



INTIMATE  
**IMMENSITY**  
MORTON SUBOTNICK

# INTIMATE IMMENSITY

by Morton Subotnick

She Joan La Barbara, vocalist  
He Thomas Buckner, vocalist  
Cyber Angel I Nyoman Wenten, Balinese dancer  
The Hand Nanik Wenten (on laser disc)

Lighting Design Kyle Lemoi  
Set Design Woody Vasulka and Kyle Lemoi  
Laser Disc Imagery Woody Vasulka  
Nature Images Steina Vasulka

Video Engineer Aaron Davidson  
Audio Engineer/ Computer Op Clay Chaplin  
Software Consultant Mark Coniglio  
Technical Consultant John Potter

*Intimate Immensity* was developed at the California Institute of the Arts in its Center for Experiments in Art, Information and Technology, an interdisciplinary program for the development and application of new, interactive technology in the arts. The project was made possible by grants from AT&T, the Rockefeller Foundation, and the Peter and Eileen Norton Family Foundation.

## INVISIBLE HAND

"It begins with the hand-- the grasp that pulls and directs; the movements enacted, then fashioned out of material. Fingers trained to guide tools to reshape the world in our image, bridging the gap between those two infinities, human idea and tactile nature." So opens my book *Hand's End* which Morton Subotnick has so remarkably taken as inspiration for his media poem, *Intimate Immensity*.

I wrote the book to explain how tools reach out from us not only to shape our world, but to define it as well. The mind does nothing without the body, and the hands are the part of our body that we have most carefully trained. We point, mold, signal, and caress with them. Fingers tap out notes on a piano or letters onto a screen. Without them, we can only shout or sing. Gesture is more than signal, as the motion of our hands is what makes the human world happen.

The word technology goes back to *techne*, which was defined by Aristotle to mean both tool and art. There was no difference. What we make is meant to have beauty whether it is to be used or contemplated. We may have lost the sense of the word, but perhaps it is time now to return to it.

*Intimate Immensity* also begins with the hand, and it ends in an ether where space and time are dissolved. Is such vastness real, or imagined? Technologies throughout human history claim to conquer nature, while they also inscribe nature. The telescope makes the distant within our reach, the microscope makes the infinitesimal comprehensible to the gaze. The clock imagines the day can be cut into equal parts, and the engine provides an image for living things as machines: taking fuel, it runs until it needs more or wears down.

Humanity comes out of nature, but in our ceaseless need to question we are wrenched from nature. Those who want to save the world (and in a sense all of us do) want to get back to nature. Not necessarily to simplify our lives, but to find a way to fit into the world around us which has made our existence possible.

This nature that we want so much is always just out of reach. (In *Intimate Immensity* listen for Kafka's tale of the dying emperor with a message for *you* alone.) Nature is still a goal that cannot be caught.

Today's technology -- far from the hand -- proliferates everywhere. Our lives are increasingly computerized. Abstract machines can "do whatever we know how to order them to perform," as Lord Byron's daughter Ada Lovelace said a century-and-a-half ago. The possibilities are immense, but the abstract machine is seductive; it has no way to accept ideas that cannot be quantified: music, love, art. Can we order these into the machine?

-David Rothenberg

## COMPOSER'S NOTE ON INTIMATE IMMENSITY

Intimate Immensity has four performers: He, She, the Cyber-Angel and the Hand [a projected laser disc image]. The music is played by two electronically controlled pianos and computer-generated and digitally processed sounds. The lighting and the laser disc images are interactively controlled through the computer.

The work is a meditation on our love affair with technology. In our quest to be empowered, to be in control of our destinies and to be free of the constraints of nature, we are constantly creating new tools. The hand was the first tool and thus takes on a prominent role in the work. Perhaps we invented our gods to empower us as well. The Cyber-Angel represents such a creation.

The text was inspired by 'The Poetics of Space' by Gaston Bachelard and 'Hand's End' by David Rothenberg. There are also excerpts from Kafka's Parables and references to Marshall McLuan and Lewis Mumford.

In his book, 'The Poetics of Space', Gaston Bachelard describes the space-time experience of daydreaming as an 'Intimate Immensity'. The characters He and She exist in this daydream state which also represents the goal of the technological journey toward complete freedom from the constraints of nature, even from our own bodies.

The Cyber-Angel, performed by a traditional Balinese dancer (I Nyoman Wenten), was conceived as a god-like figure who mysteriously controls the environment. His costume contains sensing devices which allow his hand, arm and leg movements to trigger the performance of the two pianos [Disklaviers], video imagery, voices and lights. In the opening sequence, he activates a giant projected hand which gradually learns to talk and play music. Through commentary and parables the Angel and the Hand tell about our immense journey from the earliest use of tools (our hands) to "a world without time ... a world without space".

He and She sit at their work tables. He is reading; She is writing. Both move in and out of a daydream state [Intimate Immensity] from which they eventually do not return. With arm gestures they trigger light, video and sound events. They are seen and heard as if in different locations (futuristic telephonic 'sites'), each performing a meditation on His/Her sense of *Intimate Immensity*, a duet of parallel performances. They are not aware of each other though they interact with the Angel who they dreamed into being. They have differing views of the new space. He reads and expresses ideas about technology which are accepting and intuitive, often in the context of phrases from Marshall McLuan. She writes and expresses ideas about technology which are more cautious and thoughtful, often from the writings of Lewis Mumford. Since the new space has no apparent boundaries, the characters gradually merge with one another.

Throughout the work, He and She gradually lose their bodies, and move into the *Intimate Immensity*. As the work draws to a close, images of their faces merge with those of corridors infinitely receding.

The images are on 5 laser discs. Through the computer software, any frame (image) on any of the laser discs can be accessed at any time. Once the frame is accessed, the Laser disc player can be told to hold the frame (still image) or play forward or back at any speed. This technique allows me to choreograph (animate) the images in real time. In developing the concept for the laser disc images with Woody Vasulka, I was looking for a progression of images that supported the general narrative and a sense of imagery that amplifies and extends certain concepts suggested in the text. The latter is most obviously seen in the transformed images of nature and, in Part 2, the progression of progressively more abstract images of He and She.

The music plays two roles. The music of the performers, which includes the live piano music, supports the 'narrative' development on the stage. There is also music, played by the computer, which is a collage of modifications of pre-recordings of the piano [including inside piano sounds], the two vocalists and the Balinese dancer. This music acts like an interior dialogue. It is the world of the inner self, or perhaps, the *Intimate Immensity*. Sometimes the two musics act alone and sometimes are juxtaposed.

As well as the body suit worn by the dancer, the performers interact with the computer by means of eight infrared sensors strategically placed on the stage. All the signals are sent to the computer where a software program, Interactor®, resides. I then programmed Interactor® to convert these signals to control lights, five laser discs, two Disklaviers, internal sounds in the computer, two CD ROMs, and a sampler with verbal prompting for the performers.

I refer to *Intimate Immensity* as "a media poem". It has always been difficult to decide whether much of the staged work of the last half of this century is opera, or theater piece, or performance art. I am adding another category to the list, by calling *Intimate Immensity* a media poem. In creating the work I felt as if I have been constructing a giant four dimensional poem, just as poems have sound, musical phrases, evoke imagery and idea. In this, and most of my work, all the media function together, each conveying an aspect of the work's meaningfulness, similar to the way the gesture of one's body participates in the way we communicate and the way memory alters the way we perceive the meaning. In traditional theatre the set, lights, images and music tend to create the context for the characters' action, whereas in my work the action on the stage (especially of He and She) functions to set a context for the various media. The Cyber-Angel, on the other hand, is moving freely. He is the embodiment of our godlike creations which we have empowered with the freedom we can only dream to attain. Our gods like our technologies, once created, can alter us forever.

---Morton Subotnick

## Intimate Immensity is in three parts:

Part 1 is a prologue performed by the Cyber-Angel. The work begins as a projected amorphous object gradually evolves into a fist. The Cyber-Angel is revealed and, in silence he teaches the projected fist to open into a hand. Then, through his own hand gestures, the Angel teaches the Hand to speak. And, finally, by performing the "air" in front of him, the Angel remotely plays one piano while the Hand tries to imitate him with the other piano.

Part 1 ends as the Angel tells Kafka's parable of the Emperor who sent a messenger to deliver an important message to us. The angel enacts the journey while performing his own piano accompaniment through body gestures.

Part 2 is an interaction between the Angel and He and She. Lights come up on He reading and She writing about the daydream state. After a short interlude which is performed by the Angel, the Angel leads He and She in a ritualistic music-dance based on the Monkey Chant. Alternating between the chorus of rhythmic punctuation, and a refrain in which the Angel relates a creation myth in Kawi [an ancient Javanese language\*], while He and She expound the virtues of the digital age.

Translation of the Creation Myth:

*Dadia, ta pinten kuanag Iawas Ikang kala*  
Who knows when time began  
*Kadi gelap sumarasah anusup ing randu parajamanala*  
When earth, wind, and fire trembled and quaked into being,  
*apah, teja, banyu, akasa Iawan pretiwi.*  
Followed by the sacred tree of life, by people and all creation.  
*Mijil a ri gatinira Sang Hyang Sunlyantrara amunggel punanag cerita*  
The Divine Void comes forth, measuring out the universe.

Finally, the Hand emerges over the two pianos and joins She and He in a virtuosic performance. The Angel admires his creations and leaves.

Part 3 is a meditation by He and She on Intimate Immensity. From time to time, the Angel is seen on his journey where he occasionally stops to create new worlds.

He and She are approaching the end of their journey toward complete freedom from the limits of nature and their bodies. They sing and speak of a growing immensity within themselves. Their own transformed images appear behind them.

The daydream state takes over as their bodies gradually disappear. They sing, the pianos play an accompaniment, and the images gradually grow more abstract as each of their images merges with the other's.

Their bodies are gone. They sing and speak of the sensation of a bodiless mind in a world without time or space. Their images merge with a series of images that are receding into infinity.

The Angel reappears to signal the end as he says, "It is truly and immense journey."

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## MEET THE ARTISTS

**MORTON SUBOTNICK** is one of the United States' premiere composers of electronic music and an innovator on works involving instruments and other media, including interactive computer music systems. Most of his music calls for a computer part, or live electronic processing; his oeuvre utilizes many of the important technological breakthroughs in the history of the genre.

The work that made Subotnick a celebrity was *Silver Apples of the Moon*. Written in 1967 using Buchla modular synthesizer, this work contains synthesized tone colors striking for its day. A commission by Nonesuch Records, *Silver Apples of the Moon* was used as dance music by several companies including the Stuttgart Ballet and Ballet Rambert. Subotnick reached the apex of live electronic processing in his work *Ascent into Air* (1981). Written for the powerful 4C computer at IRCAM, this piece involved many of the techniques which Subotnick had developed in his ghost scores. The most significant aspect of this work is its use of live performers to control the computer music; the live performers, in effect, serve as "control voltages" to influence where a sound is placed, how it is modulated and by how much, etc.--the reverse situation of the ghost score composition. In addition to music in the electronic medium, Subotnick has written for symphony orchestra, chamber ensembles, theater and multimedia productions. His "staged tone poem" *The Double Life of Amphibians*, a collaboration with director Lee Breuer and visual artist Irving Petlin, utilizing live interaction between singers, instrumentalists and computer, was premiered at the 1984 Olympics Arts Festival in Los Angeles.

The concert version of *Jacob's Room*, a monodrama commissioned by Betty Freeman for the Kronos Quartet and singer Joan La Barbara, received its premiere in San Francisco in 1985. *Jacob's Room*, Subotnick's multimedia opera (directed by Herbert Blau with video imagery by Steina and Woody Vasulka, featuring Joan La Barbara), received its premiere in Philadelphia in April 1993 under the auspices of The American Music Theater Festival. *The Key to Songs*, for the chamber orchestra and computer, was premiered at the 1985 Aspen Music Festival. *Return*, commissioned to celebrate the return of Haley's Comet, premiered with an accompanying sky show in the planetarium of Griffith Observatory in Los Angeles in 1986. Subotnick's recent works--among them *Jacob's Room*, *The Key to Songs*, *Hungers*, *In Two Worlds*, *And the Butterflies Begin to Sing* and *A Desert Flowers*--utilize computerized sound generation, specially designed software Interactor and "intelligent" computer controls which allow the performers to interact with the computer technology. He has also authored a CD ROM for children, "Making Music" published by Voyager.

Currently, Subotnick co-directs both the Composition program and the Center for Experiments in Art, Information and Technology (CEAIT) at the California Institute of the Arts. He tours extensively throughout the U.S. and Europe as a lecturer and composer/performer. His music is published by European-American. [by Christian Hertzog excerpt from Contemporary Composers]

**THOMAS BUCKNER** is a baritone best known for his work with contemporary composers and improvisers in a variety of genres. He has worked with a veritable "who's who" of established and emerging composers, including Andrew Hill, Alvin Lucier, Robert Ashley, Pauline Oliveros, Annea Lockwood, David Behrman, David First, Jin Hi Kim, Daniel Rothman, Roscoe Mitchell and many others.

Some recent concerts include a series of performances for solo voice and piano with Joseph Kubera in Holland's November Music Festival as well as concerts at the Stedelijk Museum in Amsterdam and the Bochum Museum in Bochum, Germany. He has performed his own improvisational compositions at the Asian Contemporary Music Festival in South Korea, at the Other Minds Festival in California, Willow Place in Brooklyn, NY, at the Paula Cooper Gallery in New York City. His two solo CDs, *FULL SPECTRUM VOICE* and *SIGN OF THE TIMES*, both feature commissioned works by an impressive array of composers and are available on the Lovely Music label.

Buckner has lead roles in Robert Ashley operas, *Atalanta (Acts of God)* and *eL/Aficionado* and premiered the *Now Eleanor's Idea* series at the Avignon Festival and The Next Wave Festival in New York. He premiered Ashley's newest opera, *Balseros*, in Marseilles, France and Miami, Florida.

In Berkeley, California, between 1967-1983, Buckner founded 1750 Arch Concerts, which presented over 100 events a year for eight years, and 1750 Arch Records, which released over 50 record albums. Since 1989, he has curated the World Music Institute's "Interpretations" series in New York.

**CLAY CHAPLIN** is a composer of electronic and inter-active music. A graduate of Oberlin Conservatory, he is pursuing an M.A. in the New Media Composition program at Cal Arts and is studying with Morton Subotnick and Mark Traylor. His works have been performed at the Lincoln Center Out-of-Doors Festival; Fringe Festival of Independent Dance in Toronto; the International Computer Music Conference in Hong Kong; Korean Electro Acoustic Society concerts in Seoul; and the Baltimore Composers Forum. He works as an audio engineer for the Aspen Music Festival where many of his recordings of live concerts have appeared on NPR's "Performance Today".

Composer/artist **MARK CONIGLIO** focuses on the creation of works that combine live performance and technology. With choreographer Dawn Stoppiello he is the co-founder of Troika Ranch, a New York City based dance theater group committed to creating and performing works that combine music, contemporary dance, theater, and interactive media.

Using emerging technology, Coniglio invents custom instruments specifically designed to be used in the performance of his music. The first of these, created in 1989, was MidiDancer, a device that measures the angular change at several joints on the dancer's body.

Coniglio is available for workshops and lectures on interactive performance. has lectured on interactive performance at the International



Computer Music Conference, California Institute of the Arts, New York University, Brown University, the Center for Computer Research in Music and Acoustics (CCRMA) at Stanford University, and others.

**AARON DAVIDSON** studied photography, video art and electronic music at the University of New Mexico. He has exhibited his photography nationally and performed live computer-aided music to accompany his single and dual-channel videos. He is co-creator, with Greg Perry and Justine Flynn, of the intermedia installation "Oracle by Design", an interactive french horn oracle parser linked to oblique narrative video streams, set into motion by a Tesla coil. Aaron has worked on numerous video projects for Lars von Trier, PBS, Discovery Channel and the Arts & Entertainment Channel as an on-line editor, and sound designer, recordist and mixer.

**JOAN LA BARBARA** is a composer/performer/sound artist. She explores the human voice as a multi-faceted instrument expanding traditional boundaries, creating works for multiple voices, chamber ensembles, music theater, orchestra and interactive technology. She has developed a unique vocabulary of experimental and extended vocal techniques: multiphonics, circular singing, ululation and glottal clicks that have become her "signature sounds", garnering awards in the U.S. and Europe including the prestigious DAAD Artist-in-Residency in Berlin and 6 NEA grants. Recent commissions include "in the dreamtime" and "Klangbild Köln" for WestDeutscher Rundfunk; "Calligraphy II/Shadows" for Nai-Ni Chen Dance Company; "to hear the wind roar" for Gregg Smith Singers, I Cantori and the Center for Contemporary Arts in Santa Fe and "Events in the Elsewhere" from "The Misfortune of the Immortals", the latter two with funding from Meet the Composer/Lila Wallace.

She has produced 10 recordings of her works, including "Sound Paintings" and "73 Poems", has served as singer and producer on internationally-acclaimed recordings of music by John Cage and Morton Feldman and has premiered landmark compositions written for her by noted American composers, including Morton Feldman's "Three Voices"; Morton Subotnick's chamber opera "Jacob's Room" for American Music Theater Festival in Philadelphia and MANCA Festival in Nice; the title role in Robert Ashley's opera "Now Eleanor's Idea" at the Festival d'Avignon and BAM's Next Wave Festival and "Balseros" for the Miami Grand Opera; Philip Glass and Robert Wilson's "Einstein on the Beach" at Festival d'Avignon and John Cage's "Solo for Voice 45 with Atlas Eclipticalis and Winter Music" at La Rochelle, France.

In addition to concertizing and recording worldwide, La Barbara currently teaches contemporary vocal and composition technique at The College of Santa Fe, produces a weekly radio program and is Contributing Editor for Schwann/Opus magazine.

**KYLE LEMOI's** most recent design credits include: *The Hour We Knew Nothing of Each Other*, directed by Steve Pearson; *Moon of My Delight*, directed by Brian Faker; and *Tartuffe* directed by Chuck Harper presented in theaters throughout Seattle, WA. Other designs include: *Trojan Women/A Love Story* directed by Tina Landau (WA); *Chaing Kai Shek* directed by Bill Akins (AZ); *Jacob's Room* by Morton Subotnick (PA /ME); and *Composition 174* by Anthony Braxton (AZ).

Last summer, he assisted Mary Louise Geiger and Neil Peter Jampolis on the Off Broadway musical revue *I Love You, You're Perfect, Now Change*.

Kyle has a B. F. A. in Theater Design/Production from Arizona State University (1989), and a M.F.A. in Lighting/Scene Design from the University of Washington (1997). Originally from Rhode Island, Kyle lives in New York.

**JOHN POTTER** is a New York based engineer for the Cleanroom industry. He is also a technical consultant to the Television and Motion Picture industry. Technical credits include "MacGyver" and "Robocop". John has been a fan of Mort's work for many years. His wife, Jane Wheeler, produces Mort's works on CD ROM.

**STEINA VASULKA**, born Steinunn Briem Bjarnadottir in Reykjavik, Iceland, in 1940. She studied violin and music theory, and in 1959 she received a scholarship from the Czechoslovak Ministry of Culture to attend the music conservatory in Prague. In 1964 she joined the Icelandic Symphony Orchestra.

Steina recieved the American Film Institute Maya Deren Award in 1992 and the Siemens Media Art Prize in 1995. In 1988, she was an artist in residence in Tokyo in a US/Japan Friendship Commission grant.

Steina lives and works in Santa Fe, New Mexico, where she has continued her work in video, media performance, and video installation. She has taught at the Academy for Applied Arts, Vienna, Austria, the Institute for New Media at the Staedelschule, Frankfurt, Germany, and the College of Arts and Crafts.

**WOODY VASULKA** was born in Brno, Czechoslovakia where he studied metal technologies and hydraulic mechanics at the School of Industrial Engineering. Later, at the Academy of Performing Arts in Prague, he began to direct and produce short films. He emigrated to the United States in 1965, living in New York City, where he worked as a freelance film editor and experimented with electronic sounds and stroboscopic lights. In 1974, he became a faculty member of the Center for Media Studies at State University of New York, Buffalo, and began investigations into computer, constructing "The Image Articulator," a real-time digital video tool.

With his wife Steina, he founded The Kitchen, a New York City Media Theater. Woody has participated in major video shows worldwide, given lectures, published articles, composed music and made numerous video

tapes. He is a Guggenheim Fellow, and the recipient of other grants and awards including the American Film Institute's Maya Deren Award in 1992.

Since his move to Santa Fe, New Mexico in 1980, he has produced three video tapes: *Artifacts*; *The Commission* (an operatic work based on the legend of Paganini and Hector Berlioz); and *Art of Memory* (a series of "songs" thematically related to early 20th century political events). He is now working on a new, largely computer-assisted work, entitled *Brotherhood*, and continuing his investigations into "digital space" through *The Theater of Hybrid Automata*.

**NANIK WENTEN**, born in Yogyakarta, Indonesia on the island of Java, began her training in Javanese dance as a young girl. As a student at Gajah Mada University, she became more involved in the art of her native dance. She then enrolled at the Dance Academy in Yogyakarta, where she became proficient in the native dance in addition to learning the dance of the neighboring island of Bali. Since coming to the United States in 1973, she has toured the country with her partner and husband I Nyoman Wenten. The two, accompanied by K.R.T. Wasitodiningrat, Nanik's father and leading composer of Javanese music, have worked as a team bringing Balinese and Javanese dance and music to every major city in the United States. Nanik received an MFA degree in dance from California Institute of the Arts, where she currently is on faculty.

**I NYOMAN WENTEN** is one of Bali's most versatile dancers and musicians. He is well known for his abilities in Javanese as well as Balinese dance and music. Wenten studied gamelan music and dance at an early age with his grandfather-- a master puppeteer, dancer and musician of Bali. He has an advanced degree from the Indonesia Arts Institute in Yogyakarta, Java; is a graduate of the Conservatory of Music and Dance in Denpasar, Bali; has an MFA degree from California Institute of the Arts in Valencia, CA; and a Ph.D. in ethnomusicology from UCLA. He is currently on the faculty of the Music Department at California Institute of the Arts and is working on a CD recording of gamelan music for the CMP record label in Germany.

## CREDITS:

### YAMAHA

Special thanks to Yamaha Corporation of America for providing two Disklavier pianos, a Miburi Electronic MIDI music controller, and technical consultation for this production.

### ITEM

ITEM Products, Inc. is proud to have helped provide materials for the set.

### WIZARD MUSIC

*Intimate Immensity* was produced by Wizard Music, Inc.

### INTERACTOR®

Interactor® was conceived by Morton Subotnick and Mark Coniglio. It was developed and programmed by Mark Coniglio.

Special thanks to Herbert Blau and Kathy Woodward for their thoughtful help as I began development of *Intimate Immensity*.

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(NOTE)

- DUE TO SPACE CONSTRAINTS,  
SOME ELEMENTS OF THE  
LIGHTING AND SET HAVE BEEN  
MODIFIED.

**PLANB**  
EVOLVING ARTS

JULY 97

THE CENTER FOR CONTEMPORARY ARTS