A FOUNDATIONAL APPROACH TO CORE MUSIC INSTRUCTION IN UNDERGRADUATE MUSIC THEORY BASED ON COMMON UNIVERSAL PRINCIPLES

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By
Christy Jo Talbott, B.A., B.S., M.M.

The Ohio State University
2008

Dissertation Committee:
Gregory M. Proctor, Ph.D., Advisor
Burdette Green, Ph.D.
Daniel Avorgbedor, Ph.D.

Approved by

________________________
Advisor
Music Graduate Program
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Music is a large subject with many diverse subcategories (Pop, Classical, Reggae, Jazz, and so on). Each subcategory, classified as a genre for its unique qualities, should relate in some way to that broader subject. These unique properties, however, do not negate all possible relationships among the genres. That these subcategories fit under a “music” label implies that they contain commonalities that transcend their differences. If there is, then, a set of commonalities for this abstract concept of music, then an examination of musics from diverse cultures should illuminate this fact. This “set of commonalities” for a real subject called music should not be limited to the Germanic tradition of the 16th-18th century or to Parisian art song of the 19th but, instead, is open to a world repertoire unbounded by era or nation. Every culture has invented a music of its own. The task here is to show that, from a variety of sources, a basic set of elements is common across cultures. In addition, those elements do not distinguish one category from another but, instead, collectively suggest a set of common principles. As a solution to a narrow scope of literature in the classroom, a course is designed that emphasizes
Common Universal Elements and Common Universal Principles. A Grid of Pertinence presents a visual representation of an analysis that identifies salient features. By identifying those features common to many musics, theory instructors can provide a new and more relevant foundation for teaching music to students of all interests.
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I am indebted to Dawn Renee Perry for editing, problem solving, and generally living through much of this experience with me. Finally, I thank my family, especially C.J., and friends for their constant love and support.
DEDICATION

To my Mother, the best musician I know

and to A.P.T., who will never be forgotten
VITA

1983..........................B.A. Music Theory/History and Religion, Hiram College
1988..........................B.S. Education, Kent State University
2004..........................M.M. Music Theory, University of South Florida
2003-2004.....................Graduate Teaching Assistant, University of South Florida
2004-2008.....................Graduate Teaching Associate, The Ohio State University

PRESENTATIONS

Great Plains/Great Lakes SuperRegional Conference

“Following the Yellow Brick Road: planning lessons that fulfill goals of the syllabus”
Fall 2006
The Ohio State University, Theory Pedagogy Workshop

“One Day at a Time: a four-step program for planning lessons”
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FIELDS OF STUDY

Major Field: Music Theory
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INTRODUCTION

ON COMMON UNIVERSAL ELEMENTS AND PRINCIPLES

Scholars in many areas of musical study discuss the possibility of common properties found in music from diverse groups. This research is an attempt to realize that possibility through the identification of specific elements found to be common among various cultures and time frames. Upon further investigation of these common elements, principles emerge that apply to the same cultures. In this paper, an initial course for music students is designed from the integration of the common elements and subsequent principles.

The primary issues at hand are the identification of common universal elements and common universal principles. Each will be discussed presently (see chapters 3 and 4, respectively). The integration of the two subjects is the basis for Commonalities Theory (also found in chapter four). This theory, it is hoped, may provide an educational foundation for beginning music students that will accommodate musics of any genre, culture, or time frame. A visualization tool for the application of Commonalities Theory in an analytical setting is called the Grid of Pertinence (see chapter 5).
As the study of music theory diversifies, so does the need for educational materials that distinguish between common universal elements and stylistic features. At this time, current texts are found wanting in this area. Based on the findings of common universal elements and over-arching principles, a text comparison reveals few informative sources. Texts included in this study are either recently published, consistently popular (texts with several editions are considered popular), or are otherwise familiar to the author. A summary is shown in chapter 7; a detailed account is offered as Appendix A.

Ultimately, the goal here is a practical one, to provide a beginning point in the field of theory to teach students from a global perspective. This paper, not a philosophical argument about the nature of universality in general, demonstrates similar events and contains a method for student application of basic musical materials.

Some explanation is required for the terms applied to the primary components of this study (Common Universal Elements, Common Universal Principles, and Commonalities Theory). Categories such as songs, etudes, symphonic works, and waltzes suggest specific sounds, particularly of rhythmic or melodic or harmonic features played on certain instruments. The specific categories are named to indicate their uniqueness. That these categories fit into the group called “music” implies that they contain commonalities that transcend their differences. If a set of commonalities for this abstract concept of music exists, then a diverse collection of musics should illustrate the features within that set. The elements in this set should not be limited to stylistic traits,
such as those of the Germanic tradition of the 16th-18th century, Parisian art song of the 19th century, or American Broadway tunes of the 20th century, but should instead comprise common universal elements unbounded by era or nation. Every culture has invented a musical style of its own; the task here is to seek out, from a variety of musical examples, those features that do not distinguish one category from another but collectively illuminate what we call music.

The features included here are found within music proper. Every attempt is made to focus on salient musical elements without preconceptions of intrinsic stylistic factors such as tonal implications, or extrinsic functions. In the earliest Greek discussions of music, principles that relate to harmonizing the soul or healing the body exemplify such extrinsic functions. Only those universal principles that are found within the music, however, are of primary importance for this research, for the inherent qualities of all musics are only those that defy boundaries of time and cultural significance.

Within a musical context, a single feature commonly found within a stylistic period may perform a variety of functions. In the tertian European tradition, for example, a C major triad may be used as a tonic or as a V/V in B♭ or as “white” for a composer such as Rimsky-Korsakov (Apel, p. 184). The possibility of multiple functions does not negate the significance of each element but confirms that individual features would be more easily understood in relation to the larger category of “music” first. For example, a descending line is prevalent in many cultures as a feature of stability. Once this fact is
established, Schenker’s *Urlinie* is more than an acceptable plausibility. The integration of descending line and stable harmonic pattern is expected.

Regardless of their singular or multiple functions, certain musical elements are found in the music of nearly all cultures. Perhaps Robert Morris’s terms “natural classes” or “similarity classes” (Morris, 2005, p.7) should be used to describe the specific commonalities that embody “music.” The term “natural” as it relates to the harmonic series has skewed many scholars who have attempted to craft the musical world around this acoustical pattern. Although music and nature are likely symbiotic, the term “natural classes” suggests that which occurs in nature. This discussion is limited to music made by humans, so the music created by other natural sources, such as birds, whales, and so on, poses a separate project. “Similarity classes” indicates the true focus of the study but suggests an additional comparison with the differences, the opposite of the present goal. I prefer the term “common universal elements.” *

*Common are those features that are found within the music but not necessarily used in the same manner, and universal in that these same features are found in musics of diverse cultures and from various centuries.*

Music is not suggested as a universal language but, in agreement with Patricia Shehan Campbell, “there do appear to be certain features in music that a number of cultures hold in common” (Campbell, p. 101). Studies in psychology show common cultural ideas in terms of pitch, timbre, and rhythm (Dowling and Harwood, 1986) as well as in Gestalt treatment of pitches (Sloboda, 1985) (taken from Krumhansl, p. 162).
In this paper, samples of music are analyzed, categorized, and organized to establish a foundation of common musical elements and basic principles of relation among them. A distinction must be made between elements and principles of music. “Elements” are salient features in a variety of musics – basic building blocks of musical construction. “Principles” are those broader components of composition – the field, the outline, the framework of construction. The theoretical component refers to a relationship of the larger principles with the common universal elements. (See Figure 1.1 for a sample of this relationship. A more thorough chart can be found at the end of Chapter 4).

Five Common Universal Principles

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<td>Elements</td>
<td>pitch</td>
<td>center</td>
<td>timbre</td>
<td>ascent</td>
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Figure 1.1 Elements and Principles in a hierarchical relationship

Theorists and other scholars generally speak about a particular genre, but those mentioned here have expressed thoughts relevant to this discussion. A revision of any previous theory is not the goal. The focus remains on commonalities, their pertinence in the music, and the kinship of those common features. Two interrelated foci, the categorization of elements and subsequent formulation of principles, join in what is called here Commonalities Theory. Other theories may illuminate the way a particular form or style of music works in great detail, but a general approach to common musical construction is the only realistic method for developing an inclusive system. The study
of common practice chord progressions with Roman numeral analysis does little to explain the music of Guillaume Dufay or Charles Ives, for example. An examination of contour in terms of a directional goal, on the other hand, could be used to compare specific works such as those by the same composers. Results from that comparison may include, for example, a recurring phrase pattern for opening a song. This pattern from two dissimilar genres could then be compared to other songs from around the world. The goal here is to offer legitimate common elements to begin the study of music from a multi-cultural perspective. The final phase of this research is the design of a foundational course in theory based on these common universal elements and principles.

Several steps have been taken to create a system that evolved from musical elements. First, music is examined from around the globe, selecting randomly as much as possible. Second, the time frame of musical examples includes music from the earliest possible source to the present. These samples allow for comparison between styles, cultures, and across centuries. A system constructed from these samples should offer stable principles. Modifications in the system may expand the number of elements or introduce an additional principle but should not eradicate any of the original five principles and their elements. Should a system be constructed for a more specific purpose, such as a chronological charting of musical features, the principles and elements are duplicable and still prevail. Additionally, as long as the system remains intact, stylistic comparisons are credible. From this set of elements, a hierarchical model of salience prompts a new analytical schema based on five specific principles. Ultimately, a
course curriculum incorporates this set of universal principles as a pathway toward a deeper musical understanding.
John Blacking defines music as “humanly organized sound” (Blacking, p. 10). This definition, accurate though it may be, does not specify any musical elements such as instrumentation or timbre. For the theorist and others, musical elements become sounded musical events with the application of style. A standard harmonic progression may be performed as “humanly organized sound,” but only becomes music in the hands of a skilled composer within a stylistic context (one needs only think of class performances of beginning part-writing or beginning keyboard harmony for evidence of non-musical but logical progressions). Humanly organized sound, without a composer, may include a poetry reading, the hammering of nails, or even a ritual door-shutting each day on the way to work, none of which are necessarily music. In a recital of musical works, however, the hammering of nails may be included as a musical portion of a programmatic Easter piece or as a sound for its own sake. The contemporary style, which allows for unexpected sounds from commonplace but not necessarily traditional musical instruments, signals to the listener that the hammering of nails is a musical event. Even the venue, the recital hall, evokes particular musical possibilities. Expectations involved in attending a recital in a recital hall include such events as elementary piano studios and
guest lecture-recitals but not, for example, an Eric Clapton concert. An explicit definition of music must, then, involve more than “humanly organized sound.” Though an explicit definition is not the current goal, it is necessary that a common ground be established. For consideration in this research, no specific genre is included, but those pieces which are part of the random sampling, must be accepted as a type of music. Organized sound is necessary; the musical context is equally important. An expanded but culture-specific definition is offered by A.P. Merriam, in his *A Prologue to the Study of the African Arts*, (Merriam, 1962). Merriam’s study of the Basongye theory of music extends Blacking’s definition. In this African culture, music has three essential functions:

1) the involvement of human beings

2) the organization of sound

3) the continuity in time.

Merriam proposes an additional dimension to Blacking’s statement; continuity implies motion with a constancy regarding time. Given this consideration, the single shutting of a door loses its potential as a musical event. The hammering of nails in a musical context that proceeds to a specific goal, though, maintains a musical significance.

The purposeful journey through time describes something slightly different from that proposed by Blacking. Certain elements, such as an initial timepoint that begins a motion and a motor that perpetuates that motion, are necessary for continuity and are vital to the identification of music. This is not to say that random items such as pots and
pans or even the shutting of doors cannot be used in a musical scenario but that, indeed, the intention of the composer and the characteristics of continuity confirm the reality as a musical event. Furthermore, each stylistic context is filled with implied and/or explicit recurrences of initial ideas, melodic and rhythmic motives, key schemes, hexachordal combinations, ragas, licks, and so on. Without these cohesive elements, and there may be many within a given style, music has no shape or substance. Repetition is an important part of a musical evolution and, therefore, should be considered for analysis. Context also dictates a sense of balance, which connects an element, such as pitch center, with the larger musical event. An example follows from an Inuit song that contains one pitch above and one below an emphasized pitch (see Example 2.1).

Example 2.1. Inuit three-note song with middle pitch emphasis

Balance serves as the self-referential context that relates to the listener each musical segment across the time and pitch space continuum. Continuity, then, should be considered in two forms: first, a surface layer that suggests a maintenance of motion, and second, an understructure that allows for undulations in intensity of that motion. In the

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1 D5, the middle pitch, is emphasized as the first pitch, the only one sustained with three fermatas, the only pitch to receive five quarter note values (each other pitch receiving just one of this longest duration), has ten attacks (compared to 9 and 4 for the other pitches) and is given the most amount of time space (using an eighth note duration, D5 is equal to 15 without considering fermatas, E5=9.5, B=5).
previous Inuit example, repetition of the pitch series and rhythm pattern maintains motion. Rhythmic changes at the end signal a close that is pitch balanced on a larger scale. That is, a fusion of the first two pitches and the final two pitches yields the same set as the opening idea.

Ernst Toch, in *The Shaping Forces of Music*, describes composition as sound architecture (Toch, p. 155) and says that man’s imposition on sound in the form of music is created by the same forces as other living entities, such as oceanic tides and inhalation-exhalation – that of contrast in a tripartite system. Form is built, constructed, around an established equilibrium, a departure with instability and a returned stasis. This is not to say that every piece is necessarily in ABA form, but that the majority of musics around the world seemingly begin with a stability, move away from the beginning to a climax, and return to the familiar. “The principle of tripartition, as manifest in art, is rooted in nature, in our souls, in our very existence” (Toch, p.164).

The description of music thus far includes specific components (such as initial ideas, repetition, and pitch series) that are readily perceived by the listener in a musical setting. Music as humanly organized sound that maintains and moves through time with a contrasting component is more than just three parts on a continuum, however. David Kraehenbuehl, in discussing music theory, is quite specific about the inter-relatedness of the components of music: “the object we call musical theory is not sound, not time, not human experience, but that particular conjunction (emphasis mine) of those that we call musical experience.”(Kraehenbuhl, 1958, p. 1). The theorist investigates “the artistic
organization for purposes of communication” (Kraehenbuhl, 1958, p. 1). Therefore, basic constructs of organized integration must inherently correspond to an analysis of a musical work.

In this paper, facts of the music, detailed events taken from various pieces from around the world, provide clues about larger components such as motion and stability. In order to devise a theory or even to accept a new one, the facts must conform in some way to a pattern of relation or organization. Crucial to the study of music are the architectural components: building blocks (such as initial ideas and repetition) and how they interact. Those components that are common to several cultures are labeled here *Common Universal Elements (CUEs)*. Principles that arise from the formal construction of these CUEs are called *Common Universal Principles (CUPs)*.

The errant logic in some arguments against common universal principles is in the assumption that all musical relations must be held in common functionally. Since most cultures employ music in a variety of ways, (for serious events, for amusement, for spirituality, and so on), it follows that the study of the function of common traits would be fruitless. This does not, however, eliminate the very real possibility that innate musical characteristics could guide our analysis of music from a firm foundation. The goal of this present research is not to study musics of the world comparatively but to investigate the constitution of music proper. Part of this investigation includes reasoning about the formalized building blocks – scales, triads, tone rows, ragas – and their relation to the broader category of music. To understand a type of music in terms of function
seems an impossible task due to the ever-changing cultures that have formed each genre. Musical purpose, or purposeful function, comes from many sources, including religious, political, and socioeconomic factors. Music may be used to settle disputes via singing and dancing contests and is believed to hold a variety of magical and mystical powers. The crux of the matter is this: a specific study of function, an important endeavor to be sure, should illuminate something about the people who formed it, but the study of common universal elements and basic common universal principles should reveal information about the music apart from the people who create and use it.

Function does not negate any possible correlation between the CUEs of one musical work with another. Rhythmic stability may be found in one genre as an accompaniment and as a separate voice in another. Regardless of how the elements function, broader principles provide the framework for a musical situation. As these broad truths relate one musical source to another, understanding increases with each genre studied. CUEs, such as contour and repetition, relate to groups of either stability or instability but are dependent on a connection to larger principles.

What is essential for sounded tones to become music is a pattern of organization that involves stability, maintained and broken, and placed in a musical context. This research shows the issues of stability and instability and the environment in which they co-exist. Music may be identified, for our purposes, as a tripartite entity of stability, instability, and sound. Patterns (which support expectations) in each of the three components of this system reflect a particular musical style. That is to say, a 15th century
piece may be expected to include consonant openings and melodic Sol-La-Do cadences as stable features, irregular phrase sizes and melodic peaks (that require resolution) as unstable, and a three part adult, vocal ensemble in a polyphonic setting as the sound source.

Music is composed of principles, elements, and connectors to form a musical environment. To devise one set of universal principles, common elements must be significant in a variety of types of music. Universal principles help to explain how those elements function on a large scale (an unfamiliar music may be understood as a music of some sort). Connectors, called conjuncts, bridge the gap between factual elements and the over-arching principles.

In order to discover these musical features and to compare common elements cross-culturally, random samples are taken from widespread and seemingly unrelated areas of the world. Included in this study are the following cultures: Zambia, China, Old English, Ethiopia, American folk, American Pop/Rock, American traditional, Korean, Hebrew, Antillean, Krti Inder, Amazon, Newfoundland, Caribou Eskimo, Chippewa, Hopi, Puerto Rican, Spanish, Incan, Craho, and Inuit.

Perhaps the most important step in this research is the gathering of music for study. Short, similar pieces (such as songs) are examined from several areas around the globe, taking care to include musical systems that are diverse and are not necessarily related by geography or peoples. Though pieces from each source were chosen at random, certain considerations prompted the selected cultural groups. The first group
was the Inuits (and subsequently other Native American peoples), mainly because their music pre-dates that of the common practice era by centuries. Certain songs, such as those of the original Americans, are passed orally from generation to generation and, due to the cultural importance of each, are transmitted with great care. These are particularly valid for study because of the lack of notational errors inherited from previous transcribers (Frances Densmore, for example, transcribed from the live performances, the actual sound source). Every attempt is made to omit any personal presuppositions about music, so the fact that no Inuit theory was available forced the issue of studying only facets within the music itself. Personal music theory education aside, the focus becomes music – facts and relations. By moving as far as possible away from common practice music and European traditions (in terms of both time and locations), stylistic idioms may be considered unique formulas. Parallel periods, common tone diminished seventh chords, and sonata form are no longer expected. Even a very specific pattern, such as the Landini cadence, suggests a time and a place.

A set of music from several locations and several centuries provides a broader scope under which to find actual commonalities of a generalized definition of music. Conditions of research also dictate, to some degree, methods of sampling. Traditional music of cultures with rich ancestries ranked high in priority. A large representative sample for those cultures is justified. In this case, the majority of songs come from the Korean and Inuit cultures.
Music theory has been misrepresented at times as a chain of events that begins with (in many texts) the Baroque period and culminates in an outgrowth such as atonality. Music in reality, however, is not simply the borrowing of ideas from slightly earlier times and places (although this too is possible; see Talbott, 2004). There are basic musical premises that are used by many peoples of the world. From that foundation, any further study, regardless of style, should have greater impact and provide more clarity. Common ground must be the only viable solution for explaining or understanding music. Historical and stylistic considerations should only arise from this solid foundation, especially given the tendency of some composers to cross-pollinate styles (one need only consider Debussy’s music after the World’s Fair in Paris in 1910).

An attempt is made here to find music in its purest form. Ancient songs of many cultures are often transmitted carefully (as compared to many ensemble or orchestral pieces that may be elaborations of songs or may be encumbered with stylistic paraphernalia regarding instrumentation or other timbral devices). While it is true that an evolution of folk musics change with time and relate to an individual’s uniqueness and historical sharing (Rice, p. 474), folk songs also retain significance musically. That is, ancient melodies are preserved as new melodies are still created. While acknowledging the cultural significance of each group of musics, this study obviates any emphasis on nuances and functions of folk music and narrows the focus to sound. Folk music, then, serves well for its orally transmitted base, its credible history, and for the musical simplicity of the single line.
To continue the exploration of elements from non-European traditional sources, a set of sea chanteys from Newfoundland, transmitted through the oral tradition, were studied for prominent features. Early music, from such composers as Palestrina and Dufay, Korean songs\(^2\), and the other pieces, were chosen to reflect a cultural diversity in terms of society, time, and place. Piano pieces and other works were included from around the globe. The list of musical features expanded quickly especially after pieces of Western tonality were added. Early in this process, however, no attempt was made to categorize or group the features on the list in an effort to avoid imposing tonal implications from my own musical background.\(^3\)

After these pieces were evaluated for salient features such as agogic accent and pitch placement,\(^4\) basic common behaviors became evident. Music is only as good as its relatedness. The facts do not imply music here; they are the building blocks for relational events. A composer weaves the facts as threads in a tapestry, using the same threads as composers of past centuries and far distances and cultures. His music sounds different, though, due to his color pattern choices; these are style indicators. Consider the blues

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\(^2\) According to Robert Aiken, from a lecture at The Ohio State University on April 19, 2007, Korean music had no Western influence until after the Korean War. Thus, this music works well for this study.

\(^3\) This study begins with only musics outside the common-practice realm in an effort to initiate a baseline of musical features distanced from the tools and terms of my own tonal music education. Time limitations as well as the ultimate pedagogical focus permit only the consideration here of the music of human beings. Whales or snails, for example, may not employ the same strategies or patterns, but as for humans, “sound elements are heard in context, organized in pitch and time and are understood in terms of their functions within that context” (Krumhansl, p. 3). Certain cultures, particularly Korea, were included because of the opportunity for consultations at The Ohio State University with those native to the land and familiar with the tunes used here. Samples were collected from the following cultures and peoples: Zambia, China, Old English, Ethiopia, American folk, American Pop/Rock, American traditional, Korean, Hebrew, Antillean, Kriti Inder, Amazon, Newfoundland, Caribou Eskimo, Chippewa, Hopi, Puerto Rican, Spanish, Incan, Craho, Inuit; Dvorak, Moniot d’Arras, Dufay, Binchois, Palestrina, Villa-Lobos
tune “After Midnight” that was made popular in 1965 by J.J. Cale and was re-mixed into a rock song by Eric Clapton in 1970. Anyone familiar with the two genres can distinguish between the two versions while admitting that the harmonies, melody, and unifying form are the same. Similarly, composers of all times and places draw upon standard patterns for construction but differ in the use of sound sources and harmonic palette. The idea of standard pitch and rhythm patterns with diverse harmonic structure may seem contrary to Schenkerian theory, but such is not the case. Heinrich Schenker, in his wisdom, found those specific patterns that indicate common practice music and distinguished that style from all others. Each genre of music has its own pattern and thus, could have a corresponding theory by which to decipher the salient features for expression. Before studying each specific theory, though, common expectations are helpful. For example, many studies show a preponderance of the interval of a second as a primary factor of continuous melodic motion. A singer who has this background knowledge of stepwise motion as a vehicle for moving can make musical sense of the fluid ascending and descending stepwise movement in Ives’s “The Cage” and can perform with greater depth the forward motion of the piece.

What is common for music-makers of every sort are the threads (facts) and the ideas of pattern and relation. Once patterns are established, though, the new schema may be used to illustrate a world music theory with predictable, though not absolutely universal, results. Theory in this case corresponds to the acceptance of universal elements

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4 Factors used in assessing common musical elements will be explained in Chapter 3.
in most cultures as a basic assumption and the formulation of principles that allow the listener expectations for recognizing sound as music from any number of styles or contexts. Commonalities across cultures justify the categorization and thus the expectancy that those features will be used in most musics; thus we call this foundational strategy of musical construction *Commonalities Theory*, henceforth abbreviated CT.

Codification is necessary to accomplish this task but, by formulating a foundational theory, a “truly creative and vital aspect of theoretical activity” is achieved (Kraehenbuhl, 1958, p. 1).
CHAPTER 3

COMMON UNIVERSAL ELEMENTS

Common universal elements exist in music across cultures and across time periods. Demonstration of this claim is the central focus of this chapter. Analysis of musical samples from a variety of times and places reveals that several elements are common among many cultures and eras, and that those elements are salient. This analysis comprises a combination of approaches specifically designed to harness these elements. Common universal elements identified in the analysis are categorized according to consistency and contrast.

Analysis

Various aspects of a piece may indicate prominence. Singing, clapping, and otherwise sounding the music exposes those aspects. The content of each piece includes certain features that are salient, invariant, or repeated prominently in other ways. Content analysis, in this study, illuminates features that are prominent. These features may then be compared to other music. In Table 3.1 following, each piece is listed according to its origin. Such a method of sampling that allows for heterogeneous groupings is considered stratified if samples of each group are taken based on the population. Musical examples
from such categories as American folk or European are available but few examples are taken for the sake of comparison with another culture of a smaller sample population. In this sense, stratified sampling allows for comparisons. On the other hand, additional samples from categories that reflect investigation of something other than European tradition assists the author in becoming distanced from European bias.

<table>
<thead>
<tr>
<th>Culture</th>
<th>Songs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>“Ali Nalengo”</td>
</tr>
<tr>
<td>China</td>
<td>“Pusamen,” “Ruizhegu”</td>
</tr>
<tr>
<td>Old English</td>
<td>“Under the Spreading Chestnut Tree”</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>“Tăzăta găñăț”</td>
</tr>
<tr>
<td>American folk</td>
<td>“Shoo Fly,” “Oh Shenendoah,” “My Bonnie”</td>
</tr>
<tr>
<td>American Pop/Rock</td>
<td>“Smoke on the Water,” Theme from “The Adam’s Family”</td>
</tr>
<tr>
<td>American traditional</td>
<td>“We wish you a Merry Christmas”</td>
</tr>
<tr>
<td>Korean</td>
<td>“Arirang”, “Miryang Arirang,”</td>
</tr>
<tr>
<td></td>
<td>“Gangwon-do Arirang,” “Nodeul”</td>
</tr>
<tr>
<td></td>
<td>“Gangbyun,” “Doraji Taryung,” “Hung”</td>
</tr>
<tr>
<td></td>
<td>“Taryung,” “Bang-A Taryung,” “Yangsando,” “Sae Taryung,” “Ni-li-ri-ya,”</td>
</tr>
<tr>
<td></td>
<td>“Monggeumpo Taryung,” “Nongboo-ga,”</td>
</tr>
<tr>
<td>Language</td>
<td>Songs</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Hebrew</td>
<td>“Were my bosom as false as thou deem’st it to be?,” “It is the hour,” “If that high world,” “Jeptha’s Daughter,” “My soul is dark,” “Thy days are done”</td>
</tr>
<tr>
<td>Antillean</td>
<td>“Montmartre,” “Avila Beach,” “Zazinka”</td>
</tr>
<tr>
<td>Krti Inder</td>
<td>Untitled (one song)</td>
</tr>
<tr>
<td>Amazon</td>
<td>“Song for Healing”</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>“Squid-jiggin,” “Southern Cross,” “Jack Hinks,” “Tickle Cove Pond,” “Kelligrew’s”</td>
</tr>
<tr>
<td>Culture</td>
<td>Song List</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Caribou Eskimo</td>
<td>Song 1, Song 2</td>
</tr>
<tr>
<td>Chippewa</td>
<td>“The Approach of the Storm,” “The Mother’s Visit,” “Making Maple Sugar,” “Smoking the Peace Pipe,” “Comforting the Mourners,” “Lullaby,” “Farewell to the Warriors,” “Visiting Song,” “My Pipe,” “First Song of the Feast,” “First Initiation Song,” “I Go to the Big Bear’s Lodge”</td>
</tr>
<tr>
<td>Hopi</td>
<td>“Snake Song”</td>
</tr>
<tr>
<td>Incan</td>
<td>“Prelude VI”</td>
</tr>
<tr>
<td>Craho</td>
<td>Song 1, Song 2</td>
</tr>
<tr>
<td>Pieces from individual people:</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Inuit</strong></td>
<td>#1, #2, #3, #4, #6, #8, #9, #12, #17, #18, #19, #21, #25, #26, #30, #33, #34, #36, #38, #45, #49, #63, #68, #72, #73, #74, #78, #79, #81a, #81b, #83, #86, #87, #99, #100, Children’s games #10, Lullaby, Drum Song</td>
</tr>
<tr>
<td><strong>Dvorak</strong></td>
<td>Theme from “Symphony No. 9 From the New World,” Mvt. 2</td>
</tr>
<tr>
<td><strong>Moniot d’Arras</strong></td>
<td>“Ce fut en mai”</td>
</tr>
<tr>
<td><strong>Dufay</strong></td>
<td>“Alma Redemptoris Mater,” “Sanctus, Sanctus, Sanctus,” “Hosanna in excelsis,” “Kyrie I,” “Adieu m’amour,” “Agnus Dei III”</td>
</tr>
<tr>
<td><strong>Binchois</strong></td>
<td>“De plus en plus”</td>
</tr>
<tr>
<td><strong>Palestrina</strong></td>
<td>“Agnus Dei”</td>
</tr>
<tr>
<td><strong>Villa-Lobos</strong></td>
<td>“Rosa Amarela,” “O Gato”</td>
</tr>
</tbody>
</table>

Table 3.1 Study samples and their origins

In this study, the set of one hundred fifty-one pieces taken from twenty-one cultures constitutes the sampling. Salient features are identified for each in this list of songs. The initial list of features found, before evaluating for any commonalities, is as
follows: rhythm, regularity of rhythm pattern, phrases, scale as building block, contour
regularity with contrast, tonal center, instrumentation, register, tessitura, beginning and
end, differing durations, tempo, pitch pattern, expectancy, space/time, shape, movement,
timbre, texture, simultaneities, regular pulse, repetition, pitch centricity, motive,
descending lines, form, life, tension and release, sameness, familiarity, return,
congruence, growth, balance, contrast, anacrusis, syncopation, antecedent/consequent,
delays, changing durations, dynamics, climax, fluctuation, delay of resolution, and
variation.

From a comparison of the elements of over one hundred and fifty songs, certain
ideas become evident as common. An initial rhythm pattern that repeats, for example, is
common in the majority of songs. Those elements that are in the majority in this
comparison are then called common universal elements (“universal” based on the
diversity of geographical areas) for the purposes of this study. These common universal
elements are illustrated in Table 3.2 at the end of this chapter.

Musical samples from various times and places are offered here as supporting
evidence that common universal elements exist in music across cultures and across time
periods. Elements alone, however, are static. Certain conjuncts move, shape, and
connect the elements along a pathway that leads to the formation of a musical event. One
of the recurring conjuncts, balance, is associated here with six of the most common of the
forty elements discovered in this study\(^5\): pitch center, contour, pitch series, range of

\(^5\) Although certain cultures and time periods were chosen specifically to obtain a diverse sample,
selections within each culture or time period were chosen arbitrarily. Diversity is represented in this study
by the following cultures: Zambia, China, Old English, Ethiopia, American folk, American Pop/Rock,
durations, rhythm pattern, and repetition. The analyses follow brief descriptions of these six elements and the aforementioned conjunct.

Elements:

*Pitch center* is determined through a variety of context clues including placement within the phrase (e.g., initiation and culmination), placement within the range (e.g., peaks), repetition, and accent.

*Contour* is analyzed in terms of pitch ascent versus pitch descent. Ascent and descent (and stasis) are notated with Robert Morris’s contour notation, in which ‘+’ represents ascent, ‘-’ represents descent, and ‘0’ represents stasis.⁶

*Pitch series* are analyzed as a number series with the lowest pitch of each event as 0.

*Range of durations* refers to the spectrum of durations for each piece. In particular, the opening gesture is compared to the entire range for predictability. That is, it is unlikely that a song that begins ‘quarter note, half note’ will follow with a series of thirty-second notes. Durations are numbered according to the following scale:

<table>
<thead>
<tr>
<th>Number</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>whole note</td>
</tr>
<tr>
<td>1.5</td>
<td>dotted half note</td>
</tr>
<tr>
<td>2</td>
<td>half note</td>
</tr>
<tr>
<td>3</td>
<td>dotted-quarter note</td>
</tr>
<tr>
<td>4</td>
<td>quarter note</td>
</tr>
<tr>
<td>6</td>
<td>dotted eighth note</td>
</tr>
<tr>
<td>8</td>
<td>eighth note</td>
</tr>
<tr>
<td>10</td>
<td>triplet</td>
</tr>
<tr>
<td>12</td>
<td>dotted sixteenth note</td>
</tr>
<tr>
<td>16</td>
<td>sixteenth note</td>
</tr>
</tbody>
</table>

*Rhythm patterns* are notated as lists of integers (e.g., half note followed by quarter note followed by eighth note is notated, 2-4-8).

⁶ Robert Morris, “New Directions in the Theory and Analysis of Musical Contour,” *Music Theory Spectrum* 15, no. 2 (Autumn 1993): 206. Contour theory notation is used to illustrate such elements as pitch and dynamics. In this study, the same form of notation works well to illustrate types of balance.
Repetition could refer to pitch, duration, or any other form of repetition. Repetition of phrases, contours, pitches (or salient pitch groupings), and rhythms were found in all eighteen cultures in this study. Repetitions of rhythms are particularly common.

Conjunct:

Balance may provide stability to pitch, rhythm, or both and is analyzed in relation to another element. From the data collected in this study, five types of balance appear. Literal balance exactly duplicates the order and number of units in the set (notated: [+/-/+-]). Mirrored balance reverses the order [+/-/-+]. Expanded balance implies that either the opening or the closing material maintains order but repeats a rise or fall pattern, thus increasing the number of ascents or descents [+---/+(++)--]. The extensions are marked in parentheses. Pattern balance is slightly more abstract in that the entire rise/fall pattern is either halved or doubled [+---/+-/+-]. Each contour set, (--++) for example, may be divided into two equal parts (A and B) if the pattern warrants. Finally, gravitational balance refers mainly to pitches above and below a central pitch, such as the familiar Ti-Do/Re-Do combination in Western music and the Inuit example from Chapter 2. Rhythmically, this corresponds to one unit away from the center. For example, instead of pitches Ti-Do/Re-Do, durations are (8-4-2-4).

In order to gain a basic understanding, the following segmentation rules apply:

- Become familiar with the piece of music. Sing, play, clap, or in any other way produce the sounds. Repeat as necessary.
- Identify the initializing idea. This may take the form of a rhythmic pattern, pitch pattern, or any other salient pattern at the beginning. Several correct ideas are possible.
- Compare this initial idea to the rest of the piece for repetition of the pattern.
- As other significant features emerge, identify the pattern or order.
- Downbeats may be considered perceptually strong to begin or elide with another pattern.
- Determine the most salient elements to include for analysis.
Example 3.1. Inuit Nursery Song

Pitch center: D4 (approximate). D4 is the first pitch, the most often used pitch, and the only pitch repeated in succession.

Contour: (+--); repeated four times, varied at the end with literal and gravitational balance (around D) of opening and closing gestures

Pitch series: [1210] repeats five times

Range of durations: 16-4 spectrum without hold; opening gesture is the same set as the range

Rhythm pattern: (4-8-8-3) repeats four times

Repetition: The pitch series and rhythm patterns repeat without variation through the middle of the song, and then vary at the end.

---

7 This song is representative of the 38 Inuit songs analyzed in this study.
Example 3.2. “Arirang”

Pitch center: G4. G4 is emphasized through repetition, agogic accent, and gravitational balance in the closing gesture. It also falls in the middle of the range, which extends a fifth above and a fourth below.

Contour: (+++) Five pitches establish pattern D-G, repeats in m. 2 from G-B, see also mm. 12-13; retrograde with variation mm. 7-9 (++-0+) from D-G-D; retrograde inversion at m. 10 {+-+-}

Range of durations: 3-8 spectrum, opening is the same range

---

8 This song is representative of the 37 Korean songs analyzed in this study.
Pitch series: nearly symmetrical pitch series, *mirror balance* of opening gesture and second section (m. 9ff), otherwise, *literal balance* between sections (see Figure 3.1 below)

<table>
<thead>
<tr>
<th>01012 (opening gesture)</th>
<th>21010 (retrograde)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0101</td>
<td>0101</td>
</tr>
<tr>
<td>3210</td>
<td>3210</td>
</tr>
<tr>
<td>0101</td>
<td>0101</td>
</tr>
<tr>
<td>0101</td>
<td>0101</td>
</tr>
<tr>
<td>3210</td>
<td>3210</td>
</tr>
<tr>
<td>012322</td>
<td>012322</td>
</tr>
</tbody>
</table>

Figure 3.1. Pitch series of “Arirang”

Rhythm pattern: (3-8-8-8); repeated five times and varied three times

Repetition: The patterns of contour, pitch and rhythm are repeated several times.
Example 3.3. “Were my bosom as false as thou deem’st it to be?” (verse 1)

Pitch center: Peaks of F in both directions. Phrases end on A, A, D, and F. Pitches A and D receive most attacks (9 each) as well as longest total duration (13 8th values and 12.5, respectively). F is the longest single pitch. F is the center of D and A and receives center status here.

Contour: (--++); expanded balance from opening and closing of first line (mm. 1-4) (--+++), mirror balance (+++--) of opening and closing gestures (first three 16ths taken as embellishment)

Range of durations: 16-2 spectrum; opening gesture (8-4) is a subset of the spectrum

Pitch series: [210] repeated pattern and literal balance with closing gesture; mirror balance from opening to closing of phrase one [2103][3012]

Rhythm pattern: Varies with the text, the first six values are either all the same (8-8-8-8-8-8) or (8-8-4-8-8); pattern (4-8-8) repeats nine times with variation at the end

Repetition: Though the pitch series is repeated, most of the repetition occurs in the rhythm pattern.

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Six Hebrew songs are used in this study.
Example 3.4. “The Approach of the Storm”

Pitch center: F is first, and is the high peak. B♭ is the final pitch and the low peak, has the longest total durational value, the most attacks, and occupies the most downbeats.

Contour: *Literal balance* of the (-+--) pattern; *expanded balance* at the end.

Range of durations: The spectrum is 1.5-16; opening values (2-6) are within that spectrum.

Pitch series: The opening contains two sets [323] and [210]. This line repeats immediately. Then, *mirror balance* of the trichords [323] and [012] (the former taken as a mirror given the pattern with [012]). In the last line, the second set is *expanded* [21010]. Finally, the opening two sets are combined [3210].

Rhythm pattern: Two patterns predominate (2-6-16) and (2-12-12-12-12). The second set is found in each line. The first set is varied as (6-16-3-8), the first two values kept
together as a single beat. In this case, the set is \textit{mirrored} as beat units (2) represents units one and two, and (6-16) is beat three.

Repetition: The central pitch is often repeated. \textit{Literal balance} in the contour makes the repetition easier to hear. Pitch series and rhythm patterns also repeat.

Example 3.5 “Southern Cross”

Pitch center: Peaks at D4 and D5; A receives the majority of downbeats. F is between D and A, receives the longest total duration, the first downbeat, and the entire last measure. F is the center here.

Contour: There are literal and mirrored balances of the pattern (-++) and the pattern is reversed and doubled (+++++--) showing \textit{mirror} and \textit{pattern balance} simultaneously.

Range of durations: The opening pattern, (8-4), lies within the spectrum of 3-16.

Pitch series: The patterns [2012] and [0123] are evident in many variations. In mm. 6-7, both patterns appear and are \textit{expanded} (see m. 7 [20121]) while one of them is also mirrored (see m. 6). An extension to the [3210] pattern follows as [32101]. The third phrase ends with a familiar [0123] and an \textit{expanded} [2012]. The last phrase leads with [2012].
Rhythm pattern: Three patterns (4-8-8-8-8), (8-8-8-8-8), and (3) occur in every phrase with one variation. In the final phrase, the first pattern is reversed (beat units remaining together); (4-8-8-8-8) becomes (8-8-8-4-8).

Repetition: The contour and rhythm patterns are the most prominently repeated. Pitch series also has recurring patterns.

Example 3.6 “O Gato”

Pitch center: High and low peaks are B♭ and D, respectively. A has the majority of attacks, the total duration time, and is tied with D for downbeat accent. D is considered the center as the low peak, tied with A for downbeats, agogic accent, and placement first and last.

Contour: Three patterns repeat throughout: (++-), (+++), and (+--). In the first two phrases, the first two sets repeat immediately followed by a chain of the third set ending in an expanded set. The entire piece repeats, the final line illustrating expanded balance of set three (+--).

Range of durations: The opening gesture, (6-16), is within the spectrum of 16-4.

Pitch series: The most prominent pattern is the [012] set found at the beginning. An immediate expansion provides the second set [0123]. These patterns pervade the piece in literal and mirrored balance.
Rhythm pattern: The opening pattern, (6-16-16-16-16), repeats adjacently and at the beginning of phrase 3 with its adjacency. A second pattern, (8-8-4), is varied as (8-8-8-8) and as (4-4).

Repetition: The pitch series and rhythm patterns are the prominent patterns of repetition in the first two phrases. The entire first section is then repeated with durational change at the end.

Music

These six song examples are compared for two reasons: 1) in the collection of each culture, the specific song expresses the typical salient elements and, 2) several of those common elements are easily identified. These, and all of the musical examples in the early portion of this research, represent cultures that pre-date or are in some other way far removed from common practice music of the Western European tradition of 1600-1850. In a complete scientific study of all cultures, it should be understood that not everyone uses a term similar to “music.” Songs represent a kind of music. Bruno Nettl cautions, though, that “the absence of a general term for music doesn’t necessarily mean that there’s no music concept…” (Nettl, 1956, p. 21). In this representative study, concept is very important. Music sources, then, come from ancient as well as distant cultures.

Each of the six examples in this chapter represents a different culture. The first, *aqiseq pawane narsatame apukatame*, is an Inuit child’s song about a ptarmigan whose eyelids change color in hunting season. From a book about Iceland written by one of its own priests, the Inuit peoples lived in that area by 1000 A.D. (Thalbitzer, p. 17).
“Arirang,” the title of the second example, is quite possibly the most familiar children’s song in Korea (according to Yoo-Hang Ahn, a native of the country). Korean dynasties date back to 4000 B.C. (www.stockton.edu).

The third example is from a set of Hebrew songs written by Isaac Nathan. Although Nathan was born in England in the late 1800’s, he uses ancient melodies and writes that he is publishing a book of “Hebrew melodies, ‘all of them upwards of 1000 years old and some of them performed by the Antient Hebrews before the destruction of the temple’” (Nathan, p. 7).

“The Approach of the Storm” is a Chippewa song transcribed by Frances Densmore in the early 1900’s. Particularly interesting about the Chippewa tribe, according to Densmore, is that melodies transmitted orally remain intact although the words may change. Her assessment that melodies reflect older generations is confirmed by speeches made during official ceremonies in which the title and location (if known) of the original song is stated before and after the performance (Densmore, 1972, p. 2).

In a large expedition in the year 1003, Thorfinn Karlsefni and his team set out to colonize “Vineland,” of which Newfoundland was a part (Thalbitzer, p. 18). The fifth song, “Southern Cross,” reflects that culture. Again, the integrity of oral transmission is important for the credibility of the music.

A song from a composer’s piano course is the last example here. Villa-Lobos did field studies particularly in Northern Brazil to discover the folk music from his land. This Brazilian tune about a cat appears in a practicum for learning to play the piano.
Results

My analysis, which includes over one hundred and fifty pieces of music that represent twenty-one cultures, reveals that certain elements appear more consistently than others. In addition to the six previously listed elements (contour, pitch center, range of durations, pitch pattern, rhythm pattern, and repetition), pulse, climax, delays, contrast, congruence, and several other features emerge as common. Table 3.2 lists all thirty-nine common universal elements found in the study.
<table>
<thead>
<tr>
<th>CONSISTENCIES</th>
<th></th>
<th>CONTRASTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contour</td>
<td>Pitch center</td>
<td>Delay</td>
</tr>
<tr>
<td>Pitch series</td>
<td>Rhythm pattern</td>
<td>Climax</td>
</tr>
<tr>
<td>Pulse</td>
<td>Climax</td>
<td>Variation</td>
</tr>
<tr>
<td>Growth</td>
<td>Congruence</td>
<td>Anacrusis</td>
</tr>
<tr>
<td>Parallel beginning/end</td>
<td>Duration changes</td>
<td>Antecedent-consequent</td>
</tr>
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<td>Long-term phrase contour</td>
<td>Short-term rhythm contour</td>
<td>Tension</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>Range</td>
<td>Fluctuation</td>
</tr>
<tr>
<td>Texture</td>
<td>Release of tension</td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Familiarity</td>
<td></td>
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<tr>
<td>Return</td>
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<tr>
<td>Table 3.2. Common Universal Elements</td>
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</table>
CHAPTER 4

THE HEART, COMMON UNIVERSAL PRINCIPLES, AND COMMONALITIES THEORY

Interpretation of data gleaned from the previous analyses reveals a set of common elements that, in and of themselves, are fragments. It is the interaction of these elements that constitutes musical significance. A model of the human heart, though not an exact analogy, offers a visual image of the conduit for the interaction of elements. Before drawing comparisons between the heart and music, a general overview of the cardiac cycle is in order.

Cardiac function is a circular process in which myocardial cells begin as negative ions, in a state of rest but with potential energy. When a stimulus is received in the heart, positive ions create a depolarization that triggers free calcium, subsequently prompting a delay. Aside from the initial stimulus, each part relates to the previous in a sympathetic reaction. A climactic point in a heartbeat is the contraction of the left ventricle, which changes the direction of blood flow back toward the source of the initial stimulus. The image in Figure 4.1 illustrates the pathway of the heart.
Four chambers of the heart house different functions and features. The initial signal takes place in the sinoatrial node (SA node). The signal spreads throughout the upper chambers (the atria) and leaves the atria via the atrioventricular node. Two more chambers (the ventricles) contain the Bundle of His and the Purkinjie fibers.
The signal is the line that is transmitted throughout the heart. Medical professionals compare this line (from an EKG strip) to a normal sinus rhythm to discover any deviations from a healthy pattern.

Motion

As can be seen in the same image of the heart, three forces work together to maintain a continual flow. First, a self-initiating stimulus propels the motion forward, essentially an electrical ignition supplied by the SA (sinoatrial) node. This motion requires no previous act and is called here the impellent. Second, the AV node acts as an impulse, pushing forward a previously received signal to a single path (through the Bundle of His and the Purkinjie Fibers). The climax in the heart serves as an impetus to stimulate activity against resistance or previous directional flow.

Pattern

The pathway for a normal sinus rhythm in the heart is a stable pattern that begins with the P wave and follows the QRS complex through the T wave (see Fig. 4.2 below). This pattern consistently repeats. Any deviation from this pattern is considered abnormal. Corrective measures are often taken.
Order

The SA node sets the heartbeat in motion by initializing a signal. An equally important function of the SA node is to depolarize the signal that it sends. That is to say, each signal begins in the SA node and is sent from that chamber to several sources in various directions (called spontaneous depolarization). This path from the SA node leads to the AV (atrioventricular) node and is called the conduction process. From the AV node, after the initial signal has been received, there is a purposeful delay to allow for a complete atrial contraction. This delay is necessary for continued, positive flow (without a contaminating backflow for the heart). The AV node then acts as an impulse, pushing forward a previously received signal into a set of channels. After the signal has flowed from the first stage (the impellent) through the second stage (the impulse), the cavity is filled and ready for climax. Free potassium, released during the delay in the AV node, eventually signals the return to the negative ionic resting state. At this peak stage, the
apex (at the lower left quadrant) contracts to efficiently generate a singularly directed motion of blood flow from the heart outward to service other areas of the body.

The basic structure of the human heart may also be visualized in a normal sinus rhythm. A tripartite structure, a normal sinus rhythm consists of a P wave, QRS complex, and a T wave (refer to Fig. 4.2). The P wave illustrates the conduction pattern from the SA node (where was ascribed the impellent) through the atria to the AV node (which provides the impulse). Depolarization (contraction) of the atria and delay are the main components in this section. Blood flows through the mitral and tricuspid valves to the ventricles. The QRS complex relays information concerning ventricular depolarization (during which the impetus changes the direction of the signal) with a simultaneous repolarization (relaxation) of the atria. The ventricles are repolarized during the T wave. The complete path is shown on EKG strips as an isoelectric line which contains the QRS complex, a series of adjacent waves. Circuitry through these three specific points in that specific order completes ventricular depolarization (which, in turn, prompts the ventricular contraction).

From Elements to Principles

The model of the human heart described above serves as an analogy for the interaction of common universal elements. Significant components of the cycle include space, voice, types of motion, patterns, and an ordered series of events that connects
elements. The analogy serves well to describe types of motion with the terms *impellent*, *impulse*, and *impetus*. The model also provides a visual image of the same significant components that are found to be *common universal principles*.

As has been previously mentioned, music has *common universal elements*, basic building materials that are found to be prominent in diverse musics. The conduction pathway in the human heart provides a model for envisioning an environment in which these CUEs may interact. This environment includes conjuncts, such as balance and stability, which point and direct elements along a musical journey. While the basic elements may be short-lived (a climax, for example), the complete pathway represents a set of large-scale principles. *Principles* are those broader components of composition – the field, the outline, the framework of construction. From the set of CUEs, larger associations emerge as Common Universal Principles.

**Interpretation**

In the analysis portion of this study, thirty-nine CUEs emerge from a collection of prominent features. The next task, an interpretation of these elements, involves investigation of larger relations. Five categories clarify these relationships. First, space, such as high and low peaks, suggests an area in which music occurs. Second, a voice is necessary to make audible the musical sounds. In the list of CUEs, one such cluster of common elements relates to timbre (i.e., multiple elements of instrumentation, dynamics and the like may sound together). Third, motion carries elements to make other connections (such as the integration of rhythm and pitch). Fourth, large-scale patterns are
often repeated throughout the music or in strategic locations (at the beginning and ending of a piece, for example). Patterns may be repeated or show other kinship relations. Fifth, order makes perception possible. These five categories (space, voice, motion, pattern, and order) express large components, or principles, that provide more contextual information about the music than elements alone can.

Common Universal Principles

The five categories listed above complete a “path” for the completion of a musical event much like the conduction cycle in the heart model. Each principle may address several elements simultaneously but, more importantly, each provides a unique purpose toward completing the musical event.

**Principle 1: Music is spatial matter that emerges from a state of rest.** Musical space is an area of availability within boundaries. Similar to the conduction pathway that occurs within the heart, music occurs within a sound space and begins at a definite point of origin. Space may be literal or abstract. Abstract space is an area available for potential sound but with specific boundaries as found in scales or across an axis in a symmetrical or otherwise balanced setting. These abstractions may or may not be realized. Music may occur, for example, using intervals and the range of a pentatonic scale but literally only contain four of its pitches. The abstract space is the set of boundaries – the five-note scale. The literal space is, in one aspect, the interval between the high and low pitches of the song. Literal spaces include time span for a nursery song, location on a steel drum,
and the air around the singer in which sine waves travel. In these literal and abstract spaces lies the potential to produce any type of music. Viktor Zuckerkandl expresses spatial matter as well. A “balanced tone stands for the field’s center of action” and the “dynamic quality of each tone is determined by dominant constellation of forces at the place where it is sounded” (Zuckerkandl, 1973, p. 98).

*Principle 2: Music is voice-driven.*

Voice is the carrier of sound from beginning to end of a sound cycle, similar to the signal that travels through the heart. The vocal feature may be an idea, a timbre, an instrument, or the like, comes in any number of combinations (a boy’s choir on a unison D5 sounds quite different from a flute at the same pitch), and is not limited to the same qualities as the first musical attack. It is the narrator, the teller of the story.

A voice (implemented as possibly a sitar, a lyric tenor, or a synthesizer) cuts the musical space and carries the movement of the initializing idea (impellent) to the next stage (impulse). The voice may change register, timbre, or line (as in a voice exchange), but voice is the mechanism that performs the actions in completing the circular route. Common to many cultures is, quite naturally, the use of the human voice to make music. The vocal instrument, however, shares its name with the expression of the line that permeates and carries the music. A strong separation need not be made between the two in this situation, because every listener hears with his/her own voice. When listening to an opera at the Metropolitan Opera House or Chaikovsky’s famous overture in a local park on the 4th of July, listener perceptions are governed by experience. A soprano, for
example, may attend to the line most compatible with her range. For someone with a
woman’s voice who primarily plays the tuba, her musical ear may ascribe predominance
to the bass line. Music contains at least one voice.

Principle 3: Music is perpetuated by three types of motion.

Impellent

As can be seen in the same image of the heart, three forces work together to
maintain a continual flow. CUEs in music move because of these three forces, all
conjuncts that connect elements with the larger principles. Music begins with its own
impellent, a self-initiating stimulus that propels the motion forward, similar to the
electrical ignition supplied by the SA (sinoatrial) node in the heart (refer to Figure 4.1).
In an example taken from another Inuit song, the impellent, as shown in Example 4.1 that
follows, initializes an idea. Steps are equal in this case (given an understanding that the
singer may waiver around the pitches as transcribed). This opening suggests a rise in
pitch, a stasis, and a return (+,0,-) followed by a rise, a fall, and a stasis (+,-,0). These
three parts of pitch contour are expected to reappear at least once for the song to be
complete. The first two pitches form an ascent that could be labeled the impellent in this
case as well. Either way, the first idea creates an expectation for continuation of that
material. This initial idea, whether judged to be the entire segment shown in Example 4.1
or simply the first two pitches, also establishes an expectation for a rather consistent
duration on each pitch (8).
Example 4.1. First phase - the impellent

In the entire set of action songs of the Chippewa (as transcribed by Frances Densmore), the opening pitch is either the same as the last or a fifth above the final pitch. The opening pitch, sets up an expectation for the home note (one of two choices, as the same as the opening pitch or as the fifth below it). Actually, this expectation is established not by the specific pitch but by the cultural expectation that an opening in a Chippewa action song will end a fifth or an octave/unison below. This abstraction from the actual pitch is the stimulus that drives the song forward; the individual pitch is the symbol for that relation. The stimulus creates, due to the nature of these works, a signal to subsequent events to reach that final pitch. Typical resulting methods to reach that final pitch are: a direct motion down from the higher pitch to the final pitch (with changes of direction in between), a neighbor motion above and back to the original pitch before the decline, a rise to pitches that create an ascending pattern before return to the final, a rise to a higher version of the final or fifth above it, or as a balanced motion above and below the final pitch (Do-Mi-La-Do in solfege terminology). In another example, a particular rhythmic pattern consists of a quarter note, then a triplet, followed by two quarter note then two half note values. The entire pattern is played on a single pitch, F. This single pitch has no meaning alone, but, when combined with the given rhythmic pattern and within a specific timbral element of a pipe organ, strongly suggests to anyone
in our culture the opening of Wagner’s *Bridal Chorus* from *Lohengrin*. A single opening idea impels that which follows.

Again, the impellent is not actually a pitch; it is a force, a spark, within the “chamber” that houses pitch and rhythm. As the atria of the heart work together (and the SA node is housed here), so pitch and rhythm combine to form that which we actually perceive, timbre. A competition strategy of the Inuit demonstrates this concept. Opponents (typically males) stand face to face dueling with voiced and unvoiced sounds of throat singing (Collaer, p. 56). At onset, a pitch and a regularity of rhythmic wave are overshadowed by the breathiness of the vocalist engaged in the musical argument. One would not expect, for example, a trumpet so lo to come in during this scenario because of the information gained by the initial spark. Again, the single opening sound, the impellent, highly suggests what will follow.

More important for the analysis at this opening stage is the identification of *an* impellent (there may be more than one possibility) rather than the choice of which one fits the music as a whole. Likely, the choice will be re-evaluated at a later stage.

**Impulse**

The second sound source is the impulse, a receiver of signals that carries forward the information after a holding period (see durational value of (4) at the end of phase one of the previous example). In the right atria of the heart, the SA node ignites the process

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in many directions leading to the AV node. The AV node acts as an impulse, pushing forward a previously received signal through multiple valves to a single path. Musical valves include groups of rhythm or pitch figures, contrasts in direction or durational value, and other motor devices. The implication is that there is a more specific journey to be taken from this point. At onset, the SA signal suggests what will follow but with open possibilities for alternatives. Musically, short-term goals are implanted early in the process implying information to the listener about the specific journey. These specifics often are related to patterning – sequences of rising pitches, diminutions of rhythm, phrase sizes, and shapes. The initial spark suggests the ultimate goal; smaller, attainable goals are set in motion by this second stage, the impulse.

Forward momentum in phase two of the Inuit example (see Example 4.2 which follows) comes from an expansion of the step size (a third from the previous phase), extension of the range (total of four semitones in this phase as compared to two in the previous), and interjection of a third pitch. These variations instigate motion away from the initial stability around D5 from the first phase. Accumulation of variants causes tension like that of a filled ventricle ready to expel its contents.

(Examples of this type of singing may be found on the CD “World Sounds, Songs of the Inuit,” Victor Entertainment, Inc., California, 1994).
Example 4.2. Second phase – the impulse

From the AV node, after the initial signal has been received, there is a purposeful delay. In music, this delay may take the form of a hold of some sort (fermata or improvisatory hold), or perhaps prolongation via repetition or patterns. Because of the delay in the heart, free potassium signals a return. Musical delays also signal upcoming events.

Accumulation from a continued impulse in the current example reaches full maturity in phase three (see Example 4.3) as familiarity peaks (repetition of previous two pitches – the same pitches found in phase one), tension increases with delays (holds), and peaks of pitch and rhythm (duration) reach a climax simultaneously. After this climactic event, a return to stable features of phase one is expected. In this sense, there is a polarization (relaxation of one part) within a depolarizing (active motion toward one goal) field.
Example 4.3. Third phase- the climax

Impetus

During climax, the apex contracts to efficiently generate a singularly directed motion of blood flow from the heart outward to service the lungs and other areas of the body. Similarly, a musical climax serves as an impetus to stimulate activity against any resistance (or previous directional flow). A musical signal proceeds to a climax and changes direction there to begin the motion toward the close.

Once the impulse drives the elements to a climax, another propellant, the impetus, redirects the previous information to complete the cycle. In this example, the initial ascent of phase one (D5-E5) and that of phase two (B4-E5) are mirrored in the final descent (see Example 4.4). This change may affect rhythm, pitch, dynamics, texture, instrumentation, tempo, contour, or any other previously stable element(s). Significant in this case is that the change of direction reflects a balance across an axis within the musical space, the aforementioned emphasized pitch, D5.\footnote{In this situation, D5 is the literal center of the interval space (one pitch above and one below) and is an abstract place-marker for any other axis with its center (such as GT4-GT5 if counting half steps).}

Notice that the size of the interval is not crucial to this style, but balance is still maintained.
Example 4.4. Fourth phase – the impetus

The impetus pushes the received information (the signal transmitted by the impulse) in one direction, back toward the origin of the flow. As this happens, phase 4 is a variation of phase 2 in terms of pitch series and resolution delay. When compared to phase 3, the pitch series is repeated, tension releases with a return to a held D5 (center), and they share two consecutive holds (fermata). In a comparison with the opening phase, this final phase uses only the stasis and descending components of the original contour (\(-,0,-\)). Descent is common in a final phase. Repose is realized with the consecutive held pitches (no longer on pitch peaks), a restatement of the trailing edge of phase one (compare the last three pitches of phase one with the first three of phase four), and a completion of literal space surrounding the D5 axis (one pitch above and below). The task for the analyst is to discover elements that relate to motion within the context. These three signals (impellent, impulse, and impetus) propel music as a living entity. For the sake of clarity in definition and to avoid clouding the point by using loaded musical terms or imposing cardiac nomenclature, the three terms are intended to reflect the behavior
around the signal. By comparing the flow of the heart to motion in music, the significant intangibles come to the forefront for analysis. A typical stream indicates the expected path toward the regular goals. Deviations from the path have specific implication for musical meaning in that these are the findings that characterize a specific style (which should be considered after an initial understanding of the regular pathway). Irregularities stem from a composer’s venturesome spirit.

According to Zuckerkandl, “To hear music is to hear motion…” (1973, p.140) because of the “audible relations between successive tones” (Ibid., p.162). Types of motion, then, are beneficial to the discussion.

*Principle 4: Music demonstrates a pattern with features of stability, instability, and a return to stability.*

In the heart, a disruption in the unidirectional flow toward the apex can cause an unstable situation. Most of the CUEs (listed in Chapter 3) may be categorized as features of either stability (such as a pulse) or instability (syncopation, for example). In some cases, CUEs can perform either purpose (repetition may, for example, confirm a sound or delay a resolution). Patterns that relate to stability do so on a larger scale than the CUEs of these two categories. According to Krumhansl, “listeners are sensitive to underlying structural principles that are preserved under transformation” (p. 161). Patterns, then, provide cohesion and contribute to understanding. Particularly in a longer work, a pattern is a welcome foci for the listener, and segmentation is key to perceptual understanding.
Short and long-term contour, pitch and rhythm integration, and areas of tension and release demonstrate these larger patterns.

*Contour patterns*

Contour regularity with contrast, the basic fall, is the most important fact of music, according to Roger Sessions (Sessions, 1962, p. 1). This claim confirms the tripartite balance of stability and instability. Two types of contour emerge from this study: 1) short-term contour - each phrase takes a specific shape which is then compared to other phrases, and 2) long term contour - the entire piece takes shape from the connection of phrases. By comparing the opening of a phrase with its ending, a specific line appears to ascend, descend, or remain. Contour in this sense is not limited to pitch height (which is possibly the most common form already in analytical existence) but may also be used to designate any number of timbral relations – full band, sax solo, full band; speed – Presto, Lento, Adagio; frequency – 90Hz, 60Hz, 120Hz; and so on. Note that in each example above, the contour was the same: (-+). Consistent patterning, then, is beneficial for perceptive capabilities.

An example of short and long-term contour, in connection with the well-known Old English folk song, “Under the Spreading Chestnut Tree,” is shown below in Example 4.5. In short-term contour, the individual pitches of phrase one, here labeled in solfege and in line form in Figure 4.3, constitute a cone shape.
Example 4.5. “Under the Spreading Chestnut Tree”

The identical phrase receives a line of stasis (−) in long-term contour as an indication that both the opening and ending of the phrase is on DO. When all five phrases are placed together, the complete contour in this song is as shown in Figure 4.4 (solfege version) and (line graph version).
Figure 4.4. Long-term pitch contour (solfege)

\[ \begin{array}{c c}
D & D \\
D___D & D___D & S & S & D___D. \\
\end{array} \]

Figure 4.4. Long-term pitch contour (line graph)

*Patterns of pitch and rhythm integration*

Identical patterns in pitch and rhythm heighten the potential for the listener to perceive those patterns. Based on rhythm durations, the first phrase of the same folk song follows the pattern shown in Figure 4.5.

\[ \begin{array}{c c}
8 \\
6 \\
4 & 4 & 4 & 4 & 4 & 4. \\
\end{array} \]

Figure 4.5. Short-term rhythm pattern of phrase one

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12 Durations are numbered according to relative time values: 4 = quarter note, 6 = dotted eighth, 8 = eighth, and so on.
A skewed cone shape with stasis is evident in the line graph of phrase one (see Figure 4.6 following).

Figure 4.6. Line graph of phrase one rhythm

Long-term rhythm contour considers the values of the first and last sound of each phase. The beginning and ending values for the phases (with all values underneath) are labeled in Figure 4.7.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
<th>Phase 5</th>
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<tr>
<td>4</td>
<td>4</td>
<td>8</td>
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<td>46844444</td>
<td>8888884</td>
<td>8888884</td>
<td>46844444</td>
</tr>
</tbody>
</table>

Figure 4.7. Long-term rhythm contour

Long-term rhythm contour may coincide with long-term pitch contour. As the line graph in Figure 4.8 shows, the pattern for long-term rhythm contour matches the pattern for long-term pitch contour (refer to Figure 4.4).
Figure 4.8. Line graph of long-term rhythm contour

This example of long-term pitch and rhythm contour shows that elements of pitch and rhythm can coincide with the use of a consistent pattern of contour.

Patterns of tension and release

Some cases overlap both functions (stability/instability) as is the case with tension and release. In one such case, an initial climb creates an instability that reaches to a yet unidentified peak. After the peak has arrived, expectations warrant a descent to counter the previous rise. Regardless of the specific pattern, continued use of the pattern provides a crucial component for the perceiver.

Principle 5: Music has the potential to be perceived due to formal ordering.

In a normal conduction pathway, the initial signal, triggered in the SA node, fires in many directions but each leading to the AV node. If the SA node works improperly, misfires at an accelerated rate cause random activity in the atria (known as atrial fibrillation). Successive order of certain musical events (such as the process of motion) is perceptually necessary for the listener. Music is recognizable because an initial idea develops into a pattern of a specific order. That pattern is then regenerated as a contrast to the opening followed by a return. In the case of motion, one signal, the impellent,
generates another (i.e. an impulse) and invites certain expectations for musical events.\footnote{Manipulations of events surprise the listener and may be used by composers for stylistic purposes.} As a final step, the impetus leads the listener back to the original sound source.

Ordering occurs in several ways including: 1) an overarching pattern of stability-instability-stability, 2) serial order of initial signals and propellents, 3) causal relations such as between signals and propellents, and 4) the circular nature of the process.

David Lewin states that even though certain relations may be difficult to comprehend, in a musical setting the same relation “has the potential for becoming audible” (Lewin, p. 86). He makes this claim by demonstrating a musical scenario in which

“the chain of motive-forms (b) (c) (d) … is generated by a very consistent, indeed relentless, process of rhythmic expansion. After the repeat, we are leaping from the end of the chain (b) (c) (d) (a), back to its beginning and motivic generator” (Lewin, pp. 86-7).

Lewin’s assertion confirms that order is a significant component for perception. Regardless of style, the initializer of music sets off a chain reaction. This reaction may affect rhythm, pitch, contour, or any other element. In the Inuit example at the beginning of this chapter (refer to Example 4.1), the ideas in the first phase (the impellent stage) set off a reaction. Forward momentum in phase two is caused by an expansion of the step size, extension of the range, and interjection of a third pitch. After the climax is reached, the subsequent focus is a reference to the beginning material. Order makes sense out of the sequence of events.
Commonalities Theory

Perception is dictated by these five principles of space, voice, motion, pattern, and order. Isolated time-pitch events may take up space or supply motion but are incomplete as music without the inter-relationship of these five principles. Zuckerkandl’s remarks confirm this larger picture. What the listener hears is not a succession of pitches but “relations of tonal direction and tension.” The final note is not so much about pitch and duration but about “the balance it achieves.” (Zuckerkandl, 1973, p. 99).

These five common universal principles form a broad category of relations among musical characteristics such that, when a song is heard, it is perceived as a “kind” of music. One may not be able to predict subsequent pitches, durational change, and the like, upon an initial hearing of an Inuit fighting song, for example, but one may be quick to identify it as “a music of some sort.” Exactly at this stage, however, a fundamental comprehension occurs of music as music (instead of as a particular style). This fundamental skill translates, then, to many types of music.

Elements alone do not constitute a musical situation. The application of the CUPs to those CUEs, however, provides a basic musical construction for a diverse population of musics from around the world. Two interrelated foci, the common universal elements (CUEs) and the five common universal principles (CUPs), join in Commonalities Theory. The theoretical component refers to the inter-relationship of the larger principles with the common universal elements.
The proposed theory emphatically names certain elements and principles as common to diverse times and places. Although outliers are conceivable, they do not falsify the claims of this study. Additional remarks from David Lewin confirm that a theory need not contain only perceptually true statements. “One can only demand that a preponderance of its true statements be potentially meaningful in sufficiently developed and extended perceptual contexts” (italics his) (Lewin, p. 87). In the following table (see Table 4.1), each common universal element from Chapter 3 relates to at least one common universal principle. Many combinations of CUEs and CUPs are possible. Analysis should reflect the relation of particular CUEs with specific CUPs.
<table>
<thead>
<tr>
<th>Common Universal Principles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Space</th>
<th>Voice</th>
<th>Motion</th>
<th>Pattern</th>
<th>Order</th>
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<td>timbre</td>
<td>ascent</td>
<td>repetition</td>
<td>tension/release</td>
</tr>
<tr>
<td>pitch center</td>
<td>register</td>
<td>repetition</td>
<td>contour</td>
<td>contour</td>
</tr>
<tr>
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<td>range</td>
<td>delay</td>
<td>rhythm pattern</td>
<td>growth</td>
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<td>instrumentation</td>
<td>climax</td>
<td>congruence</td>
<td>pitch series</td>
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<td>tessitura</td>
<td>duration change</td>
<td>parallel begin/end</td>
<td>contrast</td>
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<td>texture</td>
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<td>descending line</td>
<td>descending line</td>
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<td>anacrusis</td>
<td>release</td>
<td>familiarity</td>
<td>form</td>
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<tr>
<td>dynamic change</td>
<td>syncopation</td>
<td>variation</td>
<td>return</td>
<td></td>
</tr>
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<td>peaks</td>
<td>anacrusis</td>
<td>short-term contour</td>
<td>antecedent consequent</td>
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<tr>
<td>fluctuation</td>
<td></td>
<td></td>
<td>delayed resolution</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1. Inter-relationship of CUEs and CUPs
CHAPTER 5

ANALYSIS WITH COMMONALITIES THEORY

Commonalities Theory combines elements found as common among various cultures with larger, guiding principles. The CT concepts that are “common” and “universal” are especially important at this stage, because analysis using CT may be applied to nearly any type of music. By using this system, musicians have an opportunity to make connections within a piece and also, perhaps more significantly, between many styles. In this chapter, analysis comes to the forefront as concepts from CT are combined with a visualization mechanism.

Visual tool for analysis

Visualization methods help to solidify understanding of a variety of connections. A graphing procedure can illustrate salient features and provide a visual representation of the relations between those features. While some graphs demonstrate connections with nodes and links, other techniques allow for dissimilar events (such as melodic peaks and balance) to be connected on the same spatial plane. For an analysis using CT, pertinent elements from the list of CUEs are graphed while CUPs is applied in relation to those elements. Obviously, if every CUEs and CUPs were explored for any one musical setting, the graph would become cluttered and the perspective subsequently skewed. The
graph of salient features assists the analyst in an internalization process for better understanding (much in the same way as the EKG strip illustrates for the cardiologist any imperfections in the undulating patterns). A grid supplies a framework that allows for the plotting of literal space. Because the goal of this process is to illustrate pertinent features of the music, this tool is called the *Grid of Pertinence*\(^\text{14}\).

Analysis with Commonalities Theory involves two steps: 1) identification of salient features listed as CUEs (refer to Table 3.1 for the chart), and 2) application of the five CUPs. In order to discern prominent elements, the analyst must listen to, sing, internalize, and otherwise become familiar with the work. The most salient element is graphed first in relation to space, the first principle. The number of elements graphed in each analysis depends on the situation, but all five principles are important components of the complete event. For more insight into one particular piece, an analyst may choose to graph the most prominent four or five elements, for example. When comparing two or more works, any number of elements may be considered. For the sake of simplicity, the analyses that follow include only one or two elements in the hope that this new method remains clear for all five CUPs. More experienced analysts may include multiple elements.

In the examples that follow, CUEs and CUPs are combined in images that reflect significant relationships. The analyst chooses a piece and familiarizes him/herself with the work, selecting prominent features to be graphed. Each step in the graphing process corresponds to one of the five CUPs.

\(^{14}\) Based on the analytical discussion by Jean-Jacques Nattiez – from Dunsby on Nattiez, p. 229
The analysis

For a particular song, the musical space graphed in Figure 5.1 below displays balance (a conjunct), range (literal space), and a pitch center of F (CUEs). Balance here is the fourth above and below the central pitch. The range and the balance coincide in this instance.\(^\text{15}\)

![Grid with notes Bb, F, C]

Figure 5.1. Balance away from F

\textit{Voice}

Pitches allow the voice, a human voice in this particular song, to cut the available space. The center is still F, shown here as a middle axis. Peaks are marked in italics as a sign that they exist in space but are not realized at this stage (see Figure 5.2).

---

\(^\text{15}\) Squares in the grid are purposefully approximate to reflect the flexibility of the system. For instance, trained singers use vibrato to fluctuate around a pitch at a pleasing amplitude. Untrained singers may consistently sing below or above the exact frequency. The goal is not to plot frequencies but to study relationships.
The impellent (initializing signal) is an initial ascent to the center pitch, F, with a durational value of 4 (see Fig. 5.3). From the F, the impulse (which takes the signal and pushes forward) descends three times from different pitches. At the end of each descent is the durational value of 4 repeated. A change of direction, an impetus, occurs at the end.\textsuperscript{16}

Rhythmically, the initial phrase begins on an anacrusis (impellent), a signal to the impulse to pick up the motion. The series of durations begins at 4, moves to 8, then back to 4. After three such series, the end (impetus) changes to 4444, a reference to the opening duration of 4.

\textsuperscript{16} In the charting procedure, the following symbols are used to indicate types of motion and climactic point: Impellent (*), Impulse (>>>), Impetus (<<<), Climax (^).
Figure 5.3. Motion

Pattern

As Figure 5.3 above suggests, patterns of pitch, rhythm, and contour are established and repeated. By adding more pitches from the song (as shown in Fig. 5.4), a four-note adjacency is apparent that begins with an implied interval of a fourth (C to F) followed by a realized interval of a fourth ascending (F to B♭) and descending (F to C). Each ascending pitch also begins a new four-note adjacency (F,E,D,C), (G,F,E,D), (A,G,F,E), and (B♭,A,G,F). Balance is realized with the addition of the pitch peaks. A rhythm pattern of 48888844 is clear and repeated twice. The (+-) contour of pitch integrates with the (+-) contour of the rhythm.
Figure 5.4. Pattern

Order makes obvious (in the graph as well as to the listener) the patterns of pitch and rhythm in this song. If, for example, the descending pitch pattern is re-ordered as shown in Figure 5.5, then the listener loses the ascending four-note ascending adjacency from F as well as the repeated rhythmic pattern.
Upon final reflection, salient features emerge. An initial ascent spans a distance of a fourth and begins on two quarter notes. A recurring rhythm pattern combined with 4 note adjacencies provides the impulse that moves the song forward. Near the end of the piece, the climax is simultaneously the peak (highest pitch) and goal of the ascending (F, G, A, Bb) adjacency pattern. Rhythm and pitch share the same contour features. The opening and ending material are parallel but with an interruption. Balance across the F axis is apparent while the pitch, F, plays a vital role. The following grid (Figure 5.6) displays these features.
Heavy lines reflect issues of balance across the F axis; dashed lines relate to tetrachordal inversion around an F axis. The beginning idea rises; the ending is similar but incorporates a turn around the axis. The most often occurring pitch is the F of the axis.

In this song, “We Wish You a Merry Christmas,” the Grid of Pertinence shows contour, repetition, and balance as cohesive and vital musical factors. Other factors are striking as well. From the first pitch, Sol, the tune rises and falls followed by understructure of La, Ti, Do. This line forms an additional four-note figure from F. Also, each pitch in the line that forms a balance around the F axis (FGA together with DEF, and G to E) is of a 4 duration.

---

17 Because the elements of music are general, analysts decide which factors are most prominent and create a visual representation that reflects those decisions.
Once these CUEs and CUPs are plotted on a grid, details are easily inserted. This procedure, then, offers a useful tool for understanding significant features of the piece.

The following features are easily captured on a Grid of Pertinence:

1) Musical space – The axis offers an appropriate angle for approaching this piece. Balance is a clear factor in the example above.

2) Voice – The carrying of pitches (other graphs may use rhythms or dynamics or other features instead of pitches) through the continuum is a smooth process.

3) Motion – Repetition and rhythmic motion propel the music forward to a climax.

4) Pattern - Salient features of pitch and rhythm work together in a 3+1 pattern. Rhythmically, the 8884 relates to the descending four note adjacent pitch pattern.

5) Order/cohesion – The original ascent (C to F) provides an expectation to the listener of another, longer version (F to B♭) before the eventual fall from the climax (B♭ to F).

The Grid of Pertinence proves beneficial for understanding a common American tune. An application to a work of another culture will test the validity of the procedure.

Musicologist Zygmunt Estreicher, an expert on music of the Eskimo, researched specific features of the music proper. If his claims are similar to those elements found in this study, then confirmation only substantiates the argument. The grid should show those features.

According to Estreicher, the purest Eskimo music comes from the earliest known source, that of the Padleirmiut, living west of Hudson Bay (Collaer, p. 30). For this reason, the following song provides an interesting comparison. “The melodic structure of Eskimo music has a kind of ‘fixed centre of gravity’ functioning as the fundamental note” (Ibid.).
Example 5.1. Inuit Nursery Song

The single pitch, D, is the point in space around which other pitches revolve. The set of pitches contains three elements (B,D,E), literal spaces, within a span of four (B,C,D,E), abstract spaces. Durational values also have a range of four spaces: 16, 8, 4, 4 with fermata).

<table>
<thead>
<tr>
<th>E</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5.7. Space

As the voice enters, D and B are consistently rotated with a delay at the end. The range has not yet been realized.

<table>
<thead>
<tr>
<th>D</th>
<th>D</th>
<th>D</th>
<th>D</th>
<th>D</th>
<th>D</th>
<th>D</th>
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</thead>
<tbody>
<tr>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

Figure 5.8. Voice
The impellent in this case is a repetition of the first pitch, D. Two sixteenths followed by a quarter note on a downbeat offers a tension and release from the start. Pitches above and below carry the motion forward. Toward the end, a change in duration sets the impetus to signal the close.

| E> | E> | E> | E> | E> | E> | E | D* | D* | D> | D | D | D | D | D | D | D | D | D | D | <D | <D |
|----|----|----|----|----|----|---|----|----|----|---|---|---|---|---|---|---|---|---|---|---|
| B> | B> | B> | B> | B> | B> | <B | D* | D* | D | D | D | D | D | D | D | D | D | D | D | D |

Figure 5.9. Motion

With so much repetition in this piece, some patterns are obvious. From the beginning, the pitch set (D, E, D, B) repeats. In terms of contour, a cone shape appears as a repeated pattern. Rhythmically, the accents (agogic) are on D (downbeat) and B (held). Between these two specific points is a repeated contour of (+--).

<table>
<thead>
<tr>
<th>D*</th>
<th>D*</th>
<th>E&gt;</th>
<th>D&gt;</th>
<th>D</th>
<th>D*</th>
<th>D</th>
<th>D</th>
<th>E&gt;</th>
<th>D&gt;</th>
<th>D</th>
<th>D</th>
<th>D</th>
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<tbody>
<tr>
<td>B&gt;</td>
<td>B&gt;</td>
<td>B&gt;</td>
<td>B&gt;</td>
<td>B&gt;</td>
<td>B&gt;</td>
<td>&lt;B</td>
<td>16</td>
<td>16</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>

Figure 5.10. Pattern

The integration of rhythm and pitch form a 2:1 relation. That is, the first downbeat, D, is followed by E. This takes one pitch step and half the duration (4, then 8). At the end, D again precedes E but in reverse order (mirrored). D has a duration of 16; E has 8. In both cases, the lower goal is the same (B on value 3). Consistent
durational elements (such as each instance of 3) occur away from the gravitational center before an immediate return to D. Six episodes of each durational value (the 3 or the 8) occur above and below the central D. Also, the first and second half of the song are balanced in terms of attacks (total duration of D for each side is 8 and 3 for each other pitch). A grid of order may refer more to duration than pitch.

![Figure 5.11. Order](image)

Salient features of this song include repetition, pitch and rhythm integration, delay, and a pitch center of D. The Grid of Pertinence can show these features and may indicate more than previously noted in the grid related to order. This is not always the case. The important aspect at this point is to allow discussion, reflection, and performance of the piece.

![Figure 5.12. Grid of Pertinence](image)

The Grid of Pertinence offers to a performer a kind of map for navigating through the piece. The previous grids for the Inuit Nursery song and the song “We wish you a
“Merry Christmas” may be used by a performer to better understand and perhaps more accurately perform the work.

The previous two examples also show that the Grid of Pertinence can illuminate certain salient features. For this reason alone, the visual tool is valuable for an analysis of individual works. The ability to perform side-by-side comparisons of disparate examples is an additional benefit of the Grid. An important distinction must be made here between the results of graphing CUEs and CUPs and the results of comparisons. The interpretation of a single piece from the Grid of Pertinence draws from the set of elements and the set of principles found to be common among a diverse group. All five principles (with as many elements as the analyst desires to use) should be expected in each Grid. That a particular feature does not conform to that individual Grid should be considered an outlier and does not negate the entire theory. On the other hand, a comparative study does not come with the same expectation. To compare pitch series, for example, is to test the use of an identical pattern or a related version of it. If similarities appear, then the analyst has uncovered new, valuable information. That two or more works hold no patterns in common does not negate the fact that they each have their own patterns. The CUPs is “pattern,” not to be confused with any particular pattern. Any specific patterns that arise from comparative studies indicate a higher level commonality that is beyond the scope of CUEs and CUPs.

The two examples that follow demonstrate the process of comparative analysis with the Grid of Pertinence. What is expected is that both pieces exemplify the elements
chosen (again, the inclusion of every element on the list would only blur the visualization tool) and incorporate all five CUPs. What is not expected is the use of specific patterns of those elements and principles found in both pieces. Any such finding is an additional benefit, likely found in works by the same composer or in the same genre.

In the following comparison, two disparate works, “Miryang Arirang” (see Example 5.2) and “Smoke on the Water” (see Example 5.3), demonstrate the elements of repetition and variation with the five CUPs. A comparison of the two works may or may not reveal commonalities in any particular usage of CUEs or CUPs.

Example 5.2 “Miryang Arirang”

Space

A literal repetition of high, middle, and low space is emphasized by downbeat (see mm. 1,5,8,11,13, and 16). The pitch of downbeat emphasis repeats at least
once. Figure 5.13 demonstrates that the high, middle, and low sections repeat and that literal pitch spaces repeat in each section except the last low section.

<table>
<thead>
<tr>
<th>CCCCCCCC</th>
<th>CCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGGGGG</td>
<td>GGGG</td>
</tr>
<tr>
<td>CCCCCC</td>
<td>C</td>
</tr>
</tbody>
</table>

Figure 5.13 Space

Variation is shown in the same figure. The first section (the first completion of high, middle, and low in this case) contains more elements of repetition than each corresponding space of the second section. Also shown is a non-uniformity of repetition between the high, middle, and low spaces (one exception is the set of six repetitions for the middle and low spaces of the first section).

Voice

The voice fills in the line that forms the high, middle, and low spaces. In Figure 5.14, C, B♭, A♭, and G complete the first high space, the last pitch suggesting the next part of the line. G, F, E♭, C, and G fill in the middle section, the penultimate pitch referring to the next part in this case. The final section shows a turn around the emphasized pitch. Repetition occurs as the end (or near end) of each section offers the pitch for the next section. Variation is evident by the number of spaces in each section.
The repetition of the first pitch in the high section acts as an impellent to move forward. Repetition of pitch and continuation of the same line in the middle section pushed toward the end (impulse). Variation is found in the low section. Instead of leading downward to continue the line, it rotates around one pitch. The stasis of this line sets up a propulsion in the opposite direction (up) to the return of the high section (see mm. 10-11). The low section, then, acts as the impetus that changes direction to refer to the original idea.
Figure 5.15 Motion

Pattern

Literal repetition of high, middle, and low space for each section is already evident (see Figure 5.13). On a smaller scale, that pattern repeats. High, middle, and low spaces (written as H,M,L in the left column) occur in each of the first two sections. The third section varies the pattern (see Figure 5.16).
<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>MIDDLE</th>
<th>LOW</th>
<th>HIGH</th>
<th>MIDDLE</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>CCCCCCCC*</td>
<td></td>
<td>CCC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bb</td>
<td></td>
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<tr>
<td>M</td>
<td>Ab</td>
<td></td>
<td>Ab</td>
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</tr>
<tr>
<td>L</td>
<td>G</td>
<td>H</td>
<td>GGGGGG</td>
<td>G</td>
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<tr>
<td></td>
<td>F&gt;</td>
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<tr>
<td>M</td>
<td>Eb&gt;</td>
<td>H</td>
<td>Eb</td>
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<td>Eb</td>
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<tr>
<td>C&gt;</td>
<td>M</td>
<td>CCCCCC&lt;</td>
<td>C</td>
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<tr>
<td>L</td>
<td>G&gt;</td>
<td>L</td>
<td>G</td>
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</tbody>
</table>

Figure 5.16 Pattern

*Order*

The overall plan coheres due to the ordered patterning. Section one uses high, middle, and low space, as does section two. The third section in the order must change the direction or there is no goal; an endless line would result. High, middle, and low space is repeated as well as varied in this piece. Also, a common pitch space between sections (i.e. C and G in sections one and two) and between the first half and second half of the piece (i.e. C of both) demonstrate the repetition in the pattern. The Grid of Pertinence shown in Figure 5.17 demonstrates this.
The next example, “Smoke on the Water,” demonstrates the same CUEs and CUPs as those found in “Miryang Arirang.” How the two works compare in the use of these ideas remains to be seen.

Example 5.3 “Smoke on the Water”
Space

Pitch space repeats on the downbeat of the first three measures. In the final measure the space repeats but is varied by delay. Also evident is a repetition of low, middle, and high in all but the final measure (see Figure 5.18).

<table>
<thead>
<tr>
<th>H</th>
<th>D</th>
<th>D</th>
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</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>L</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

Figure 5.18 Space

Voice

The voice in each section (mainly per measure here) leads upward from low to middle to high creating a single line for each section. That line repeats in all but the final measure as shown in Figure 5.19.

<table>
<thead>
<tr>
<th>H</th>
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</thead>
<tbody>
<tr>
<td>M</td>
<td>C</td>
<td>C</td>
<td>C</td>
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<tr>
<td>L</td>
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<td>A</td>
</tr>
</tbody>
</table>

Figure 5.19 Voice
**Motion**

The three-note ascending figure constitutes the initializing idea (impellent). Repetition of the line (as in measure two) acts as the impulse, driving forward the initial idea. At the end of measure three, an impetus is created by the change of direction. The same three-note figure as the one in the first measure is reversed to reach the final pitch. This pitch coincides with the first pitch of measure one but is not emphasized by downbeat as was the initial pitch. Delay accompanies the final pitch. The three types of motion (impellent, impulse, and impetus) are shown in Figure 5.20.

![Figure 5.20 Motion](image)

**Pattern**

The low, middle, and high pattern from measure one repeats three times, the final pattern varied in a retrograde version. See Figure 5.21 for visual confirmation of this pattern repetition and variation.
Order

Order is paramount for this progression of events. The initial idea is repeated and varied in measure two. Had the Eb ornament been found in the first idea, it would also be repeated. The first measure, then, cannot be a variation of measure two. The variation follows the initial idea and occurs in measure two. The third measure contains a repetition of the initial idea which could be considered the first application of that idea were it not for the change of direction. That change signals the end which, in this case, must be found in measure three. The end of the reverse pattern and the reference to the opening idea (pitch) is found, as expected, in measure four. The Grid of Pertinence shown in Figure 5.22 clarifies the necessary order.

<table>
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<th></th>
<th>H</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D*</td>
<td>C*</td>
<td>A*</td>
</tr>
<tr>
<td></td>
<td>D&gt;</td>
<td>C&gt;</td>
<td>A&gt;</td>
</tr>
<tr>
<td></td>
<td>D&lt;</td>
<td>C&lt;</td>
<td>A&lt;</td>
</tr>
</tbody>
</table>

Figure 5.21 Pattern
Collectively, the information gained by analysis illustrates that repetition and variation (two of the CUEs) occur with each of the five principles in both songs, “Miryang Arirang” and “Smoke on the Water.” The fact that information may be gleaned by using this integrated system of CUEs and CUPs only confirms its validity.

The visual images may be used as a source for comparing two different styles as well. Grids of Pertinence for both songs (shown in Fig. 5.23) offer a visual reduction of salient features, allowing for interpretation of the most prominent aspects of the two pieces.
In terms of space, both songs repeat downbeat pitch space in some way. Also, high, middle, and low spaces are salient in both songs. Spatial variations of numbers of pitch repetitions versus delay of pitch space do not coincide.

Repetition of the high, middle, low sequence occurs in the voices of both songs, though in reverse order. Variation in the first song relates to the number of spaces for the filling of the line. Reversal of the direction occurs in the second song. Again, the repetitions of the two songs share salience, but the variations do not.

Figure 5.23 Grids of Pertinence
In both songs, a repetition of the motion figure relates to the impellent (each song has its own impellent). In both cases, variation comes as a change of direction at the end (either a section end or a final ending). A repetition of the impellent and variation in direction coincide here.

Patterns exist in both pieces, but only the first repeats the pattern (H,M,L) on a large and a small scale. In both cases, the pattern changes direction in some way at the end.

The order seems to be important in both songs. In the first, the pattern (H,M,L) is repeated and then varied. Though the number of patterns is different in song two, the order remains. That pattern (L,M,H) repeats, repeats again, and then is varied.

A comparison of the two songs reveals that some similarities exist while others do not. Those features that coincide are: use of downbeat pitch space, a voice that moves in a line from either high-middle-low or the reverse, a repetition of the impellent with a change of direction in an ending place, patterns of linear high-middle-low, and a consistency in terms of order. Items that do not appear related are: number of pitch attacks, direction of pattern, nature of the impellent, agreement on large and small scales, and number of occurrences in the ordered succession of the event.

What this means to the analyst is that Commonalities Theory, the integration of CUEs and CUPs in a musical scenario, provides a plausible method for uncovering salient features of a musical work. Any similarity that emerges from a comparison of two
or more works is possible but not necessary. Specific features may be found. The more generally one can reflect on the combination of the works, however, the more one finds that related features are more akin to principles and conjuncts than to any specific space unit, line, motion type, or pattern. The possibility exists, however, for analysts to uncover similarities between dissimilar musics. Those studies would prove fruitful regardless of the outcome. In this study, though, the important component for the analyst is the blending of salient CUEs and CUPs for better understanding of a single piece.

Dissimilar musics include aspects of space, voice, motion, pattern, and order. Sound includes features of timbre, pitch height, downbeat, and so on, and motion refers to such issues as harmonic goals, rhythmic propellants, stasis, and tension and release. Any music may be identified by its conformance to the elements and principles in Commonalities Theory and may be graphed using the Grid of Pertinence to illustrate salient features. Six skills are needed to complete this analytic procedure: identify elements, consider the relation of each to the five principles, graph the CUEs and CUPs, reflect on the pertinent features, perform the piece, and evaluate the connection of performance to information about the piece. At each stage of skill development, comprehension increases about music regardless of culture or genres. A foundational course that incorporates this skill development could be beneficial for a beginning music student. Before initiating such as course, however, the need for curriculum change must be justified. The following chapter exposes dilemmas in the current status of traditional music theory studies and offers a solution through CT.
CHAPTER 6

AN EDUCATIONAL FOUNDATION

Current Problems in the Theory Curriculum

If it is true that a study of universal principles enables greater understanding of musics from around the world, then a beginning student should expect to learn basic musical concepts before any study of a particular style. A more specific approach to analysis would be ideal if one could decide on whose/which theory to use that would accommodate any style of music. The historical approach that has been in use in the American college classroom for the past 100 years focuses on the artistic principles of 17th–18th century Europe to the exclusion of many other musical discussions. As music diversifies, some pedagogues expand their views by adding chapters to textbooks to incorporate new material, such as twentieth century music and techniques for analysis. In so doing, the study of music theory has become something of a set of core beliefs (the European Classical tradition) with many appendages (twentieth century music, jazz theory, cognition, and so on). As more and more topics enter the undergraduate theory classroom, certain features are either given a reduced status or eliminated. If the core of
the curriculum can be made more inclusive, students can gain a deeper understanding earlier in the process.

Many scholars would agree that music theory has fallen behind the musical times. For decades, scholars have discussed several dilemmas in music theory including the need for live performances, skills in logic, and historical bases. William Schuman (teaching at Julliard in the 40’s and 50’s), appeals for a shift in his article “Literature and Materials” from part-writing and common practice harmony to literature itself and “toward a wider range of historical styles and compositional issues” as the core (Schuman, p.1). In 1959, David Kraehenbuhl brought to light the need for revision in his collection of essays “On the Nature and Value of Theoretical Training” (Kraehenbuhl, 1959). In this article, four prominent musicians discuss the problems with the then current status of music theory. Upon review of the article, four common threads emerge as critical elements in a thriving theory program. Each contributor suggests that 1) theory function as a living entity, 2) as a logical and intuitive process, 3) without historical borders, and 4) with a fresh perspective. The article’s credibility lies in the prominence of the authors (Leonard Ratner, Stanley Fletcher, Eugene Weigel, Halsey Stevens, and David Kraehenbuehl) as well as the pertinence of the various perspectives for today’s classroom. The authors represent four widespread musical vantage points – as composer, performer, music educator, and layman.

Theory should also recognize music as a living entity. In Zuckerkandl’s, Man the Musician, the past becomes symbol and in this form continues to be a living force in the
present and in what is to come” (Zuckerkandl, 1973, p. 75). The broader category of Art must be incorporated in an understanding and appreciation of music. Live performances may emphasize this feature. Stanley Fletcher writes, “there is not sufficient study of live music” and suggests that theory should involve the “sources of energy” of tension and propulsion that impact the listener (Kraehenbuhl, 1959, p. 46). These elements of “magic” provide mystery and “command the human ear and mind” (Ibid. 45 and 47). Performance must be included in any beginning course.

Logic and intuition are important facets of the musical mind that should be cultivated in the classroom as well. According to Eugene Weigel, the theory classroom should address issues such as how music works, “why it does what it does, and what are the materials used in doing it” (Ibid., p. 53). Halsey Stevens rightly chooses the words of a composer-theorist: “a mind thoroughly trained in musical logic may function logically under any circumstance” (as quoted in Kraehenbuhl, 1959, p. 37). By creating a Grid of Pertinence, students must use their skills of logic and intuition.

Theory should promote inclusive historical awareness. Leonard Ratner points out that even fundamental stylistic elements – scales, intervals, tempo, are “born in the context of music” (Ibid. p. 59). Fletcher emphasizes the duty of a performer to take a score and make it the “living experience that the composer conceived” (Ibid. p. 39). Knowledge of historical context would be critical for those decisions. Some programs include historical settings for Western tonal harmony, but most are deficient in pre-tonal concepts. According to Stevens, students do not study plainchant nor are they proficient
in the modes. Yet, much of the music of the 20th century incorporates modal elements (Ibid. p. 33). Students of the CUEs and CUPs in Commonalities Theory are empowered to make universal connections. Although songs of many cultures are used as teaching tools for reflection, historical settings invoke social function and possibly stylistic characteristics. For this reason, historical information from each culture is best saved (and is necessary) for the discussions on unique features of each style.

The methodology of teaching theory should be as creative as is the making of music. Part of the problem here is cyclical. When students are poorly or uncreatively trained, schools sometimes lower the standards to retain student population. The poorly trained student graduates and procures an assignment, teaching the next group of freshmen. Weigel believes that theory is the program that can, and must, break this cycle. Again, if music as an art is realized in the classroom, then students grasp a higher level of understanding and can produce work that demonstrates a “sharper musical awareness” (Ibid. p. 54).

According to Kraehenbuehl, “the Nature of current theoretical instruction…[is] almost valueless for active participants in the world of music” (Ibid. p. 31). To rebuild theory pedagogy, then, requires four main components: 1) theory must be viewed as a live entity, 2) instruction must include musical logic, 3) pre-tonal historical settings must be inserted at some early stage and 4) teachers must dare to change as does music itself. I would like to extend one aspect of this argument; the core of our curriculum must be built on common musical ground from around the world. As Kraehenbuehl mentioned, music
is constantly changing, and the theory classroom must “get in step.” “Theories of real value deal with the moment and must be constantly revised as new musical moments develop” (Ibid. p. 32). Even today, with music evolving around the world, regardless of the time constraints of quarters and semesters, teachers of theory must equip themselves with contemporary musical practices and integrate those common elements into the classroom. Kraehenbuhl’s article, a response to a deteriorating curriculum, may be as relevant to current teaching practices as it was to the misguided theory courses of nearly fifty years ago.

Roger Sessions also suggests a new theory or a revamping of the existing one (Sessions, 1962, p. 9). The more composers taught, the more they found common intrinsic factors that had not been included in textbooks. Nearly a decade after Sessions, Godfrey Winham reiterates the same concerns and provides five factors that have brought theory to this state: 1) the development of musicology as a separate discipline, 2) better awareness on the part of composers to existing theory, 3) new theories, such as that of Heinrich Schenker, 4) additional tools in mathematics and logic, and 5) new fields such as electronic computation (Blasius, p. 1). The problem continues and escalates as more and more genres are deemed worthy of study. In an attempt to incorporate advances in music–technology, perception discoveries, works by new composers, and so on, other solid topics receive less concentration. New textbooks provide differing sets of literature (though often with the omission of some exceptional works). Technology class, counterpoint, and aural training seemingly juggle for space. None of these classes,
though, should be eliminated any more than the discarded literature should be removed. What is necessary now more than ever, is efficiency.

Goals of a Theory Curriculum

A foundational theory should illuminate, to some degree, some aspects of any type of music. Students would likely benefit from the study of consistent principles found in various dialects in the language of music and the application of those principles to their lives. The foundation for a music theory curriculum should involve facts and relationships. The music texts indicate that our “theory” of music is based on building blocks such as scales and key signatures, both of which are facts. The theory that comes from these and other facts (the spelling of the Augmented sixth chords, the tone row in Schoenberg’s 4th String Quartet, as examples) is never fully developed procedurally. It is an abstraction that is not clear and is, therefore, not tested. Theory texts, and consequently teaching strategies, neglect the underlying theories that are connected with the building blocks. Further, much time (in the same current course) is devoted to notational practices (writing out ascending and descending scales and notating the key signature of G major with a sharp symbol on the 5th line of the treble clef). Any foundational theory should provide more than these primitive facts. A basic set of musical components that consistently relate various musics provides a better opportunity for understanding any other given musical setting. Once this foundation is established, music theory makes more musical sense than a current common student perception that music theory is the mere study of chords. Each subsequent course in the core of the
theory sequence can affirm musical similarities of each chronological or geographical event and to any uniqueness within a specific genre. Because of the obvious compare/contrast component in this method, every style may be studied with more meaning. Even without any additional pedagogical technique, Commonalities Theory reflects a higher level of cognate ability than that of labeling chords and naming functional progressions. The study of music theory should include this higher level thinking.

Patricia Shehan Campbell also addresses the correlation of commonalities with education. She allows for common cognitive development and says that, if there are commonalities of elements or principles, they are relevant for the classroom.

“As to music teaching and learning, the development of cognitive and creative processes may progress naturally through common stages of human growth throughout the world, although there may be culture-specific aspects of transmission to consider as well…; that certain principles are commonly employed in a diversity of cultural settings may suggest that they are commonsense, practical, and human approaches to music learning” (Campbell. p. 102).

Theory, as defined in Webster’s New World Dictionary of the American Language, 2nd college ed., stems from the French théorie, the Latin theoria, and the Greek theōria (Guralnik, p. 1475). The first meaning is that of a “mental viewing” or “contemplation.” In his Teaching Approaches in Music Theory, Michael Rogers offers his version of this cerebral activity:
“Music theory, in my opinion, is not a subject [all italics his] like pharmacy with labels to learn and prescriptions to fill, but is an activity – more like compositions or performance. The activity is theorizing: i.e., thinking about what we hear and hearing what we think about – and I would include even thinking about what we think (p. 7).”

It is my assertion that students of music theory should graduate with the ability to listen to and think about music intently, as in contemplation. Though it may exceed the scope of this work to fully design every facet of a “theory” based on the third definition, “a systematic statement of principles involved,” it is my expectation that, by constructing a “formulation of apparent relationships or underlying principles of certain observed phenomena which has been verified to some degree,” (definition 4, p. 1475) a foundation is provided that is suited for a student beginning intensive study in any style with a maximum potential for musical diversity in the music theory curriculum.

One may and perhaps should be skeptical about changing what has been occurring in American institutions for decades. If, however, a practical method provides some depth and some relevance to future musical genres, then it is necessary to consider moving further than scholarship alone has done. Students should learn to discuss features that attracted them to this field and to share what they have come to know as the indisputable tenets of music. Changing the curriculum is a complex process, but changing the foundation to allow for greater understanding may be necessary.

If students are given tools of basic construction and can distinguish between common characteristics and unique features, then students can evaluate what works in that piece in terms of categories – movement, stability, climax, and so forth. Students
then interpret their findings and after some active involvement, can decide on the
significant events that provide connections for the listeners. The integral components,
then, for any beginning study in music should be Common Universal Elements (CUEs)
taught concurrently with Common Universal Principles (CUPs). In this manner, students
gain a viable and more global understanding of music and can realistically study future
stylistic traits in a musical way. Live performances of their analyzed pieces are vital to
the connection process. Students should gain from their theory courses that this skill
development is a means to understanding and is useful for their performance knowledge.
To that end, certain skills should be required in this and subsequent theory courses:

- Talking about music – Students are able to compare common elements of two pieces.

- Analyzing – Students identify features of space, voice, motion, patterning, and order
  in a musical setting.

- Composing – Students write an example of a musical setting.

- Performing – Students perform on their own instruments the musical piece written for
  the composing component of the course.

- Sight-singing – Students vocalize musical elements such as pitch and descent.

- Dictation – Students notate musical concepts such as contour, pattern, and order.

- Improvisation – Students imitate given concepts, such as sequences, with variation.
Godfrey Winham says that “theory attempts to show that certain kinds of unusual techniques or procedures are justified or unjustified in general, because of their effect on significance and hence on coherence” (Blasius, p. 4). If students, then, can make this argument for or against certain procedures within a musical work, they have much better frame of reference for understanding and hence performing the work. Additionally, if they can make these comparative decisions based on certain norms, then improvisation becomes less of a challenge.

Logic dictates that certain ideas, processes, strategies will make sense while others will not. Contrast, among a static environment, whether of pitch or rhythm or simultaneity, becomes a salient feature, discernable to the listener. Sessions talks about a logic of tonality that prompted composers to study intrinsic musical factors. Specifically, chromatic tonality emerged from that musical research. The musical mind can formulate such a paradigm. Students from the first theory course should be encouraged to think about music, the space, the behavior, the reasoning – not a specific style based on a set of rules but a unique set of expectations superimposed on a universal musical venue. Toch also tells us that “by drawing conclusions [logic], it may pave the way for new discoveries or events” (Toch, p. iii).

If students begin with the CUPs, they can build a case for cohesiveness from that initial point of departure – the musical idea (the impellent) in space. Komar’s derivational analysis links a first event, such as that point of departure, to subsequent events. By looking at these events – motive, content, stability, on the Grid of Pertinence,
students draw their own logical conclusions and have a firm grasp of the piece. Hopefully this leads to a performance based on insight and also a deeper reading into the next piece.

Commonalities theory is an aim to meet certain goals for a revised music theory course by providing opportunities for thinking about, discussing, evaluating, and performing music from all over the world. Obviously, this theory can never be proven entirely. Since there will always be future “new music,” any proof of the theory is only true up to that time point. The validity here is strong enough, however, to show that commonalities exist within a large, humanly organized framework and that future studies will likely confirm the categories. These findings are vital to the practical study of music theory for all students. How they learn this theory in the classroom and ultimately apply it to their own musical lives is another consideration.

Commonalities Theory as a Foundation

Students enter the theory classroom from diverse musical backgrounds. Some have taken piano lessons since early childhood, some began other instruments in the fifth grade, and others have had no prior formal training. The student body is made up of many races, creeds, and cultures. The music that these students know is more diverse than that which is played on the most popular radio station. Jazz, hip-hop, Latin, rhythm and blues, and rock comprise only a few of the genres that interest today’s students. Professional teachers must be cognizant of the expanding knowledge base of musical
styles for each incoming class. Diverse backgrounds and a new foundation are easily integrated by incorporating a solid learning strategy.

Bloom

Bloom’s taxonomy (Bloom et al, 1956) is a widely acknowledged model for learning objectives based on cognate development. In each of the six stages of learning, a particular level of skill is emphasized (see the following Table 6.1). Skills range from low level thinking (stage 1) to high level critical and evaluative thought (stage 6). Included in the model are terms synonymous with each category. Some overlapping may occur due to functional differences of terms between disciplines. A term may be found in more than one category if it relates to multiple cognitive processes. An analysis of blood types A, B, and O, for example, may require less complicated thought processes than an analysis of Milton Babbitt’s “Semi-Simple Variations.”
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<tr>
<td>Task:</td>
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<td>Key terms:</td>
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<td>Key terms:</td>
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<th><strong>Stage six:</strong></th>
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<td>Key terms:</td>
<td>Judge, determine, interpret, opine, evaluate</td>
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Table 6.1. Bloom’s Taxonomy with sample terms

The instructor can insure that lessons and assignments include these various stages by drawing from the terms. As educators incorporate these six stages in planning, an environment is established for students to maximize learning. Students take many
notes at the lowest level (recall of facts) but should expect to apply these facts later in new and creative ways.

In essence, the six-step process regards facts, consideration of relevance, comparison to a single event, application to a new setting, conclusions, and an evaluation. Every step is built into CT as follows:

1) Students identify CUEs.
2) Students locate salient features.
3) Students categorize CUPs.
4) Students graph CUPs.
5) Students interpret the graph as a sound event.
6) Students evaluate and perform the sound event.

The labeling of common universal principles provides the opportunity for connections from one set of music to another. These connections are not rigid but are flexible enough to incorporate musical forms outside of the Western European tradition. By approaching musical investigation solely within the systems and geometric shapes of music itself, an elastic tie may be found that binds two seemingly unrelated musics. This is not to say that Western music should be eliminated or even de-emphasized. Students should simply have a way to analyze any music and be able to compare it to music from the Western tradition.
Although the listing of common traits (CUEs) may appear to be a surface event, it is precisely from this foundation that a pedagogical system may be erected. In accord with the six levels of cognitive complexity in Bloom’s taxonomy, listing, or naming the salient features in a piece, is a fundamental step toward a greater understanding. That is to say, cognitive abilities used for the task begin at the first level in the taxonomy. By integrating an element with musical space, however, this task climbs the taxonomy to level four. Justifiably, all six stages are necessary for a complete understanding. A practical case in point, this music from a Western standpoint, follows.

The first stage requires some fact gathering. Students identify Sol and Do in the theme to “The Adams’ Family” (see Figure 6.1). In stage two, students demonstrate some level of comprehension about the facts. Students may recognize a motion from Sol to Do as prominent, for example, or may describe the actual motion of the line as a stepwise descent from Mi (see Example 6.1).

\[ \hat{3} \quad \hat{2} \quad \hat{1} \]

SDMDLFR, LiTRTSMD, SDMDLFR, DTSLTD.

Figure 6.1. Western labeling of descending line
Example 6.1. Theme from “The Adams’ Family”

From this stage, the student may test (compare) other stepwise motions in the same place (constructing a 5 line from Sol, for example). The next step, stage four, is crucial. Students may survey other pieces in any genre to identify occurrences of the same stepwise motion from Sol-Do (definitely not an exclusive feature to common practice music, to be sure) or more generically, initial goal-directed motion to a pitch center. In this stage, the student not only applies his/her knowledge of music but also directs it to personal music choices. Any course has more impact when the student has personal involvement in the choices, and this affects his/her world outside of the classroom. That is to say, when a student embraces this assignment, he/she is offered motivation for studying music to be performed live (his/her own repertoire).

Subsequently, the student has more to offer in the discussion about the piece and other similar pieces (goal-directed motion to Do as in Clara Schumann’s “Liebst du um Schönheit,” “We wish you a Merry Christmas,” “Le Marseillaise,” and so many others) with the studio instructor. In developing a greater knowledge base about the piece, the student becomes more aware of other factors (also studied in the class) which were previously overlooked for the sake of trying to impress the instructor.

The next step, stage five, requires synthesis of information from the characteristics found in previous steps. Students connect elements with each principle in
the process. The development of an organizational procedure as a final reflective stage helps the student to examine and make evaluative decisions about the musical piece (stage six). In this stage, the student finally internalizes principles of music and can use the information from the theory class to the highest benefit - that of critically assessing the value of the given knowledge.

Bloom’s taxonomy works in the theory classroom as it does in others; students engage in tasks of increasing cognitive complexity. Consequently, students walk away with a deeper understanding and tools for comparing, thinking, and “contemplating” the music they study.

Each step brings more opportunity for growth. By creating and interpreting the grid of pertinence, students internalize meaningful events. By incorporating the grid into a fundamental course on Commonalities Theory, students can gain some level of insight into any piece at any level of musical development and in any genre. That is to say, those grounded in this foundational approach may find greater and faster understanding. Freshmen can quickly find meaningful events in a piece of music from actual literature (preferably their own), and graduate students may also be better equipped to choose between five or three line urlinie in Schenkerian theory. Schools that cannot afford much time on electronic music or 20th century techniques or pop music or even jazz theory can appreciate the benefit of equipping students with tools to analyze, on some level, music that relates to them personally. The same tools that prompt a legitimate graph may be used for any music that the student enjoys outside of class.
Additionally, those schools that already have coursework in such stylistic idioms as jazz and pop will find helpful the logic of Commonalities Theory combined with the Grid of Pertinence as an effective starter tool that will likely provide a fluid transition from studies in tonal harmony of the common practice period to other genres. By design, commonalities theory requires little time to implement (perhaps one course) and may reduce the amount of time needed for classroom instruction in any subsequent course that relates to these categories, including the entire theory sequence and aural training.

Students in America study practices handed down from the European traditions. Chinese students focus on music of their culture. And so it goes around the globe. If there are, however, guiding principles, no matter how few, these should be the foundation of the practice of musical study. Once the foundation for a universal musical system has been established, students learn more effectively about the tonal world in which they are classically trained. Hopefully, they also have some basics to study more about any other type of music that they hear and perform.
A New Course

David Kraehenbuehl’s article “What is Music Theory?” inspired this research by raising the issue that something is missing from current music theory courses. The classroom in music theory should become a laboratory for exploring musical logic and developing practical skills in musical understanding. By demonstrating to students that musics from all around the world share significant common features, all subsequent music study becomes more informative. A foundational course of CUEs and CUPs, rather than a later one, would be of the most benefit. The foundation of CT supplies a framework for constructing music. *Common Universals* suffices as a suitable title for the course, which includes Commonalities Theory of CUEs and CUPs and the graphing of these foci using the Grid of Pertinence. The beginning course, possibly extending into the first several courses, should emphasize hands-on construction (using graphs) within a performance context.

One problem in the implementation of this course is the current lack of corresponding textbook with its own musical examples, CDs, and teacher’s edition.
workbook. Most theory textbooks address specific stylistic characteristics of 17th - 20th century Europe. While new texts with broader ranges may surface, few delve into the possibility that common practice and other musics are based on more primitive musical assumptions. The five basic principles included in this discussion serve both to affirm an ancestral predecessor to classical music that can be evidenced by folk music and to provide a first step toward an evolution of musical thought that leads to classical tonalities and other creative outgrowths. In an effort to retain music examples that have been minimally tainted, folk tunes from around the world contain samples of CUEs and CUPs and would likely not overwhelm a beginning student. The use of folk song as a suitable illustrative work is ideal. Zuckerkandl clarifies this,

“…it speaks a language that is understood without learning, understood by everyone, not just by the so-called musical people. If this were not so, folk music would not be the universal phenomenon it is. Fundamentally, Bach and Beethoven speak no other language than the folk song” (Zuckerkandl, 1959, p. 4). “But if an opening can be made, and a few sound steps taken, proof will have been given that there is solid ground to tread on paths other than the traditional ones, and that it is not necessarily futile to push the search for a knowledge of music beyond its rather narrow present day limitations” (Ibid, p. 10).

Though one text has not yet been written that covers these five principles and the common elements spoken of in this essay, certain texts and other books (many of them ancient by our current standards) draw on similar ideas and clearly discuss particular issues. The table below summarizes a comparison of texts (recent, popular, or otherwise familiar to this author) with the five CUPs. Four designations, each with a corresponding number, suggest a Likert-type scale: 1= little or no reference is made to the principle, 2=
more than a minor reference is made to the principle, 3= some information is given to the principle, 4 = a considerable amount of time and space is devoted to the principle.

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<th>Title</th>
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<th>VOICE</th>
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<td>Robert Ottman</td>
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<td>Ernst Toch</td>
<td><em>A Creative Approach to Music Fundamentals, 8th Ed.</em></td>
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Table 7.1 Summary of Text Reviews

Particularly reflective of the majority of CUPs are: *The Shaping Forces of Music* by Ernst Toch, *sonic design* by Robert Cogan and Pozzi Escot, and *Theoretical Foundations of Music* by William Duckworth and Edward Brown. The Zuckerkandl book, although highly related, is rather philosophic in nature and would benefit a graduate student much more than the beginning theory student.
By far the closest kinship to the concepts in the course entitled Common Universals is the book by Ernst Toch, The Shaping Forces of Music. Despite its age and tonal bent, Toch iterates concepts of motion and order (among other topics) with great clarity. He describes in easily accessible language, for example, the movements of a line in terms of waves and crests that drive forward toward the climax (Toch, p. 79).

Many authors of texts and musical studies refer to the same concepts found in this paper but few explain at any length topics such as musical space and balance. One book, sonic design, despite its age in publishing, is perfectly adaptable to the entire theory sequence in this setting. In this text, the authors illustrate the majority of concepts that are included here but in much greater detail and with a corresponding visualization method (also graphing) to enhance student learning. And, although the course proposed here is not intended as a two-year journey, it surely offers the student a wide-angle lens for beginning the serious study of music. By using sonic design on a superficial layer for this course and, subsequently for the rest of the core theory sequence, instructors facilitate life-long learning on a large musical scale. The texts are available from their website (www.sonicdesign.org).

In Theoretical Foundations of Music, Duckworth and Brown use a similar analytical method (focusing on a few salient features at a time) and, in Chapter Six in particular, present contour, balance, peaks, tension, motion, and variation in a
comprehensible way. In one example, the authors illustrate continuous ascending contour with the opening of Beethoven’s Sonata in F minor, Op. 2, No. 1.

Example 7.1. Continuous ascending contour

Motion is described as a rhythmic manipulation of pitch. In this section, the authors discuss the drive forward (impulse) with the elements of rhythm and climax and the principles of pattern and stability. “This rhythmic pattern continues for each successive arrival point. The pattern (++++)---+, stated four times, sets up an air of stability that is destroyed in measure seven by the unexpected change in duration, drawing even greater attention to the climax” (Duckworth and Brown, p. 45). Other melodic manipulative devices include “sequence, repetition, inversion, retrograde, retrograde inversion, augmentation, diminution, and variation” (Ibid., p. 46). The next step in this text is an “overall analysis” applied to the previously noted Beethoven Sonata.
“Pitch basis: F minor

Contour: Basically ascending, predominantly disjunct, reaching a high point in measure 7.

Motion: Recurring rhythmic motives give unity of motion. Longer note values emphasize important pitch arrival points.

Manipulation: Chordal outlines and important resting tones support the F minor tonality. Motive and sequence are extensively used.” (Ibid., p. 48).\textsuperscript{18}

The following syllabus offers three reasonable resources and outlines a sample ten-week strategy for implementing the course in Common Universal Principles of Music. Instructors are encouraged to provide meaningful, student-centered assignments around a wealth of examples from folk songs of various musical cultures.

\textsuperscript{18}Chapter six is particularly saturated with the features of the CUEs and CUPs in this research, but permission has not yet been granted for its inclusion in the form of an Appendix C at this time.
Course Objective: Elements and Principles common to most cultures of the world are introduced as a precursor to the study of any particular musical style. Students will

- Identify and chart common universal elements of a variety of primitive works from around the world.
- Locate and categorize musical space, voice, motion, pattern, and order.
- Graph common universal principles.
- Interpret his/her graph as a sound event.
- Judge the interpretation and perform accordingly.

Texts and materials needed:


Graph paper, pencils, single line instrument

Attendance policy: In order to participate, students must be in attendance. Because this procedural study unfolds incrementally, students are expected to attend and apply skill in each class. Should a situation arise that requires an absence, the student must notify the instructor before class via e:mail or phone message to be eligible for make-up grades (including quizzes, due homeworks, and tests).
Grading: Student comprehension is better achieved through graphic representation as well as performance. Grades, then, emphasize these areas.

Quizzes (4): 15%
Graphs (6): 30%
Homework (8): 10%
Midterm Project: 15%
Final Performance Project: 30%

100%

Note: Performance projects for the midterm and final include the following steps:

1) Choose a single line musical piece such as a folk tune or children’s song from any culture.

2) Analyze your piece in terms of the five common universal principles (For the midterm, the first three principles are expected).

3) Graph your findings.

4) Write one page that summarizes your data and provides interpretive information for a performer.

5) Share your graph and interpretation with the class, and perform your piece.

Outline:

Week One: Musical Space - space, time, balance, proportion, scalar structures, gravitational centers, potentialities

*Sonic Design*, chapter 1, pp. 16-21, 42-59

Graph of many lines, balance, proportion, sphere, center of gravity

Forces

HW 1: Musical Space and Forces
Quiz 1

WK 2: Voice - lines, contour, instruments, ranges, melody

Thickness for density, color for contour, legend for symbols (Brass, Strings, Drums, Singers, Winds)

HW 2: Voices

_Sonic Design_, pp. 114-20

Graph 1

WK 3: Motion (Toch Form Chapter and Melody)

_Sonic Design_, pp. 21-28, 69-78

_Theoretical Foundations of Music_, pp. 21-4, 43-52 (entirety of ch. 6)

Impellent (*), Impulse (>>>), Impetus (<<<), Climax (^).

HW 3: Score – mark motion points

Quiz 2

Graph 2 – Location of points – framework for form

WK 4: Pitch

Stable vs. unstable, tones as universals, peaks, axes

HW 4: Balance of pitches

Graph 3

WK 5: Duration

Stable vs. unstable, strong/weak, intensity, accents

_Sonic Design_, pp. 311-324 (use in several stages throughout the remainder of the course)

HW5 Midterm project

Graph 4

WK 6: Patterns (potential to hear) – stable and unstable
After this introductory course on common universal elements and principles of music, students are prepared to grasp stylistic idiosyncrasies on a deeper level than previously attainable with traditional studies that begin with key signatures and scales. Certainly anyone with a classical music background can insert other features that contribute to a musical experience, particularly those which have been taught in theory classrooms for years, such as key signatures, rhythm trees, and major/minor scales. Though the understanding of these factors provide an easier segue into tonal harmony and the study of common practice music, they pale as foundational material when compared to the musical context provided by this set of CUEs and the related principles. Given two students, one well-versed in key signatures, and one able to reconstruct a piece based on motion, the second student is the one who would likely provide a more
enjoyable, and musical, performance on his/her instrument. In point of fact, my own mother, an organist of over sixty-five years who plays with beautiful depth and understanding of voice-leading and linear motion, can rarely tell me with any confidence the key of the piece but easily demonstrates the motion to the necessary resolutions implied by given harmonies.

A student explanation of a musical event is not only higher level thinking (as compared to the more basic identification of a type of music) but holds greater potential for understanding other musics on a deeper level as well. Since visual learners comprise the greatest percentage of our classrooms (www.inspiration.com), students would likely benefit from a visual method of incorporating that which they can summarize. The graphing procedure proposed in Cogan and Pozzi’s *Sonic Design* allows the student to concretely engage in analysis with sound results. A beginner’s version is offered here which incorporates visual learning with CUEs and CUPs.

The focus for this paper is to establish a foundation for study that combines compositional elements and musics from around the world (and, as composers build upon previous ideas, musics of the future). Early theory course(s) are most effective within a performance context. This includes sight-reading and listening tools demonstrated by dictation and by responses on the student instrument, and performances of the analysis components. Theorists have spoken for decades about the need to revise theory pedagogy. A change in the curriculum that begins with a study of common ideas provides that vital link between students and their own repertoire. The connections made
at this level can activate the young musical mind and motivate him/her to think (at least on a comparison level) musically in any context. As Ernst Toch said, “Research should not stop at describing some surface appearances and putting tags and labels on them. Nor will such knowledge ever help a creative talent to express himself musically” (Toch, p. 155). Toch values over-arching musical understanding and proposes that his book, *The Shaping Forces in Music*, “attempts to bring out and emphasize the timeless and permanent features of music as against the time-bound and transient ones” (Ibid., p. ii). That is exactly the point.

The foundation proposed here is more than a set of categories. The student can find, using basic exercises in active analyses, the uniqueness of a piece and compare it to others in the same style or by the same composer. In so doing, the student can evaluate the creativity of the composer for that particular style, thus incorporating the graduated comprehension strategy of the Bloom taxonomy method. One factor in this effective learning strategy is that students are freed (somewhat) from the focus on tests and grades and the concern about memorizing cumulative data. Instead, students practice musical thought, which is necessarily cumulative.

Any learning goal will far more likely be attained when a student actively participates. For far too long, students in theory classrooms have taken seats and remained there, gathering data for future test-taking. Luckily, however, music is not a spectator sport. Music can be a full-contact event, and the students already know this.
To test this, just attend any rock concert and count the number of students quietly sitting in chairs. What is essential, and I must agree with Roger Sessions yet again, is that “music is an activity: it is something done,” (emphasis mine) (Sessions 1962, p. 8) and is, thought out, reasoned, manipulated, heard, composed, revised, and performed. After this foundational course, the student has crossed the bridge between the classroom and an educated performance – that student has analyzed music.

Critical thinking does not end after the first course. Filters through which music is perceived (Rogers, 1984, p. 141) may take the form of analysis, performance, or even the act of composing. Students can do this in the foundational course. Students also need an appreciation of aesthetic values like “hierarchy, coherence, intricacy, cleverness, novelty, resistance,” as well as some expressive values like “suspense, surprise, humor, drama, poignancy, and contrasting pairs like ambiguity/clarity, conflict/resolution, dynamism/stasis, growth/attenuation, profusion/economy (Ibid.).” After the initial course, students move from an understanding of stable and unstable features and points of motion to more specific realms such as the contrasting pairs of ambiguity and clarity spoken of by Rogers.

In later courses, logic may begin with the departure from the universal. To understand a piece of music, one must first acknowledge it as music (Commonalities Theory and the Grid of Pertinence are strong indicators in this respect), uncover the stylistic expectations, and then discover its uniqueness. A singular musical idea, be it any
explicit rhythmic or melodic motive or timbral event or even linear relation, is a good place to start. Sessions states that, “a musical idea is simply that fragment of music which forms the composer’s point of departure, either for a whole composition or for an episode or even a single aspect of a composition.” The musical idea is the “starting point of a vital musical ‘train of thought’” (Sessions, 1962, p. 44).

The elements and the principles provide practical musical information. According to William Poland,

“While the search for universals must fail [and he is likely thinking in absolutes here], all we can find out about the experiential world of objects and events, whether of stars or of people, must converge toward a congruent set of principles. For the physicist, the psychologist, the mathematician, the historian, and the music theorist, the basic data are the same – our sense perception.” (Poland, p. 157)

The labels are less important than the musical features that we can hear and sense. It is necessary to take those features and offer students principles that convey actual musical behavior.
CHAPTER 8

CONCLUSION

The outcome, or general objective of a foundational course in Commonalities Theory, is that students practice music-making in a laboratory format with guidelines that relate to nearly all musics. Similar to the experimental approach taken by Janet McGaughey at the University of Texas (as well as in some other Comprehensive Musicianship programs such as the one described by J. Buccheri in the JMTP, 1990), I have proposed four crucial components as the basis for study: 1) common elements are introduced, 2) various types of music are entertained, 3) constant elements of musicianship are reinforced (performance happens here), and 4) relationship to overarching principles is paramount. Part of the problem of CM, as spelled out by Michael Rogers in his Teaching Approaches of Music Theory, is that colleges and universities are hard-pressed to find professors who excel in the field of theory, demonstrate excellent teaching ability, provide historical settings for any and all concepts, AND are quite knowledgable about sculpture, poetry, dance, and other art forms (Rogers, 1984, p. 22). On the other hand, evaluative analysis based on CT
performed in a student-centered work environment invites high level thinking that leads to deeper actual comprehension of the material.

In this paper, I have suggested a specific approach to teaching music theory: namely, begin at the beginning. Use music from anywhere and any time in the world, and show common features. The graphing component here is simple and easy to learn yet embodies meaningful musical relationships that students can incorporate in performance. This small step toward an understanding and appreciation for the broader, more mystical form of music that binds us all eventually moves us, instructors included, onto a new path of insight that takes us beyond the study of harmonic structure. Ultimately, the student who begins with this course may well develop deep connections of commonalities throughout his/her musical career and will form, if continuing in like manner, a “realization of the profound interrelationship of the various musics of the entire world, and of the intimate bonds joining music with other arts, sciences, and the most varied human life forces” (Cogan, 1976, p. xiii).

The teaching of Commonalities Theory is quite manageable in a typical curriculum. In McGaughey’s world, as I would suggest also here, students learn by writing, analysis, aural recognition, and parallel performances. She also favors, it appears, a hands-on approach. Students learn by doing. The pedagogical methods are sound as well. Students work together in discussion groups called “retreats” where a safe environment is maintained for sharing concerns.
Two goals extend beyond this paper. First, of great benefit would be an additional study from a non-Western analyst of Commonalities Theory. The list of CUEs may be expanded or contracted, but the over-arching principles should remain. A separate study such as this would hopefully confirm the theory and solidify the need to begin musical training with this foundation. Second, many scholars have discussed implementing theory pedagogy from a world music perspective. This paper is an attempt to begin that implementation process.

My hope is that educators of music theory collectively engage in the pursuit of musical enlightenment, and focus courses and curricula on goals that address the development of the musical mind. The only acceptable reason to stray from this lofty pursuit is to strive ever higher.


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APPENDIX A: A chronological ancestry of theory texts/books and the relevance of each to the five principles of Commonalities Theory

Note: These books were selected based on popularity (texts with several editions were considered relevant in this category), recent publishing, and/or familiarity.

2008


1. Musical Space – Composers in common practice period “have a point of gravitation, an explicit or implicit center around which all its pitches orbit” (p. 3). In the very first paragraph of this theory text, Laitz realistically gives rise to the creation of common practice music by discussing a gravitational field and uses these examples: ↓ 6 gravitates to 5; ↑ 7 gravitates to 1 (p. 14). He also states that “a tonal center or other such point of reference can be found throughout the world” (p. 3).

2. Voice – Because he is discussing tonal music, the term and concept of melody is appropriate. He defines melody as “logical and goal-directed flow” which includes “balance and creation and dissipation of energy” usually with an arched contour (p. 88). While illustrating counterpoint, he calls voices “members” (p. 47).

3. Motion – The impulse of forward motion is discussed early, “…goal-directed motion…forward motion in tonal music is generally enhanced by half-step motion.” Pitch steps and types of motion (conjunct and disjunct) coincide with agogic accent and basic rhythm (p. 88). Further explanations of motion include contrapuntal movement (p. 100), tension and release of pitch and duration (p. 106), and motion between tonal pillars (p. 183). On pages 366 and 367, Laitz provides concrete examples of motion with motivic transformations and repetitions.

4. Pattern – Laitz refers to several points of stability and instability. “The major mode is sometimes considered brighter than the minor mode and more stable” (p. 9). The “primary tonal pillar and point of stability” refers to 1; 5 is a secondary pillar. The falling gesture is a sign of stability (p. 30). Pitch and rhythm are “intertwined and complement each other” (p. 33); the prominence of pitches coincide with rhythmic accents, agogic accents, strong beats, or metric pattern (pp. 38-9). Sequences are addressed in Chapter 22.

5. Cycle – Given the tonal context, it is no surprise but worth the causal explanation that the “minor collection is really a byproduct of melodic requirement of lines” (p. 14). Even in the work for students to accomplish outside of class (“Exercise Interludes”), scale patterning reinforces the cause and effect relation of scales and the sounds that result on subsequent scale degrees. Motives arise from “…our basic human need to organize and group…” (p. 364).
Particularly integral is the analysis of Bach’s Violin Partita No. 3 Prelude in which Laitz helps the student to assess the musical situation aurally and to focus on prominent features (as compared to a prescribed formula that dictates the hierarchy such as the first step as a Roman numeral analysis). Students sometimes struggle here, because they have not been instructed to listen for prominent pitches and patterns. Simply looking at the first and last pitch with the key signature (particularly in early Baroque pieces or in any modulatory passage) does not necessarily offer the correct tonal center. Laitz, instead, suggests pitch prominence in terms of frequency of attack, metric placement, accents, and changes (contrast vs. stability – p. 29).

Although the text is built around common practice music, the author has entertained some possible relations with the outside world. He uses, for example, a child’s tune, “Puff the Magic Dragon,” on p. 447.

2007


1. Space – The Golden Mean serves as an example of proportion as a compositional choice (p. 222). The term “soundscape” appears several times (for example, on p. 205) as a specific field within a musical context. As used here, the term implies a space or block of musical sound but not necessarily the multi-layered dimension of literal and abstract musical space.

2. Voice – Blatter specifies the interchangeability of the terms “lines” and “voices” (p. 91). Melody is an example of a musical line or voice.

3. Motion – The three musical properties of sound are defined as: pitch, duration, loudness, and timbre (p. 1). Each has a common element in that they are experienced through time. The terms “beat” and “pulse” are used interchangeably (p. 13). Combinations in texture account for relationships between layers of voices (p. 205).

4. Pattern – The text focuses more on the terminology of sequences than the movement or patterns created by them (p. 217). Repetition functions as a responsorial complement to the antecedent phrase (p. 205).

5. Order – An original idea contains a specific order of pitches and rhythms that may then be used by the composer for manipulation purposes such as retrograde (p. 214).

The format and prose of this text is amenable to the beginning student, but the amount of attention to the five principles of the CUPs course is minimal.
1. **Space** – Other than “spacing” issues, little information relates to musical space.

2. **Voice** – Some consideration is given to voices as timbres. Students are encouraged to listen to various instruments to become acquainted with each voice (perhaps color would work synonymously here) (p. 96). The bass line (p. 155) as a bearer of harmonic structure is an implied voice.

3. **Motion** – Much information relates to pitch and or rhythmic duration but in a notational, concrete stance. Pitch and rhythm items are static for perceptive purposes.

4. **Pattern** – Strong and weak patterns unify a set of pulses (p. 1). Sequencing refers to a repeated pattern (motion toward a specific goal is not the underlying focus) and is not discussed in any detail but is a suggested student exercise (p. 62).

5. **Order** – A few words are given on goals of harmonic motion (p. 149).

The graphing strategies given in this text (“protonotation”) absolutely solidify concepts (mainly rhythmic ones here). Certainly, strategies for listening overlap with some of the fundamental ideas put forth in this paper (i.e. contour, strong-weak associations), but they are presented and left quickly in this text.

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2005


1) **Space** - No clear indication of musical space or balance is given.

2) **Voice** – The authors discuss compositional choices for integrating melody and harmony, “When we write counterpoint, we set two or more melodic lines of music together so that the lines form harmonies, or we set harmonies one after another so that the individual voices make good melodic lines” (p. 135). Voice is not emphasized as a universal feature in all musics but is specific to counterpoint of the Baroque and Renaissance periods.

Unfortunately, our language duplicates the term voice for use as a stream of a particular musical line (as is meant here) or the human instrument that may be used to convey such as stream. On p. 187, voice is clearly the mechanical tool. “In the following chapters, you may be asked to set some of your assignments for three, four, or five instruments instead of voices or keyboard.”
3) Motion – On page 307, the authors treat sequences as agents of motion, relating them to “subways, buses, or trains: You get on at one location, ride for a while, and get off when you reach your destination.” The analogy is appropriate, but the topic could be expanded.

4) Patterns – An application of aural patterning is found in “Hearing Meter” (p. 23). Students are to listen to pieces (Try it #2) for duple, triple, and quadruple meter.

5) Cycles/order: - Sequence is discussed as a “pattern of repetition…[which] smooths over…weak harmonic links with strong linear voice-leading…” (p. 328).

Many of the topics of common universal elements and principles are in this text but none appear to function outside of the tonal contexts. With so much emphasis on concrete examples, the student would likely struggle with the abstract application to universal principles and examples from other cultures.

2004


1) Musical space is not addressed.

2) Voice – The interpretation of “voicing” as distribution, spacing (keyboard-specific), and the effect of instrumentation on the listener implies at least some degree of linear passage. A specific contrapuntal line is safeguarded against parallel fifths and octaves (p. 79).

3) Motion – Pitch is defined on p. 23 as “highness or lowness.” Rhythm is not defined but described as a reference for the “time aspect of music” (p. 25). In this text, the labels “pulse” and “beat” are synonymous. Motives consist of pitch + rhythm, the latter being the more prominent event (p. 152). A fair amount of attention is given to the moving of individual lines (voice-leading within a tonal context). A short guide for writing an individual “melody” (for the same tonal context) resembles an abbreviated list of common universal elements with a stylistic emphasis:

1. Rhythm. Keep the rhythm simple, with most durations being equal to or longer than the duration of the beat. The final note should occur on a strong beat.

2. Harmony. Every melody note should belong to the chord that is to harmonize it.
3. Contour. The melody should be primarily conjunct (stepwise). The shape of the melody should be interesting but clear and simple, with a single focal point, the highest note of the melody.

4. Leaps.
   A. Avoid augmented intervals, 7ths, and intervals larger than a P8. Diminished intervals may be used if the melody changes direction by step immediately after the interval.
   B. A melodic interval larger than a P4 is usually best approached and left in the direction opposite to the leap.
   C. When smaller leaps are used consecutively in the same direction, they should outline a triad.

5. Tendency tones. In tonal music 7 has a strong tendency to move up to 1. An exception to this is the scale-wise line descending from 1: 1-7-6-5. The only other tendency tone that needs to be considered is 4, which often moves down to 3, but not with the regularity with which 7 goes to 1” (p. 71).

The four types of motion (parallel, contrasting, oblique, and similar) refer more to direction than to the motion proper (p. 79). Planing, however, addresses actual movement without specifying the direction (p. 491). Motion toward a goal is found stylistically as an harmonic progression (p. 99). Sequences and imitation contribute to achieving unity (ibid) but also may lead the listener toward the goal.

Although Kostka and Payne dwell on specific tonal constructs, theirs is a text of stylistic factual clarity that may serve the student well after basic instruction in common universal principles.

1989


1. Space – The overtone series provides an element of abstract space. That is, this series of “natural” events affords the possibilities of fifth relations (p. 60) and the relations of pitch and timbre for a given instrument (p. 25).

2. Voice – The idea of a voice that creates the sound is relayed in terms of pitch and timbre; these relate to instruments that play partials from the overtone series (p. 25). Other discussions of voice specify each category in an SATB setting (p. 250).
3. Motion – “Tonal motion” (p. 8) is described as the listener’s actual focus. Each movement element comes from our experiences with rhythm (such as walking). A tonal piece is organized because of its directed motion toward a specific goal (Ibid.). In particular, movement by descending fifths is “strongly goal oriented” (p. 231). Fifth relations stem from the overtone series and are of great importance in tonal settings (p. 60). Intervals may be stable or unstable (equated with dissonance/consonance), the most unstable intervals causing the greatest level of tension (p. 27). Melodic motion is spoken of directionally – parallel, oblique, contrary, similar with two terms regarding distance between pitches – conjunct and disjunct (p. 69). Parallel motion is described as the most fluid type of motion (p. 271).

4. Pattern – Repetition is “the crucial element in - musical design and form” (italics theirs) and includes subcategories such as sequence (p. 247).

5. Order – Common practice topics which infer a particular order, such as sequence and rondo, appear in this text.

In the opening pages, the authors emphasize “tonal motion” as that musical element which the listener actually hears (as compared to pitches or rhythms). Although much solid information about motion (particularly in terms of voice-leading) is found within these pages, this text was written with the tonal practices in mind and is therefore limited in scope as it relates to any study of musical commonalities with other cultures.

1982


1. Space – Potentiality is found in such entities as themes (p. 77). Variation comes from this potential.

2. Voice – Dux (p. 24) is specified as a principle theme, voice, or subject.

3. Motion – Analysis of factors of unity and variety (p. 87) refer to stable and unstable features.

4. Pattern – A “Guiding force” (p. 78) is a pattern so basic that it is recognizable through the variations. Repetition is key to any analysis.

5. Order – Serial order as used in 20th century music if the focus here.
In this text, the author reveals stylistic characteristics of 16th – 20th century music (based on European traditions). Of great benefit is the thorough analysis of many different works highlighting expectations and then deviations. Students are not likely, however, to grasp the five CUPs from this text but may benefit from this text after the CUPs course.

1981/1976


1. Space – Chapter 1 is entirely dedicated to musical space. This includes but is not limited to range, acoustical possibilities, auditory potential, registral color, linearity, goals, and density. Locally, “fields of emphasis” are plotted out as visual cubes. Intervals are classified as “points of musical space” (p. 88) in differing systems. Therefore, different collections of systems exist within the realm of the larger musical space.

2. Voice – Even in the first chapter, the voice supercedes the composer tools (such as tertian chords) as the focus for study. The life (motion) of the voice is carried by pitches and reaches specific goals (p. 21).

3. Motion – As the voice moves, repetition is necessary but without strict reproduction (p. 135). Rhythmic analysis includes resting points and time fields (a generic space consisting of similar durations, i.e. a field of half notes) (p. 416). Noh theory provides the rhythmic process of introduction, scatter, and conclusion.

4. Pattern – Several concepts that are compatible in songs of various cultures are in this text. Rhythmic, spatial, and linguistic analysis (p. 120) explores salient features for any particular piece; the interpretation is not limited to any genre or time period. A new creation by these authors is the use of tone color analysis, again not limited to any region (p. 329).

5. Order – Serialism is presented in the typical, post-tonal historical frame, but several features for study require a prerequisite ordering (such as beginnings of each line, symmetries, balance, complements).

Cogan and Escot appear to emphasize a comprehensive analysis system that embraces musics from all cultures. To this end, they have devised a graphing procedure to visually heighten the aural concept. In the preface, the authors share four angles for viewing a musical event: space, language, time, and tone color (p. xii). These aspects are so closely related to the common universal principles set forth in this paper that this text cannot be avoided. For the initial course, however, the musical examples may be overwhelming to the beginning theory student. Selections from this text would be beneficial.

1. **Space** – Primarily, space is discussed in terms of texture and is a result of specific instrumentation (p. 68).

2. **Voice** – Instrumentation and motion of the voice is discussed throughout the text but within a tonal context.

3. **Motion** – The four “physical characteristics of sound” are pitch, volume, duration, and timbre (p. 3). Melody is created through “pitch materials, motion, placement of arrival points, contour, and harmonic considerations” (p. 38). Even more, contour is viewed from many angles: range, tempo, mood, texture, high/low points, ascending/descending motion, expectancies, balance of conjunct and disjunct motions, dramatic leaps, gradual rises, and climaxes (p. 44).

4. **Pattern** – Some detail is given about the rhythmic modes as patterns for composition (p. 24). Part of expectancies comes from a rhythmic “drive” to a longer note value; expectancies are set by patterns of stability (p. 45). Manipulation devices include: sequences, repetitions, inversions, retrogrades, retrograde inversions, augmentations and diminutions, and variations (p. 46).

5. **Order** – Repetition and contrast create form. Binary is contrast; ternary is contrast plus repetition (p. 79).

The method of analysis set forth by these authors, a four step process of pitch basis, contour, motion, and manipulation, is clear, easy for beginning students, and musically meaningful regardless of genre. Melodies from as early as Gregorian chant are accessible to novices. Information in the latter part of the text primarily focuses on tertian harmony and European traditions.


1. **Space** – A balance exists between harmonic activity and phrase structure (p. 139). That is, a purposeful plan for the number of changing harmonies is consistent among antecedent and consequent phrases.

2. **Voice** – Other than the mention of specific instruments, the discussion of “voice” is limited to a contrapuntal device.
3. Motion – The four “rules” of motion are as follows: contrary, oblique, similar, and parallel (p. 29). Mention is made of the melodic expectancy created by a leading tone (p. 50), motivic transformation (p. 90), and the integration of rhythm and pitch as they form a sequential passage (p. 296).

4. Pattern – Melody is defined as a recurring theme, particularly in the context of symphonic works. Repetition, or at least variation, is implied here (p. 84).

5. Order – The most common shape of a melody is a rise that precedes a fall (though Piston also allows for several real musical possibilities that utilize the opposite contour) (p. 89).

In keeping with the purpose of the text, Piston’s harmony remains an excellent source for the study of harmonic practices. However, given the author’s focus on concrete subject matter, this text would not fit well with the CUPs course, nor would it be an easy transition for the student immediately upon completion of the CUPs course.

1973


1. Space – Music and rites are inextricably intertwined as “mediators between two superterrestrial powers whose polar tension keeps the universe in permanent balance” (p. 18). In this context, music is a necessary component of man’s existence, a source of energy. The author sees musical space as a sphere with arrows from each radius gravitating to the center; the sphere fills “the space without leaving any gaps” and is “energy-infused” (p. 47). Potential space becomes actual through reinterpretation (two points become one line, three lines become a triangle, and so on) (p. 45).

2. Voice – The singer of folk tunes represents the collective voice of the people (p. 14). Voice also acts as a bridge between the subject of music and the object, that is the song and the human connection with the song (p. 25). The author speaks of a pear picker who is singing. The listener hears a story about pear-picking; the listener simultaneously hears a story about the singer and his/her pear-picking.

3. Motion – The essential characteristics of music are pitch and duration, but common elements are pitch, timbre, and loudness (p. 90). In an analysis of the Hallelujah Chorale, the author emphasizes motion as the critical focus via repetition, tension, upward movement, sequence, change of direction, and balance (p. 143).
4. Pattern – “Musical thinking deals with motions and links them into patterns” (p. 335).

5. Order – “…tones are in order and have no existence except within a system” (italic emphasis by the author) (p. 15). Every plan, essentially each composition as well as the organization of the universe, has an “internal order” (p. 187).

This text states each of the five principles nearly in the same ordering as this paper. The philosophic nature of the language and analyses make this book an excellent tool for an upper level course in analysis.

1970


1. Space – Through the use of folk songs from a variety of countries, Ottman explains musical characteristics, such as adjacent melodic motion. In the chapter on melodic line, his examples include folk songs from Tennessee, Mexico, Italy, Latvia, Germany, and England. The implication here is that certain musical ideas, though he does not explicitly specify them, are common to many cultures. The derivation of these features, however, is not addressed.

2. Voice – The musical voice in this tonal context is referred to as “melody” regardless of the date of the musical setting. From Gregorian chant through the Romantic period, melody is and “has always been one of the principal characteristics of the music of the Western civilization” (p. 31). The term “voice” is used here synonymously with the vocal instrument.

3. Motion – In Appendix 3, rhythm is defined as “the duration of each of the pitches and the patterns formed by these durations” (p. 337). These durational patterns are ascribed to the music of all human civilization (p. 33). Beat is not a fixed element; it may change with each composition or even within a piece. Divisions of two and three are the norm. Interest is piqued with contrasts in rhythm (p. 67). Climax, sequence, and repetition are common features of melodic writing (pp. 71-2). Types of motion (more accurately, directions of the motion) involve a voice-leading procedure that smoothly gets from point A to point B. The journey (that is, the actual moving component) is not the topic; the arrival place is the goal here. Melodic writing requires an understanding of phrase manipulation such as repetition, phrase lengthening, adding or lengthening a motive (pp. 220-2).

4. Pattern – Ottman defined rhythm as a patterned event (see above) and explains form similarly as the “patterns of musical construction” (Ibid). Rhythmic patterning indicates meter but also may be used to define harmonies. Where melodic pitches are rhythmically strong, for example, harmonies are implied (p. 173).
5. Order – Music has been found to contain an “orderly arrangement” from the very earliest of times (p. 34).

1948


1. Space – “Any sound- tone, interval or chord- once exposed to the force of attraction which emanates from the tonic, seeks to reach the tonic (dissolve, ‘resolve into it’) either directly or indirectly through the sphere of attraction that surrounds the tonic as its center” (italics his) (p. 18). Melodies that revolve around an axis (usually the dominant) have what is called the “melodic fulcrum” (p. 124). The basic frame of music requires rhythm and the element of contrast; form is derived from the balance of contrasting elements (p. 156).

2. Voice – Each voice has an “inborn urge to move” (p. 10) in an environment where harmony and melody coexist.

3. Motion – “…it is the pitch-line, its curve or curves, its shape, its profile, its ascensions and descensions which determine the character, the gesture of the melody…” (italics his) (p. 67). Several examples are found in Chapter 4. Regarding the integration of pitch and rhythm, the author finds that “rhythmic patterns and pitch-line may be alternately substituted in a continuous chain” (p. 72). In chapter 5, the line is considered a wave, a forward motion event with crests and delays along the way. “If inspiration dies, form is doomed to die with it. What keeps them alive, is essentially movement” (p. 194).

4. Pattern – Devices of contrast reveal a “most important basic principle…tripartition” (p. 163). A distant beginning journeys to a final arrival via an arched pathway (p. 227). Repetition is discussed in several chapters as a means of motion, pattern-recognition, and delay.

5. Order – Examples show that the order of melodic pitches changes the melody drastically (p. 63). Toch even uses the term “Mother Tonic” for the final point of order in a musical journey in a comparison with a river’s flow to “Mother Ocean” (p. 235).

*The Shaping Forces in Music* illuminates all five principles in the CUPs course with several musical examples though the entire book is not immediately approachable for beginning students. Toch points out that, although his examples are taken from the classical literature, the principles in his text are “not bound to any particular style or epoch or idiom” (p. 237).
As was expected, many textbooks contain information about common elements such as pitch and rhythm. Most of these books also offered glimpses of broader principles than those specific to Western music. In this study, however, the textbooks were examined for practicality of use by beginning music theory students in a course on common universal principles (CUPs) of music. For our purposes, the following resources were found to be of the most likely benefit:


Four additional books showed an insignificant amount of discussion on the five common universal principles and were excluded from this chart. These books, important for the purpose for which they had been written, are unusable for this course. They are listed here in reverse chronological order.


APPENDIX B: Features of stability and instability found in this research.

Below, the factors of stability and instability relate to each of the salient features found in the research of many musics performed in this study.

Regularity of rhythm pattern – In every song, the rhythmic idea of the first phrase is repeated elsewhere. Often, a second rhythmic pattern is also repeated.

Regularity of pitch pattern – This is less likely to result in a repeat performance of any second idea, but the pitch pattern of phrase one is nearly always repeated elsewhere. Beginnings typically emphasize SOL; endings focus on DO. Generally, no more than two ascending pitches are found in a row; conversely, consistent descending pitches are much more common. Balance of opening and closing patterns occurs frequently (i.e. DO-MI/LA-DO).

Regularity of contour - Contour (structural beginning to end of phrase) was found to be form-defining. The shape of the first phrase coincided with other phrases to form a logical progression in contour. In most cases, the beginning and ending phrases carried descending lines. A change in the second section (or just the second phrase) was not found to be necessary. The most often occurring pattern is as follows: the beginning section features a rise in pitch and/or dynamics followed by a short descent. The middle section falls from beginning to end, a pattern which is often sequenced or repeated one or more times. The third section, the closing, continues the descent to a typical melodic end on DO (or sometimes SOL). The contour pattern, then, features a rise, a same-ness, and a descent (\--\). In this way, it appears that contour is a form-defining feature.

Descents - Descending phrases typically repeated in more areas than the beginning and end, the total number mainly depending on the length of the piece. The descent is more time-consuming than the ascent. In fact, sometimes there was no ascent but instead a stasis. Contrasts, however, did come in the form of either ascending lines or horizontal motion from phrase beginning to phrase end.

Descent pattern - Other patterns emerged, mainly a short-long-short-long group. That is to say, in a typical four phrase group, the first phrase will descend from beginning to end but span a short distance (say a descending third from beginning to end). Phrase two spans, for example, a descent of a fifth) followed by a phrase that spans a second. The final phrase descends a sixth; this illustrates the SLSL pattern.

Beginning and ending patterns – The majority of these songs began with either scale degree 1 or 5, possibly indicating a tonic chord. The overall pattern was that beginnings utilized scale degrees 1, 3, or 5 and endings emphasized a movement from scale degree 5 to scale degree 1, most often in stepwise motion. Where scale degrees were less clear, similar patterns were apparent. An opening rise was coupled with a descent at the end.
Opening descents were found to be higher in register than the final descent.

Differing durations – Divisions of two, whether simple or compound meters, were consistent. At least three different durations were used. Those consistent with the metric source (“diarhythmic” as it were – quarter notes, eighth notes, sixteenths in a simple meter, dotted eighth in compound, and so on) were most often found in first phrases and first sections.

Pattern of pitch – In terms of localized ascending and descending motion of pitches, clearly the initial motion was an ascent which balances the final phrase, nearly always a descending motion.

Space/time – Space/time refers to the amount of time (and space) spent on each scale degree. After counting the durations of each pitch, a pattern emerged. Scale degrees 1, 5, and 6 were consistently emphasized. Central pitches were also emphasized in this way.

Movement – Rhythmically, a change occurs from a diarhythm (consistent with meter) to a smaller value or to a non-diatonic value (such as dotted eighth in simple meter). In terms of pitch or contour, lines that span the scale (even in a tritonic scale) and changes in register (particularly at the octave) indicate another type of movement.

Pulse – Though much of the source material was transcribed by a non-native (which may skew the data), pulses were found repeatedly in groups of 2, 3, and 4.

Repetition – By far an outstanding component of the musical sources studied here is repetition. In particular, both pitch and rhythm of phrase one are reiterated. In nearly all cases, repetition includes the original motives (of pitch, harmony, contour and rhythmic ideas). The next phrase is far less likely to be repeated in its entirety. As previously stated regarding rhythmic patterning, the second rhythmic phrase is much more likely to be repeated than the pitch counterpart.

Sequence - Sequencing, a varied form of repetition, transports the motive up as an ascent to a climax or down as part of a structural, descending line. Rhythmic sequencing is also possible with diminution or augmentation of the motivic figure.

Motive – The primary component of motive is a rhythmic figure that is repeated. Often, contour, pitch figure, and harmonic structure accompanies this rhythmic feature.

Sameness – Phrase size was consistently measured in groups of 4 or 8.

Form – Various cultures use consistent forms. Cross-culturally, however, the only consistency lies in a contrasted A + B and a repetition pattern.

Life – Forms of life include rise and fall, motivic extension, rhythmic variation, and acceleration.
Growth – Similar to life, generally expansion of pitch and/or rhythm adds to the complexity of the piece.

Familiarity – Introductions provide elements of familiarity of pitch, harmony, rhythm, and the like. Additionally, and more prominently, the motive, whether rhythmic or otherwise, breeds familiarity when it is repeated. Congruent phrase sizes make it easy for the listener to pick out the repeated parts.

Return – Similar to the familiar, the return is the large-scale familiar. A repetition of the opening section or to the chorus or to the original key provides a sense of “going home” (Schmaldfelt’s term).

Balance – Literal balance refers mainly to a comparison of the opening and closing statements. Mirroring reverses the pattern. Expansion adds to one part of the pattern. Pattern balance either doubles or halves the idea. Gravitational balance refers to pitches above and below a center. Pitch centricity involves the number (ordinal number) of pitches used above and below the gravitational center.

Bass line - Drones are found in ancient music (also Wagner’s Rheingold). Though usually heard as a lower pitch relation to other voices (as in a polyphonic setting), drones may be foreground or background events. Rarely does the singing parallel the drone accompaniment.

Unstable

Tension and release – Asymmetric forms (such as AAB), rhythms (changing meters mainly), durations (figures like 4-4-8), and pitch height (more pitches above central line than below) create tension. Delays of new sections or phrases (via an added beat or measure) also provide tension.

Climax – An emphasis often associated with a melodic high peak, dynamic and/or rhythmic accent (agogic or otherwise), the climax expresses a specific tension that must resolve. In general, the climax expands the original rhythmic or melodic motive.

Fluctuation – references the balance idea but contrasts the point of balance. This may be demonstrated in the motion of pitch groupings above and below a central pitch, a repeated departure from and return to large sections as in a rondo, or, as is often found, motion to and from two tetrachords in a scale.

Delay of resolution – Typically, the final phrase will incorporate a stutter before reaching the final. In many cases, additions are made of measure(s) and pitches. For example, an imitation of the A section may suggest that the last line should be 5 4 3 2 1; the typical final line, though, is varied: 5 4 3 2 7 1, adding to the original idea without taking anything away.
Variations – Variations are abundant but are most obvious in terms of harmony, melody, rhythm, and form.
Christy J. Talbott is the current GTA Fellowship Mentor in the music theory department at The Ohio State University. She holds degrees from Hiram College, Kent State University, the University of South Florida, and is in the final stages of the dissertation process at OSU. A full member of ASCAP and a currently active composer, her music has been performed in large and small arenas. She is also a member of the College Music Society (CMS), the Society for Music Theory (SMT), The Ohio State University Association for Scholarship of Teaching (TOAST), and Pi Kappa Lambda.

With a degree in Education, her passion is student development motivated by a practical application of theoretical concepts. As a mentor to other Graduate Teaching Associates, she compiled a guidebook of significant pedagogical practices designed to instruct the new TA with little classroom experience or little background in educational methodologies. She also has offered workshops on behavioral objectives and lesson planning, given private consultations on teaching practices, and is developing a course for all new teachers on “Tenets of Effective Teaching.”