soria, D.J. "Artists Life: Cathy Berberian." *High Fidelity/Musical America*, 20 July, section 2, 1970, 4-5.
- Stockhausen, K. "Music and Speech." *Die Reihe*, 6 1960, 40-60.
- Stockhausen, K. *Texte I-IV Verlag*. Köln: M. Du Mont Schauberg, 1978.
- Sundberg, J. "Speech, Song and Emotions." an expanded and translated version of chapter 6 of the author's book *Röstlara* (Voice Science). Stockholm: Proprius Förlag, 1980.
- Tagg, Philip. *Glossary of special terms, abbreviations, neologisms, etc. used in writings*. Available from <http://www.tagg.org/articles/ptgloss.html#Extramusical>.
- Trask, R. L. *A Student's dictionary of language and linguistics*. New York: Oxford University Press, 1997.
- Trager, G.L. "Paralanguage: A first Approximation." *Studies in Linguistics*, 13 no 12 1958, 1-12.
- Uldall, E. "Attitudinal Meanings Conveyed by Intonation." *Language and Speech*, 3: 1960, 223-34.
- Westergaard, P. "Sung language." American Society of University Composers *Proceedings of the Second Annual Conference*, April:1967, 9-36.

# Green Ideas

Musical Score

# Green Ideas

by

Lisa Miller

Violin I  
Violin II  
Viola  
Cello  
Electric Guitar  
Piano  
Double Bass  
Drum Kit

© January 2007 Lisa Miller



I.	I cry	c. 12:00	73
II.	Truck	c. 9:00	125
III.	Scribble Talk	5:00 - 8:00	132
IV.	Singing	c. 9:00	139
V.	Sleep Furiously	8:00 - 12:00	166
VI.	green ideas	c. 9:00	191

# I. I cry

Violin I  
Violin II  
Viola  
Cello  
Double Bass  
Electric Guitar  
Piano

## I cry - directions

N.B. These instructions apply to *I cry* as well as the other movements in Green Ideas.

### General:



Alternate staves indicate improvisation. Thicker lines at the beginning or ending are to be regarded as suggestions for the density, volume or shape of the solo. Extemporization should be based upon the surrounding written/improvised material. Solos may be reassigned.



Continue previous material.



Continue previous material or cease playing.

### Strings:



Groans, cries and scrapes - Groans and scrapes: see the directions below and on the next page. Cries - Create animal-like wails by 1. Using slow glissandi and extra bow pressure and/or 2. Lightly touch the string with the thumb behind finger in L.H., slide hand towards the nut, keeping finger position intact.



Breathy whisper - 1. Play half col legno, half normale (with the hair) and/or 2. Lightly dampen the string. Using very quiet dynamics, circular and multi-directional bowing, create whispering sounds. Use *sul tasto* bowing often.

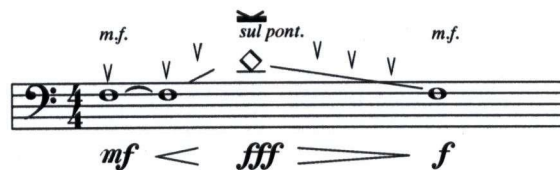


Falsetto whisper - Same as above with a greater concentration upon *sul ponticello* bowing and smaller circles closer to the bridge.



Overpressure groan - RH: Begin *sul tasto* and move to the bridge and back. Increase pressure near the bridge. LH: finger up and down glissandi in coordination with RH.

Notated overpressure groan:



### Bowing



Circular bowing.



Normal bow pressure.



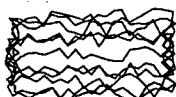
Slow bow on the bridge, create a pitched buzzing sound.



Excessive bow pressure (on the bridge), pitch disappears.

## I cry - directions

### Strings continued:



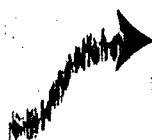
Shrieks and scrapes - See below.



Shriek - Play on the string (loudly) behind the tailpiece.



Croaky voice (*son file*) - Place bow on string at the frog. Apply as much weight as possible with entire arm (constant pressure). Don't go beyond mid - bow. Release pressure until bow moves slightly, slips and catches intermittently to create pops and noise bursts.



Overpressure scrape - Use excessive bow pressure on the bridge, and a short slow bow motion which becomes faster near the end.



Scrape - 1. Play *sul tasto* with bow hair loosened until there is a minimum of tension (use extra bow) or 2. Bow at the frog in small circular motions above or behind the bridge using overpressure.

*Son file* - (spun tone) Press the bow very firmly against one of the lower strings and apply pressure until the bow slips. The bow pressure should be released every second or so, resulting in a series of uneven short pops or scratches of sound.

## I cry - directions

### Guitar:

#### Distortion types

No distortion



Edgy distortion



Medium edgy distortion



Maximum edgy distortion



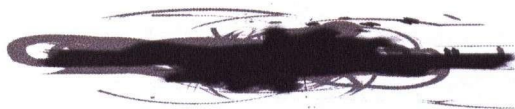
Soft distortion



Grainy distortion



Soft grainy distortion



Crying sounds - Use moderate feedback to sustain high harmonics. Add varied amounts of distortion.



Shrill cries - At a medium volume level, use harsh distortion and effects ad lib. to sustain long high notes.



Low buzz - Sample low sounds. Lower, loop and distort.

Groan, scrape, whispers - see graphics on page 74.

Groan - Slowly scrape bolt across strings.

Scrape - Slowly drag bow across the strings.

Breathy whisper - At a quiet volume, lightly scrunch brillo pad on strings.

Falsetto whisper - Add effects to breathy whisper to create a higher fuzzy sound.

**I cry**

Diagram illustrating the performance of a musical piece, showing the progression of time across four measures, each marked with a duration: c. 7", c. 5", c. 5", and c. 4". A box labeled "1" is positioned above the measures.

The score is written for the following instruments:

- Gtr. (Guitar)
- Pno. (Piano)
- Vln. 1 (Violin 1)
- Vln. 2 (Violin 2)
- Vla. (Viola)
- Vc. (Violoncello)
- Cb. (Contrabasso)

Performance instructions and dynamics are provided for each instrument:

- Vln. 1 & 2:** *sul tasto* (mf) to *sul pont.* (ff) in the first measure. In the third measure, *on the bridge poco a poco* (n < mp).
- Vla.:** *sul tasto* (mf) to *sul pont.* (ff) in the first measure. In the third measure, *on the bridge poco a poco* (n < mp).
- Vc. & Cb.:** *sul tasto* (mf) to *sul pont.* (fff) in the first measure, then *sul tasto* (f) to *n* in the second measure. In the third measure, *sul tasto* (mf) to *sul pont.* (ff) and *on tailpiece* (mf < ff).

Additional markings include *c. 4"* for the first measure and *on tailpiece* for the final measure.

Diagram illustrating musical notation and performance instructions for various instruments, including Gtr., Pno., Vln. 1, Vln. 2, Vla., Vc., and Cb., across a timeline marked with durations: c. 10", c. 4", c. 3", and c. 2".

**Gtr.** (Guitar): *mp* (mezzo-piano) to *f* (forte) transition.

**Pno.** (Piano): Rests throughout the section.

**Vln. 1** (Violin 1): *mf* (mezzo-forte) with wavy lines indicating tremolo or rapid oscillation. Transition to *mf* (mezzo-forte) with a double bar line.

**Vln. 2** (Violin 2): *mf* (mezzo-forte) with wavy lines. Transition to *mf* (mezzo-forte) with a double bar line.

**Vla.** (Viola): *f* (forte) with wavy lines. Transition to *f* (forte) with a double bar line. Subsequent notation includes *mp* (mezzo-piano) and *mf* (mezzo-forte) with *poco a poco* (little by little) markings.

**Vc.** (Violoncello): *f* (forte) with wavy lines. Transition to *f* (forte) with a double bar line. Subsequent notation includes *mp* (mezzo-piano) and *mf* (mezzo-forte) with *poco a poco* (little by little) markings.

**Cb.** (Contrabass): *on tailpiece* with wavy lines. *mp* (mezzo-piano) to *f* (forte) transition.



2

c. 10"

Gtr.

Pno.

Enter at will at any tempo. Parts need not be synchronized.  
Repeat gesture. Occasionally use different pitches.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*sul tasto* *sul pont.* *sul tasto*

*f* *fff* *f*

*sul tasto* *sul pont.* *sul tasto*

*f* *fff* *f*

*sul tasto* *sul pont.* *sul tasto*

*f* *fff* *f*

*sul tasto* *sul pont.* *sul tasto*

*f* *fff* *f*

*sul tasto* *sul pont.* *sul tasto*

*f* *fff* *f*

Diagram illustrating musical notation for a score, showing measures and durations.

Measure durations are indicated by brackets at the top:

- c. 8 - 10"
- c. 5"

The score includes staves for the following instruments:

- Gtr. (Guitar)
- Pno. (Piano)
- Vln. 1 (Violin 1)
- Vln. 2 (Violin 2)
- Vla. (Viola)
- Vc. (Violoncello)
- Cb. (Contrabasso)

Specific notation details:

- Vln. 1, Vln. 2, and Vla. staves show a duration of 3 - 5" for a specific phrase.
- The Vln. 1 staff includes the dynamic marking *mp* (mezzo-piano).
- The Vln. 2 staff includes the dynamic marking *mp* (mezzo-piano).
- The Vla. staff includes the dynamic marking *mp* (mezzo-piano).
- The Vc. and Cb. staves show a duration of 3 - 5" for a specific phrase.
- The Cb. staff includes the dynamic marking *mp* (mezzo-piano).

On cue

1  $\text{♩} = 80$

Gtr.

*mf* *mp* *f*

Pno.

Vln. 1

*poco a poco* *on the bridge* *normale*

*pp* *mf* *p* *mf*

Vln. 2

*poco a poco* *on the bridge* *normale*

*pp* *mf* *p* *mf*

Vla.

*poco a poco* *on the bridge*

*pp* *mf* *p* *f* *pp*

Vc.

*on the bridge*

*f* *pp*

Cb.

*on the bridge*

*f* *pp*

Loop and distort sound. Intermittent pops and noise bursts are desired. Use: 1. open feedback loop. change in delay = change in pitch [noisy] and/or 2. sample purer sound (about 2"), create slow loop, play while performing written music, change pitch to be slightly above or below notated pitches.

5

Gtr. *mp* *f* *mf*

Pno.

Vln. 1 *mp* *f* *son filé*

Vln. 2 *mp* *f* *son filé*

Vla. *son filé* *f*

Vc. *son filé* *f*

Cb. *son filé* *f*



10 - 15"

*poco a poco*

shrill cries

*mf* *f*

Gtr. 13

Pno.

Vln. 1 *sul pont.*

Vln. 2 *sul pont.*

Vla. *sul pont.*

Vc. *sul pont.*

Cb.

*vary dynamics*

*vary dynamics*

*vary dynamics*

*vary dynamics*

On cue

A Tempo

16

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mf*

*mp*

*f*

*son filé*

*normale*

*sul pont.*

21

Gtr. *low buzz*

Pno.

Vln. 1 *poco a poco* *f* *mp* *f* *normale poco a poco* *mp* *f*

Vln. 2 *poco a poco* *f* *mp* *f* *normale poco a poco* *mp* *f*

Vla. *sul pont.* *f* *mp* *f* *normale poco a poco* *mp* *f*

Vc. *sul pont.* *f* *mp* *f* *normale poco a poco* *mp* *f*

Cb.



Loop and distort sound. Intermittent pops and noise bursts are desired. Use: 1. open feedback loop. change in delay = change in pitch [noisy] and/or 2. sample purer sound (about 2"), create slow loop, play while performing written music, change pitch to be slightly above or below notated pitches.



25

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*U sul tasto*

*pp*

*U sul tasto*

*pp*

*U sul tasto*

*f*  $\rightrightarrows$  *pp*

*U sul tasto*

*f*  $\rightrightarrows$  *pp*

*U sul tasto*

*f*  $\rightrightarrows$  *pp*

*U sul tasto*

*U sul tasto* *U sul pont.* *U sul tasto*

*fff*  $\rightrightarrows$  *f*

*U sul tasto* *U sul pont.* *U sul tasto*

*fff*  $\rightrightarrows$  *f*  $\rightrightarrows$  *p*

*U sul tasto*

*f*  $\rightrightarrows$  *pp*

29

31 end loop

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*p*

*mf*

*f*

*ppp*

*f*

*p*

*mp*

*normale*

*sul tasto*

*sul pont.*

*normale*

*mp*

*normale*

*mp*

*normale*

*mp*

*mp*

*ppp*

*f*

*p*

33

Gtr. *mf*

Pno.

Vln. 1 *mf* *poco a poco*

Vln. 2 *mf* *poco a poco*

Vla. *mf* *poco a poco*

Vc. *mf* *poco a poco*

Cb. *normale* *poco a poco* *mf*

Diagram illustrating musical notation and sound effects across various instruments.

**Timeline:**

- c. 2"
- c. 5"
- c. 15"

**Instruments and Notation:**

- Gtr. (Guitar):** Notation includes a treble clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "effects ad lib.".
- Pno. (Piano):** Notation includes a grand staff (treble and bass clefs) and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte).
- Vln. 1 (Violin 1):** Notation includes a treble clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "son filé".
- Vln. 2 (Violin 2):** Notation includes a treble clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "son filé".
- Vla. (Viola):** Notation includes a bass clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "son filé".
- Vc. (Violoncello):** Notation includes a bass clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "son filé".
- Cb. (Contrabasso):** Notation includes a bass clef, a key signature of one flat (B-flat), and a 4/4 time signature. The notation shows a series of notes, with a dynamic marking of *f* (forte) and a crescendo leading to *mp* (mezzo-piano) and then *mf* (mezzo-forte). The notation is labeled "son filé".

**Sound Effects:**

- The diagram includes a series of sound effect notations, represented by a dense, scribbled pattern, labeled *mp* (mezzo-piano) and *mf* (mezzo-forte).

On cue

A Tempo

41

Gtr.

*mp*

Pno.

Vln. 1

*mf* *mp* *mf* *mp* *mf*

Vln. 2

*mf* *mp* *mf* *mp* *mf*

Vla.

*mf* *mp* *mf* *mp* *sul pont.*

Vc.

*sul pont.* *mp*

Cb.

*sul pont.* *mp*

45

Gr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mp*

*mf*

*f*

*c. 7"*

Guitar improvises

20-30"

Crying sounds (wammy bar optional). Relate solo to previous material.

49

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

4/4

4/4

4/4

4/4

4/4

4/4

4/4

On cue

A Tempo

50 low buzz

Gtr. *p*

Pno. *mp*

Vln. 1 *p* non vibrato sul tasto on the bridge *mp* < *f*

Vln. 2 *p* non vibrato sul tasto on the bridge *pp* *mp* < *f*

Vla. *p* non vibrato sul tasto on the bridge *pp* *mp* < *f*

Vc. on the bridge low bow *mf* *pp* *n* *p* *pp* on the bridge *mp* < *f*

Cb. on the bridge low bow *mf* *pp* *n* on the bridge *mp* < *f*



54

Gtr. *f* *mf*

Pno.

Vln. 1 *poco a poco* *U* *sul pont.* *vibrato normale* *mf*

Vln. 2 *poco a poco* *U* *sul pont.* *non vibrato sul tasto* *p* *vibrato normale* *mf*

Vla. *poco a poco* *U* *sul pont.* *non vibrato sul tasto* *p* *vibrato normale* *mf*

Vc. *poco a poco* *U* *sul pont.* *non vibrato sul tasto* *p* *vibrato normale* *mf*

Cb. *poco a poco* *U* *sul pont.*

[illegible]

Pianist improvises

20-30"

63

Gtr.

Pno.

solo Ad lib. in style of previous music.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

ad lib. *sul pont.*, on the bridge, over pressure and/or *son filé*.

vary dynamics

vary dynamics

vary dynamics

vary dynamics

vary dynamics

Cellist improvises

20-30"

67

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

solo Ad lib. in the style of the piano solo.

On cue

A Tempo



Use moderate effects to sustain.

68

Gtr.

*mf* > *p*

Pno.

*mf*

Vln. 1

*p* *sul tasto* *sul pont.* < *mf* > *p*

Vln. 2

*p* *sul tasto* *sul pont.* < *mf* > *p*

Vla.

*p* *sul tasto* *sul pont.* < *mf* > *p*

Vc.

*p* *sul tasto* *sul pont.* < *mf* > *p*

Cb.

*p* *sul tasto* *sul pont.* < *mf* > *p*

[illegible]

76

Gtr.

*mf* *f*

Pno.

*mf* *f*

Vln. 1

*p* *f*

vibrato normale

Vln. 2

*p* *f*

vibrato normale

Vla.

*p* *f*

vibrato normale

Vc.

*p* *f*

vibrato normale

Cb.

*p* *f*

Diagram illustrating musical notation and performance instructions for a string ensemble.

At the top, a horizontal scale bar indicates two segments: **c. 5"** and **c. 3"**.

The musical score includes staves for the following instruments:

- Gtr.** (Guitar): Staff 1, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Pno.** (Piano): Staff 2, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Vln. 1** (Violin 1): Staff 3, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Vln. 2** (Violin 2): Staff 4, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Vla.** (Viola): Staff 5, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Vc.** (Violoncello): Staff 6, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.
- Cb.** (Contrabasso): Staff 7, starting at measure 80. The notation shows a series of chords (triads) connected by a slur, with a fermata over the final chord.

Below the staves, a diagram illustrates the performance instructions for the string ensemble:

- A vertical box contains five staves, each labeled **pp** (pianissimo).
- Each staff in the box is connected by a thick line to a triangle symbol.
- Each triangle symbol is connected by a thin line to a staff labeled **mp** (mezzo-piano).
- The final staff in the box is connected by a thin line to a staff labeled **mp**.

The diagram also includes a vertical scale bar on the right side, indicating two segments: **c. 5"** and **c. 3"**.



On cue

A Tempo

Add delay and effects, not too busy.

85

loop

(layer)

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mf* *mp* *f* *mp* *mf* *mp* *f* *mp* *mf* *mp* *f*

*f* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *f*

*f* *p* *mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *f*

*f* *p* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *f*

*f* *p* *mp* *f*

[illegible]

93

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

mf mp sim. mf mp mf mp mf mp

97

Gtr.

Pno.

Ad lib. use similar pitches, not too busy.

Vln. 1

*mf mp mf mp mf mp*

Ad lib. sim.

Vln. 2

*mp mf mp mf mp*

Ad lib. sim.

Vla.

*mf mp mf mp mf mp mp mf mp*

Vc.

Ad lib. sim.

Cb.

*mf mp mf mp mf mp*

101

Ad lib. using similar notes (E White tone).

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *mp* *mf* *mp*

Ad lib. sim.

105

c. 5"

Gtr.

Pno.

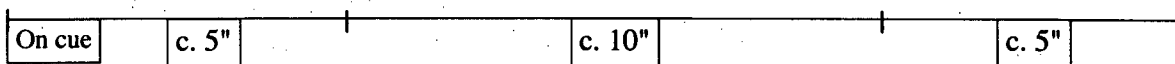
Vln. 1

Vln. 2

Vla.

Vc.

Cb.



111

Score for measures 111 and 112, featuring a guitar (Gtr.) and a piano (Pno.) ensemble, with string parts (Vln. 1, Vln. 2, Vla., Vc., Cb.) also indicated.

**Gtr. (Guitar):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Pno. (Piano):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Vln. 1 (Violin 1):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Vln. 2 (Violin 2):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Vla. (Viola):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Vc. (Violoncello):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

**Cb. (Contrabasso):** Measure 111 features a *f* (forte) tremolo. Measure 112 features a *pp* (pianissimo) buzz. A dynamic marking *p* (piano) is also present in measure 112.

On cue

114 ♩ = 96

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mf*

*mf*

*mp* *f* *mp* *mp*

*mp* *f* *mp* *mp*

*mp* *f* *mp* *mp*

*mp* *f* *mp* *mp*

*mp*

*vibrato normale*

*vibrato normale*

*vibrato normale*

*vibrato normale*

*vibrato normale*



118

Gtr.

*mp* *mf*

Pno.

*mp* *mf*

Vln. 1

*p* *mf* *mp*

Vln. 2

*p* *mf* *mp*

Vla.

*p* *mf* *mp* *mp*

Vc.

*p* *mf* *mp* *mp*

Cb.

*mp*

123

Gtr. *mp* *p*

Pno. *mp* *p*

Vln. 1 *< mf* *f* *mp* *p* *mp*

Vln. 2 *< mf* *f* *mp* *p* *mp*

Vla. *< mf* *p* *mp* *mp*

Vc. *< mf* *p* *mp* *mp*

Cb. *mp* *< mf* *mp* *mf* *mp* *mf*

124

125

126

127

1

 $\text{♩} = 100$ 

Second time ad lib. using the same pitches.

129

Gtr.

*pp* *mf*

Pno.

Vln. 1

*p* *sul pont.*

Vln. 2

*p* *sul pont.*

Vla.

*p* *sul pont.*

Vc.

*p* *sul pont.*

Cb.

*p* *sul pont.*

2

(Cue 2 - 3 = 40 - 70")

Parts need not be aligned,  
slight variations in tempo desired.

c. 7.5 - 15"

Second time ad lib. using the same pitches.

135

Gtr. *mp* 3rd fret 1 or 2 times

Pno. 1 or 2 times

Vln. 1 *pp* 1 or 2 times

Vln. 2 *pp* 1 or 2 times

Vla. *pp* 1 or 2 times

Vc. *non vibrato normale* 1 or 2 times

Cb. *non vibrato normale* 1 or 2 times

N.B. Individual players may choose the number of repeats per section.

c. 7.5 - 15"      c. 15 - 20"

Gtr. 7th fret (for both D and E) loop 12th fret 12th fret

*p* *mp* *mp*

Pno.

Vln. 1 1 or 2 times *mp* > *p* *sul tasto* *mp* > *p*

Vln. 2 1 or 2 times *mp* > *p* *sul tasto* *mp* > *p*

Vla. 1 or 2 times *mp* > *p* *sul tasto*

Vc. 1 or 2 times *sul tasto*

Cb. 1 or 2 times *sul tasto*

(c. 15 - 20")

musical score for guitar (Gtr.), piano (Pno.), violin 1 (Vln. 1), violin 2 (Vln. 2), viola (Vla.), violoncello (Vc.), and contrabass (Cb.).

The score is divided into measures by vertical dashed lines. The guitar part features a melodic line with a *mf* (mezzo-forte) dynamic followed by a *mp* (mezzo-piano) dynamic, and a *fade loop out* instruction. The piano part is silent. The violin 1 and 2 parts play sustained notes with the instruction *sul pont. with a slow bow* (sul ponticello with a slow bow). The viola part plays a melodic line with a *mp* (mezzo-piano) dynamic followed by a *p* (piano) dynamic, and a *sul pont. with a slow bow* instruction. The violoncello and contrabass parts play sustained notes with the instruction *sul pont. with a slow bow*.

10-20"

Shake body of guitar to produce vibrato.

end loop      Add gentle delay and effects ad lib.

Gtr. 15th fret repeat until cue

*mf*

Pno.

Vln. 1 *bow position normale* *p* *mf* *move bow closer to l.h.* repeat until cue

Vln. 2 *bow position normale* *p* *mf* *move bow closer to l.h.* repeat until cue

Vla. *bow position normale* *p* *mf* repeat until cue

Vc. *bow position normale* *p* *mf* *move bow closer to l.h.* repeat until cue

Cb. *bow position normale* *p* *mf* repeat until cue

*p* *mf*

3

On cue

c. 7.5 - 15"

10-20"

The musical score is for a string ensemble and guitar. At the top, a diagram shows a horizontal line with a flower-like symbol on the left, a circle in the middle, and a vertical line on the right. Below this, the score is written for the following instruments:

- Gtr.** (Guitar): Treble clef. The notation includes a B-flat, a whole note, a half note, a quarter note, and a half note. Dynamics include *pp* and *mf*.
- Pno.** (Piano): Treble and Bass clefs. The notation is mostly rests.
- Vln. 1** (Violin 1): Treble clef. The notation includes a whole note, a half note, and a quarter note. Dynamics include *pp*. A performance instruction "place bow over harmonic node" is written above the staff.
- Vln. 2** (Violin 2): Treble clef. The notation includes a whole note, a half note, and a quarter note. Dynamics include *pp*. A performance instruction "place bow over harmonic node" is written above the staff.
- Vla.** (Viola): Treble clef. The notation includes a whole note, a half note, and a quarter note. Dynamics include *pp*. A performance instruction "place bow over harmonic node" is written above the staff.
- Vc.** (Violoncello): Bass clef. The notation includes a whole note, a half note, and a quarter note. Dynamics include *pp*. A performance instruction "place bow over harmonic node" is written above the staff.
- Cb.** (Contrabass): Bass clef. The notation includes a whole note, a half note, and a quarter note. Dynamics include *pp*. A performance instruction "place bow over harmonic node" is written above the staff.

The score is divided into measures by vertical dashed lines. The first measure is marked with a "3" in a box, "On cue", and "c. 7.5 - 15\"". The second measure is marked with "10-20\"".



(10 - 20")

Repeat until  
pianist enters.

4

Score for Gtr., Pno., Vln. 1, Vln. 2, Vla., Vc., and Cb. The score is divided into two systems. The first system includes a rehearsal mark with the instruction "(10 - 20") Repeat until pianist enters." and a measure number "4". The Gtr. part begins with a *mp* dynamic. The Pno. part begins with a *mp* dynamic and a "sim." (simulacrum) instruction. The Vln. 1 and Vln. 2 parts begin with a *pp* dynamic. The Vla., Vc., and Cb. parts begin with a *pp* dynamic. The score includes various musical notations such as notes, rests, and dynamics.

Gtr. *mp*

Pno. *mp* sim.

Sustain pedal throughout.

Vln. 1 *pp*

Vln. 2 *pp*

Vla.

Vc.

Cb.

20-30"

2 or 3 times

Gtr.

Pno. *mf* 2 or 3 times

Vln. 1 *bow position normale* *p* *mp* *p* 2 or 3 times

Vln. 2 *bow position normale* *p* *mp* *p* 2 or 3 times

Vla. *bow position normale* *p* *mp* *p* 2 or 3 times

Vc. *bow position normale* *p* *mp* *p* *mp* *p* 2 or 3 times

Cb. *bow position normale* *p* *mp* 2 or 3 times

20-30"

Continue in similar manner, add loops, any tempo.

168

Gtr.

12th fret

*p*

7th fret

7th fret

7th fret

2 or 3 times

Pno.

Vln. 1

*mp*

*p*

*mp*

2 or 3 times

Vln. 2

*mp*

*p*

*mp*

*p*

2 or 3 times

Vla.

*mp*

*p*

*mp*

*p*

2 or 3 times

Vc.

*p*

*mp*

*p*

*mp*

2 or 3 times

Cb.

*mp*

2 or 3 times

20-30"

7th fret

gradually fade out loop 2 or 3 times

5th fret

172

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*mp*

*mf*

*p*

*mp*

*p*

*mp*

*p*

2 or 3 times

2 or 3 times

2 or 3 times

2 or 3 times

2 or 3 times

Detailed description: This is a page of a musical score, page 123, showing measures 172 through 175. The score is for a guitar (Gtr.), piano (Pno.), violin 1 (Vln. 1), violin 2 (Vln. 2), viola (Vla.), cello (Vc.), and double bass (Cb.). Above the staves, a bracket indicates a duration of 20-30 seconds. The guitar part starts at measure 172 with a 7th fret and ends at measure 175 with a 5th fret. The piano part has dynamic markings of *mp* and *mf*. The violin 1 part has dynamic markings of *p* and *mp*. The violin 2 part has dynamic markings of *mp* and *p*. The viola part has dynamic markings of *mp* and *p*. The cello part has dynamic markings of *p* and *mp*. The double bass part has a dynamic marking of *p*. The score includes performance instructions such as 'gradually fade out loop 2 or 3 times' and '2 or 3 times' repeated several times.

c. 40 - 60"

stop after about 30" (take your time)

stop last

repeat once more after violin 2 stops

repeat once more after viola stops

repeat once more after vln. 1 stops

repeat once more after guitar stops

Gtr.

Pno.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

*pp*

*p*

*mp*

*mf*

## II. Truck

Violin I  
Violin II  
Viola  
Cello  
Electric Guitar  
Drum Kit

## Truck - directions

The strings, the guitar and the drums each use the corresponding section of the graphic score, interpreting the symbols according the directions outlined in the table of sonorities.

Time moves from left to right. Musicians place their sonorities according to the proportions on the score. The pianist will give cues 1 - 5. Cue one occurs approximately 30 seconds after the drums begin. The remaining cues should each be approximately 90 seconds long.

The register of the articulation of Cues 1 and 2 roughly follows the spatial distribution of the score, i.e. higher or lower graphics on the score signifies performing them at a higher or lower register, the breadth of the registral span is to be decided by the performer. The bike motive may be interpreted in several ways. A performer may choose to follow one line, and change their register accordingly, they may jump from line to line, or they may create a polyphonic version of two or more lines through registral separation of the motives.

At cue 3, *happy sigh*, the strings perform the happy sigh insert. After completing the insert, the strings return to the graphic score.

In Cues 3 - 5, the register is determined by the type of sonority articulated, and/or is left to the discretion of the performer.

The musical material in cues 3 - 5 is meant to be layered in the guitar, using multiple loops. The material in cues 3 - 5 in the drums are also meant to be layered, using simultaneous varied articulation on the entire drum kit separated through register and textural differentiation.

# Truck - directions

## Table of sonorities

signifies freely continue sonority.

Instrument	Left Column	Right Column
Guitar	<p><b>bike - guitar and strings</b></p> <p><i>col legno</i></p> <p><b>duck</b></p> <p>drag bolt across strings, sample, lower</p> <p><b>rake</b></p> <p>short bow drawn across strings</p>	<p><b>broom - ssss</b></p> <p>place radio across strings</p> <p><b>shoes - shzz</b></p> <p>place vibrator across strings</p> <p><b>excavator</b></p> <p>brillo pad (or plastic pot scratcher) scrunched on strings</p>
Strings	<p><b>[b], [p], [t]</b></p> <p>[b] short mezzo piano down bow [p] dampened pizzicato note [t] dampened mezzo piano pizzicato note, use fingernail</p> <p>use any pitch class except <math>\sharp</math> and <math>\flat</math></p> <p><b>[m]</b></p> <p>tempo may be med. fast or med. slow</p> <p><i>sul tasto</i> <i>overpressure bowing</i> <i>sul pont.</i> <i>sul tasto</i></p>	<p><b>[f]</b></p> <p>rub body of instrument or hands, circular motion</p> <p><b>shoes - shzz</b></p> <p>bow very near bridge for a quasipitched/unpitched sound use extra bow pressure to make a grating sound</p> <p><i>fast bow.....slow bow</i></p>
Drums	<p><b>da</b> low tom note (with mallet or hand)</p> <p><b>ta</b> cymbal articulation (with stick)</p> <p><b>truuuuk</b> long, full phrase, ad lib. full kit</p> <p><b>tuk</b> very fast</p>	<p><b>broom - ss ss, ssss</b></p> <p>sizzle cymbal</p> <p><b>[f] [v]</b></p> <p>[f] fine sandpaper, circular motion and/or slowly crinkle newspaper/waxed paper [v] slow rub wet thumb across toms to make a low groan</p>



## Truck

score

c. 8:00

cue:

each cue is  
c. 90' long1 c. 30' after the  
entrance of the drums

2

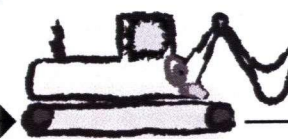
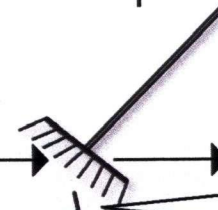
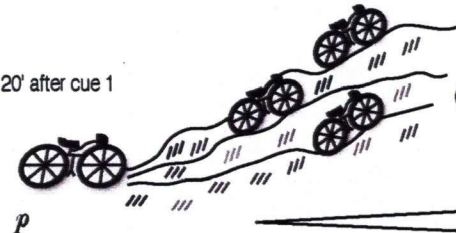
3

4

5

guitar

20' after cue 1



30' after cue 5

add loops: ssss

30' after cue 3

mf

f

mp

p

ssss

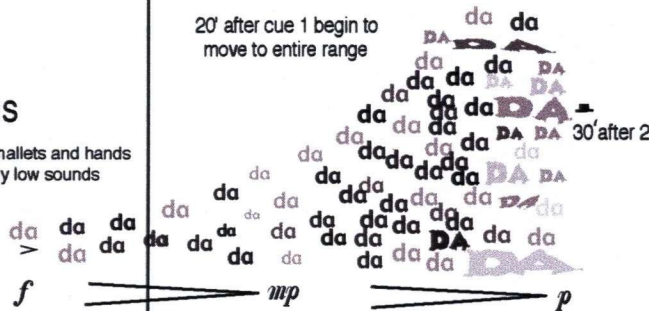
mp

pp

da

20' after cue 1 begin to  
move to entire range

drums

use mallets and hands  
mostly low sounds

ta

da tuk

ssss

sizzle cymbals

full kit

[f] [v]

mp

pp

mp

use sticks on cymbals  
and hardware

mf

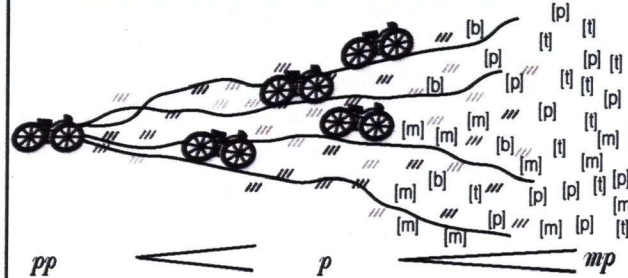
f

mp



20' after cue 5

strings



c. 20' after cue 3

happy sigh



[f]

mp

pp

30' after cue 5

open cello solo

c. 1:00

20 -30' after cue 2 add [m] [b] [t] [p]  
(avoid melodic statements)

**Truck - *happy sigh* cue**

Violin I  
Violin II  
Viola  
Cello

# Truck - happy sigh cue

1  $\text{♩} = 100$

*sul pont.* *poco a poco* *normale* *sul tasto* *normale*

Violin 1 *pp mp p mp mf p mp mf*

Violin 2 *pp mp p mp mf p mp mf*

Viola *pp mp p mp mf p mp mf*

Cello *pp mp p mp mf p mp mf*

*sul tasto* *normale* *sul tasto* *normale*

Vln. 1 *p mp mf p mp p*

Vln. 2 *p mp mf p mp p*

Vla. *p mp mf p mp p*

Vc. *p mp mf p mp p*

# Truck - happy sigh cue

2

♩ = 152

Choose from motive list A and B.

extended techniques or normale  
6 times

Vln. 1  
 Vln. 2  
 Vla.  
 Vc.

3

Faster: Any tempo - parts need not be aligned.  
Choose motive lists A,B,C (concentrate on list C).

Vln. 1  
 Vln. 2  
 Vla.  
 Vc.

A

Choose any two-note group, any octave.

B

C

Vln. 1  
 Vln. 2  
 Vla.  
 Vc.

### III. Scribble Talk

For 3 - 8 Instruments

In three parts:

1. Prosody
2. Motherese
3. Stress Timing/Babbling

## Scribble Talk – directions

In three parts: Prosody, Motherese and Stress-timing.

For any number of instruments. Play any part or a combination of parts.

### Cue 1

0:30 – 0:45

**All:** Dynamics are to be kept as soft as possible, except for the prosodic strain, which should also be generally as soft as possible but may reach mezzo piano in the climaxes of phrases. Leave space between articulations. Play about 1/3 of the time.

#### Prosody (melodic strain)

- Each phrase may be played once. It is not necessary to play all of the phrases. They should be of roughly equal duration, about 3 seconds (quarter note equals 60 B.P.M. for the notated phrases).
- The highest notes of phrases should be lightly accented: held for full duration and played at a slightly higher volume level.
- Although notated pitches are desired, microtonal variances glissandi, and gentle grace notes are welcome. Allow the pitch to fall slightly at the ends of phrases. Octave transpositions are possible.
- When not playing phrases, intermittently add snuffy breath-like sounds.
- Play phrases in an explorative self-involved manner; do not react to the other musicians.

#### Motherese (harmonic strain)

- Each chord voicing can be stated once. Leave space between chords. Duration should be from medium long to long. Maintain the given register.
- React to the prosodic strain – be incredibly sensitive to the melodic phrases and make placements of chords relate to them.

#### Stress-timing (rhythmic strain):

- About 1/3 of the time make very quiet, quickly articulated snuffy breath-like sounds, sometimes calm, sometimes enthusiastic.

### Cue 2

0:30 – 0:45

**All:** Reduce the number of instruments to two. At least one instrument should play the prosodic part. Dynamics are still as soft as possible. Play about 1/2 of the time. Unless stated otherwise continue similar articulation from before.

#### Prosody (melodic strain)

- Play phrases in a more reactive manner. Begin them by responding to other musicians, and then continue in a self-involved fashion.
- Begin to combine some phrases.
- Add whisper, breathy and nasal articulation.
-

## Scribble Talk - directions

### Motherese (harmonic strain)

- Continue as before.

### Stress-timing (rhythmic strain):

- Tacet.

### Cue 3

1:30 – 2:00

**All:** All instruments should play. Dynamics are approximately mezzo piano. Play about 2/3 of the time. Unless stated otherwise continue similar articulation from cues 1 and 2.

### Prosody (melodic strain)

- Play phrases in a more reactive manner throughout.
- Combine more phrases.

### Motherese (harmonic strain)

- Continue as before.
- Play some chords in succession (without interspersing rests). Maintain space between chords or combined chords.

### Stress-timing (rhythmic strain):

- Begin to make short groove-like interpretations of the text (lasting from three to ten seconds). Interpret phrases once, not all need to be played. If playing a pitched instrument, concentrate upon sonorities without definite pitch.

### Cue 4

c. 2:00

**All:** Dynamics are mezzo piano to mezzo forte. Play longer phrases with more expressive/communicative articulation. Create smooth, broad contours. Expand registers.

### Prosody (melodic strain)

- Play phrases in a more reactive manner.

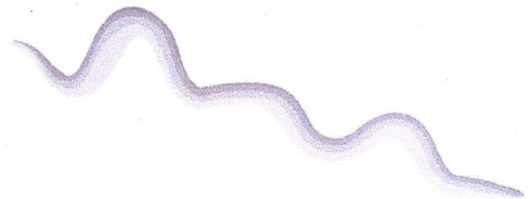
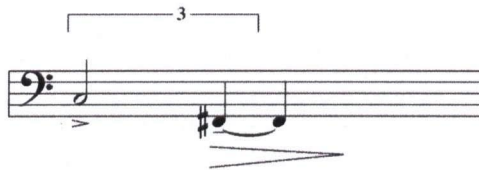
### Motherese (harmonic strain)

- Feel free to add groove-like interpretations of the stress timing/babbling page.
- Play more chords in succession.
- It is possible to repeat some chords.

### Stress-timing (rhythmic strain):

- Choose a few text phrases and play longer groove-like interpretations of them (ten to twenty seconds). Interpret each phrase once or twice.

## Scribble Talk - Prosody cues 1 and 2

 $\text{♩} = 60$ 



# Scribble Talk - Prosody cues 3 and 4

♩ = 60

The musical score consists of several staves with notes and rests, interspersed with various hand-drawn scribbles. The staves are arranged in a non-linear fashion. The first staff has a treble clef and a key signature of one sharp (F#), with a 5-measure rest and a 3-measure rest. The second staff has a treble clef and a 5-measure rest. The third staff has a bass clef and a 5-measure rest. The fourth staff has a treble clef and a 6-measure rest. The fifth staff has a treble clef and a 3-measure rest. The sixth staff has a bass clef and a 3-measure rest. The seventh staff has a treble clef and a 3-measure rest. The eighth staff has a bass clef and a 3-measure rest. The ninth staff has a treble clef and a 3-measure rest. The tenth staff has a bass clef and a 3-measure rest. The scribbles are drawn in various colors (purple, black, brown) and styles (wavy, jagged, scribbled).



## Scribble Talk - Stress-timing

Apabouyé oyé oyé *pabouyé*

**bullya bullyba**

**abbelyo abbbbah**

**goddolyo bbbbbb goddolyo guh**

**bah bah buah**

**abbbbb-cah**

*hubp habp engmf*

ah ahr ahrah

ah-bbb ah-bbb ah-bbbbbbbb

a bbbbbeo bbbbah

bboddolyo ug... geh... gah

*bbbbbbbberr bbbbbbbbbbb*

abé adowa bababa...bey

## IV. Singing

Violin I  
Violin II  
Viola  
Cello  
Electric Guitar  
Double Bass  
Piano  
Drum Kit

# Singing

Timeline: c. 20"      20-30"      c. 10"      20-30"

Violin 2: Restrict range - repeat notes, change note order, use varied tempi, timbre, delay, and effects.

Guitar: Restrict range - repeat notes, change note order, use varied tempi, timbre, delay, and effects.

Piano: Insert screws between strings of pitch classes Bb, Db and Ebs in very low and very high registers. *p* Very sparse and quiet. use ped.

Drums: Pull end of stick across cymbal to create ringing tones. *p* Very sparse and quiet.

1 On Cue

♩ = 96

Vln. 2: Continue ad lib. until cue 2 (about 30"), very sparse. Use only extended techniques, get sparser, quieter.

Vla.: *sul tasto non vibrato détaché* *mf* *p*

Guit.: Continue ad lib. until cue 2 (about 30"). Soft weird singing sounds; very sparse, get sparser, quieter.

pno.: Continue ad lib. until cue 2 (about 30"), very sparse.

Drums: Continue ad lib., very sparse and quiet.

3

Vln. 2

Vla.

Guit.

pno.

Drums

*pp* *p* *mp* *poco* *pp* *mp*

Add other sounds...

8

Vln. 1

Vln. 2

Vla.

Guit.

pno.

Drums

*pp* *p* *mp* *pp* *mp* *p*

2

13 Begin to play some notes about a quarter tone flat. Stop after about 20"

Vln. 2

Vla.

*mp*

*p*

Guit. Drop slightly in pitch. Fade out after about 10".

Add chord voicings ad lib.  
A-7 (add Bb, Db, Eb)

pno.

Drums After about 5" imply varied tempi - short bursts, very quiet. Fade in and out, speed up, slow down.

18

Vln. 1

*pp*

*n*

*pp*

Vln. 2

Vla.

*mp*

*n*

*p*

*mp*

pno.

Drums

23

Vln. 1

Vln. 2

Vla.

pno.

Drums

*pp* *n* *mp*

*p* *mp* *pp* *mp*

*mp*

*Ad lib.*

*détaché non vibrato sul tasto*

27

Vln. 1

Vln. 2

Vla.

Vc.

pno.

Drums

*poco* *p*

*poco* *p*

*poco* *p*

*poco* *p*

*(Ad lib.)*



31

Vln. 1

Vln. 2

Vla.

Vc.

pno.

Drums

*pp* *mp* *poco* *pp*

*mp* *pp*

*Red*

35

Vln. 1

Vln. 2

Vla.

Vc.

pno.

Drums

*p* *mp* *mp*

*p* *mp*

(Ad lib.)

*Red*

39

Vln. 1 *pp* *détaché* (except notes with tenuto markings) *p* *détaché* (except notes with tenuto markings)

Vln. 2 *p* *mp* *p*

Vla. *p* *mp* *p*

Vc. *p* *mp* *p* *détaché* (except notes with tenuto markings)

pno. (Ad lib.)

Drums While continuing ad lib. begin to play time and add accents. Imply 6 against 4.

3

43

Vln. 1 *mp* *vibrato normale* *non vibrato* *détaché non vibrato*

Vln. 2 *mp* *non détaché* *poco* *p* *mp*

Vla. *mp* *non détaché* *vibrato normale* *poco* *p* *mp*

Vc. *mp* *vibrato normale* *poco* *p* *non vibrato* *mp*

pno.

Cb. *mp*

Drums *p*

[illegible]

51

Vln. 1

Vln. 2

Vla.

Vc.

pno.

Cb.

Drums

*mp*

*non vibrato*

*mp*

*p*

*non vibrato*

*mp*

*p*

*mp*

*poco*

*mp*

*mp*

*poco*

*p*

*Pia*

55

Vln. 1 *p* *mf* *vibrato normale* 3 3

Vln. 2 *mf*

Vla. *mf*

Vc. *p* *mf* *vibrato normale* 3 3

pno. *End ad lib. legato* *mf*

Cb. *pizz.* *pp*

Drums *pp* Either play time with bass and piano or ad lib. as before.

59

Vln. 1 *p* *non vibrato* *mp* *vibrato normale* *pp*

Vln. 2 *non vibrato* *mp* *vibrato normale* *pp*

Vla. *non vibrato* *mp* *vibrato normale* *pp*

Vc. *non vibrato* *mp* *vibrato normale* *pp*

pno. *mp* *mf* *mp* *mf*

Cb. *pp* *p* *mp*

Drums *pp* *p* *mp*

[illegible]

67

Vln. 1

*mp*

*poco*

*p*

Vln. 2

*mp*

*poco*

*p*

Vla.

*mp*

*poco*

*p*

Vc.

*mp*

*poco*

*p*

pno.

Cb.

Drums

[illegible]

79

Vln. 1 *mp* *mf* *p*

Vln. 2 *mp* *mf* *p*

Vla. *mp* *mf* *p*

Vc. *mf* *p* *pp*

Guit. *mf*

pno. *mf*

Cb. *mp* (with bass) *mf*

Drums *mp* *mf*

Add sixteenth notes and faster notes, in and out of time.

83

Vln. 1 *mp* *mf* *mp*

Vln. 2 *mp* *mf* *mp*

Vla. *mp* *mf* *mp*

Vc. *mp* *mf* *mp*

Guit. *mp*

pno. *mp*

Cb. *mp*

Drums *mp*

87

Vln. 1 *mf* *crescendo poco a poco*

Vln. 2 *mf* *crescendo poco a poco*

Vla. *mf* *crescendo poco a poco*

Vc. *mf* *crescendo poco a poco*

Guit. Loop. After about 6-8" gradually drop pitch. Go as far as you'd like.

pno. Ad lib. Add prepared notes any rhythm in extreme registers. *mp*

Cb.

Drums (not with the bass) *mf* *crescendo poco a poco*

91

Vln. 1 *mp* *crescendo poco a poco*

Vln. 2 *mp* *crescendo poco a poco*

Vla. *mp* *crescendo poco a poco*

Vc. *mp* *crescendo poco a poco*

Guit. *mp*

pno. *arco*

Cb. *mp* *crescendo poco a poco*

Drums



4 10" 10" 5 5"

95

Vln. 1 Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.

Vln. 2 Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.

Vla. Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.

Vc. Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.

Guit. Create low dirty loops. Add very high notes. Use Bb, Db, and Eb.

pno.

Cb. Create low repeated figures using Db, Bb and Ebs.

Drums Create very low and very high sounds, using varied tempi.

The musical score is organized into staves for various instruments. At the top, a timeline shows four segments: 4, 10", 10", and 5, with a final 5" segment. The instruments and their instructions are as follows:

- Vln. 1**: Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.
- Vln. 2**: Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.
- Vla.**: Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.
- Vc.**: Add high notes: *sul ponticello*, harmonics (natural or artificial) long notes. Use Bb, Db, and Eb.
- Guit.**: Create low dirty loops. Add very high notes. Use Bb, Db, and Eb.
- pno.**: (Piano part, consisting of two staves).
- Cb.**: Create low repeated figures using Db, Bb and Ebs.
- Drums**: Create very low and very high sounds, using varied tempi.

The score includes musical notation for the guitar part, showing a sequence of notes with a *mp* (mezzo-piano) dynamic marking. The notation is in a single staff with a treble clef and a key signature of one flat.

Repeat until piano and drums join bass.

98 (Continue ad lib.)

Vln. 1 (Continue ad lib.)

Vln. 2 (Continue ad lib.)

Vla. (Continue ad lib.)

Vc. (Continue ad lib.)

Guit. (Continue ad lib.)

pno. (Continue ad lib.) Continue ad lib. or join bass.

♩ = 116  
Eb-7  
pizz.  
mf

Cb. (Continue ad lib.)

Drums (Continue ad lib.) ♩ = 116 Continue ad lib. or join bass.

### Strategies for improvisation:

It is possible to play for the entire section, intermittently, or rest for the entire section.

Strings, Guitar and Piano: Generally blend into the texture of the ensemble. Occasionally add varied versions of the four-note melody (in the style of the previous music). It is possible to play in or out of time.



Bass: Follow the music with the option of dropping out or changing style after about 2 or 3 minutes. (if you do this, bring the bass line back near the end of the section - cued by the pianist).

Drums: Continue ad lib. or join bass. Create 12 beat grooves that imply 4/8 against 6/8.

**E** Last time on cue

106

$\text{♩} = 116$

Last time in time and on cue (by pianist).

Vln. 1  
 Vln. 2  
 Vla.  
 Vc.  
 Guit.  
 pno.  
 Cb.  
 Drums

Play last time  
 Play last time.  
*mf*  
*mf*

F On Cue

114  $\text{♩} = \text{♩}$

Vln. 1 *mf* *pp*

Vln. 2 *mf* *pp*

Vla. *mf* *pp*

Vc. *mf* *pp*

Guit.

pno. *mf*

Cb. *mf*

Drums

Straight eighth groove.

The musical score is written for measures 114 through 117. The key signature is one flat (Bb) and the time signature is 4/4. Measure 114 begins with a tempo/meter change indicated by a quarter note followed by an equals sign and another quarter note. The string section (Vln. 1, Vln. 2, Vla., Vc.) and piano (pno.) play a melody starting on a half note, moving to quarter notes in the second and third measures, and ending with a half note in the fourth measure. The dynamics for these parts are marked *mf* (measures 114-116) and *pp* (measure 117). The guitar (Guit.) and contrabass (Cb.) parts are marked *mf* and play a steady eighth-note groove. The drums (Drums) are marked with a straight eighth groove. In measure 117, all instruments have a whole rest.

118

Vln. 1 *mp* *mf*

Vln. 2 *mp* *mf*

Vla. *mp*

Vc. *mp*

Guit.

pno. *mp*

Cb.

Drums

The musical score for measures 118-121 is as follows:

- Measure 118:** Violin 1 and Violin 2 play a melody starting on G4, moving to A4, B4, and C5. Viola and Violoncello play a similar melody starting on E3, moving to F3, G3, and A3. The piano accompaniment features a melody in the right hand starting on G4, moving to A4, B4, and C5, and a bass line in the left hand starting on E3, moving to F3, G3, and A3. The guitar is silent.
- Measure 119:** The strings continue their melody, with Violin 1 and Violin 2 moving to D5, E5, and F5. Viola and Violoncello move to B3, C4, and D4. The piano accompaniment continues with a similar melody in the right hand and a bass line in the left hand. The guitar is silent.
- Measure 120:** The guitar plays a solo, consisting of a series of eighth notes: G4, A4, B4, C5, B4, A4, G4. The other instruments are silent.
- Measure 121:** The piano accompaniment features a melody in the right hand starting on G4, moving to A4, B4, and C5, and a bass line in the left hand starting on E3, moving to F3, G3, and A3. The contrabass and drums provide a rhythmic foundation.

122

The musical score for measures 122-125 is arranged in a system with eight staves. The first four staves (Vln. 1, Vln. 2, Vla., Vc.) are grouped by a brace on the left. The fifth staff (Guit.) is a single line. The sixth staff (pno.) is a grand staff with two lines. The seventh staff (Cb.) is a single line. The eighth staff (Drums) is a single line. The key signature has one flat (B-flat). The time signature is 4/4. The score begins with a measure rest in measure 122. In measure 123, Vln. 1 and Vln. 2 play a half note G4. Vla. and Vc. play a half note F4. In measure 124, Vln. 1 and Vln. 2 play a half note A4. Vla. and Vc. play a half note G4. In measure 125, Vln. 1 and Vln. 2 play a half note B4. Vla. and Vc. play a half note A4. The score ends with a measure rest in measure 126. Dynamics include *f* (forte) in measures 123, 124, and 125.

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drums

G

126

Vln. 1 *mp*

Vln. 2 *mp*

Vla. *mp*

Vc. *mp*

Guit. *mf*

Add occasional full voicings based upon Eb dorian.

pno.

Cb. *pp*

Drums

131

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drums

The musical score for measures 131-135 features the following instruments and their parts:

- Vln. 1:** Plays a series of half notes, starting with a measure rest in measure 132.
- Vln. 2:** Plays a series of half notes, starting with a measure rest in measure 132.
- Vla.:** Plays a series of half notes, starting with a measure rest in measure 132.
- Vc.:** Plays a series of half notes, starting with a measure rest in measure 132.
- Guit.:** Plays a series of chords, starting with a measure rest in measure 132.
- pno.:** Indicated by diagonal lines across the staff, suggesting a sustained or tremolo effect.
- Cb.:** Plays a series of eighth notes, starting with a measure rest in measure 132.
- Drums:** Indicated by diagonal lines across the staff, suggesting a sustained or tremolo effect.



H

136

Vln. 1 *sul tasto*  
*pp*

Vln. 2 *sul tasto*  
*pp*

Vla. *sul tasto*  
*pp*

Vc. *sul tasto*  
*pp*

Guit.

pno. *mf*

Cb. *mf*

Drums

The musical score for measures 136-139 is as follows:

- Measure 136:** Violin 1, Violin 2, Viola, and Violoncello play a tremolo. The Piano plays a tremolo. The Contrabass and Drums are silent.
- Measure 137:** Violin 1, Violin 2, Viola, and Violoncello play a tremolo. The Piano plays a tremolo. The Contrabass and Drums are silent.
- Measure 138:** Violin 1, Violin 2, Viola, and Violoncello play a sustained melody. The Piano plays a sustained melody. The Contrabass plays a sustained melody. The Drums play a sustained pattern.
- Measure 139:** Violin 1, Violin 2, Viola, and Violoncello play a sustained melody. The Piano plays a sustained melody. The Contrabass plays a sustained melody. The Drums play a sustained pattern.

141

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drums

The musical score for measures 141-145 is as follows:

- Violin 1 (Vln. 1):** Measures 141-143 have a whole note G4. Measures 144-145 have a whole note F#4.
- Violin 2 (Vln. 2):** Measures 141-143 have a whole note E4. Measures 144-145 have a whole note D4.
- Viola (Vla.):** Measures 141-143 have a whole note E4. Measures 144-145 have a whole note D4.
- Violoncello (Vc.):** Measures 141-143 have a whole note E3. Measures 144-145 have a whole note D3.
- Guitar (Guit.):** Measures 141-145 feature a continuous arpeggiated pattern of chords: G4-Bb4-D5, F#4-A4-C5, and E5-G5.
- Piano (pno.):** Measures 141-143 have a sustained chord of G4-Bb4-D5. Measures 144-145 have a sustained chord of F#4-A4-C5. A *mp* dynamic marking is present in measure 144.
- Contrabass (Cb.):** Measures 141-143 have a whole note G2. Measures 144-145 have a whole note F#2.
- Drums:** Measures 141-145 feature a continuous rhythmic pattern of eighth notes.

146

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drums

*mp*

*mf*

*mf*

*mf*

## I

150 *pizz.*

Vln. 1 *p*

Vln. 2 *pizz.* *p*

Vla. *pizz.* *mp*

Vc. *pizz.* *mp*

Guit. *mp*

pno. *pp*

Cb. *mp*

Drums *p*

The musical score for measures 150-153 is as follows:

- Measure 150:** Vln. 1 and Vln. 2 play a half note G4. Vln. 2 is marked *pizz.* and *p*. Vla. plays a half note G4. Vc. plays a half note G2. Guit. plays a half note G4. pno. plays a half note G4. Cb. plays a half note G2. Drums play a half note G4.
- Measure 151:** Vln. 1 and Vln. 2 play a half note A4. Vln. 2 is marked *pizz.* and *p*. Vla. plays a half note A4. Vc. plays a half note A2. Guit. plays a half note A4. pno. plays a half note A4. Cb. plays a half note A2. Drums play a half note A4.
- Measure 152:** Vln. 1 and Vln. 2 play a half note B4. Vln. 2 is marked *pizz.* and *p*. Vla. plays a half note B4. Vc. plays a half note B2. Guit. plays a half note B4. pno. plays a half note B4. Cb. plays a half note B2. Drums play a half note B4.
- Measure 153:** Vln. 1 and Vln. 2 play a half note C5. Vln. 2 is marked *pizz.* and *p*. Vla. plays a half note C5. Vc. plays a half note C3. Guit. plays a half note C5. pno. plays a half note C5. Cb. plays a half note C3. Drums play a half note C5.

153

Repeat ad lib. speed up, slow down.

Vln. 1

Vln. 2

Repeat ad lib. speed up, slow down.

Vla.

*p*

Repeat ad lib. speed up, slow down.

Vc.

*p*

Repeat ad lib. speed up, slow down.

Guit.

*p*

Repeat ad lib. speed up, slow down.

pno.

Repeat ad lib. speed up, slow down.

Cb.

*p*

Drums

Play time ad lib. Speed up, slow down.

*pp*

Detailed description: This is a page of a musical score, page 164, showing measures 153 and 154. The score is for a full orchestra and includes staves for Violin 1, Violin 2, Viola, Violoncello, Guitar, Piano, Contrabass, and Drums. Measures 153 and 154 contain musical notation for each instrument. Measures 155 and 156 are empty staves with repeat instructions. The score includes dynamic markings (p, pp) and performance instructions (Repeat ad lib. speed up, slow down., Play time ad lib. Speed up, slow down.).

157 Use varied gently articulation: soft to medium soft  
*pizz.*, *sul tasto*, harmonics, muted notes...

c. 10" 10 - 20"

(After bass stops) Continue or fade out.

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

Pno.

Cb.

Drums

## V. Sleep Furiously

Violin I  
Violin II  
Viola  
Cello  
Electric Guitar  
Piano  
Double Bass  
Drum Kit

## Sleep Furiously - directions



Continue previous material.



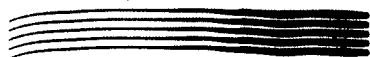
Continue previous material or cease playing.



Alternate staves indicate improvisation. Unless marked as a solo, they denote supporting a soloist. Those with thicker lines at the beginning or ending are to be regarded as loose suggestions for the density, volume or shape of the solo. Solos may be reassigned in various performances.



Each improvisatory section contains numerous options for accompaniment and solo performance. These are to be found on the bottom two staves of the score and in every part (see the examples below). It is also possible to freely improvise in the style of the previous or following music in the score.



Choose from these options while reacting to the texture created by the rest of the ensemble. Extemporization should be based upon the material provided - chord symbols, scales, graphic symbols, rhythmic and melodic motives, and/or the surrounding written music. Keep in mind the role of the instrument (soloist or accompanist in section 1, 2, and 3) and conversational strategies: interruption, turn taking, completion points, abrupt subject change, echolalia, echo questions, overlaps, pauses, etc (in section 4).

The maximum degree of stimulus freedom is preferred. It is for this reason that alternate improvisatory plans are provided. Solos may be reassigned.

Scale

D7(#11)(add Bb)

any order/combination

Improvisation options



## Sleep Furiously

1

Varied tempi:

5 - 8"

$\text{♩} = 100$   $\text{♩} = 80 - 100$  Move on individually without cue. Harmonic gliss on D string

Violin 1

Violin 2

Viola

Cello

Guitar

Piano

Bass

Drums

Scale

Improvisation options

guitar solo

30 - 45"

Harmonic gliss may or may not continue into guitar solo.

Vln. 1

Vln. 2

Vla.

Vc.

open solo

Guit.

Arpeggiate and roll chords, very spacious.

pno.

Cb.

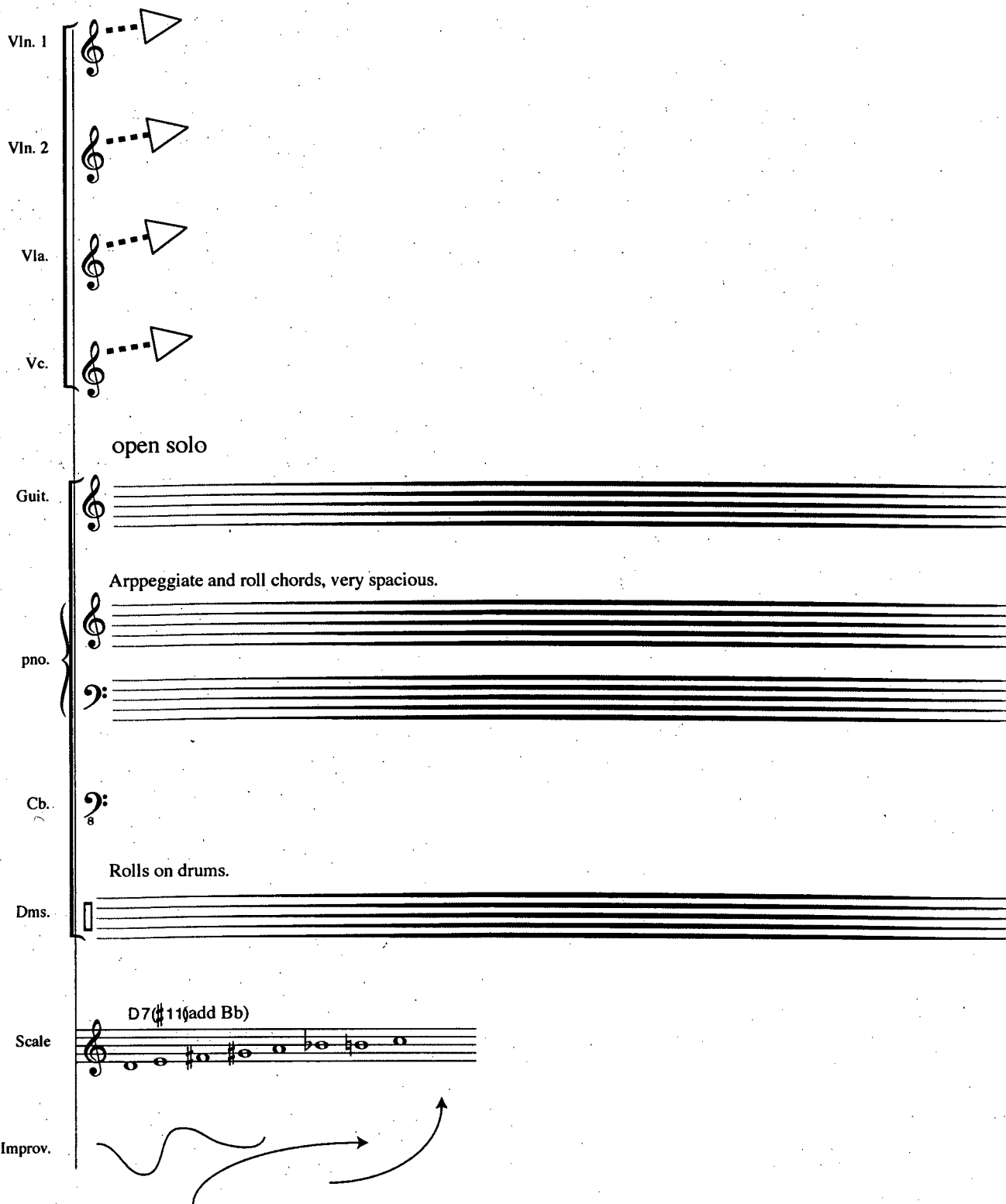
Rolls on drums.

Dms.

Scale

D7(#11)(add Bb)

Improv.



1a

 $\text{♩} = 120$ 

Use to cue end of solo.

Guit. *f*

pno. *f*

Guit.

pno.

Cb. *pizz.* *f*

Dms. Fills ad lib.

1b

Varied tempi: ♩ = 60 - 90 Entrances need not be synchronized

non vibrato  
sul pont. *poco a poco*

Vln. 1 *f*

Vln. 2 *f* *non vibrato* *poco a poco* *mf*

Vla. *f* *non vibrato sul pont.* *mf*

Vc. *f* *non vibrato* *sul pont.* *normale* *mf*

(♩ = 120)

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Afro cuban 9/8 12/8 ad lib.

Dms. *f*

Guit. *f*

pno. *f*

Cb. *f*

*sul tasto* *poco a poco* *sul pont.* Continue in a similar manner

Vln. 1 *mf* *f*

*sul pont.* *poco a poco* *normale* Continue in a similar manner

Vln. 2 *f* *mf*

Vla. *f* *mf* Continue in a similar manner

Vc. *sul pont.* *normale* Continue in a similar manner

*f* *mf*

Guit. Maintain phrase or ad lib.

pno. Maintain phrase or ad lib.

Cb. <sub>8</sub> Maintain phrase or ad lib.

Dms.

Musical score for page 173, featuring the following instruments and staves:

- Vln. 1**: Violin 1, Treble clef, solid line.
- Vln. 2**: Violin 2, Treble clef, solid line.
- Vla.**: Viola, Alto clef, solid line.
- Vc.**: Violoncello, Treble clef, solid line.
- Guit.**: Guitar, Treble clef, dotted line.
- pno.**: Piano, Treble and Bass clefs, dotted lines. Includes the instruction "Maintain phrase or ad lib." above the Treble staff.
- Cb.**: Contrabass, Bass clef, dotted line.
- Dms.**: Drums, Percussion clef, solid line.

The score is divided into measures by vertical lines. Rehearsal marks (triangles) are placed at the end of the first, second, and third measures for the Vln. 1, Vln. 2, Vla., Vc., Guit., Cb., and Dms. staves. The piano part (pno.) has a dotted line across the measures, with the instruction "Maintain phrase or ad lib." written above the Treble staff.

2 - 4 times

On cue

(piano l.h.)

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Dms.

2

On Cue

5 - 8"

piano solo

30 - 45"

$\text{♩} = 100$

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

arco

Cb.

Dms.

Scale

Improv.

Support piano solo.

Support piano solo.

Support piano solo.

move directly to solo

Open solo

B7(sus4)(add C)

any order/combination

*mp*

*p*

*mf*



2a

Guit.

Use to cue end of solo.  
Duplicate/harmonize melody ad lib.

pno.

*mf*

Cb.

Dms.

Scale

B7 (add C)

The musical score for section 2a is written for four instruments: Guitar, Piano, Contrabass, and Drums. The time signature is 5/4. The Piano part begins with a melody in the right hand, marked *mf*, and a rhythmic pattern in the left hand. The Guitar part is mostly rests. A scale for B7 (add C) is shown at the bottom.

(with piano)

Guit.

*mf*

pno.

Cb.

Dms.

(after guitar)  
Straight 8th groove

The musical score for section 2a (with piano) is written for four instruments: Guitar, Piano, Contrabass, and Drums. The time signature is 5/4. The Piano part has a melody in the right hand and a rhythmic pattern in the left hand. The Guitar part has a melody in the right hand. The Drums part has a straight 8th groove.

Score for page 177, featuring the following instruments and parts:

- Vln. 1:** Melodic line in 5/4 time, starting with a *mp* dynamic, transitioning to *mf* in 6/4 time, and ending with a *pp* dynamic in 5/4 time.
- Vln. 2:** Rests in 5/4 and 6/4 time, followed by a *pp* dynamic in 5/4 time.
- Vla.:** Rests in 5/4 and 6/4 time, followed by a *pp* dynamic in 5/4 time.
- Vc.:** Rests in 5/4 and 6/4 time, followed by a *pp* dynamic in 5/4 time.
- Guit.:** Melodic line in 5/4 time, transitioning to 6/4 time, and ending with a *pp* dynamic in 5/4 time.
- pno.:** Melodic line in 5/4 time, transitioning to 6/4 time, and ending with a *pp* dynamic in 5/4 time. The bass line consists of a continuous eighth-note pattern.
- Cb.:** Rests in 5/4 and 6/4 time, followed by an *arco* marking and a *mp* dynamic in 5/4 time.
- Dms.:** Continuous eighth-note pattern in 5/4 and 6/4 time.

The score is written in 5/4 time, with a key signature of one sharp (F#). The dynamics range from *mp* (mezzo-piano) to *pp* (pianissimo). The *arco* marking indicates that the cello should be played with the bow.

178

Vln. 1

*mp* *mf*

Vln. 2

*mp* *mf*

Vla.

Vc.

*mf* *pp*

Guit.

pno.

Cb.

Dms.

The musical score is for page 178 and consists of eight staves. The top staff is for Violin 1 (Vln. 1), followed by Violin 2 (Vln. 2), Viola (Vla.), Violoncello (Vc.), Guitar (Guit.), Piano (pno.), Contrabass (Cb.), and Double Bass (Dms.). The time signature is 5/4. The key signature has one sharp (F#). The score is divided into three measures. The first measure starts with a *mp* (mezzo-piano) dynamic. The second measure starts with a *mf* (mezzo-forte) dynamic. The third measure starts with a *pp* (pianissimo) dynamic. The piano part (pno.) features a continuous eighth-note pattern in the right hand and a continuous eighth-note pattern in the left hand. The double bass (Dms.) part features a continuous eighth-note pattern. The guitar (Guit.) part features a continuous eighth-note pattern. The violin parts (Vln. 1 and Vln. 2) feature a continuous eighth-note pattern. The viola (Vla.) and cello (Vc.) parts are mostly silent, with some notes in the second measure. The contrabass (Cb.) part is mostly silent, with some notes in the second measure.

Score for page 179, featuring the following instruments and parts:

- Vln. 1**: Violin 1, starting with *mp* and transitioning to *mf*.
- Vln. 2**: Violin 2, starting with *mp* and transitioning to *mf*.
- Vla.**: Viola, playing a melodic line with dynamics *mp*, *mf*, *mp*, and *mf*. Includes the instruction: *normale poco a pocul pont.*
- Vc.**: Violoncello, starting with *mp* and transitioning to *mf*.
- Guit.**: Guitar, playing a melodic line.
- pno.**: Piano, playing a melodic line in the right hand and a rhythmic pattern in the left hand.
- Cb.**: Contrabass, playing a low melodic line.
- Dms.**: Drums, playing a rhythmic pattern.

The score is written in 5/4 time and includes various dynamic markings and performance instructions.

Score for Violins 1 & 2, Viola, Violoncello, Guitar, Piano, Contrabass, and Double Basses.

**Violins 1 & 2:** *mp* (first measure), *mf* (second measure), *mf* (third measure).

**Viola:** *mp* (first measure), *mf* (second measure), *mp* (third measure), *mf* (fourth measure). *normale poco a poco al pont.*

**Violoncello:** *mp* (first measure), *mp* (second measure), *mf* (third measure), *mp* (fourth measure).

**Guitar:** Continue phrase or fade out.

**Piano:** Continue phrase or fade out.

**Contrabass:** *mf* (first measure), *mf* (second measure), *mf* (third measure), *mf* (fourth measure).

**Double Basses:** *mf* (first measure), *mf* (second measure), *mf* (third measure), *mf* (fourth measure).

Score for Vln. 1, Vln. 2, Vla., Vc., pno., Cb., and Dms. across three measures.

**Vln. 1:** *mp* (first measure), *mf* (second and third measures).

**Vln. 2:** *mf* (second and third measures).

**Vla.:** *mp* (first measure), *mf* (second measure), *mp* (third measure), *mf* (fourth measure). Instruction: *normale poco a posul pont.*

**Vc.:** *mf* (second measure).

**pno.:** Dotted lines with triangle markers at the end of the first, second, and third measures.

**Cb.:** Dotted lines with triangle markers at the end of the first, second, and third measures.

**Dms.:** Dotted lines with triangle markers at the end of the first, second, and third measures.

Strings: repeat once more or move directly to cue 2

The musical score for the strings section consists of six staves: Vln. 1, Vln. 2, Vla., Vc., Cb., and Dms. The time signature is 5/4. The score is divided into three measures by vertical bar lines. In the first measure, the woodwinds (Vln. 1, Vln. 2, Vla., Vc.) play a dotted half note G4. In the second measure, they play a dotted half note A4. In the third measure, they play a dotted half note B4. The Cb. staff has a whole rest in the first and third measures and a dotted half note A4 in the second measure. The Dms. staff has a continuous tremolo pattern across all three measures. The woodwinds have a repeat sign at the end of the third measure.

Vln. 1

Vln. 2

Vla.

Vc.

Cb.

Dms.

2b On Cue drum solo

Strings: continue on cue.

Vln. 1 *mp* *mf*

Vln. 2 *pizz.* *mp* *mf*

Vla. *normale* *poco a poco sul pont.* *mp < mf* *mp < mf*

Vc. *pizz.* *mp*

Dms. open solo

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Repeat phrase with slight variances.

Vln. 1 Repeat phrases or ad lib.

Vln. 2 Repeat phrases or ad lib.

Vla. Repeat phrases or ad lib.

Vc. Repeat phrases or ad lib.

Dms. (solo)



(drum solo continues)

30 - 45"

Strings: support drum solo. Continue in style of previous music or ad lib.

Vln. 1

Vln. 2

Vla.

Vc.

(solo)

Dms.

Ebo (add E, G sharp, B))

Scale

Improv.

*poco a poco sul pont.**p**mp*
*p**mf**p**mf*

3

bass solo

30 - 45"

Any tempo - parts need not align.

Vln. 1 *p*  $\swarrow$  *mp*  $\searrow$

Vln. 2 *p*  $\swarrow$  *mp*  $\searrow$

Vla. *p*  $\swarrow$  *mp*  $\searrow$

Vc. *p*  $\swarrow$  *mp*  $\searrow$

Guit.

pno.

Cb. open solo

Dms.

Scale C# add A, D)

Impro. spacious

*p*  $\swarrow$  *mp*  $\searrow$

3a

♩ = 94

Vln. 1  
 Vln. 2  
 Vla.  
 Vc.

Fade out accompaniment.  
 Guit.

Fade out accompaniment.  
 pno.

Use to cue end of solo.  
*pizz.*  
*mf* 3

Repeat once more or move to next measure.

Fade out accompaniment.  
 Dms.

C# (add A, D)  
 Scale

Improv.

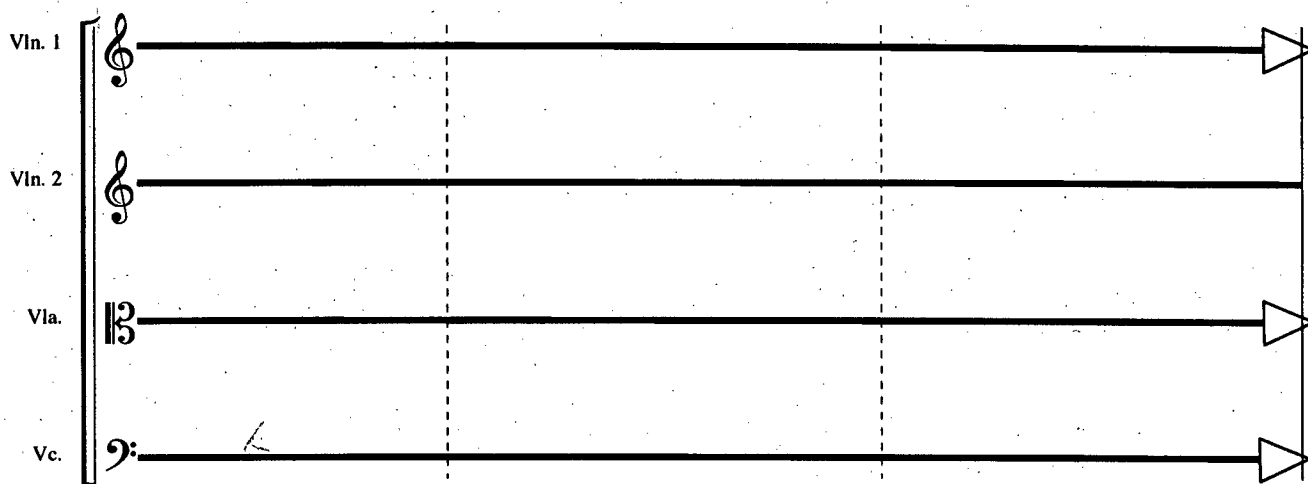
*p* < *mp* >

Vln. 1

Vln. 2

Vla.

Vc.



Four empty musical staves for Violin 1, Violin 2, Viola, and Violoncello. Each staff has a clef (treble for Vln. 1 and 2, alto for Vla., and bass for Vc.) and a repeat sign at the end.

Any tempo - parts need not align.

Guit.

pno.

Cb.

Dms.



Four musical staves for Guitar, Piano, Contrabass, and Drums. The Piano staff has a *mf* dynamic and a triplet of eighth notes. The Contrabass staff has an *arco* marking and a triplet of eighth notes. The Drums staff has a *mp* dynamic and a triplet of eighth notes. The Guitar staff has a *p* dynamic and a triplet of eighth notes. The Contrabass staff has a *p* dynamic and a triplet of eighth notes.

10-20"

$\text{♩} = 94$

Vln. 1 *mp* *3* *3* *3* *3* Repeat with variances, alter tempo.

Vln. 2  $\text{♩} = 94$  *mp* Repeat with variances, alter tempo.

Vla. Any tempo *p* *mp* Repeat with variances, alter tempo.

Vc. Any tempo *p* *mp* Repeat with variances, alter tempo.

Guit. Repeat with variances, alter tempo.

pno. *3* *3* *3* *3* Repeat with variances, alter tempo.

Cb. Repeat with variances, alter tempo.

Dms. Repeat phrase with slight variances. Repeat with variances, alter tempo.

4 On Cue

c. 10"

group improv

Continue after 10 - 20"

Any tempo - parts need not align.

Vln. 1

*p* *mp*

Vln. 2

*p* *mp*

Vla.

*p* *mp*

Vc.

*p* *mp*

Guit.

*p* *mp*

Arpeggiate and roll chords, very spacious.

pno.

arco

Cb.

*p* *mp*

Rolls on drums.

Dms.

CMaj7(#5 sharp 11) / Bb

Scale

Improv.

CMaj7(#5 sharp 11) / Bb

Conversation strategies:  
turn taking, interruption,  
echolalia.

4a

Each part should have it's own tempo.

Any tempo - end at any time.

Attacca to last movement.

Continue after 10 - 20"

any duration

Play all or portions of the phrase.

Strings - play written material or improvise.

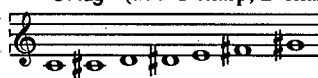
Vln. 1 *mf* *mp* *p* *mp*  
 Vln. 2 *mf* *mp* *p* *mp*  
 Vla. *mf* *mp* *p* *mp*  
 Vc. *mf* *mp* *p* *mp*

Rhythm section - repeat phrase or improvise.

Guit. *mf* *mp*  
 pno. *mf* *mp*  
 Cb. *pizz.* *mf* *mp*  
 Dms. *mf* *mp*

Scale

C Aug (add C sharp, D sharp)



Conversation strategies:  
 overlap, pauses, echolalia,  
 and completion points.

## VI. green ideas

Violin I  
Violin II  
Viola  
Cello  
Electric Guitar  
Piano  
Double Bass  
Drum Kit



# green ideas

Contiune until piano entrance.      On cue

(from previous movement)      1      ♩ = 138

Violin 1  
Violin 2  
Viola  
Cello  
Piano

*p* *mp*

Enter ad lib.

*p* *cres. poco a poco*

*Red*      \* *Red*      \* *Red*      \* *Red*      \*

5

pno.

*Red*      \* *Red*      \* *Red*      \* *ped. sim.*

Cb.

*pizz.* *mf*

9

pno.

*f*

Cb.

A

13

Vln. 1

Vc.

pno.

Cb.

Drms.

accents sim.

Straight eighth groove.

*f*

*mf*

*p*

*Rea*

17

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

*f*

*mf*

*Rea*

21

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

Pno.

Cb.

Drms.

*mp* *mf*

*mp* *mf*

*mp* *mf*

*mp* *mf*

*mp* *mf*

*f*

26

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

Pno.

Cb.

Drms.

*f* *mp* *mf* *f* *mp* *f* *mf* *mp* *f*

**B**

31

Vln. 1

Vln. 2

Vla.

Vc.

*p* *mp* *p* *mp* *p* *mp* *p*

C

37

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

*f*

*p*

*f*

*f*

*mf*

*f*

41

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

mf

f

f

f

f

45

The musical score consists of eight staves. The first four staves are for Violin 1, Violin 2, Viola, and Violoncello. The next two staves are for Guitar and Piano. The final two staves are for Contrabass and Drums. The key signature has one flat (B-flat). The time signature changes from 4/4 to 2/4 at measure 46, then to 3/4 at measure 47, and back to 4/4 at measure 48. The Violoncello staff has a forte (f) dynamic marking at measure 47. The Piano staff has a forte (f) dynamic marking at measure 45. The Drums staff has a rhythmic pattern of eighth notes.

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

**D** 5 - 8" On cue - very sudden c. 10"

Very slow overpressure creaks (son filé).

49

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

**On cue**

52

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.



E

56

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

The musical score for measures 56-59 is written for an ensemble. The key signature is one sharp (F#) and the time signature is 2/4. The score includes staves for Violin 1, Violin 2, Viola, Violoncello, Guitar, Piano, Contrabass, and Drums. The piano part is marked 'f' (forte). The drums part consists of a steady eighth-note pattern. The measures are marked with a large 'E' in a box at the top left.

60

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

8va

The musical score for page 201, measures 60-64, is written for a chamber ensemble. The instruments are Violin 1, Violin 2, Viola, Violoncello, Guitar, Piano (treble and bass), Contrabass, and Drums. The key signature has one sharp (F#) and the time signature changes from 3/4 to 4/4 and back to 3/4. The piano part includes an 8va line.

F

open solo in the style of scribble talk

45 - 60"

65

Vln. 2

Vc.

Guit.

pno.

Drms.

abé adowa bababa...bey

**bullya bullyba**

Apabouyé oyé oyé *pabouyé*

ah-bbb ah-bbb ah-bbbbbbbb

**abbbbb-cah**

A tempo - On cue

66

Vln. 1

Vln. 2

Vla.

Vc.

pno.

*mf*

*f*

*mf*

*f*

*mf*

*f*

*mf*

*ff*

**G**

72

Vln. 1 *f* *mf*

Vln. 2 *f* *mf* *f* *mf*

Vla. *pizz.* *f* *mf* *f* *mf*

Vc. *f*

open cello solo (Solos may be reassigned). 20 - 45"

77

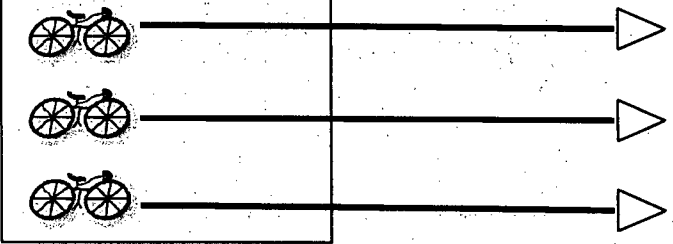
Vln. 1 *f*

Vln. 2 *f*

Vla. *mf*

Vc. *mf*

Accompany cello solo with occasional bike motive (from Truck).



On cue - by cellist

79

Vln. 1 *mf*

Vln. 2 *mf*

Vla. *mf*

Vc. *mf*

pno. *f*

H

85

The musical score consists of seven staves. The first four staves are for Violin I, Violin II, Viola, and Violoncello. The fifth staff is for Piano, the sixth for Contrabass, and the seventh for Drums. The key signature has one sharp (F#) and the time signature is 4/4. Measures 85 and 86 are in 4/4 time. At measure 87, the time signature changes to 2/4 for two measures, then back to 4/4 for the final measure. Dynamics include *f* (forte) and *mf* (mezzo-forte). A box labeled 'H' is positioned above the score. A slur is present over the piano part in measures 87 and 88.

Vln. 1 *f* *mf*

Vln. 2 *f* *mf*

Vla. *f* *mf*

Vc. *f* *mf*

pno. *ff* *mf*

Cb. *f*

Drms.

89

Vln. 1

Vln. 2

Vla.

Vc.

pno.

Cb.

Drms.

*mp*

*mf*

*f*

*8va*

I

solo - strings and guitar

30 - 45"

93

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

Improvise in the style of *Singing*.

Improvise in the style of *Singing*.

Improvise in the style of *Singing*.

Improvise in the style of *Singing*.

Improvise in the style of *Singing*.

On cue - by cellist

94

Vln. 1 *mf*

Vln. 2 *mf*

Vla. *mf*

Vc. *mf*

98

Vln. 1 *ff*

Vln. 2 *ff*

Vla. *ff*

Vc. *ff*

pno. *f* *ff*

140

J

102

Vln. 1

Vln. 2

Vla.

Vc.

pno.

*mf*

*mf*

*mf*

*f*

*mf*

*mf*

107

Vln. 1

Vln. 2

Vla.

Vc.

pno.

*f*

*mf*

*f*

*f*

*mp*



111

Vln. 1

Vln. 2

Vla.

Vc.

pno.

mf

f

mp

mf

mf

115

Vln. 1

Vln. 2

Vla.

Vc.

pno.

mf

f

mf

f

mf

119

Vln. 1

Vln. 2

Vla.

Vc.

pno.

K

Rubato chordal section

c. 20"

123 Play members of the chord or arpeggiate chords. Collectively move (by listening) through progression. Use low registers.

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

D7(#11)(add Bb)      B7(sus4)(add C)      Ebo(add E, G sharp, B)      C#-(add A, D)

(c. 20")

127

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

C Maj7 (#5 sharp 11) / Bb C Aug add C sharp, D sharp

pno.

Cb.

Drms.

133

L

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

137

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

mf

f

141

Vln. 1

Vln. 2

Vla.

Vc.

Guit.

pno.

Cb.

Drms.

mf

f