

**Bangor University**

## **DOCTOR OF PHILOSOPHY**

### **Global interactions : an international perspective : a portfolio of compositions**

Johnston, Ozzie

*Award date:*  
2004

*Awarding institution:*  
Bangor University

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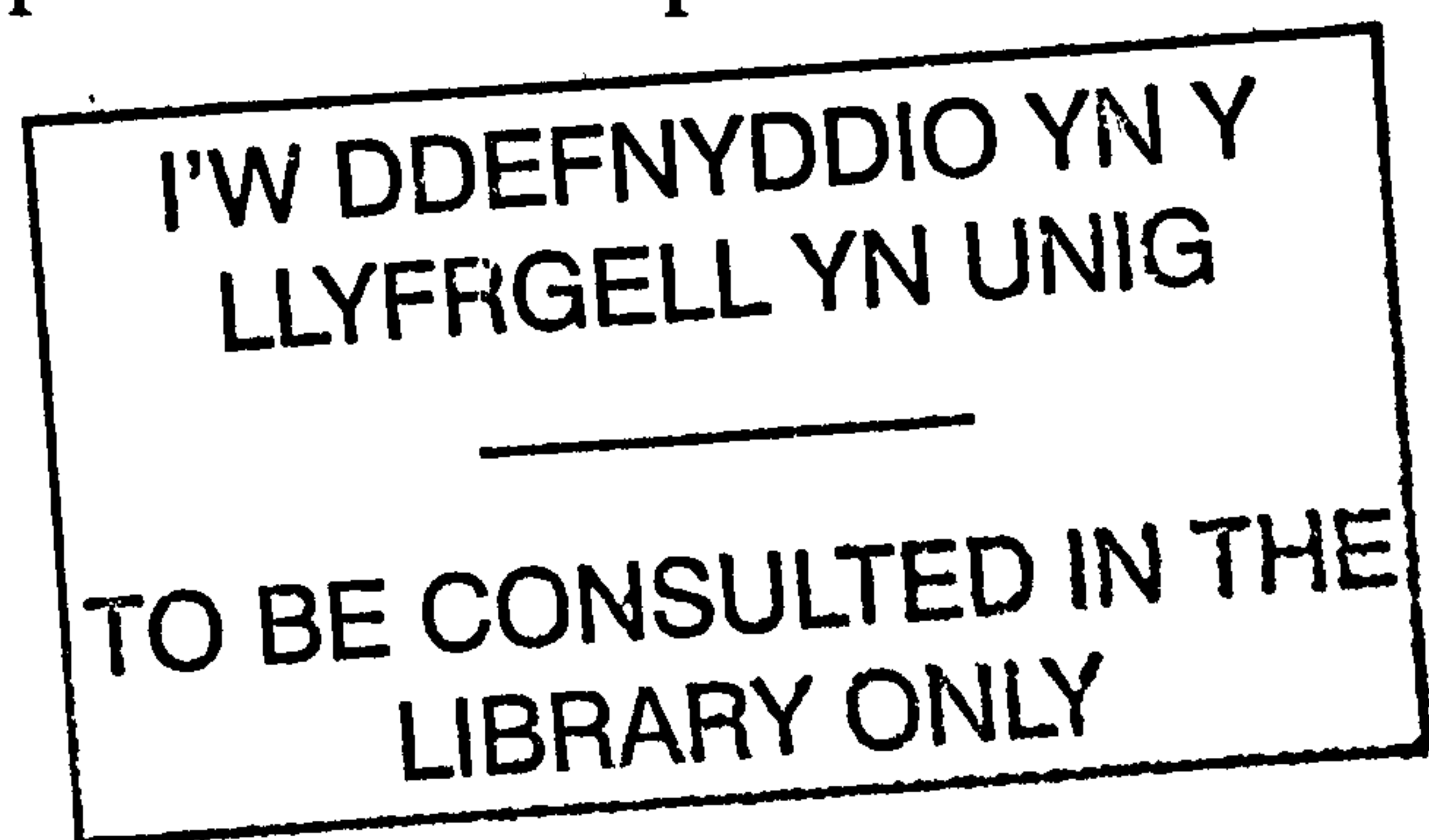
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# **PhD in Electroacoustic Composition**

**Ozzie Bruce Johnston**

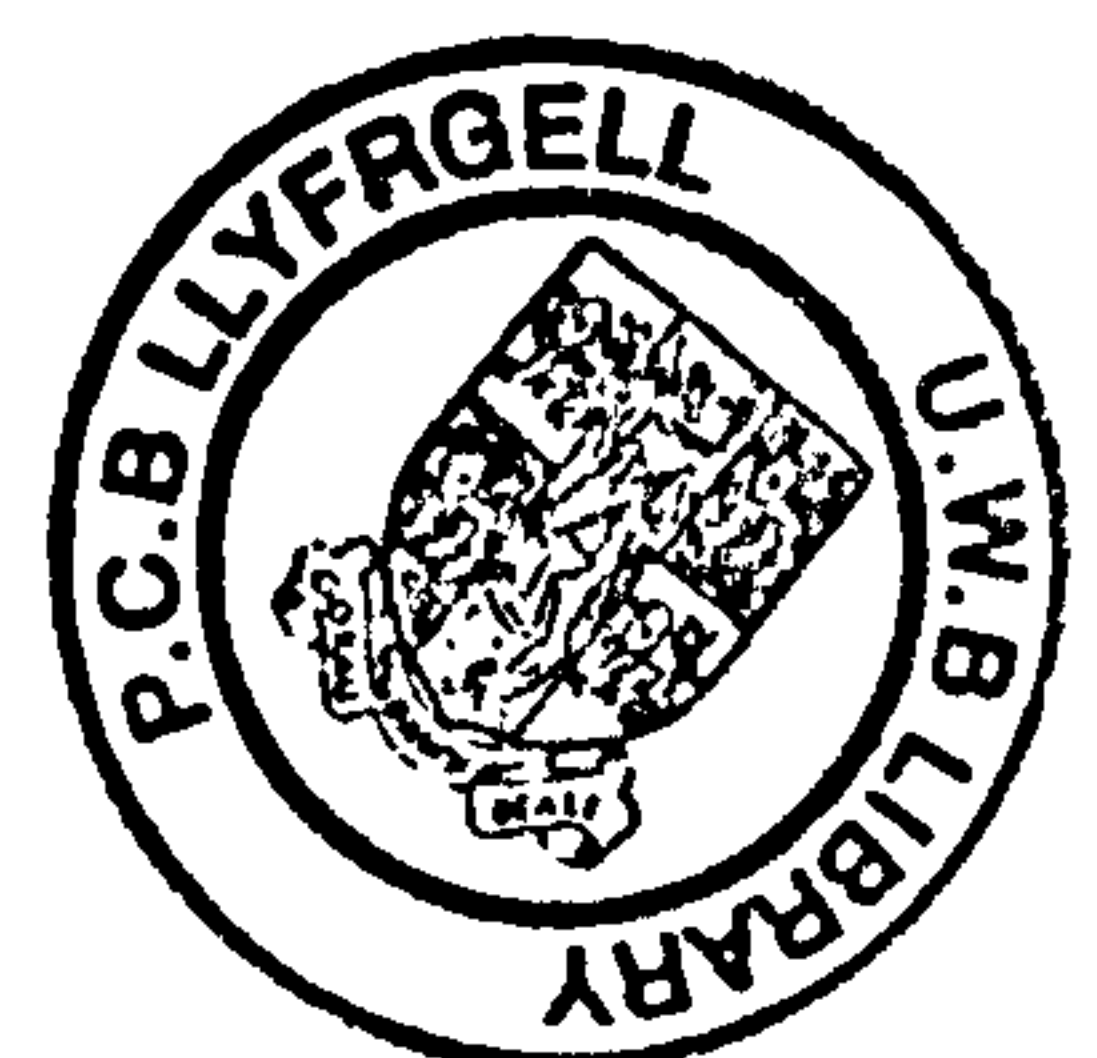
## **Global Interactions: An International Perspective**

A portfolio of compositions



**School of Music  
University of Wales, Bangor**

**2004**



**THESIS  
CONTAINS  
CD/DVD**

## **Acknowledgements**

**This doctorate would not have been possible without the encouragement and support of my mother and father, my brothers Justin, Ryan, and Max, and a host of friends and colleagues, including Professor Lewis, Professor Pascall, Dr. ap Siôn, Dr. Wood, Jana Frenklova, Suzi Collick, Rachel Ley, Helen Roberts, Abby Morris, and Father George.**

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## **Summary**

**My portfolio of electroacoustic works entitled, *Global Interactions: An International Perspective* was produced in both Studio 1 at the University of Wales, Bangor and in my electroacoustic studio in Bangor between October 2000 and September 2004. The six pieces presented here are all for stereo diffusion and involve a host of both live and processed elements that represent a rhythmical and musical cross-section of solo and ensemble instruments and instrumental patterns from around the world. Collectively, the pieces juxtapose sonic ideas from different cultures and ideologies, bringing together many diverse (and sometimes, surprisingly similar) instrumental and rhythmical traditions.**

## Ideology

**“Our musical alphabet is poor and illogical. Music, which should pulsate with life, needs new means of expression and science alone can infuse it with youthful vigor... I dream of instruments obedient to my thought and which with their contribution of a whole new world of unsuspected sounds, will lend themselves to the exigencies of my inner rhythm.”<sup>1</sup>**

**-Edgard Varèse**

The work contained within this portfolio is the product of not only four years of composition and research, but also represents a lifelong interest in exploring and bringing together a seemingly endless source of global musical disciplines. In **Global Interactions: An International Perspective**, I have strived to produce, through the medium of electroacoustic music, a global representation of solo and ensemble music, taken from six different subject areas; India, Africa, North America (Native America), Japan and China, and two representing Europe (Western influences). Within one collection, my portfolio presents to the listener an international cross-section of incredibly rich and diverse musical material, much of it developed independently over thousands of years and enhanced and enriched through the process of electroacoustic transformation (this also includes its layout and arrangement). My aim has been for the listener to experience sonic interaction based on pure material from individual countries or regions, and not to be subjected to a musical hybrid based on a conglomeration of sounds taken from all world sources.

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<sup>1</sup> KOSTELANETZ, R.; DARBY, J.; SANTA, M. (eds) (1996) Classic essays on twentieth-century music: a continuing symposium (New York: Schirmer).



As a composer, I feel it essential that my work must be accessible to the general public, and not just to the academic analyst. This can, at times be incredibly difficult, especially due to the fact that complicated concepts do not always easily translate into simple musical ideas, but the benefits are shown through seeing the listener begin to take a cognitive approach to listening, and therefore begin to truly 'understand' the work.

Many individuals do not realise that the compositional process does not simply end with the production of a twelve-minute CD, but ends after its 'live' performance. The way in which I choose to diffuse a piece in the concert hall requires much thought and planning, and in order for my work to be effectively realised, I must prepare and arrange ahead of time exactly where I wish to send my audio source (stereo, in my case). Furthermore, realizing this planned idea in a live concert situation is an act of performance.

Though octophonic sound allows the individual minute control over the placement of his sounds, I have found it quite limiting (from the performer's point of view) due to its lack of 'live' maneuverability. The level of control over a stereo work is far greater, mainly due to the fact that there is only one linear tract to work with and diffuse. Once an individual experiences the spatial complexity that can be achieved with a two-channel audio source, the stereotype of a simple hi-fi, producing flat and two-dimensional sound will quickly be eliminated.

## The Compositions

“Of all noises, I think music is the least disagreeable”<sup>2</sup>

-Dr. Samuel Johnson

All six of the compositions mentioned below have been performed at concerts in Powis Hall as part of the *Music at Bangor* concert series (a number of these pieces have also been performed as part of numerous Bangor New Music Festivals, which began to coincide with the *Music at Bangor* concert series a number of years ago). The studio apparatus I have used over the years has changed considerably, but generally speaking, Macintosh G3 and G4 workstations, equipped with DigiDesign ProTools hardware have formed the nucleus of my studio setup. Various software packages were utilised, including programmes such as SoundMaker, SoundHack and MetaSynth. I would also like to thank my father, Bruce Johnston for access to many generic sounds and clips in Santa Barbara, California.

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<sup>2</sup> BOSWELL, J. (1946) Boswell's Life of Johnson (London: Oxford University Press).

## **Harpsichord Reverie**

Stereo

Duration- 12:34

“The sound of a harpsichord -two skeletons copulating on a tin roof in a thunderstorm”<sup>3</sup>

-Sir Thomas Beecham

The first great difficulty of any doctoral project is knowing exactly where and how to begin. **Harpsichord Reverie** is the product of a music student utilising his strengths as a harpsichordist. As the Curator of the Early Keyboard Instruments at Bangor, I had become exceptionally familiar with many different types of keyboard instruments as an undergraduate, but the harpsichord was unique in that I had been trained both as a technician and performer. In this work, I explore the many sonorous and resonant qualities that can be extracted from a harpsichord. Many of the piece’s motifs are gradually developed and layered as the work progresses. This method of musical development brings the listener through a chronological journey of understanding of what the instrument is capable of producing through the medium of electroacoustic music.

One of the unique features of this piece is that it broadly resembles a harpsichord and tape piece, or live instrument performed with a processed background. Though most of the material is highly processed, the audible harpsichord passages are composed and performed personally, allowing me to have complete control over every aspect of

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<sup>3</sup> SHORE, B. (1938) The orchestra speaks (London: Longmans, Green & Co.).

production. With regards to my own stylistic development, **Harpsichord Reverie** is a typical example of my early compositional style, where I utilise my expertise as a traditional performer and combine traditional musical methods with sonic processing.

One of the most noticeable features in **Harpsichord Reverie** is its strong sense of rhythmical interaction. The work is also heavily processed in order to enhance its many harmonic and reverberative qualities. These are juxtaposed by various traditional harpsichord techniques (musical extracts, chords, arpeggios, etc.) in order to highlight even further how through the medium of electroacoustic music, processing and manipulation can vastly extend and exploit the musical capability of traditional instruments. Many musical strands have also been altered in pitch or reversed, as well as layered in octaves, fourths and fifths.

Through pitch and rhythmic interplay, pitch modulation and resolution, **Harpsichord Reverie** explores and greatly extends the aural versatility of an instrument that is generally thought of as a relic of the past.

A single manual German harpsichord, after Carl Conrad Fleischer by Anthony and Andrea Goble (1996) was used for my recordings, courtesy of the University of Wales, Bangor. Three ranks of strings, two at 8' and one at 4' (a=440, equal temperament) were used.



## **African Heartbeat**

Stereo            Duration - 12:34

**African Heartbeat** was broadcast on BBC Radio 3's 'Hear and Now' program on 22 June 2002.

Access to African music was fairly limited during my childhood in California. Beyond a brief (and fairly unfocused) introduction to African drums and rhythmical patterns in school as a child, I had not even come across a true representation of African Music until my time spent at boarding school in England. It was only during the last ten years that I have been able to explore more of this fascinating and diverse musical universe. Many of my new friends from Africa brought with them to England first-hand musical examples from their home villages and towns, including the haunting and mesmerising rhythms that are inextricably linked with African music. Also, my interest increased tremendously once enrolled at the University of Wales, Bangor as I immediately became familiar with their ethnomusicology resources (which are extensive). One of the great difficulties was to narrow the field of choice down to a select number of regions in Africa. In my search for a faithful representation of an area's music I first had to peel back as much foreign influence as possible. At times, this could be quite difficult as throughout history there has always been cultural interaction of some sort, and what may seem a unique instrument, or style of singing may have been imported generations before due to trading. All in all, I feel that **African Heartbeat** is a work that embodies the very essence and spirit of traditional African music. By processing and combining the most articulate vocal and

instrumental material, I have endeavoured to produce a work that explores a central cross-section of the continent's intricate rhythmical, instrumental, and vocal patterns through the medium of electroacoustic music.

Though Africa offers a wealth of musical expression, I ultimately decided to focus on material extracted from the central and western regions of the continent (mainly The Central African Republic and Ghana). Traditional instruments like the Guaguanco, Didrenuou, and Banda drums are represented throughout the piece. Also, numerous examples from various chants and songs are included, ranging from war chants to counting songs.

Structurally speaking, **African Heartbeat** is divided into a series of expositional segments that introduce a variety of untreated solo vocal and instrumental strands. These strands are gradually developed through various musical processes, which include time stretching, time freezing and pitch modulation. The end result is a work that progressively deconstructs complicated musical textures and rhythmical patterns, allowing their complexities to be appreciated and better understood by the listener.

## **Turquoise Spirit**

**Stereo          Duration - 10:35**

Unlike my lack of exposure to African resources as a child growing up in California, Native-American culture was abundant at home and seamlessly integrated into our environment, both in educational circles as well as in the arts and media. Unlike a generation before, where Cowboys and Indians were historically ill portrayed and mainly presented for visual entertainment, my generation of peers were taught a new respect for Native American cultures, and exposed to civilisations found on our doorstep. Many local schools have been able to integrate Native American history with American history (meaning the history of the country), and I was fortunate to have one of my brothers trained at a school well versed on many local traditions of the indigenous tribes. The other great resource I utilised was the plethora of knowledge recorded by American anthropologists and historians. It is a sad irony, though that the very nation known for its exemplary documenting and cataloguing skills was also the same nation responsible for the demise of the Native American Indians generations before.

Personally, I have always had a special interest in Native American music, especially as much of my childhood was spent listening to the various indigenous chants and rhythmical patterns found in the American Southwest. These early influences have allowed me to explore extensively many of the beautiful and evocative musical

qualities that Native American music has to offer. With my piece **Turquoise Spirit**, I have attempted to capture some of these haunting melodies and chants, as well as incorporating a selection of native percussion and wind music found throughout the many tribes and regions of America.

In choosing source material for **Turquoise Spirit**, I decided to focus on music from the Apache, Navajo-Ute, Iroquois, and Salt River-Maricopa tribes. The sacred and traditional chants chosen range from mountain spirit dances and lullabies to farewell songs. I have also chosen to highlight the versatile usage of the Native American flute, drums and shakers.

**Turquoise Spirit** is structurally arranged so that untreated musical extracts are given a brief expository period, followed by, and eventually combined with a processed counterpart in order to highlight the many sonorous qualities of the instruments. Particular care has been taken to preserve the unique vocal characteristics and usage of the female voice. This allows the listener to appreciate the many rich and resonant textural qualities that would otherwise not be easily audible.



## **Choral Majesty**

Stereo

Duration - 10:35

The great excitement about **Choral Majesty** was that its main component, the human voice, is an area that I know much about, being a trained singer. I have both America and the United Kingdom to thank for my knowledge in this area. I began to train vocally at an early age, both as a soloist and as a choral singer and my family have been fundamental in my development in this area, especially my father, as many of the vocal combinations used in this piece were learned by careful observation and instruction from him during those early years. In Britain, my time at school was to play an important part in my selection of choral material as I was surrounded with scholars from both Westminster Abbey and Westminster Cathedral. The 'sacred layout' is mainly attributed to the Catholic ethos provided by my school in England (as well as my understanding of the 'continental' style of singing). One can understand from this upbringing why choral music in particular, and the human voice in general, has always played an integral part in my life. The very mystery and solemnity of this music has continually intrigued me and became the basis for **Choral Majesty**; a piece that can be seen as a celebration of the human voice throughout the ages.

From Russian Orthodox chant and works by Hildegard von Bingen to Mass settings by Byrd, Jakob Ryba and Howells and sacred works sung by The King's Singers, **Choral Majesty** embraces a tremendously wide range of religious and musical

traditions. Rich vocal textures are combined to illustrate the many different styles of singing and occasionally when integral to the vocal line, various segments of instrumental accompaniment have been included. By a series of various filters and computer manipulation, I have been able to fuse untreated musical examples with strikingly original processed sounds that both highlight and accentuate intricacies not easily detected by the human ear.

Structurally speaking, **Choral Majesty** is loosely modeled on the congregational parts of the Ordinary of the Mass (Kyrie, Gloria, Credo, Sanctus [including Benedictus] and Agnus Dei). Each passage correlates with a specific historical period in music and is introduced chronologically, beginning with early monophonic material and ending with very avant-garde twenty-first century polyphonic choral arrangements. The Latin plainsong of the Mass is also superseded by the more modern vernacular style towards the final movement of the work.

## Looking Eastward

Stereo

Duration – 10:35

“The use of natural sounds in the composition of electroacoustic music on tape allows us to claim that this is the first musical genre ever to place under the composer’s control an acoustic palette as wide as that of the environment itself.”<sup>4</sup>

-Simon Emmerson

The majority of my compositions to date have largely been centred on material obtained from Europe, Central Africa, and the New World. With my latest work, **Looking Eastward**, I have endeavoured to bring together the musical influences of traditional Japanese and Chinese music, covering a wide cross-section of rhythmical, lyrical and instrumental disciplines. This piece has enabled me to broaden my range of resources as well as to further develop my compositional style. Whether or not this change is more apparent in the overall layout and structure of the piece, or in the approach and level of sensitivity taken (with regards to the processing of the components) is left to be debated, but the listener will definitely notice an overall pulse and flow throughout the work. Unlike my previous pieces, my interest in China and Japan stems simply from curiosity. I had very little influence from either at home or abroad, but have always been acutely aware of the extensive musical styles and the unique vocal and orchestral traditions that both countries are renowned for. It is fascinating to note the parallels between the orchestral and vocal ensembles of both

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<sup>4</sup> EMMERSON, S, ed (1986) The language of electroacoustic music (London: Macmillan).

China and Japan and the West, though not directly linked with regards to musical style, the musical layout and general function of, say the Imperial Court entertainment in Japan is not so dissimilar to the evolution and function of the court orchestra in Europe. Essential elements may differ, but the ideology of producing different forms of music for various events and occasions is similar.

Though not apparent at first, the musical structure of **Looking Eastward** gradually begins to take the form of a 'call and answer' pattern. Within this framework, processed material derived from both Chinese and Japanese sources is arranged so that sound objects are able to play upon each other's sonic movements. This gives the work a strong sense of shape and direction and allows the piece scope for organic development.

The wealth of sonic material contained within China and Japan has allowed me to select an incredibly wide range of musical extracts. Vocal sequences like the ones contained in the Kawachi Ondo (music to accompany the festival of the dead) from Osaka in Japan and instruments like the shamisen and the shakuhachi have been processed and fused together with Chinese instruments like the erhu (a two-string fiddle) and the gu-zheng (a type of zither). The culmination of these elements has resulted in the richly varied and expressive work, **Looking Eastward**.



## **India**

Stereo

Duration - 12:35

**India** is the final piece in my portfolio of compositions and arguably the most refined example of my compositional skills to-date. My inspiration is taken not so much from the various ragas I was exposed to during my youth, but to my discovery, years later that the minutest change in pitch and pattern could signify an entirely different ritual and meaning. In many ways, Indian music to me (especially relating to the glissando used in the voice and various stringed instruments) embodies the idea of breaking away from the twelve-tone system so firmly implanted in my mind throughout my musical education. Divorce oneself from that basic principle, and one begins to realise that the boundaries of musical composition are in fact limitless. Music can be created from any level, angle, or pattern, whilst still retaining an intricate and multi-faceted structure or layout. At the beginning of my electroacoustic studies, this idea became the best analogy for me to begin to develop my own compositional style, and it is with great pleasure and excitement that I am able to apply all I have learned about electroacoustic composition to my final work, **India**.

My title, **India** may be a simple and straightforward one, but this single word encompasses an incredibly wide variety of cultural identities and practices throughout the Indian Sub-Continent, especially with regard to the nation's rich and diverse musical heritage. To put it plainly, **India** represents the sonic fusion of this nation's

own cultural and traditional ideas, using processed material from a wide cross-section of the country.

Due to the strong musical tradition found at every level of society in India, I have been able to extract a wealth of sonic material, ranging from examples of religious music from South India (Kerala), to various forms of northern ragas, including ragas performed in the more orthodox Dhrupad style.

The most effective way to understand the structure of this work is to focus upon the textural strands of the music, as they gradually merge into larger sound objects, as opposed to waiting for material to be progressively introduced. This allows the overall sonic picture to be considered as one complete thought.

Until the creation of **India**, I had not fully explored the concept of completely ‘fusing’ sound objects together, preferring to layer and combine treated material into complex, but not wholly integrated sound blocks. This work attempts to demonstrate the ability to seamlessly weave intricate and at times exceptionally contrasting material together. It has also allowed me to unite these many musical styles under one title. Historically, this title has attempted to encapsulate the rich and diverse heritage of an expansive region under the single name of India. The completion of this work marks both an end and a beginning. It signifies my final and most advanced effort as a compositional student, and my first step as a professional composer.

## Sources

I have listed below a number of audio sources used either as raw processing material or as raw inserts.

World Music: Afro Drums. Columbia River Entertainment Group. Request Music Co.  
Compact Disc

(1994) Sacred Spirit: Chants and Dances of the Native Americans. Virgin Records.  
Compact Disc

Russian Orthodox Chant: Bulgarian choirs from Sofia. Regis. Compact Disc

(2001) Ritual Music of the Tibetan Monks: Mantras for meditation. Recording Arts  
Dejavu Retro Gold Collection. Compact Disc

(1991) Music from India. Delta Music, Inc. Laser Light Digital. Compact Disc

## **Audio Recordings (compact-disc format) 1-6**

2