



COLUMBIA PACIFIC UNIVERSITY

INDEPENDENT STUDY PROJECT COVER SHEET

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2. Title of Project: _____

Music Composition and Performance based on World Music Models

3. Date Submitted: 7/1/83 in partial fulfillment of the requirements

4. for the Degree of: Bachelors of Arts

5. with Major in: Music Composition and Performance/World Music Studies

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Signed:

Date: 6/21/83

Please attach to finished copy of Independent Study Project.

Table of Contents

<u>Forward</u>	pp. 1-3
<u>Chapter I Professional and Touring Experience</u>	pp. 4-6
A. Autobiography	
B. Evaluation of Performance Experience	
<u>Chapter II Background of Study</u>	pp. 7-9
A. Formal Instruction	
B. Personal Studies	
<u>Chapter III Cross-cultural, World Music Composing</u>	pp. 10-20
A. Statement of Purpose	
B. Method and Procedures	
C. Problems	
D. Examples	
<u>Conclusion</u>	pp. 21
<u>Bibliography</u>	
<u>Appendixes</u>	
A. List of Books	
B. List of Recordings	
C. Chart of Temperaments	
D. Transcription: <u>Light Upon Light</u>	
E. Transcription: <u>Zenith</u>	
F. List of Instruments	

Forward

The content of this Independent Study Project on Music Composition and Performance based on World Music Models is to document, survey and evaluate my experience in the field of cross-cultural, world music composition and world music studies. Through evaluation of this experience, I will show the methods and procedures I have developed in acquiring the fundamental knowledge and inspiration to compose and perform music in a style aspiring toward a cross-cultural point of view.

First and foremost, I must put forth the most critical and important concept on which I have based my view of music.

At this stage in the evolution of human history, we are moving closer and closer toward the emergence of a world-minded consciousness. This is, I believe, a time where the peoples of the earth must begin the process of valuing their own culture as a part of a greater whole. Gerald and Patricia Mische reinforce this concept by stating:

"There is today a growing consciousness of the fact that we are unalterably bound together. We share a common dependency on one earth system. We are together in relationship with one air, water land and life-support system. We have the same needs, the same potentialities, the same capacities for participating in destruction or for participating in creation. We share a common possibility of annihilation or fulfillment. We no longer have many diverse and isolated histories. Our cultural and national histories have converged in one commonly shared and future reality."¹

The great advancements in the technologies of communications and transportation, has made the world an interconnected and interdependent network of human exchange. Lester R. Brown states, "advances in transportation technology along with those in com-

munications are leading to global economic and social integration. One of the most remarkable characteristics of the contemporary world is the mobility which modern man has achieved. Tens of millions of human beings routinely travel at speeds only slightly slower than sound. A traveler catching an early-morning plane at sunrise in New Delhi can fly westward with the sun, arriving in New York on the far side of the globe before nightfall of the same day. As people cross national borders more and more frequently, the significance of these artificial divisions in human society diminishes."² The influence between cultures is far-reaching, widespread and profound.

I believe we must maintain our own cultural integrity, but should work toward a world society that views each culture and its people as fragrant flowers in the garden of humanity, creating a unity through diversity. Margaret Mead supports this idea by stating:

"The planetary community is now made up of all the inhabitants of the planet, its wholeness and safety dependent upon all of them. One group, one nation even one individual who acts in defiance of the needs of the whole, can endanger the whole. It is as if the earth were a sphere made up of strangely shaped mosaic pieces which, by fitting together, hold it together and where the withdrawal of one piece might result in the sphere's collapse. The knowledge that this is so can provide us energy to keep each part in place, but only if that knowledge is shared by all the othersthe human community, grown richer, more intricately related and diverse, will have a better chance of survival and growth."³

This concept of a world society is expressed from a musical point of view by Leonard Meyer:

"While recognizing the diversity of musical languages, we must also admit that these languages have important characteristics in common. The most important of these, and the one which least attention has been paid, is the syntactical nature of different musical styles. The organization of sound terms into a system of probability

relationships, the limitations imposed upon combining sounds, and so forth, are all common characteristics of musical language.....But different musical languages may also have certain sounds in common. Certain musical relationships appear to be well-nigh universal. In almost all cultures, for example, the octave and the fifth or fourth are treated as stable, focal tones toward which other terms of the system tend to move."⁴

It is important to note, as Alan Merriam points out, "cross-cultural communication depends both upon understanding and, more important, receptivity to understanding."⁵ From an international context, ethnomusicologist Mantle Hood states, "today, as never before, governmental agencies of the nations of the world are recognizing the fact that international understanding and goodwill is possible only when the cultural expressions of the peoples involved are comprehended."⁶

There will always be historians, anthropologists, musicologists and ethnomusicologists dedicated to documenting and maintaining the "authentic" music of a culture. We need not worry that we will completely lose the classical and traditional forms of music, especially with the advent of the recording and film industries.

I strive to merge in my compositional style different and sometimes divergent world musics.

Chapter I Performance and Touring Experience

A. Autobiography

I was formally exposed to music at the age of eight while living in Columbus, Ohio. I studied and performed on trumpet through elementary and junior high school with most of my performances occurring in marching bands and school orchestras. Several solo recitals were arranged by my early instructors to give me the opportunity to perform classical pieces I had been studying during this period. At the age of thirteen, I began the study of my principal instrument, the guitar. I spent the first two years learning basic guitar technique and the popular songs of the time.

I began my professional performance career as a sophomore in high school and performed throughout high school and after graduation in popular and rock music groups. I toured throughout the mid-western and eastern United States which proved to be one of the most valuable and formative educational experiences of my life. While in high school, I had the opportunity to record and produce two records that were released regionally. As group leader for several bands, I learned to communicate with booking agents and record business executives which gave me an important resource in later years. After high school I continued my music career producing another record for R.C.A. Victor and performing as opening act for such popular groups as the Beach Boys, the Grass Roots, the Doors, etc.

During this period, the seeds of my pursuit into cross-cultural, world music were sown. With the Beatles introducing and popularizing north Indian music and the increased use of modal compositional structures and Latin African rhythm, I became

acquainted and later immersed in its study and performance.

After seven years of continuous touring, my wife and I decided we needed a change from urban living and in 1972 we moved to the White Mountain region of New Hampshire. At approximately the same time, we became members of the Baha'i Faith. The world encompassing and unifying principles of the Baha'i Faith have played a tremendously important role in my music.

In 1973, I co-founded the music group; Do'a.* This musical association and endeavor has been pursued for over nine years. The concept and focus of Do'a is to explore, compose and perform music that unites traditions and styles from around the world. During the formative years of Do'a, we collected and began the use of many instruments from around the world. Currently, in each concert, we use over three dozen instruments from India, Africa, Asia and the Americas. With Do'a, I have toured extensively throughout the U.S. and Canada with recent engagements at Carnegie Recital Hall and Lincoln Center for the Performing Arts.

Do'a has been a selected member group of the prestigious New England Foundation for the Arts' Touring Program since 1976. Do'a has given workshops and seminars on improvisation techniques and world musics at universities, state art councils, secondary and elementary schools throughout the country. I have written and implemented for Do'a, three consecutive touring grants awarded by the New Hampshire Commission on the Arts and

*Do'a is an Arabic-Persian word signifying a call to prayer, meditation, chanting and worship.

the National Endowment for the Arts from 1977 to 1979.

Do'a is currently under contract with Philo Records, Inc. to produce four record albums, three of which have been recorded and released internationally. These albums and reviews of past performances have been submitted for documentation and evaluation for my Independent Study Project at the Bachelors level.

B. Evaluation of Performance Experience

In reviewing my past performance experience, my long history of exposure to the concert stage has given me a greater ability to evaluate my own musical work. Through performing my compositions literally hundreds of times for audiences of great diversity, I have developed insight into the dynamics of reaching out and touching peoples lives in a deeper and more effective way.

Years of experience performing on ethnic instruments has also given me a greater understanding of how to make the combinations of many unique sounds a viable compositional vehicle capable of strong and moving musical statements.

I have benefited from the opportunity to pursue a full-time performance and composition career. This opportunity has allowed me to develop my ideas of performance and composition in an observable and progressive manner.

Chapter II Background of Study

A. Formal Instruction

The earliest instruction on my main instrument, the guitar, began in 1964 with Garland Milliken and continued through 1967 with Charles Watts. Both of these teachers were jazz musicians. The most important role they played in my development was to emphasize the use of improvisation. They outlined the principles of western harmony and theory with the intention of developing my ear training. Through acute listening and dictation of intervalic relationships in simple pentatonic and diatonic scales, I learned to improvise against I-II-V, I-IV-V and IV-II-III chord progressions. This instruction at such an early age became the germinating seed by which I would later reap the benefits of composing and improvising music.

In 1974-75, inspired to develop a deeper ability and discipline in improvisation, I began the study of North Indian music with my main focus on performance of the sitar. My instructor was Peter Row, director of the Lalit Center of North Indian Music and Dance and faculty member at the New England Conservatory of Music. The formal study of Indian classical music has become the model by which I launched into my studies of world musics.

Through my studies of Indian music, I have developed a deeper understanding of thinking from a linear, melodic point of view based on a tonal center or drone. R. Murray Schaffer states, "In the Indian anahata and in the Western Music of the Spheres man has constantly sought some prime unity, some central sound against which all other vibrations may be measured. In diatonic or modal music it is the fundamental or tonic of the mode or scale

that binds all other sounds into relationship."⁷ "Generally speaking", Ravi Shankar emphasizes, "Indian music belongs to the system of modal music. A mode, or scale type, is defined in terms of the relationships between the fundamental, unchanging note and successive notes of the scale."⁸ The role of the raga and scales (thats) have influenced my concepts in composition by defining a structure upon which I would launch into a creative idea. H.A. Popley defines a raga as "different series of notes within the octave, which form the basis of all Indian melodies, and are differentiated from each other by the prominence of certain fixed notes and by the sequence of particular notes."⁹

It is important for me to note that the influence of rasa, the emotional and spiritual sentiment that a raga concurs, has taught me the importance of maintaining the emotional impact of a composition. Ravi Shankar sums this up beautifully, stating, "the beauty of the raga leads the listener to a serene and peaceful frame of mind and brings him joy. In other words, the raga must create a forceful effect on the listener. Every note in our (Hindustani) musical system not only is a time, but also carries within it a certain expression or emotion."¹⁰

After my studies with Peter Rowe, from 1975-76, I returned to my studies in jazz guitar performance and theory with Ed Corey, faculty member of the Manchester Institute on the Arts. The focus of these studies was to develop a greater ability to sight-read and perform in a more mainstream style of jazz guitar.

From 1977 to 1981, I entered an intensive study program with Bart Jordan, a former student of Andres Segovia. My main focus was classical guitar performance and study of western musical

forms. During this intensive period, I studied classical guitar technique through exercises developed by Segovia and other masters. I expanded my classical repertoire with pieces ranging from early Gregorian chant transcriptions, Dowland, Frescobaldi and Bach to Tarrega, Moupou, and Rodrigo. While reading the history of different periods of western music, I spent time studying scores, listening to recordings and reviewing the visual arts of each period. I transcribed pieces and learned lute tablature with a great amount of focus on early music.

B. Personal Studies

During all the formal instruction since 1974, I coupled these intensives with in-depth study in the musics of many cultures. I proceeded to collect over two dozen authentic instruments from around the world while investigating their history, music and performance application. (See Appendix F for listing of these instruments.)

Listening to recordings, transcribing traditional pieces and reading ethnomusicological publications has given me valuable information on the uses of these ethnic instruments. (See Appendix A and B for a partial listing of books and recordings.) Experimentation and sessions with skilled musicians have also contributed to my insight in the performance of these instruments.

Chapter III Cross-cultural, world music composing

A. Statement of Purpose

We are living in a time where communications and mass transportation have made it possible for exchange between cultures. In no other century in the history of humankind has there been such exchange in the areas of commerce, technology and art. We are able to have first hand experience with the cultures of many lands through performances, exhibitions and exchange programs sponsored by the nations of the world. The music and dance of the near east, Asia and Africa are no longer mysteries of exotic, far-off lands. Television, film and radio have brought their influence into the homes of millions of people throughout western society. Likewise, the influence of western music and art are to be found in the countries of the east, Africa and South America. As an artist, I have been profoundly influenced by this intercultural exchange.

I realize that my primary enculturation has taken place in the sphere of western classical, jazz and popular music. In regards to the influence of the culture we have been brought up in, Alan Merriam states, "it is through education, enculturation, cultural learning, that culture gains its stability and is perpetuated, but it is through the same process of cultural learning that change takes place and culture derives its dynamic quality. What is true for culture as a whole is also true for music; the learning process in music is at the core of our understanding of the sounds men produce."¹¹ There is no doubt that my "learned" tendency leans strongly toward the models of western music, but having studied world musics for the past ten years,

I have begun the process of taking on the view of being a "world citizen". This process has lead me to believe three basic asser-tions. These are: the universality of music as a form of cultural expression; the ability of music to uplift the spirit and magnify the emotional state of the performer and listener; and the belief in a universal creative process.

The premise of my first assertion is based on the realization that all cultures have music and dance as a creative expression, which represents the inner-most realities of a society. Music takes on its unique character due to geographical location, language, raw materials available for instruments and the spiritual and philosophical beliefs of its people. David Reck states, "music all over the world has a common denominator: man himself/herself. We are all, every one of us, standing with our comprehending, curious and feeling minds "in our own old shoes on the spot where we are". Besides our universal humanness, we share with those persons standing or living around us certain more specific things: maybe an enviroment, religious beliefs, a life-style....."¹² Though the music of a society will manifest itself in many diverse ways, it will none the less always take into consideration these variables. No music of any society is any more sophisticated or consummately artistic than the other, it is simply the true expression of the people who make it and how it manfests their beliefs and experiences.

My second assertion is based on the ability for music to uplift the spirit and magnify the emotional state of the performer and listener. For the most part, music is created to bring the performer and listener into an altered state of mind. Peter Michael Hamel reinforces, "in all earlier world-cultures music stood at the

service of ritual, of the holy cult, of consciousness-expansion and deepest in human experience." Hamel further expounds that music, "is capable of being perceived only by an "integrated" auditory consciousness that can experience the vitality of the magical, perceive the psychic form of the mythical and grasp the structure of the mental."¹³

Music has a transforming effect on the participant, whether it be the harmonic, emotional creations of a Beethoven symphony the modal, meditative melodies of a raga performed on the north Indian Bansri flute or the polyrhythmic, exciting drumming of a west African ensemble. Not all listeners will experience the same emotive quality from one culture to the next. This is a process of "enculturation" and in many cases a "learned" skill, but ultimately music has the ability to transport the participant from one state of consciousness to another. Music has the power to uplift the spirit to a greater sense of harmonious living as well as it has the power to intensify the negative qualities of a society.

My third assertion is that there is a universal, creative process. I believe that each musical piece, whether composed or improvised, had to have a creative impulse, whether this be by an individual composer or a group of composers. Alan Merriam paraphrases ethnomusicologist, Bruno Nettl on the topic of composition by stating:

"Bruno Nettl has discussed three points in connection with composition among nonliterate peoples. The first is that any music composition is ultimately the product of the mind of an individual or a group of individuals. The second point noted by Nettl is that "no generalizations can be made about composition techniques in primitive music which contrast it with the music of high cultures with exception that it is composed without written records." The third and final

point concerns what he calls, "conscious composition", which refers to the deliberate and planned process of creating new music material, carried out by individuals who are aware of their specific and directed actions to the desired end."¹⁴

Each society has its own method of recognizing the creative source of a composition from the belief that all musical compositions are God-inspired and given to its people by means of a vision or dream-state to the individual composer being the all-powerful, creative force. My belief is that all music, whether individually or collectively composed, taps into a creative force that is our connection with the infinite.

B. Method and Procedure

To compose from a cross-cultural point of view, I had to become more familiar with world musics. Listening was the key element. There are numerous recordings of world musics available, which gave me the resource material necessary to involve myself in these sonic explorations. By immersing my ears and reading publications about the music and cultures I was investigating, I began the process of understanding the music emotionally and spiritually. Of course, this type of exploration is no substitute for experiencing a culture first-hand, it nevertheless gave me a foundation upon which I could build a composition. I have found the method of listening as outlined by Peter Michael Hamel an excellent introduction to the process of sonic exploration.

Hamel states:

1. Temporarily release yourself in thought from the usual way of thinking and concentrate on the higher, spiritual aspects of life.
2. Place the universal in the forefront of your contemplation, and endeavor to lay aside preconceived ideas and forget the habit of looking at partial aspects only.

3. Immerse yourself in a mood of meditation and contemplation.
4. Establish a link with the supernatural aspects of reality.
5. Leave aside all inner preconceptions.
6. Try to think your way inside the artist. In other words, try to feel with him/her and to become one with both artist and theme.
7. Be still and spiritualized - both inwardly and outwardly.¹⁵

Once I had experienced the music, I needed to channel the new information into a plausible format. I approached this in several ways. I began by using an instrument most familiar to me and transcribed the music as close to what I had available through our western system. (Granted that I did so within certain instrument groups such as strings to strings, percussion to percussion, etc.) This method is time consuming and will make very evident the difficulties of cross-cultural integration. Bruno Nettle expounds upon this problem, stating, "transcribing music by hand and ear, as it were, is hindered by the situation in which the transcriber is a native of one musical culture trying to write down (or imitate) the music of another culture.....the point is that human transcribers, using a notation which is always to some extent selective of the musical phenomena it reproduces, and having a background in a specific musical culture which is also selective of the musical phenomena which it uses as communication, might have great difficulty in first perceiving and then reproducing on paper (or an instrument) the music of another culture in such a way that the essential distinctions are indicated....."¹⁶ On the other hand, it can lead to exciting, new discoveries on the performance and capabilities of our more familiar instruments.

Another approach is by working directly with indigenous

instruments from other countries. Discovering how to perform and use the instruments first hand takes time and perserverance to develop the technical skill to produce reasonable music on an instrument. In many cases, I would discover that if I remained within more familiar instrument groups, progress became more rapid. It is obvious that it could take many lifetimes to master any one of these instruments. As a composer, I must become familiar enough to write and/or perform intelligently on an instrument. Yet another approach or method is to study the written music of other cultures. Many cultures do not have any form of notated music and the music is passed on by imitation and/or oral tradition. In this case I had to rely on first-hand information and direct learning procedures. There are a number of cultures, who have highly developed notational systems. To use this information, it requires the composer to learn a new musical language, which can be very rewarding and will later help in the problems of communicating a cross-cultural composition.

Once the development of skills and the exploration stage has been implemented, the composer must then turn towards a source of inspiration in order to write music of depth and beauty. This inspiration can manifest itself through a spiritually, uplifting written passage or experience, an earth shattering personal or social tragedy, or any number of ways of focusing on a subject. Many times, an instrument can inspire the composer to use the sound as launching pad to catapult the composition into existence.

The use of diverse musical instruments and world musics can be likened to many colors on the painters palate just waiting to be

mixed and stroked into a multi-hued, sonic painting.

C. Problems

The composer will discover several difficulties in developing a world music composition. One of the most immediate problems he/she will encounter is the temperament of the scale or scales to be used. As we examine the 12 tone, equal tempered scale of Euro-American classical and jazz music, we realize that the scale has been altered dramatically from the natural harmonic series in order to take advantage of harmony and chordal elements, which characterize the music of western society. In contrast, the scale system of east Indian music for example, distributes the notes into just intonation and has an elaborate microtonal system, which sub-divides the scale into 22 separate notes called shrutis. The subject of intonation deals primarily with the enculturation of a given group of people. To the east Indian, a sitar performed in an equal tempered scale would seem "out of tune", likewise a piano tuned to a just intonated scale would seem "out of tune", especially in certain keys. (See Appendix C for detailed information on different tunings.)

Throughout all world musics, we encounter the problem of intonation. All world music composers have to make critical choices in how to approach this problem in a manner that does not compromise the character of the scales or musical influences employed. The decision many times lies within the fact that the composer must lean toward one particular culture as the foundation to build the composition. Re-tuning a particular ethnic instrument

to match the others is often the compromise I have chosen.

The problem of obtaining quality instruments from distant lands can be approached from several different ways. There are a number of musical instrument importers in the U.S. that can acquire reasonable quality instruments. Many times when master musicians come to teach at universities through exchange programs, they will bring a number of instruments to be sold to students and admirers. Occasionally, some import shops may have ethnic instruments for sale in their stores, but generally the quality is inferior.

Acquiring good source material for study presents some difficulty. It is not easy to find most ethnic musics in the bends of your local record store. Becoming familiar with such labels as the Nonesuch Explorer Series, Lyrichord, and Unesco Anthology, etc. are invaluable resources. Publications are generally quite accessible in most universities that offer musicology or ethnomusicology as subject matter in their music departments. Excellent books by such noted ethnomusicologists as Merriam, Nettle, Sachs, Berliner, etc. are very informative reading materials.

D. Examples

I would like to exhibit four practical applications and examples of my world music compositions. On our third LP, Ancient Beauty, in the composition, Flowers of the Garden, we have taken the South African Mibira tuned to a G major scale and performed in an E minor aeolian mode and combined it with the traditional Japanese, 4 stringed, Biwa that has been retuned to a root/5th (E-B) open structure. The composition superimposes the Biwa's pen-

tatonic scale over the Mbira's diatonic rhythmic backdrop while keeping an element of improvised spontaniety. The addition of Chinese temple blocks and the Tibetan Ting-Shaw add rhythmic color to the simple and austere composition.

Again on the album, Ancient Beauty, in the composition, Coral and Pearls, I have taken a mandolin harp (zither) most commonly tuned to 2 octaves of a C major diatonic scale. I retuned the zither to the phrygian pentatonic or Greek hemitonic scale used frequently on the Japanese koto and shakuhachi flute. The tuning is C-D^b-F-G-A^b or the intervals of root, minor second, fourth, fifth, minor sixth. We perform an improvisational duet with the zither and a north Indian bansri flute, which is also using this same 5 note scale. The effect gives a shimmering soundscape that reflects the music of Japan, yet uses instruments from Euro-American and Indian traditions.

In the composition Light Upon Light, (see Appendix D), from the LP of the same title, the opening section was inspired by European Renaissance dance pieces performed in a 6/8 or 3/4 time signature. The composition is dominated by the use of a consistent drone or pedal tone in D throughout the piece. The composition was written as a duet for flute and guitar with the addition of vibraphone in section D for color and as a chordal accent. At section E, the north Indian drone instrument, the Tamboura enters to reinforce the pedal tone. Four measures later the sitar enters to perform an improvised solo over-dubbed on top of the guitar/tamboura drone. The sitar's tuning has been raised to D from

its common root tone, which generally falls between C# and a slightly sharp C#. The sitar's movable frets facilitated the use of equal temperament. The sitar and flute come to a climatic ending at the conclusion of section H, where the guitar/flute duet restates the original thematic material up to the closing chimes. This work was one of our earliest world music compositions and shows the use of retuned instruments and modal structure to create a cohesive, unified sound.

In the composition, Zenith, appearing on our 2nd LP, Ornament of Hope, the piece opens with a double-recorder solo reminiscent of European Renaissance music. The melody at section A reflects a classical/folk motif, which develops into a syncopated, rhythm pattern with the entry of the Indian tablas at the 1st and 2nd endings. The piece works with an E pedal tone during the improvised sections and uses the Lydian mode derived from the that (scale) of the raga Kalyan. The piece develops to the rhythmic climax with the exchange of solos between the flute and guitar on page six. This type of soloing is modeled after the Indian style of performance called "jawab sawal" where the guru exchanges phrases with a disciple or more recently when the main instrument exchanges phrases with the tabla. Ravi Shankar explains, "for some years now, there has developed a particular type of give-and-take, known as jawab sawal (question-answer), between the main instrumentalist and the drummer. Actually, this was started in a simpler form by my own guru as an explanation of a musical phrase by the teacher and a reply by the student.....in this sangat, first the musicians each play a very long phrase, usually four bars in whatever tala (rhythmic cycle) the piece is based on.

They each play four bars, alternately, then two bars, then one, then a half bar back and forth, and then a quarter, and finally, they all join together for the climax."¹⁷ In Zenith, we have modified this approach by exchanging four beats to two beats to one beat to a unison finale. A restatement of the melody at section A resolves the piece to its closing chord.

Conclusion

In reviewing my work as a cross-cultural, world music composer, I can not but feel a great humility in approaching so immense a project. My discoveries of the vast wealth of musical heritage that the people of our planet have produced is profound. The more deeply I delve into the creative process of producing such works, the more I am lead to new and exciting information upon which I can study and base future compositions.

The challenges on a technical level are many, but through these growth opportunities I have gained insight and ability to write music on a higher level of sophistication and realized content. Discipline and self-directed personal study creates the channel through which the composer can realize his/her potential. Elimination of pre-conceived ideas and prejudices can release an exciting, new music, a music which is being introduced today and will help lead the way to a truly, world-minded approach to composition. In this day, when "the Earth is but one Country and Mankind its Citizens", we must arise to the task of making "music a ladder by which souls may ascent to the realm on high."¹⁸

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APPENDIX A

List of Books

Title:	Author:	Publisher:
1) <u>Music of the Whole Earth</u>	David Reck	Scribners
2) <u>Musical Instruments of the World</u> (Illustrated Encyclopedia)	The Diagram Group	Bantam
3) <u>The Soul of Mbira</u>	Paul Berliner	U. of California
4) <u>The Music of India</u>	H.A. Popley	YMCA Pub. House
5) <u>My Music, My Life</u>	Ravi Shankar	Simon & Shuster
6) <u>Preservation & Propagation</u> <u>of Iranian Music</u>	Lloyd Miller	Center for Ira- nian Music, S.L.C.
7) <u>The Therapeutic Value of Music</u>	Manly P. Hall	Philos. Research
8) <u>Songs & Stories of Uganda</u>	Serwaddi/Pantaleoni	Crowell
9) <u>Masterpieces of Music before 1750</u>	Parrish/Ohl	Norton
10) <u>History of Western Music</u>	Donald Grout	Norton
11) <u>Orchestration</u>	Walter Piston	Norton
12) <u>Introduction to Contemporary Music</u>	Joseph Machlis	Norton
13) <u>Principles of Orchestration</u>	Rimsky-Korsakov	Dover
14) <u>Music</u>	Sufi Inayat Kahn	Sufi Publishing
15) <u>Harvard Dictionary of Music</u> (Reference)		Belknap/Harvard
16) <u>Elementary Training for Musicians</u>	Paul Hindemith	Schott
17) <u>Craft of Musical Composition Vol. I</u>	" " "	Schott
18) <u>The Art and Times of the Guitar</u>	Frederic Grunfeld	Collier
19) <u>Musical Instruments through the</u> <u>Ages</u>	Anthony Baines	Pelican
20) <u>The Study of Counterpoint</u> (Gradis Ad Parnassum)	Johann Joseph Fux	Norton
21) <u>Through Music to the Self</u>	Peter Michael Hamel	Shambhala
22) <u>A Guide to Musical Styles</u>	Douglas Moore	Norton
23) <u>The Tuning of the World</u>	R. Murray Schaffer	Knopf
24) <u>The Anthropology of Music</u>	Alan Merriam	Northwestern Univ.
25) <u>Society of Ethnomusicology</u> <u>Publications 1982</u>		
26) <u>Ear Magazine East</u>	R.I.P. Hayman	New Wilderness
27) <u>Lou Harrison's Music Primer</u>	L. Harrison	Peters Publishing
28) <u>The Segovia Technique</u>	Vladimir Bobri	Collier
29) <u>The Magic of Tone and the Art</u> <u>of Music</u>	Dane Rudhyar	Shambala
30) <u>Music-Society-Education</u>	Christopher Small	John Calder
31) <u>Baha'i Writings on Music</u>	Baha'u'llah/ Abdul'Baha	Baha'i Pub- lishing Trust
32) <u>Complete Handbook for Jazz</u> <u>Improvisation</u>	Arnie Berle	Amsco Publishing
33) <u>Music Cultures of the Pacific,</u> <u>Near East and Asia</u>	William Malm	Prentice-Hall

APPENDIX B

List of Recordings
(non-western)

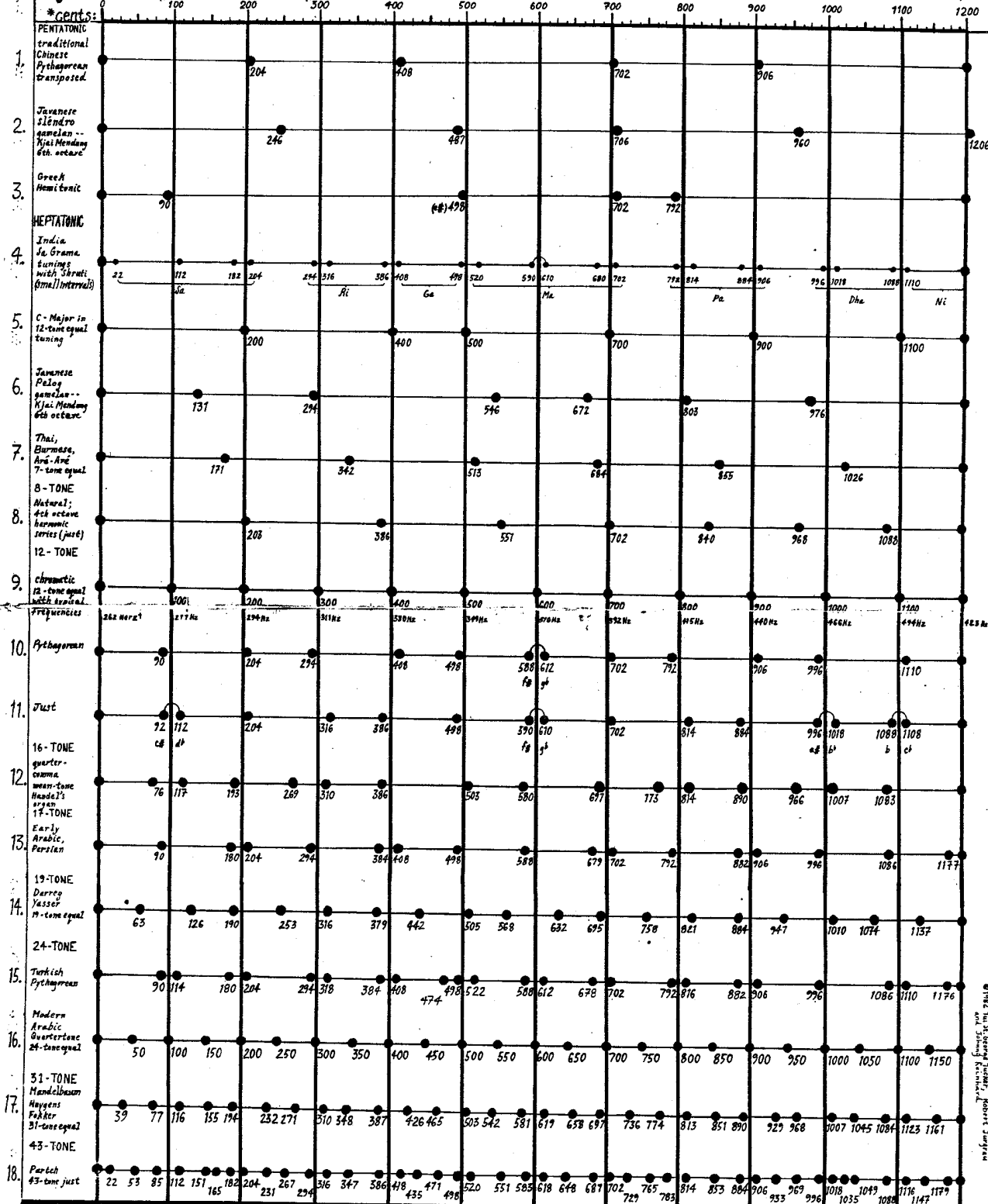
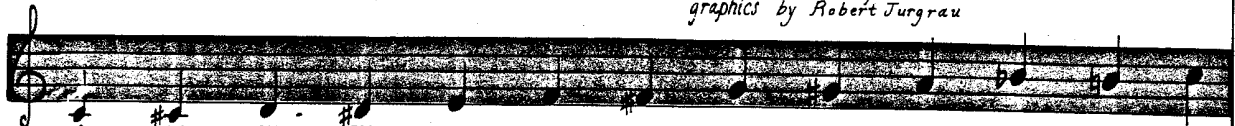
Title:	Label:
1) <u>The Nonesuch Explorer Series</u>	Nonesuch
2) <u>Shakuhachi - The Japanese Flute</u>	Nonesuch
3) <u>Music for Zen Meditation</u>	Verve
4) <u>Musical Treasures of Japan - Anthology</u>	Murray Hill
5) <u>Drums of Passion - Michael Olatunji</u>	Columbia
6) <u>Tantras of Gyuto: Sangwa Dupa</u>	Nonesuch
7) <u>The African Mbira</u>	Nonesuch
8) <u>Unesco Anthologies</u>	Unesco
9) <u>Africa: Shona Mbira Music</u>	Nonesuch
10) <u>The Jasmine Isle (Javanese)</u>	Nonesuch
11) <u>Concerto for Sitar and Orchestra - Shankar</u>	Angel
12) <u>Music from the Morning of the World - Balinese</u>	Nonesuch
13) <u>Africa: Ceremonial and Folk Music</u>	Nonesuch
14) <u>Tradition Classique de l'Iran - Persian tar</u>	Harmonia Mundi
15) <u>Japan: Traditional Vocal & Instrumental Music</u>	Nonesuch
16) <u>Africa: Drum, Chant & Instrumental Music</u>	Nonesuch
17) <u>India's Master Musician - Shankar</u>	World Pacific
18) <u>The Exotic Sitar & Sarod</u>	World Pacific
19) <u>Festival of India</u>	Capitol
20) <u>Portrait of Genius</u>	World Pacific
21) <u>Sounds of West Africa - Kora & Balofon</u>	Lyricord
22) <u>Music for 18 Musicians - Steve Reich</u>	ECM
23) <u>A Bell Ringing in an Empty Sky</u>	Nonesuch
24) <u>Urubamba - Music of the Incas</u>	CBS
25) <u>Music of the Andes</u>	Atlas Series
26) <u>42 Lessons for Tabla - Keramatullah Khan</u>	Folkways
27) <u>Shakti with John McLaughlin</u>	Columbia
28) <u>Korean Court Music</u>	
29) <u>Music of Ethiopia</u>	
30) <u>Steel Band Clash - Trinidad</u>	Cook
31) <u>High-Life Music of W. Africa</u>	
32) <u>A Persian Heritage - Classical Music of Iran</u>	Nonesuch
33) <u>Thailand "Lao Music of the Northeast"</u>	Lyricord
34) <u>Harp Music of the Andes</u>	Atlas Series
35) <u>Los Chaskis (Bolivia)</u>	Canada International
36) <u>Kora Melodies of Gambia</u>	Rounder
37) <u>East African Music - Lomax</u>	Columbia
38) <u>Bismillah Khan - Shenai</u>	EMI
39) <u>Ustad Ali Akbar Khan - Sarod</u>	EMI
40) <u>Ephat Mujuru - Mbira</u>	

APPENDIX C

Chart of Temperaments

A Few Popular and Important Tunings

coordinated by Tui St. George Tucker, Robert Jurgrau, and
Johnny Reinhard
graphics by Robert Jurgrau



EARR

MAGAZINE EAST

New Wilderness Foundation, Inc. 325 Spring Street Room 208 New York, New York 10013
Volume 7, Number 5 November/December/January 1982/1983 \$2.00 (U.S. Dollars)
81822 N.W. 67th Street, Robert Jurgrau and Johnny Reinhard

HEPZ = vibrations per second (or cycles, or frequency). (All numbers rounded off to nearest whole number.)



APPENDIX D

Composition: Light Upon Light

Guitar ① = D
⑥ = D

LIGHT UPON LIGHT

Armstrong/La Roche

Flute

Guitar

Flute

Guitar

A

Fl.

G.

Fl.

G.

B

Fl.

G.

The image shows a handwritten musical score for guitar, organized into eight systems, each consisting of two staves. The notation is dense and includes various musical symbols and technical markings. Key features include:

- Staff 1:** Starts with a treble clef and a key signature of one flat (B-flat). It features a melodic line with a slur and a fermata, and a bass line with chords. A 'b' marking is present above the first measure.
- Staff 2:** Continues the melodic and harmonic development with various note values and rests.
- Staff 3:** Shows a melodic line with a slur and a fermata, and a bass line with chords. A 'D' marking is present above the first measure.
- Staff 4:** Features a melodic line with a slur and a fermata, and a bass line with chords. A 'D' marking is present above the first measure.
- Staff 5:** Continues the melodic and harmonic development with various note values and rests.
- Staff 6:** Shows a melodic line with a slur and a fermata, and a bass line with chords. A 'D' marking is present above the first measure.
- Staff 7:** Features a melodic line with a slur and a fermata, and a bass line with chords. A 'C' marking is present above the first measure.
- Staff 8:** Shows a melodic line with a slur and a fermata, and a bass line with chords. A 'C' marking is present above the first measure.

Handwritten musical notation for the first system. It features a treble clef staff with notes and rests, and a bass clef staff with rhythmic patterns. Annotations include "tam 1/4 ↑" above the first two measures, "tr 1/4 ↑" above the next two measures, and "Vibes enter" in a box at the end of the system. The word "simile" is written below the bass staff in the second measure.

Handwritten musical notation for the second system. It consists of two staves. The top staff has a treble clef and contains a melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. The word "SIMILE" is written in the first measure of the top staff.

Handwritten musical notation for the third system. It consists of two staves. The top staff has a treble clef and contains a melodic line. The bottom staff has a bass clef and contains a rhythmic accompaniment. The word "p." is written below the bass staff in each of the four measures.

Handwritten musical notation for the fourth system. It features a treble clef staff with notes and rests, and a bass clef staff with notes and rests. Annotations include "Flute re-enters" in a box above the first measure of the top staff, "Tambora enters" above the first measure of the bottom staff, and "Guitar simile" below the first measure of the bottom staff. The word "p." is written below the first measure of the bottom staff.

Handwritten musical notation for the fifth system. It features a treble clef staff with notes and rests, and a bass clef staff with notes and rests. Annotations include "Tambora simile" and "Guitar simile" below the first measure, and "Sitar enters" above the first measure of the bottom staff.

Handwritten musical notation for the sixth system. It consists of a single staff with a treble clef and contains a melodic line.

SITAR SOLO 16 BARS

$\text{F}^{\#}$ Flute

FLUTE SOLO 12 BARS

SITAR & FLUTE IMPROVIZATION 52 BARS

G

Flute

cresc.

Rhythm stops

D.S. al f

trunk

Harmonics

C

APPENDIX E

Composition: Zenith

ZENITH

ARMSTRONG/LaRoche

2 Recordars

Free'ly

♩ = 80

FLUTE

GUITAR

BASS

A.S. ♩ = 100 - 104 Andante

Bass (after 0.5.)
Flute

Add Triangle
F#m

A sus

C sus

B sus

1. and 2.

Add Tabla

Flute 2x only

Flute Ad Lib ...

Flute $\frac{6}{8}$ (1/4)

Flute Ad Lib ... 4

SIMILE

MORE RHYTHMIC
Harm.

Guitar
'CHIMES'

More Sustained
Flute Ad Lib Continues

Flute part with notes and slurs. Bass part with notes. A dotted line with a '4' is positioned below the first measure.

Flute part with notes and slurs. Guitar part with notes and slurs. A diagonal slash is present in the first measure of the guitar part.

Guitar part with notes and slurs. Bass part with notes and slurs.

Flute part with notes and slurs. Guitar part with notes and slurs. A cymbal symbol is present in the first measure of the flute part.

Flute part with notes and slurs. Guitar part with notes and slurs. Chord symbols Eb, G, F#m, E sus, and Em are written below the guitar part.

Flute part with notes and slurs. Guitar part with notes and slurs. Chord symbols Eb sus, D, A sus, C sus, and B sus are written below the guitar part.

Rit.....

RAGA KALYAN

Zeit: 4.

Allegro $\text{♩} = 134$

Guitar

Bass

Handwritten musical notation for the first system, featuring a guitar staff with a treble clef and a bass staff with a bass clef. The key signature has two sharps (F# and C#). The guitar part includes various rhythmic patterns and melodic lines, while the bass part provides a steady accompaniment.

Add Tabla

Handwritten musical notation for the second system, specifically for the Tabla. It shows rhythmic patterns and fingerings for the tabla accompaniment, corresponding to the measures above.

Flute

Bass

Handwritten musical notation for the third system, featuring a flute staff and a bass staff. The flute part has a melodic line with slurs and accents, while the bass part continues the accompaniment. The word "Guitar Simile" is written above the bass staff.

Handwritten musical notation for the fourth system, continuing the flute and bass parts from the previous system. The flute part shows more complex melodic development.

Handwritten musical notation for the fifth system, featuring triplets and more intricate melodic lines in both the flute and bass parts.

Handwritten musical notation for the sixth system, concluding the piece with final melodic phrases in the flute and bass.

Flute Improv. Continues

Guitar and Bass Simile | — 8 — |

Flutter Tongue → (136 FASTER)

Flute Improvisation | — 8 — |
 Guitar Full Drone
 Bass Simile

Flute Melody

Flute Variations

Musical staff showing a simple melodic line with a whole note G and a half note G.

Rhythm Continues

Guitar + Flute

Flute

Musical staff showing guitar accompaniment and flute entries.

Flute

Guitar

Flute y

Musical staff showing flute, guitar, and flute y parts.

(Flute)

Guitar

Flute y

Musical staff showing flute, guitar, and flute y parts.

Flutter Tongue

Guitar

Flute

Musical staff showing flutter tongue effects, guitar, and flute parts.

Musical staff showing guitar and flute y parts.

Musical staff showing guitar and flute y parts.

Musical staff showing unison parts.

Musical staff showing bass line.

Cymbal

D.S. al

⊕ CODA

Musical staff for the coda section, including guitar and bass parts.

FINE

APPENDIX F

List of Instruments

- 1) Acoustic guitar
- 2) Classical guitar
- 3) West African Balofons
- 4) Japanese Biwa
- 5) Sitar
- 6) Tabla
- 7) Mbira dzavadzimu, Karimba, Kalimba
- 8) Xylophones
- 9) Mandolin Harp
- 10) Dhakabellas (slit drums)
- 11) Japanese Koto
- 12) Moroccan clay-drums
- 13) Chinese yueh-chin
- 14) Dunno Drum
- 15) Berimhau
- 16) Tamboura
- 17) Percussion
- 18) High-strung guitar
- 19) Charango
- 20) Counc Shell Trumpet
- 21) Turkish Saz

ADDENDUM

Do'a World Music Ensemble
Co-founded by Randy Armstrong & Ken LaRoche
1974-1991

List of Recordings:

Light Upon Light - 1976	Philo Records
Ornament of Hope - 1979	Philo Records
Ancient Beauty - 1981	Philo Records
Companions - 1983	Philo Records
Do'a - The Early Years - 1986	Rounder Records
World Dance - 1987	Global Pacific / CBS Records
LEGACY - Complete Works - 2008 5 CD Box Set	UMP Records & Media