Software for People:
Collected Writings 1963-1980

Pauline Oliveros

Contents

1963 Karl Kohn: Concerto Mutabile, (Tech) ~~Perspectives of New Music~~ ~~Spring - Summer 1963, Vol. II, No. II~~

1968 Some Sound Observations, ~~Source III 1968 pp 77-79~~

1968 The Poetics of Environmental Sound, ~~Bell Educational~~

1969 Tape Delay Techniques for Electronic Music Composers (Tech)

1970 Don't Call Them Lady Composers (newspaper?)

1972 Dialogue with Basho (Different Type faces)

1972 To NMCE (Poetic - Journalistic)

1972 Three Themes Correllated Similar styles

1972 Five Scenes

1973 Many Strands

1973 Divisions Underground

1974 Rags and Patches

1973 The Poetics of Music (Essay)

1973 The Contribution of Women Composers (~~Possible~~) Essay

1973 On Sonic Meditation Essay

1973 Meditation Project: A Report Report

1975 Modes of Attention and Awareness in the Teaching of Basic Musicianship. Essay

(over)

1978 Soft Ware for People (Speech)

1979 Alvin Lucier Essay

1979 On the need for Research facilities for new music and the Related Arts (Essay)

1980 A Tarot Reading On The Life/work of Xenakis

1980 MMM : Meditation/Mandala/Music Speech

many added 1) Computer music address 1977 (Speech)
2) article on CME 1976
3) Radical Music 1980 Essay
4) Sonic Images 1974 Series of questions

2

21 Articles

give writing date then pub date

Soft Ware for People: Collected writings 1963-1980

Total 29 - 11 Articles to PO = 18 Articles

Pauline Oliveros

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1970 5) Don't Call Them Lady Composers at home

1972 6) Three Themes (here)

1972 7) Five Scenes

8) Divisions Under Ground

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1973 10) Single Stroke Roll Meditation (consider for P.O.)

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1976 12) Rose Mountain Slow Runner (consider for PO) (here)

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1978 14) To Make A Universe of Sound: Four Visions (for PO) here

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Software for People

unpublished Articles

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1974 2) Rags and Patches (here)

Put in PO 1970 3) Program Notes (Bye Bye Butterfly, the Wheel of Fortune, Event Theater Piece for Trombone Player) (here)

1974 4) the Contribution of Women as Composers (Ford Proposal) (here)

1973 5) The Poetics of Music (here)

aug. 1979 6) Alvin Lucier ? ✓

PO P 7) Crow Two: A Ceremonial Opera (here) (Alchemiga is different?)

Put this in Pauline D. 8) To Valerie Solanas and Marilyn Monroe In Recognition of their Desperation Program Note Correspondence etc. in young

1973 PO 9) Theater Piece or My Work from 1957 (here)

1972-1973 PO 10) Career Narrative 1 and 2 Include this in P.O. (Part 1 here)

1975 11) Modes of Attention and Awareness in the Teaching of Basic Musician ship. (here)

1973 12) Meditation Project: A Report (here)

1972 13) Dialogue With Basho (here)

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could be considered PO 15) Sonic Images (should be a pamphlet with exercises —) (here)

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16) Address to Computer Music Convention 1977

17) CME research Article

18) CME reports 1977 1978 1979

How Dick Higgins Cured A Flaw In My Character
By Paying Attention

Tape Delay Techniques for Electronic Music Composition

The following technical article on Tape Delay Techniques ~~completed in 1968~~ was requested by Composer David Cope for the Composer, a magazine which he initiated and edited. The article was included in Volume 1, No. 3, December 1969.

17

Some Sound Observations

As I sit here trying to compose an article for *Source*, my mind adheres to the sounds of myself and my environment. In the distance a bulldozer is eating away a hillside while its motor is a cascade of harmonics defining the space between it and the Rock and Roll radio playing in the next room. Sounds of birds, insects, children's voices and the rustling of trees fleck this space.

As I penetrate the deep drone of the bulldozer with my ear, the mind opens and reveals the high pitched whine of my nervous system. It reaches out and joins the flight of an airplane drone, floats down the curve of Doppler effect.

Now, fifteen minutes since the beginning of this writing, the bulldozer has stopped for a while. The freeway one-half mile away, unmasked, sends its ever-shifting drone to join with the train whistle from Encinitas.

The bulldozer starts again moving the air like an audible crooked staircase before reaching its full power. As I lean on my wooden table, my arm receives sympathetic vibrations from the low frequencies of the bulldozer, but hearing seems to take place in my stomach. A jet passes over. Some of its sound moves through my jawbone and out the back of my neck. It is dragging the earth with it.

I would like to amplify my bowl of crackling, shaking jello. (Once in 1959 a bulldozer came through the side of my house while I was eating lunch. The driver looked at me, backed out, and continued to operate the bulldozer.)

I would like to amplify the sound of a bull dozing.

The bulldozer has stopped again. On the other side of the freeway, a dog repeats a high bark which curves downward. My dog has a tinkling collar. I would like to find a free way.

Three days ago at UCD, I experienced a magnificent performance of Bob Ashley's *Wolfman*. My ears changed and adapted themselves to the sound pressure level. All the wax in my ears melted. After the performance, ordinary conversation at two feet away sounded very distant. Later, all ordinary sounds seemed heightened, much louder than usual. Today I can still feel *Wolfman* in my ears. MY EARS FEEL LIKE CAVES. Monday I am going to hear *Wolfman* again. It will be the fourth time I've heard *Wolfman*, and I can't wait to hear the feedback dripping from his jaws again.

My present bulldozer has started and stopped again. A faraway jet simulates a fifty foot tabla, accompanied by an infinite freeway tamboura.

I am tired of writing this article, but not of the opportunity it is giving me to listen and remember. My chair is creaking as restlessness grows. I wonder what God's chair sounds like? I would like to amplify it. I would like to amplify a spider spinning its web.

Loren Rush calls his new work "Theater of the Mind." Since last night, he is still playing and singing in the theater of my mind.

The bulldozer remains silent. A very low frequency is shaking my belly. (7 Hz at high intensity can make you sick or kill you.) It is an automobile becoming more apparent as it passes, now accented by a motorbike.

(Once in a half-waking state, my head was held hard against a wall by the sound of a model airplane motor. I thought some cosmic dentist was drilling for my mind's tooth.)

The breeze is rising and blowing my papers about the table. The rustling in the trees sounds like tape hiss until it mixes with the next plane overhead.

Recently, a young man described his experience working in proximity to jet engines. After overcoming fear of the sound, he began to find sounds to listen to, such as small tinklings within the engine.

Why can't sounds be visible? Would the feedback from ear to eye cause fatal oscillation? Can you remember the first sound you ever heard? What is the first sound you remember hearing?

Why shouldn't a music department in a university devote itself entirely to music since 1950? Without a substantial body of new literature and instrumentation, the symphony and opera will become defunct—dead horses in the 21st Century. Who cares.

I often think of the title of one of La Monte Young's pieces which I have not yet had the pleasure of hearing: *The Second Dream of the High Tension Wire*.

In the Schwann long-playing record catalog there are special sections for railroads, sound effects, sports cars, test records, and honky-tonk piano, but none for electronic music.

When a concert pianist is on tour, he usually finds a tuned Steinway grand piano to play. What kind of sound system does the electronic musician find?

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When I stopped writing yesterday, I went on listening. I attended dinner in a Syrian restaurant and ate a concert with my *Wolfman* ears. The house lights dimmed to a singing SCR. Spots came up and the bassoon soloist walked on the stage, bowed to the applause, walked off again and told someone to turn off the heating fan which was playing a duet with the SCR. He returned, bowed again to the new round of applause. His taped accompaniment began. I heard trees rustling in the speakers.

Loren Rush has synthesized a bassoon sound at the artificial intelligence center at Stanford. With John Chowning's programming, he can make it move in circles, ellipses, or figure-eights around two speakers. He can make the synthesized bassoon do a *glissando*. Loren has a lecture entitled "A Day in the Life of a Plastic Bassoon."

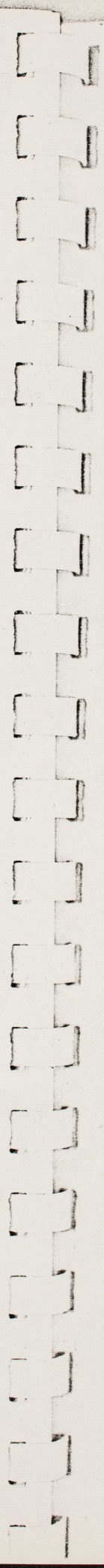
Next, a quiet trio played in the manner of Feldman, accepted, perfectly-cued car drones.

I listened to a Schubert Octet in the recording engineer's sound booth. The speakers added their characteristics to the orchestration. As we watched the audience, the engineer said, "Those people are not listening to the music as it was intended. They should be having dinner."

I am inside my house now. Outside, sounds are attenuated by the insulation. I hear a dripping faucet and the ticking of my cuckoo clock. They combine and are joined by the refrigerator. The planes from Palomar Airport dwindle in through the furnace openings.

I have listened to many refrigerators. There is often a flickering between the sixth and seventh harmonic. Once, while in the process of drinking *Ouzo* with David, Bob, and Orville, a refrigerator sent its harmonics out to surround my head with circles, ellipses, and figure-eights.

In 1963 I made a tape piece for dancer Elizabeth Harris. It was made from piano sounds. On the night of the first performance, I stood in the wings prepared to start the tape recorder. Suddenly, I heard the opening sounds of my piece, but the tape transport was not moving. The dance involved a mobile that was suspended from a strand of piano wire. When the mobile was lowered, it moved like a pendulum, causing the piano wire to vibrate.



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In New York, Terry Riley led me fifteen blocks out of our way to hear a building ventilator. I wonder what microbes hear?

Sitting in a parking lot on my third day of article writing. I could listen to the stereophony of cars, starter gaggling, motor wigglings, door squeals, and "bllaps" forever. It's almost like Debussy, compared to Saturday's Wagnerian bulldozer.

The best part of Lincoln Center is the tunnel from the IRT to the Beaumont Theater. Walking toward the theater, my footsteps greeted me from the approaching wall; midway, they followed me from the opposite wall. I listened to this more than one hundred and fifty times—an Alice in Tunnelland—while moving from the saga of subway sound to Brechtian music drama.

"If the moon is ever visited, one feature of its environment will be known beforehand with certainty; the wastes will be noiseless except for vibration transmitted through the solid surface. Since there is no gaseous atmosphere, there can be no tread of footsteps heard, no rustle of clothing, and if an obstruction is dynamited, the debris will fly apart silently as in a dream."*

During the quiet evening of a summer vacation near the Feather River Canyon, Lynn, Bob, and I wanted to play music. We decided to read John Cage's *Atlas Eclipticalis* from the original score, which was shining brightly above. The canyon creatures joined us as we played, and we played until our awareness became imbedded in the canyon and summoned a ghostly, floating train, an apparition of metal meeting metal, reflected doubly, triply, endlessly from the canyon, from the mind, from the flickering passenger windows, the rumbling ties. OUR EARS FELT LIKE CANYONS. We didn't speak until morning.

One's ideas about music can change radically after listening to recorded works at fast forward or rewind on a tape recorder. Ramon Sender arranged Wagner's *Ring Cycle* by a series of re-recordings at fast forward to four successive clicks. "The auditory basis of obstacle detection by bats was independently recognized in 1932 by a Dutch zoologist, Sven Dijkgraaf, who made a careful study of these faint, audible clicks and noted how closely they were correlated with the echo-location of obstacles. This is an example of the need for care, patience, and appropriate conditions if one is to notice and enjoy some of the more fascinating facets of the natural world."**

According to Loren Rush, the reason for studying counterpoint is that you may have to teach it some day.

"Airborne sound waves are reflected back almost totally from the water, and underwater sound is equally well reflected back downward from the surface . . . . Once proper equipment was available for converting underwater sound to audible, airborn sound . . . underwater listening became refined enough and common enough to reveal the immense variety of sounds used by marine animals."†

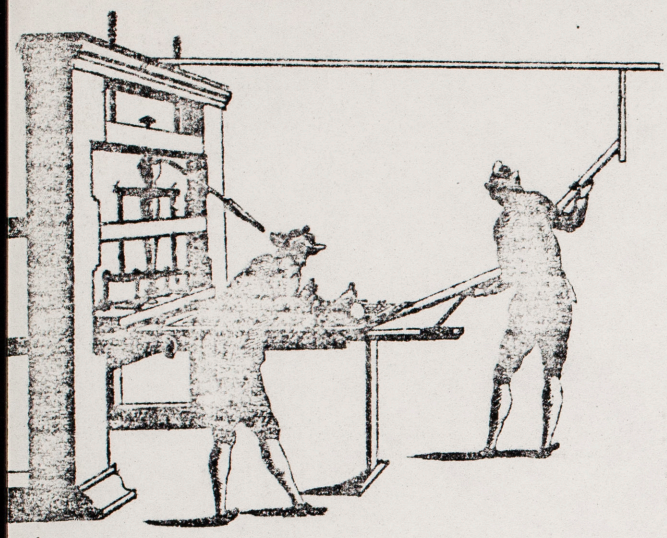
In most schools and universities the language laboratories are better equipped for sound processing and modifications than the music departments.

Human hearing is non-linear. Our ears are less sensitive to low and high frequencies approaching the limits of audibility. Our ears are most sensitive at about 3000 Hz where some people can hear collisions of air molecules.

A fast sweep of the audio range by a tone generator can produce a click.

"Some animals, notably insects, do not have ears in their heads but in such unlikely places as legs (some crickets) or the thorax, the 'middle' portions of the insect body to which the legs attach (some grasshoppers)."††

I stopped writing yesterday in order to go on listening. Monday's performance of *Wolfman* was somewhat marred because the sponsors failed to provide proper speakers and amplifiers. I heard Wolfman's ghost drooling feedback.



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SLIDE CUES

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4	FOUR HOUSES OF THE SUN 8)	7) 4	MANDALA OF LATER HEAVEN
		9) 5	THE WHEEL OF LIFE

TURN OFF PROJECTOR A "LET'S TRY A SIMPLE MANDALA MEDITATION"
TURN OFF PROJECTOR B "CAN YOU IMAGINE THE SPACE FROM BEHIND THE EYES TO THE BACK OF THE HEAD"

DIM UP PROJECTOR A SLIDE AS "IN A FEW MOMENTS, WHILE YOUR EYES ARE STILL CLOSED, I AM GOING TO CUE YOU ...."

A		B	
5	FOUR POINTED STAR 10)	11) 6	GEOMETRIC SHAPES
6	CHICKEN 12)	13) 7	POSITIVE NEGATIVE SHAPES
7	MANDALA SKETCH 14)	15) 8	TRIO FOR FLUTE, PIANO & PAGE TURNER
8	SOUND PATTERNS 16)	17) 9	OUT LINE FOR FLUTE, PERCUSSION & BASS
9	PIECES OF EIGHT SKETCH 18)	19) 10	PIECES OF EIGHT SKETCH
10	PIECES OF EIGHT SCORE pg. 20)	21) 11	DRAWING 1
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12	DRAWING 4 24)	25) 13	DRAWING 5
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23	ROSE MOON PHOTO -2- 46)	47) 24	YELLOW RIVER MAP
24	YELLOW RIVER PHOTO -1- 48)	49) 25	Y.R.M PHOTO -23-

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SLIDE CUES

25 YELLOW R.M. PHOTO -28- 50)
26 " " " -51- 52)
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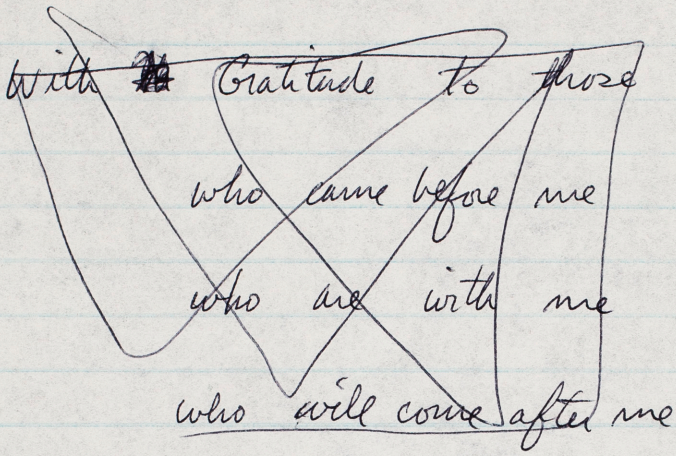


With Gratitude

To those who came before me
To those who are with me
To those who come after me

Don't Call Them Lady Composers 1970

the following article was ~~wrotted~~ written at the invitation of music Critic Theodore Strongen of the New York Times. It was included in the Arts and Leisure section on September 13, 1970.

A Tarot Reading On the Life/Work of Xenakis

The following article was requested by editor _____
of (Name of publication)
to be included in an International Portrait of composer Iannis Xenakis.

Xenakis and Oliveros were participants at an International Seminar on Musical Creation and the Future at the Universidad Autónoma de Mexico in December 1978.

During an informal social gathering at the home of Susanna Dultzin in Mexico City, Xenakis requested a reading. The reading was noted in a diary. When _____ requested the article for the Xenakis Portrait, it seemed that the major issues had been answered by the reading.

Dialogue With Basho

the meditation 'Dialogue with Basho' was ~~presented at the conferen architectural and design conference Shelter for Mankind at Los Angeles Community College (check name) (and date)~~ as a performance ~~It was subsequently~~ presented at Douglas College Rutgers in Brunswick, New Jersey in 1973. It is (here published) for the first time.

Alvin Lucier Aug 1979

The following essay was written in response to ~~the editors~~ Alvin Lucier's request for ~~that I write~~ an introduction to his book Chambers, Wesleyan University Press 1980. The manuscript arrived too late for the press so it is published here for the first time.

Karl Kohn: Concerto Mutabile 1963

This analysis was written in 1963 at the invitation of Composer Benjamin Boretz, Editor of *Perspectives of New Music*. The analysis appeared in Volume II, Number 2, Spring/Summer 1963 of *Perspectives* as part of a series involving 20 young composers, each examining the music of one of the other composers in the group. This was Oliveros' first published writing.

On the need for Research facilities for new music and the Related Arts

1979

The following essay was presented at the first conference of the New Music Alliance sponsored by the Kitchen, Mary MacArthur, Director, in June 14, 1979, New York City. Center for Video, Dance and Music; Subsequently it was ~~accep~~ published in the Performing Arts Review, Vol. 9 No. 4, 1979.

A Tarot Reading On the Life/Work of Xenakis 1980

~~The following account of~~

"During an informal social gathering at the home of Susanna Dultzin in Mexico City I read Tarot cards for the composer Iannis Xenakis. We were in Mexico City as participants in a Conference on Creation and the Future of Music, December 1978, (Universidad Nacional Autónoma de Mexico) at the invitation of composer Julio Estrada. I was invited to contribute an article to be included in A Portrait of Iannis Xenakis by Editor _____ (check name) of _____ (name of publisher) I had noted the cards which were turned up during my reading for Xenakis in my diary, so I decided that the major issues which the editor wished me to address had been covered in the reading. So, I wrote it up and sent it."

~~Modes of Attention and Awareness in the~~

~~Teaching of Basic~~ Musicianship

Things to think about -

Are the headings the same or different
" " Text " " " "
Figures
~~Identification~~ of figures
Footnotes
Extracts (anything to be set off differently)

Are there corollations between chapters.
What has been left out on first proof?

(Network diagrams etc.)

Type Style
Width of line
Size of type
Spacing between lines of type (leading)
Bold face Italics.
Indentations
Separations of paragraphs
Justified or not

All ~~headings~~ Introductions to articles set the same

Soft Ware for People
Collected Writings 1963-1980

1) Write commentary on each article

2) Edit for errors - changes - Consistency in detail
Footnotes at end of book? or end of chapter?

3) Include date written, date published, where published

4) Write Introduction (who is addressed?)

5) Have some one else write introduction (who?)
   a) Ramon Sender
   * b) Gordon Kumma
   c) Phil Corner
   * d) Anna Lockwood
   e) Edith Gutierrez
   f) Tom Johnson

choose one have the rest write jacket blurbs - Solicit by Printed Editions sec.

6) Get art work together.

7) Permissions where necessary

8) Acknowledgements

ON SONIC MEDITATION

Pauline Oliveros

The meaning of meditation is problematical in that it has accumulated many different associations and generally a very broad range of diverse practices and techniques. It appears often in a religious context such as Buddhism, Christianity, Sufism and others. It's secular counterpart is usually called concentration. Although all meditation , both secular and religious, is similar in that it employs attention, awareness, concentration, openess and repetition, some define meditation as exclusively a specific type of practice or technique. Many contrasts among different systems arise: Christian meditation, or contemplation, is usually a dwelling upon specific ideas, such as one's relationship to God, or the pursuit of an activity which is decided upon and directed intellectually. Certain Eastern practices will be opposite, advocating dwellingon emptiness of mind. (Nirodha in the Yoga Sutras of Patanjali, 'No Mind' in Zen Buddhism.) Some methods of meditation encourage mental imagery, others discourage all imagery, some promote the involvement of sense organs using visual, auditory and somatic forms, others promote the abandonment of sensory modes. Further, there is action

versus inaction, feeling versus indifference and more. In Taoism when action arises, it is spontaneous and natural, while in Confucianism, action is the result of ethics or intellect. I use the word meditation, rather than concentration, in a secular sense to mean steady attention and steady awareness, for continuous or cyclic periods of time. Any of the above practices or techniques might be employed when appropriate.

While one's attention is focused to a point on something specific, it is possible to remain aware of one's surroundings, one's body, movement of all kinds and one's mental activity, or in other words remain aware of inner and outer reality simultaneously. Attention is narrow, pointed and selective. Awareness is broad, diffuse and inclusive. Both have a tunable range: attention can be honed to a finer and finer point. Awareness can be expanded until it seems all inclusive. Attention can intensify awareness. Awareness can support attention. There is attention to awareness; there is awareness of attention.

Attention seems to equate with mental activity and to be aroused by interest or desire. Awareness seems to equate with the body's sensory receptivity. It is activated, or present, during pleasure and pain. Either attention or awareness can interfere with the other de-

pending on the intensity of interest or the intensity of stimulation. When either attention or awareness predominates or becomes out of balance, the other tends to drift or become unconscious: For example, after practicing a difficult passage (or even an easy one) over and over again, with or without success in execution, the musician discovers a cramp in some part of the body which has developed from a faulty playing position. Awareness has been sacrificed for attention and becomes unconscious, or very low level. Awareness only returns with the urgency of the cramping pain. With conscious awareness, the cramp might have been avoided by adjusting the relationship to his or her instrument without sacrificing attention, before a cramp could develop. In this case awareness would be supporting attention rather than producing a delayed interference reaction. If the passage was executed successfully, one might consider the cramp a small price to pay or it might not be associated with the activity. It is also possible to sustain an inner muscular or visceral tension which is not noticeable or visible on the outside, so that the body appears to be in the correct relationship to the instrument. If the passage was executed unsuccessfully, the faulty position disclosed by the cramp might

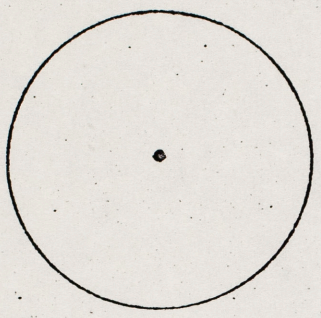
be blamed and subsequently corrected. In the former, some musicians who remain unaware for a long time, even years, often end by paying a very high price for success. Indeed, when such things as severe chronic pains in the back or other

parts of the body appear without apparent reason, they may be results of some small but constantly repeated strain. The symptoms often do not respond to medical treatment, probably because the source of the now chronic ailment is continually repeated as an unconscious habit in association with "correct" habits of playing music. It is therefore most difficult to correct in anyway whatever. Besides the misery of such a situation some musicians are forced to give up playing or singing because of such ailments, but even worse, some never realize the relationship of such illness to inner tension, because the appearance of the playing position seems to be correct and the music may sound right.

The opposite can be true: while awareness of body sensations remain present, attention can lapse or drift attracted by the larger phenomenon of a painful awareness. The musical passage might become automated and sound mechanical, or, parts or all of it are interrupted or forgotten as attention is divided or diverted by awareness of the cramp or some other strong sensation. Attention then refocuses and intensifies awareness.

The proper relationship of attention and awareness can be symbolized by a circle with a dot in the center. (Fig.1)

Figure 1.



The dot represents attention and the circle awareness. In these respective positions both are centered in relation to each other. Awareness can expand without losing center or its balanced relationship with attention

and become more inclusive simultaneously. Attention can be focused, as fine as possible, in any direction and can probe all aspects of awareness without losing its balanced relationship to awareness.

My Sonic Meditations (see Source #10 Music of the Avant Gard for Sonic Meditations I-XI) are "sonic" in that sound and hearing, both active and receptive, are the foci of attention and stimuli of awareness. The enhancement and development of aural sensation is one of the goals. The synchronization of attention and awareness, that is, keeping them balanced and conscious, is necessary. Also, the synchronization of voluntary and involuntary mental or physical activity is explored. The ear is the primary receptor or instrument, sound, both inner and outer, real and imaginary, is the stimulus of Sonic Meditations.

How and what does one hear? In order to answer this question, the mind must relax, as a muscle must relax, or the appropriate state of expectation must be present in body and mind in order to become receptive to both internal and external stimuli.

A CUP OF TEA

"Nan-In, a Japanese master during the Meiji era (1868-1912) received a university professor who came to inquire about Zen.

Nan-In served tea. He poured his visitors cup

full, and then kept on pouring.

The professor watched the overflow until he could no longer restrain himself. "It is overfull. No more will go in!"

"Like this cup," Nan-In said, "you are full of your own opinions and speculations. How can I show you Zen unless you first empty your cup?" (Zen Flesh-Zen Bones, Paul Reps, Tuttle)

As a composer I had to empty my cup: I became interested in dwelling on single pitches in my music at the end of the 1950's. There is a very long held note in the cello part of my Variations for Sextet (1959-60) (Fig. 2). The note lasts approximately half a minute and it is solo. It emerges from a hard attack, together with trumpet, horn and clarinet, with a few low level, evanescent piano harmonics. It is very long in the context of the Variations and other music of its style, which deal with radical shifts in rhythm and timbre. The long cello tone is a very brief meditation, although I was not thinking of it that way at the time. It had at least two functions: 1) It represented a very slow contrasting tempo, within a multiplicity of changing tempi. 2) Its harmonic ambiguity increased as it stretched out in time, although the tone itself became an object of interest rather than where it was leading. It signaled my growing interest in timbral shapes and changes, the complementary opposite of chordal or harmonic changes.

Other composers were becoming involved in this fascination with long tones also. See Terry Riley's String ~~Trio~~ QUARTET (Fig. 3) and La Mont Young's ~~To Be Held For A Long Time~~ COMPOSITION #7, 1960. (Fig. 4)

Drones of all kinds, such as motors, flourescent lighting, freeway noise are ever present. The mantra of the electronic age is hum rather than Om. These constant soundings influence everyone, whether consciously or unconsciously. Some adverse effects can occur when the influence is unconsciously received: For example, a musician who plays in tune unknowingly with 60 hz. hum rather than B♭ 61.735 in an ensemble. Or an ensemble which does not realize the out-of tuneness caused by the discrepancy between standard musical tuning in reference to A440 and 60 hz. hum.

I began to seek out drones of all kinds and to listen to them consciously, allowing myself to hear the myriad shifting, changing partials of a constant tone, broad and narrow band noise. My subsequent music, both electronic and instrumental reflected this interest. Whole pieces became single tonal centers or noise bands with characteristic timbral shaping. I was quite satisfied with this work, emotionally and intellectually, although I had apparently abandoned Western harmonic practice.

> "--the knowledge of sound can give a person a magical instrument by which to wind and tune and control and help the life of another person to the best advantage. The ancient singers used to experience the effect of their spiritual practices upon themselves first. They used to sing one note for about half an hour and study the effect of that same note upon all the different centers of their body: what life current it produced, how it opened the intuitive faculties, how it created enthusiasm, how it gave added energy, how it soothed and how it healed. For them it was not a theory but an experience." (Sufi Inayat Khan ~~Op. Cit.~~ ,) Music, Ashraf Press, Pakistan.)

I continued to empty my cup and follow my secular way: My interest and fascination with long tones was centered in attention to the beauty of the subtle shifts in timbre and the ambiguity of an apparently static phenomena. Why was a tone which went nowhere so seductive? My awareness was adrift.

In 1969 I began to work with dancer, Al Chung Liang Huang, and with him I began the study of T'ai Chi Chuan. The work with Huang in this Chinese form of meditation movement, involved breath rhythm, synchronized with slow, circular motions of torso, arms and legs. I had been playing and singing with my accordion, slow lingering improvisations on a tonal center. I began to translate the breath rhythms and the slow natural motions of T'ai Chi to my solo improvisations. I noticed that I began to feel better physically and mentally, I began to crave more retreat to the calming influence of these

drone-like improvisations, from what seemed to be a nervous, frantic music world, full of hasty rehearsals, and constantly noodling performers with up-tight vibrations.

By 1970, some other women had joined me to form The ♀ Ensemble, an improvisation group, both vocal and instrumental, devoted to unchanging tonal centers with emphasis on changing partials. After a long period of working together a profound change occurred: rather than manipulating one's voice or instrument in a goal oriented way in order to produce certain effects, we began to allow changes to occur involuntarily, or without conscious effort, while sustaining a sound voluntarily. It is an entirely different mode; and like the professor for whom Nan-In poured continuous tea, opinions and speculations have no place in this activity.

My first conscious recognition of this change resulted in the articulation of "Teach Yourself to Fly," Sonic Meditation I. (op.cit.) I say articulated rather than composed because the instructions were transmitted orally many times before being committed to paper.

We could no longer call our activity improvisation.

'Illuminate the area with dim blue light.'

Low illumination is less stimulating to the visual sense and helps to center one's awareness in the body, awakening the sense of hearing and the somatic sense which has an intimate relationship to the ear.

'Begin by simply observing your own breathing.'

The key principle in this meditation is observation of the breathing cycle. Observation meaning to remain attentive and aware without consciously manipulating or interfering with the observed. Observation requires a receptive mode of consciousness; an empty cup. The breath cycle is a bridge between voluntary and involuntary activity. It can and does continue all the time without one's conscious attention or awareness. Sometimes it is only noticed when one is struggling to gain voluntary control over it. By trying to observe the breath cycle without disturbing it, one begins to tune an activity which is both conscious and unconscious. In short, breath is the door to the unconscious where a great store of energy lies ready to support or obliterate conscious efforts. Energy is neither positive nor negative, but it can become either.

Is it possible to observe the breath cycle without disturbing it? Heisenberg's principle of uncertainty as applied to quantum theory, teaches that

> "there is no such thing as mere observing, in the sense that the only action is a one-way action of the object on the observer; every observation we make is bound to act on the object we observe, even if only by the impact of a single quantum of light. In other words, there is always a mutual inter-action between the observer and the object." (Atomic Physics Today, Otto R. Frisch, Fawcett.)

Perhaps participation in Teach Yourself To Fly is to experience Heisenberg's principle of uncertainty.

Although my instructions ask for observation in its receptive sense, somewhere complementary action is occurring. The breath does change, if the attention remains focused on the cycle. What the quality of these changes are is personal and varies with each participating individual. In my own experience with this Sonic Meditation my breaths become very prolonged. The rate reduces to 2 or 3 per minute or less. The effect is very calming to the nervous system and the whole body. I always feel refreshed and very relaxed afterward.

> "There are three degrees of breath current. One degree is the simple breath which is inhaled and exhaled by the nostrils. This current reaches outside and has a certain effect. A greater degree of breath current is blowing. When a person blows from his lips, that breath current is directed more intensely; therefore healers who have understood this principle make use of it. And the third degree, in which breath is

> most intense, is sound: Because in that degree the breath, coming in the form of sound, is vitalized." (Inayat Khan, op. cit.)

'Always be an observer.' Restrain any desire to manipulate, although a voluntary action is introduced: 'Gradually allow your breathing to become audible.' Here, while attention remains focused on the breath cycle and its involuntary changes, one must synchronize the voluntary increase in air pressure without consciously manipulating the cycle. Thus, the choice of the word 'allow' for transmitting this instruction. This linkage is not necessarily easy:

> "What the meditator realizes in her practice is to a large extent how she is failing to meditate properly, and by becoming aware of her failing she gains understanding and the ability to let go of her wrong way. The right way, the desired attitude, is what remains when we have, so to say, stepped out of the way." (On the Psychology of Meditation, Claudio Naranjo, Esalen Books.

If I am successful as an observer, while my attention remains fixed on the breath cycle, another phenomenon may appear; that is: While attention remains steady, keeping the details* of breathing clearly in focus, awareness is present and may be expanding. During this process it is also possible to observe myself attending and being aware. For me this is a highly desirable mode of consciousness. It seems that this aspect of observation

Each phenomenon seems to have the power to support or distract, depending on balance or centeredness of the relationships.

When observation remains unconscious, one is often obliged to seek an outside, objective observer such as a teacher, doctor or adviser for the necessary feedback or reflection on one's condition, which may help to make one's own observation conscious. Progress to new levels of finer, more sustained attention and larger, more inclusive awareness is arrested without accurate, objective feedback from the observation mode, either from an outsider or the insider: one's self.

'Then gradually introduce your voice.' What is the sound of my own voice? What would it sound like if I had not adopted the way it sounds now? What models am I using? What is the sound of my original voice? 'Allow your vocal cords to vibrate in any mode that occurs naturally.' Again, the word 'allow' meaning no conscious manipulation of the vocal cords in order to produce a particular sound. No sound is more desirable than another, all are accepted. Simply be aware of the sounds that emerge, while the attention remains focused on the breath cycle.

'Allow the intensity of the vibrations to increase very slowly.' The voice enters more and more fully with the increase in intensity, still without conscious manipulation. Vibration of the vocal cords should be occurring before one becomes aware that they are vibrating and imposes a conscious direction for a specific sound or pitch, causing a lapse in attention.

Slowness is relative. It might take any length of time, depending on the experience of the meditator. Actual time periods seem to increase in length with practice, but time perception in terms of clock time appears to be inverse, or, longer and longer time periods seem shorter and shorter as attention improves. 'Continue as long as possible, naturally, and until all others are quiet.' There are many individual variations in comfortable time lengths for such vocal production. Usually there is a kind of group consensus which occurs spontaneously and supportively. There is some group recognition of peak activity and a natural decay time as the meditation ends as it began.

'Variation: Translate voice to an instrument.' A musical instrument, of course, is an amplifier, an extension of the musician to a certain extent. Like all amplifiers it also acts as a band pass filter. As beautiful as the sound may be, it cannot be as flexible and rich in

partials as the human voice. A trained singer, such as the soprano, contralto, tenor or bass of Western art music, or pop singer of various distinctive styles has a vocal filter produced by his or her training. Some such singers become unable, or refuse to produce any sounds beyond or different from what the training has taught. There is a fear of breaking training or of 'ruining' one's voice, or there is simply a devaluation of anything else. Many singers actually do ruin their voices by striving and straining for effects which are easily attained by certain models, but are unnatural or impractical for their own voices. Or, by straining against the effects of bodily tension produced by stage fright and other pressures, in order to sing. Today's singer must not only meet the challenge of Western art or pop music, but of world music with all of its vocal variation and extensive techniques. This requires openess, awareness, receptivity and the exploration of the voice under reasonable conditions such as Sonic Meditation offers.

When I articulated "Teach Yourself to Fly" for The ♀ Ensemble, some of us were playing instruments. As understanding increased of what we were doing, it was accompanied by frustration with the filter systems imposed by the instrument. Gradually we abandoned

instruments in favor of the development of our voices and the awareness of the physical changes in tension towards relaxation, brought about by the meditations.

> "In the Middle East, among Orthodox Christians and Armenians, there is a custom that they do not use an organ in church; they use a chord or sound made by ten or twelve persons sitting with closed lips. It has such a wonderfully magical effect, it reaches so far and so deeply into the heart of man, it produces such a religious atmosphere, that one feels that there is no necessity for an organ, it is a natural organ which God has made." (Inayat Khan, op. cit.)

Nevertheless, an instrumental version can be instructive and beautiful. Such a translation is most natural or direct for wind and brass players. String, percussion and keyboard players have to project their vocal cords to the instrument so that body movements which activate sound vibrations are synchronized with the breath cycle as exactly as possible. The choice of pitch must come involuntarily.

So what is the sonic result of "Teach Yourself to Fly"? Because of the underlying principle, observation of the breath cycle, there is always the unity of a characteristic drone. The texture resembles ocean waves. The individual aperiodic coincidences of different breath cycles creates a variety of details. There is an increasingly rich production of partials. The form of the whole is a dynamic arch.

The effect is restful rather than stimulating. The energies of a few to many people participating together amplify, reinforce and sustain the effects, but one can also participate alone with good results. The resulting awareness of one's body in a relaxed mode, the fresh receptivity to external sound, the discovery of unused vocal or instrumental range and qualities seem primary since the pressures associated with my former music world were not often conducive to such things. However, it happens that I very much like the musical as well as social and psychological results of Sonic Meditations, although it seems to require re-orientation of the tangled jungle of expectations among performers and audience.

THE PROBLEM OF MUSIC

> "Be sure that you do not train yourself to music, in case this holds you back from even higher perceptions." (Ibn Hamdan, The Way of the Sufi. Idries Shah, Dutton)

Sonic Meditation requires participation from all present. It is related to more ancient musical practices where listening as an audience, especially intellectually, was not the specialized practice as it is today.

Sonic Meditations were intended for musicians of all levels; however an important aspect of this work as stated above, is that non-musicians may participate

as well and often much better than musicians whose training sometimes interferes.

The experience of Sonic Meditation can be immediate depending on the degree of commitment in the group. The experience is greatly enhanced and deepened over a long period of time with many repititions. New participants are supported by the energy, focused attention and broad awareness of experienced meditators. Even one person with training can cause a large group to become more continuously attentive, AND AWARE. Just as one hypertensive individual can upset or affect a whole roomful of people. The training of attention and awareness, of course, has many applications towards other musical goals and interests as well as other disciplines.

In the winter of 1973, a research fellowship in the Project for Music Experiment, funded by the Rockefeller Foundation and sponsored by the Department of Music at the University of California at San Diego, allowed me to pursue Sonic Meditations further, on a daily basis, with twenty volunteers. As a result of this work, the following new meditations were articulated and composed.

"My cup runneth over!"

SONIC MEDITATIONS

XII-XXV

All of these Sonic Meditations are intended to begin with observation of the breath cycle.

Pauline Oliveros

XII

One Word

Choose a word. Listen to it mentally. Slowly and gradually begin to voice this word by allowing each tiny part of it to sound extremely prolonged. Repeat for a long time.

Variations:

1. As above, but increase the speed of each repetition as imperceptibly as possible. Continue beyond the normal pronunciation of the word until the repetitions are as fast as possible. Continue.
2. As variation one but when the top speed has been reached and maintained, reverse the process by slowing down again as imperceptibly as possible until the original utterance returns.

XIII

Energy Changes (For Elaine Summers' movement meditation, Energy Changes)

Listen to the environment as a drone. Establish contact mentally with all of the continuous external sounds and include all of your own continuous internal sounds, such as blood pressure, heart beat and nervous system. When you feel prepared, or when you are triggered by a random or intermittent sound from the external or

internal environment, make any sound you like in one breath, or a cycle of like sounds. When a sound or a cycle of sounds, is completed re-establish mental connection with the drone, which you first established before making another sound or cycle of like sounds.

XIV

Tumbling Song

Make any vocal sound, but always go downward in pitch from the initial attack. The initial attack may begin at any pitch level. Go downward in a glissando or in discrete steps continuously. Go any distance in range, at any speed, dynamic or quality, but the breath determines the maximum time length of any downward gesture.

XV

Zina's Circle

Stand together in a circle, with eyes closed facing the center. One person is designated, the transmitter. After observing the breathing cycle, individually, gradually join hands. Then slowly move back so that all arms are stretched out and the size of the circle increased. Next stretch the arms towards

center and move in slowly. Finally move back to the normal sized circle, with hands still joined, standing so that arms are relaxed at sides. Return attention to breathing. When the time seems right, the transmitter starts a pulse that travels around the circle, by using the right hand to squeeze the left hand of the person next to her. The squeeze should be quickly and sharply made, to resemble a light jolt of electricity. The squeeze must be passed from left hand to right hand, ~~and passing with the right hand~~ ON TO THE NEXT PERSON as quickly as possible. The action should become so quick that it happens as a reflex, before the person has time to consciously direct the squeeze. Simultaneously with the squeeze, each person must shout hah. This shout must come up from the center of the body (somewhere a little below the navel) before passing through the throat. There must be complete abdominal support for the voice. When the first cycle is complete, the transmitter waits for a long time to begin the next cycle. When the reaction time around the circle has become extremely short, the transmitter makes the cycles begin closer and closer together until a new transmission coincides with the end of a cycle, then continue trying to speed up the reaction time. If attention and awareness

are maintained, the circle depending on its size, should be shouting almost simultaneously.

Variation:

1. Reverse the direction of the pulse using the left hand to transmit and the right hand to receive.
2. Reverse the direction of each cycle.
3. Each person chooses which direction to send the pulse. The transmitter continues to control the beginning and ending of a cycle.

XVI

Begin simultaneously with the others. Sing any pitch. The maximum length of the pitch is determined by the breath. Listen to the group. Locate the center of the group sound spectrum. Sing your pitch again and make a tiny adjustment upward or downward, but tuning toward the center of the sound spectrum. Continue to tune slowly, in tiny increments toward the center of the spectrum. Each time sing a long tone with a complete breath until the whole group is singing the same pitch. Continue to drone on that central pitch for about the same length of time it took to reach the unison. Then begin adjusting or tuning away from

the center pitch as the original beginning pitch was.

Variation:

Follow the same instructions but return to the original beginning pitch.

XVII

Ear Ly (For Kenneth Gaburo's NMCE)

1. Enhance or paraphrase the auditory environment so perfectly that a listener cannot distinguish between the real sounds of the environment and the performed sounds.
2. Become performers by not performing.

XVIII

Re Cognition

Listen to a sound until you no longer recognize it.

XIX

Lie flat on your back or sit comfortably. Open your eyes widely, then let your eyelids close extremely slowly. Become aware of how your eyelids are closing. When your eyelids are closed, turn your eyes slowly from left to right, around, up and down. Let your eyes rest comfortably in their sockets. Try to be aware of the muscles behind the eyes and of the distance

from these muscles to the back of the head. Cover your eyes with your palms and shut out all the light. Become aware of all the sounds in the environment. When you think you have established contact with all of the sounds in the external environment, very gradually, introduce your fingers into your ears or cover them with your palms. Try to shut out all external sound. Listen carefully to the internal sounds of your own body working. After a long time gradually open your ears and include the sounds of the external environment.

XX

Your voice

Think of the sound of your own voice. What is its fundamental pitch? What is its range? What is its quality? What does it express no matter what you might be verbalizing or singing? What was the original sound of your voice before you learned to sound the way you sound now?

XXI

What constitutes your musical universe?

XXII

Think of some familiar sound. Listen to it mentally. Try to find a metaphor for this sound. What are the real and imaginary possible contexts for this sound? How many ways does or could this sound affect you? , or how do you feel about it? What is its effect upon you? How can this sound be described?

As a group meditation; sit in a circle. Find a sound common to all, then ask the above questions one by one. Allow plenty of time between each question. When all of the questions have been asked, the group shares their answers.

Variations: Try the same meditation with

1. an imaginary sound
2. a live sound
3. a remembered sound.

XXIII

Pure noise

Sing the purest tone possible, that is, with the fewest partials, in a comfortable register. Gradually change the quality of this tone to include more and more partials until it approaches or becomes a noise band. Continue as long as possible, going from pure tone to noise band with each breath.

Variation: Reverse the above process.

XXIV

Focus your attention on an external source of constant sound. Imagine alternate sounds while remaining aware of the external source.

XXV

Your name

The Signature Meditation

1. Dwell on your name. Write it down as slowly as possible.
2. Visualize your name as you sign it mentally:
   a. with eyes closed
   b. with eyes open
3. Visualize your name in different kinds of writing, script and printing.
   a. vary the sizes from microscopic to gigantic
   b. vary the colors and backgrounds
   c. vary the dimensions from 2 to 3.
4. Visualize or actually sign your name backwards, forwards, upside down, inside out.
   a. with the right hand
   b. with the left hand
   c. with both hands simultaneously mirroring each other.

5. Imagine hearing your name spoken, inflected, sung in many different voices, individual and mixed.
6. Imagine hearing your name in different spaces, from very small to very large, out of doors, indoors, amplified and natural.
7. Your Name, Mantra

   Fix your visual attention on your imagined signature

   Repeat your name over and over many times mentally.

MEDITATION PROJECT

A Report

TO: Roger Reynolds, Director of C.M.E.

FROM: Pauline Oliveros, Research Musician (Winter, 1973)

My Meditation Project was an intended exploration of mental and physical exercises in concentration, or attention, and awareness for their relationship to the techniques of rehearsal and performance of music. Exercises were drawn from many and various sources and included my own Sonic Meditations. (See my paper On Sonic Meditations, available from the project office and soon to be published in Performance magazine.) Exercises were practiced daily for two hours with a group of twenty volunteers. Both musicians and non-musicians were included.

Elaine Summers, kinesiologist, dancer and Director of the Intermedia Foundation in New York (A recorded lecture by Elaine Summers is available from the C.M.E. archives), provided the first two weeks of training in kinetic awareness. Summers' exercises consist primarily of sensing the various parts of the body, the body as a whole, awareness of skeletal and muscular relationships through self massage and massage with a partner, and a series of exercises in moving a part or parts of the body very slowly, almost imperceptibly. These exercises help to reveal and release inappropriate tensions which might interfere with one's activities. Summers maintains that inappropriate tensions arise from the body image that one holds either consciously or unconsciously, when that body image is in conflict with the natural relation-

ships of the body.

Elaine Summers' work provided an invaluable foundation for the project as body awareness is essential yet often suppressed during concentrated activity. Many project members were helped by her exercises and relieved of unnecessary pains from inappropriate tension and given personal guidance toward self-help routines.

We were able to present a meditation event at the end of her stay entitled Energy Changes (Energy changes the body). Elaine Summers performed her work which involves movement from meditation, or sensing the body until it moves apparently involuntarily. Borrowing her title, my Sonic Meditation XIII, Energy Changes (See On Sonic Meditations) was composed for the occasion and performed with project members Lin Barron, Bonnie Barnet and myself.

Dr. Ronald Lane of the Muir Councilling Service acted as consulting psychologist for the project. Dr. Lane provided a battery of tests at the beginning and repeated at the end of the training in order to monitor possible significant changes in the participants. Also, there were weekly individual personal consciousness scales. The data accumulated from these tests awaits a computer program for correlations.

Dr. Lane attended many of the sessions and was also available to any participant on a consulting basis. Several of the participants made use of his services as a result of changes apparently triggered by the training sessions.

Dr. Lane also provided two training sessions in contacting dream imagery and fantasy. Dr. Lane noted the unusual clarity and creativeness of the imagery in this group as compared to his

usual encounters with other groups.

Dr. Lane's role was assuring and valuable to the project and its members. He was very supportive of the experimental nature of the project.

Beginning the third week, I led the group in a continual review of Summer's exercises and introduced meditations of contrasting kinds, mostly mental, from many sources along with Sonic Meditations.

Al Chung Liang Huang, dancer and Tai Chi master, led the seventh week of training. He introduced his own personal meditations derived from Tai Chi Chuan, Chinese Theater and Calligraphy. Huang was also very interested in the receptivity of the group as contrasted with other groups under ordinary circumstances he has encountered. He was able to accomplish much more during his week than usual.

Dr. Lester Ingber, Karate Master and President of the Institute for the study of Attention, provided two training sessions at the end of the eighth week; a survey of Karate technique with particular emphasis on the meditative aspects of training attention and awareness. Ingber also noted the unusual receptivity of the group as compared with more ordinary circumstances.

Both Ingber and Huang are interested in the synthesis of Eastern (meditation) practice with Western analytical techniques.

Research Assistant Bruce Rittenbach provided a before and after EEG sample for each participant. The tests, carried out in Dr. R. Bickford's EEG laboratory in the medical school, showed that most of the participants were already high amplitude alpha producers. Alpha is a correlate of the meditative state (see

Operant Control of EEG Alpha Rhythm, Joe Kamiya ; Altered States of Consciousness, Ed. Tart, Wiley). However an interesting tendency appeared: Alpha tended to be present in higher amplitude in the right as opposed to the left hemisphere of the brain or vice versa during the first tests. At the end of the project, the tendency was towards more equal amplitude alpha in both hemispheres simultaneously, indicating that some balancing or synchronization might be occurring. Fig. 1 illustration

Rittenbach also set up a small biofeedback training laboratory for individual use, utilizing Alpha Metrics biofeedback equipment. Participants could monitor their brain waves through headphones in order to learn to emulate meditative states (high amplitude alpha production) in hopes of supplementing the autogenic training sessions. Unfortunately bureaucratic delays interfered with this aspect of the project and the biofeedback training could not begin until the 5th week of the project.

John Forkner, Optical Physicist and C.M.E. Fellow designed and built a special lighting system which projects a circle of light on the floor for the meditation exercises. Forkner calls this system "Moonpool." The quality of the light resembles moonlight and provides a low visual stimulation atmosphere accomodating to the exercises and artistically satisfying. The light was utilized successfully as the environment for the presentation of Energy Changes. Because of its experimental development parallel to the training period, Moonpool has not been explored to its fullest potential in connection with meditation, but it promises future development.

Finally the training sessions were also a long rehearsal for my ceremonial composition Phantom Fathom: from The Theater of the

Ancient Trumpeters, which was performed March 10, 1973, with the training group, as a culmination of the project.

One of the central problems of Phantom Fathom is a necessary re-orientation of the relationship between performers and audience. The performance includes everyone present so that the active experience of participation is primary and there are no spectators in the usual sense. A necessary condition of this break with normal concert format is that "audience" members be informed and prepared to participate by published instructions prior to the event so that participation may be voluntary. This helps to preclude a kind of negative energy arising from persons whose normal concert expectations would be disappointed, or persons who might prefer to remain spectators. In this sense, Phantom Fathom is exclusive, on the other hand its inclusive nature cannot work in the normal mileau of the concert world. The prevailing concert paradigm is also exclusive in that the assumed performer-audience relationship is one of deliberate separation, with the performer primarily active and the audience primarily receptive. This underlying assumption has been accepted and built on by composers and preserved by performers' attitudes and training, and frozen by the architecture of concert halls everywhere.

Phantom Fathom requires large open space where a hundred or more people can move about freely as well as sit comfortably on the floor for some of the meditations. It also requires very fine lighting control as well as a comfortably resonant acoustical quality. The P.M.E. building was less than ideal for Phantom Fathom, with its low ceiling, obstructing posts and poor ventilation, however it is the only space on campus which approaches

the general needs of such a performance space.

Phantom Fathom especially requires a difference in attitude and practice among the performers. The lines must blur between specialist and non-specialist and yet energy must be transmitted by the performers which encourages and supports audience members in their participation without separating them. Audience members must be willing to experience through participation without trying to interpret or analyze an artistic message during the performances. In this case analysis opposes direct experience. The performer must be attentive to the tasks without trying to express or send a message. The performer must set an example which should help support an untrained but informed audience member. Phantom Fathom does not require specialized musical skills but it does require the training of attention and awareness as defined in my paper On Sonic Meditations (op.cit.).

The exercises during the daily two hour meditation sessions were intended to provide this training to the mixed group of volunteer musicians and non-musicians.

As far as I am concerned Phantom Fathom was performed quite successfully although with subsequent work fruitful changes and improvements could occur. An audience of approximately 100 or more arrived and participated silently as prearranged. The silence produced a remarkable atmosphere free of distracting verbal energies. As the evening progressed non-verbally, it seemed to me that the imagery of the performance gained in intensity. The project members seemed to transmit the necessary models without selfconsciousness.

I attempted an experiment in ESP sound and image transmission as part of Phantom Fathom: For a week prior to the event I concentrated every evening on the same sound and the same image, hoping to transmit it to willing receivers in the prospective audience. The reception was most likely to take place in a dream. (As proven by Stanley Krippneri experiments at Maimonides Hospital in Brooklyn).

A thrilling moment in the dream telling ritual, which was necessarily verbal, during Phantom Fathom was the direct hit on the image by an audience member and a very near hit (Golden Trumpet rather than shell trumpet) on the sound I transmitted.

Besides the training group meetings, Dr. Ingber, Lin Barron and Bruce Rittenbach and I met regularly three times a week to work with biofeedback training experiments. We used respiration to control the pitch of an oscillator and the amplitude of alpha brain waves to trigger the oscillator on and off. We tried placing electrodes at different points of the brain i.e. occipital, parietal, etc. corresponding to known functions, auditory, visual etc. and noted the quality of various mental states in relation to the auditory feedback results. Some of our observations led directly to successful meditation training exercises and new Sonic Meditations.

I spent at least two hours a day privately engaging in all of the daily exercises before the training sessions.

The key product of all this training is the development of receptivity. In general, our cultural training dominantly promotes active manipulation of the external environment through analysis and judgement and tends to devalue the receptive mode which consists of observation and intuition. (See "Deautomatization

and the Mystic Experience", Deikman, The Nature of Human Consciousness, Ed. Ornstein, Freeman Press). My project was designed to reverse the above, not to replace the active mode but to complement it. It seems to me that musicians might benefit by the ability to switch modes easily and consciously. Promoting receptivity has high potential value in teaching as well as rehearsal and performance as indicated by the observations of the group leaders, Lane, Huang and Ingber.

Immediate and Future Research Needs:

1. A computer programmer to work with Dr. Lane in order to correlate the data from psychological tests during the project.

2. Computer time for the above work.

3. Technical assistance for the maintenance and development of equipment for further biofeedback experiments.

4. Space for a biofeedback laboratory (currently provided by the Department).

5. A large, open, uncluttered space, free from office and other environmental noises with lighting control for rehearsals.

6. A group of musicians interested in pursuing meditation techniques.

7. Clerical assistance and typing.

Some Sound Observations

These observations were written at the invitation of composer Larry Austin, editor of Source: Music of the Avant Garde. 'Some Sound Observations' was included in Source III 1968. It was also performed by ~~the~~ Oliveros with amplified ambience from the streets directly outside during a program of her music at ~~the~~ Electric Circus in New York City in June 1968. (check date)

Software
contents addition

add article on 1) Atlas Eclipticalis

& The Future of Music (Given at Augsberg College)

Modes of Attention and Awareness in the Teaching of Basic Musicianship

this essay was submitted as part of a grant proposal to the University of California for Innovative Teaching. The intention ~~my interest~~ was to test systematically, ~~the exercises I had composed~~, with the aid of Clinical Psychologist Dr. Ron Lane of the Muir Counseling Service at UCSD, exercises especially composed for basic musicianship. The ~~My~~ approach was influenced by the attentional theories of Dr. Lester Ingber and by the imaginal theories of Dr. Lane.

The project was not funded.

NUMUS WEST ARTICLES

The following group of five articles were written for Numus West ~~which began publication in 1972 and ended in 197? (check date) I became the San Diego correspondent~~ at the invitation of ~~Numus West~~ Publisher/editor Louis Christensen.

Because the articles represent a certain continuity they are grouped together rather than inserted chronologically in this collection.

'Three Themes' appeared in Numus West 1-72

'Five Scenes' appeared in Numus West 2-72

'Many Strands' appeared in Numus West 3-73

'Division Underground' appeared in Numus West 4-73

'Rags and Patches' was intended for Numus West 5-74 but was too long to be included and perhaps too outrageous for the direction Numus West wished to represent. It is published here for the first time.

MMM

Meditation / Mandala / Music

MMM was presented April 14 1980 at Walker Art Center in Minneapolis, Minnesota as part of a series entitled Meanings of Modernism: Myth and Ritual: The Past Redefined which was moderated by Poet Jerome Rothenberg and organized by Melinda Ward of the Walker Art Center. Other participants in the series were Allen Ginsberg, Allen Kaprow, Lucy Lippard, ~~It is published here for the first time~~. The presentation was recorded at Walker Art Center and broadcast by National Public Radio in Minneapolis. MMM is published here for the first time.

Software For People

In Late November 1978 Composer Julio Estrada telephoned an invitation to participate in an International Studies Seminar on Musical Creation and the Future at Universidad Nacional Autónoma de Mexico. He requested a title for a presentation. The unhesitating answer was 'Software for People'. 'Software for People' was written at the Seminar during a playback of Karlheinz Stockhausen's Hymnen and presented at a subsequent session in December 1978.

~~Many helpful suggestions during many hours of I am grateful to Dr. Lester Ingber, president of the Institute for the Study of Attention for many hours of conversation concerning attention theory.~~

→ Many helpful suggestions during many hours of conversation with Dr. Lester Ingber, president of The Institute for the Study of Attention were incorporated in Software for People. It was first published in New Wilderness Letter Vol 1, No. 7, 1979 at the request of Poet Jerome Rothenberg, editor.

Software for People

On late november 1978 quico Estrada telephoned and invited me to Mexico City

'Software for People' was written during a playback of Karlheinz Stockhausen's Hymnen during the International Studies

Meditation Project: A Report

An opportunity to do full time research supported by the Rockefeller Foundation at the Project for Music Experiment (now the Center for Music Experiment and Related Research) at the University of California San Diego, resulted in Meditation Project: an exploration of meditation techniques in relation to music and musicians. The following report was originally presented to composer Roger Reynolds who was the Director of PME. Meditation Project: A Report is published here for the first time.

On Sonic Meditation

'On Sonic Meditation' was written ~~while~~ during a Guggenheim Fellowship period in 1973. It was an attempt to integrate some of the experiences of working with the ♀ Ensemble for two years and the Meditation Project carried out for 9 weeks in the Project for Music Experiment at the University of California San Diego. On Sonic Meditation was published in the Painted Bride Quarterly, Winter 1976, Vol 3, no. 1 by invitation from editor Paul Epstein.

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

MODES OF ATTENTION AND AWARENESS
IN THE TEACHING OF BASIC MUSICIANSHIP

February 12, 1975

DR. PAUL SALTMAN
Vice Chancellor/Academic Affairs

Subject: Innovative Teaching Grant Request/Pauline Oliveros

I would like to support the application of Professor Pauline Oliveros for an Innovative Teaching Grant for summer 1975.

Professor Oliveros has long been one of our most imaginative teachers. She has a methodical, probing mind and does a great deal of planning before trying her new ideas. The present plan was experimented with two summers at York University in Canada before trying portions this year at UCSD. I have visited her classes this year and found them stimulating and well run. I believe she will change many of our worn ideas of teaching basic musicianship.

Cordially,

Thomas Nee

Thomas Nee
Chairman

TN/ck

PROPOSAL SUBMITTED TO:
THE CHANCELLOR'S ADVISORY COMMITTEE ON
INSTRUCTION IMPROVEMENT PROGRAMS

TITLE OF PROPOSAL: Modes of Attention and Awareness in the Teaching of Basic Musicianship

DEPARTMENT/UNIT: MUSIC DEPARTMENT

PRINCIPAL INVESTIGATOR(S):

Pauline Oliveros — 2-14-75
Name — Date

Pauline Oliveros

Ronald W. Lane — 2-14-75
Name — Date

Name — Date

ENDORSEMENT OF DEPARTMENT CHAIRMAN/UNIT HEAD:

I have reviewed the attached proposal and it has my full endorsement and support.

Thomas Nee — 2-18-75
Name Thomas Nee — Date

SUBMITTED TO THE CHANCELLOR'S ADVISORY COMMITTEE ON:

Date

ADMINISTRATIVE USE ONLY:

Recommend Approval: _____

Recommend Disapproval: _____

Modify and Approve: _____

Modification: _____

CHANCELLOR'S ADVISORY COMMITTEE ACTION:

Chairperson, CACIIP — Date

CHANCELLOR'S ACTION:

Approved: _____

Disapproved: _____

Approved modification: _____

Chancellor — Date

ASSIGNED BUDGET NAME AND NUMBER: _____

SOURCE OF FUNDS: _____

BUDGET:

I. ACADEMIC SALARIES:

Name/Payroll Title	% of time & period	Annual Rate	
R.W. Lane, Consulting Psychol. II (5)	20% F,W 75-76	21,204	$2,121

JUSTIFICATION: one day each week will be devoted to this project during the Fall and Winter Quarters

II. NON-ACADEMIC SALARIES:

Name/Payroll Title	% of time & period	Annual Rate	
E. Barron, Secretary III	25% F,W 75-76	9,720	$1,215

JUSTIFICATION: Research Secretary needed 25% time for 6 mos.

III. SUPPLIES AND EXPENSES:

Computer analysis (recharge)	600
Secretarial supplies, phone, postage	464

JUSTIFICATION: please see proposal $1,064

IV. CONSULTANTS: $15/hour Rate $ 600

40 hours anticipated through the length of the project.

JUSTIFICATION: please see proposal

V. TRAVEL: $ -0-

JUSTIFICATION:

VI. EQUIPMENT: $ -0-

See below under Departmental Contribution.

JUSTIFICATION:

GRANT TOTAL REQUESTED:

VII. DEPARTMENTAL CONTRIBUTION: May be expressed in release time of employees (faculty/staff) or actual financial contributions made by the department/unit. $5,000

1. Equipment will be made available to this project from the Center for Music Experiment (approx. $6,000 available in previously purchased items through Research Committee grant). Total $6,000
2. Professor Oliveros will be dedicating approximately two full days during the summer (1975) as well as the same for Fall and Winter Quarter 75-76 to this project; no release time will be applied. not calcu.

CHANCELLOR'S ADVISORY COMMITTEE ON
INSTRUCTIONAL IMPROVEMENT PROGRAMS

MATTHEWS CAMPUS, ROOM 104

NAME Pauline Oliveros DEPARTMENT/~~UNIT~~ MUSIC

TITLE/RANK Associate Professor CAMPUS EXTENSION 3230

TITLE OF PROPOSAL: Modes of Attention and Awareness in the Teaching of Basic Musicianship

PROPOSAL SUBMITTED FOR FUNDING UNDER: Innovative Teaching Grant (1)

xxxx1. Innovative projects in University instruction (opportunity funds)
2. Regent's undergraduate improvement grant (opportunity funds)
3. Undergraduate teaching excellence program (state funds)
4. Regent's multi-campus course projects (opportunity funds)

PRINCIPAL INVESTIGATOR(S):

NAME	RANK/TITLE	DEPT./UNIT
Pauline Oliveros	Associate Professor	Music
Ronald Lane	Consulting Psychologist	DSA/Counselling

In 100 words or less, summarize the proposal. The proposal is addressed to the poor attention habits and lack of awareness in auditory, visual, and somatic fields. Exercises are provided and data is to be gathered and tested by a clinical psychologist. Possible applications to other disciplines will be suggested. Examples written and evaluated by students are appended.

PROBLEM: Please describe in detail the problem your proposal is designed to address. Inefficiency in learning fundamental skills of musicianship is largely due to poor attention and lack of awareness in the auditory, visual and somatic fields. Also students often lack a feeling of togetherness with classmates because of the highly competitive atmosphere. The continual

low level disturbance which is manifested by such symptoms as boredom, listlessness, or restlessness is very likely a result of such a lack. Such feelings are destructive to ensemble work. Most musicians need ensemble skill.

PROPOSAL: Describe your proposal in detail. Give particular emphasis to how it is designed to address the problem previously described. (Use extra pages if necessary.)

Please see the attached writings.

EVALUATION: All proposals must be accompanied by a detailed description of how the proposal will be evaluated. (Proposals that do not have an evaluation component will not be considered.)

Proposal exercises will be tested during Summer Session course, Music 2, Basic Musicianship and again in the Fall and Winter Quarters 1975-76. Students will be asked for commentary. Dr. Lane of the Muir Counselling Services will provide tests for scientific evaluation of the exercises. Data will be analyzed weekly by computer operations.

(Please see attachements and letters of support.)

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

12 February 1975

TO: Dr. Paul Saltman
Vice Chancellor/Academic Affairs
FROM: Pauline Oliveros, Associate Professor of Music

SUBJECT: Innovative Teaching Grant

Attached is a proposal for a project for the composition, investigation, application and testing of some innovative teaching techniques. Appended are some exercises composed and evaluated by my Music 2 (Basic Musicianship) students from models and theory of my own. The evaluations by the students were written under time pressure (20 minutes) as a mid-term exam. Also appended is my paper "On Sonic Meditation" which gives my definition of attention and awareness as it is used in my proposal.

The grant should provide funds for release time for Dr. R. Lane of the Muir Counseling Service, computer time for evaluation of data, access to equipment for measuring and recording reaction times, recording tape, xeroxing and for part time secretarial service.

PO:rel

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

12 February 1975

TO: Dr. Paul Saltman
Vice Chancellor/Academic Affairs
FROM: Pauline Oliveros, Associate Professor of Music

~~SUBJECT~~: Modes of attention and awareness* in the teaching of Basic Musicianship

The skill of a musician depends on the synthesis of aural, visual, and somatic attention and awareness.* He or she must be able to hear mentally as well as physically, see and interpret musical symbols and cues, respond correctly as a singer, conductor or instrumentalist. Attention means focus and clarity of detail, while awareness* is concerned with the overall field and is diffuse. (See On Sonic Meditations. Appendix). Attention and awareness may be turned outward toward the environment or inward to the imagination and memory. Aural and somatic attention can be turned outward while visual attention is turned inward or any combination of these modes of attention and awareness might be in effect. An individual whose attention and awarenss is turned entirely inward might be considered to be out of touch with reality. An individual whose attention and awareness is turned entirely outward might be considered to be out of touch with himself. What is necessary for growth and development for the whole person is the ability to focus attention and find awareness in each area, inward or outward, flexibly, or at will in any combination of the modes. The separation of attention and awareness is a useful theoretical concept.

I have composed some exercises based on the above theory for my ~~Music 2~~ Basic Musicianship class. For example:

~~*~~ * TERMED GLOBAL ATTENTION IN THE LATER ARTICLE 'SOFTWARE FOR PEOPLE'.

The group forms a circle (about 20). Three people face each other in the center of the circle and a fourth person is the critic-conductor. The critic-conductor begins to clap a tempo. The large group takes it up. In the center, person A invents and claps a rhythm, with respect to the tempo person B must repeat it and add his or her own rhythm, person C must repeat A's and B's and then add his or her own rhythm. Then the center group must clap together (A + B + C), and then the whole group claps the whole rhythm. The critic-conductor must stop the exercise whenever he or she detects an error and explain exactly what was wrong. Some possible errors: Person A, B, or C does not repeat exactly; Person A, B or C lags the tempo; THE group is too loud or goes out of tempo; THE critic-conductor does not perceive error; etc. The group determines whether the critic is accurate. Then a new group comes into the center. No errors are allowed. As the group improves, more people are added to the center group.

This exercise is extremely difficult due to the poor attention habits of many students but it is extremely effective at training attention and awareness, intuitive responses and memory. Psychologically, both group and individual competition is present but is balanced by collaboration. (If the individual fails, OR SUCCEEDS the whole group fails OR SUCCEEDS.). Visual attention in this exercise is free to scan for any visual cues which aid and reinforce the aural and somatic tasks. For instance, watching a group member's hands in order to keep tempo, or help pick up the rhythm. Visual awareness is intended to take in the group as a whole, to reinforce the feeling of ensemble. Aural attention must be focused on the rhythm introduced by person A without losing awareness of the overall tempo (the whole group). The critic and the group must be able to tell when an error is made. Somatic attention is focused in the movement of the hands and an awareness or sensing of the group is necessary to maintain tempo. The rhythmic invention of the center group is spontaneous so that intuition is also necessary along with the training of memory.

This exercise and others that I have composed seem to be very effective

in the context of ~~Music 2~~ BASIC MUSICIANSHIP. Not only do they sharpen the necessary skills for good musicianship but they seem also to help students to communicate more directly, and CREATIVELY peacefully with each other.

I believe that the theory of these exercises would apply to other disciplines as well. For example, any discipline which requires spontaneity as well as precision in the use of language, such as mathematics. Mathematical exercises could be devised with a game approach to learning arithmetic or equations. Instead of one individual writing math problems always in isolation, it could be possible for each member, of a group to be responsible for a particular function in an equation, or represent an analog of the problem, and practice orally in a circle formation with the group responses forming "an individual".

stop here

I should like to work systematically to compose and test a number of these exercises with the help of Dr. Ron Lane of the Muir Counseling service. I will be teaching Music 2 during the summer session for this purpose and again next fall and winter. I will ask for student evaluation as well as the evaluative testing procedures offered by Dr. Lane.

PO:rel

SAN DIEGO: DEPARTMENT OF MUSIC
LA JOLLA, CALIFORNIA

February 14, 1975

TO: Dr. Paul Saltman
Vice Chancellor/Academic Affairs

FROM: Dr. Ronald Lane
Counseling & Psychological Services

SUBJECT: Dr. Pauline Oliveros' Proposed Project in Innovative Education

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This is a brief statement of my enthusiastic support of Pauline Oliveros' innovative approach to education in music, as well as an outline of my proposed role in this project. Pauline and I have developed our research and educational interests along similar lines over the past three years. We both share our interest in the use of medatative techniques for the development of nonlinear or intuitional thinking. My research in this area began with my teaching extension courses in the development of imagery and dreams. Subsequently, I began investigating the effects of different forms of meditation on cognitive functioning, and served as Pauline's research consultant for her PME project in the Music Department. My recent interest in teaching students intuitional skills for the development of creativity, has dovetailed with Pauline's innovative techniques in music education. We both see exciting possibilities for the development, investigation, and evaluation of these techniques and their effects on the learning and performance of music.

In cognitive functioning, our educational system is devoted primarily to the development of verbal/analytic skills which largely represent linear modes of thinking. Considerably less importance is placed on the education of nonlinear or intuitional forms of cognition, expressed, for example, in imagination, creativity and artistic performance. I believe we need to educate students not only in nonlinear thinking, but to learn ways to develop the interaction of this process with the verbal/analytic mode. By teaching students techniques which will enhance the controlled interaction of these two cognitive modes. I believe creative performance can be enhanced in both the scientific and artistic disciplines.

Hard data is needed to determine whether effective education in nonlinear processes is possible, and if so, what techniques are most effective for the cognitive functioning and performance in different disciplines. Because of its heavy reliance on nonlinear cognition, music is an appropriate discipline with which to begin. I have already gathered some initial data in the evaluation of Pauline's PME project two years ago. This was a project which involved an intensive effort to educate music students in nonlinear or intuitional forms of cognition over an academic quarter. The results from this pilot study were very encouraging. The learning and daily practice of various meditational techniques seemed to increase the vividness as well as the

control of the imaginal process, while less controlled forms of mental activity, such as mind wandering, were significantly reduced. This was accompanied by some exciting biorhythmic data in which the amplitude of alpha-wave production from the right and left hemispheres of the brain appeared more balanced for these students at the end of the nine-week project.*

Pauline's methods for developing skills in the deployment and regulation of attention and awareness represents a unique educational approach. To my knowledge, this has never been attempted in a way that lends itself to objective evaluation, particularly in the field of education. My role in the proposed project will focus on the investigation and evaluation of these techniques, particularly from the standpoint of their effects on the learning and performance of music. I also plan to investigate the extent to which increasing the controlled interaction of nonlinear and linear cognition can influence creativity, as well as general cognitive functioning and well-being.

The instruments of measurement for this study will include Singer and Antrober's Imaginal Process Inventory, as well as actual performance tests of aural, visual and somatic awareness, creativity, and experience skills.

The results of this innovative approach to education can have important implications for the education and development of creativity in other artistic, as well as scientific disciplines.

* A more complete description of these results are described in The Use of Dream-work and Imagery Process Training in Higher Education, presented at the International Conference for Humanistic Psychology, Paris, France, Sept. 1973.

Dr. Ronald Lane

RL:gp

February 14, 1975

TO: Dr. Paul Saltman
Vice Chancellor/Academic Affairs

FROM: Heidi Von Gunden, Graduate Teaching Assistant, Music Department

SUBJECT: Pauline Oliveros' Proposed Project in Innovative Education

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I consider myself fortunate to be a graduate teaching assistant for Pauline Oliveros' Music 2 (basic musicianship class). My function is to participate in the class exercises which develop modes of attention and awareness and to conduct laboratory drill sessions in sight singing and dictation. Having previously been a T.A. for Music 100 (creative musicianship, the course which follows Music 2) I am in the position to compare the skills of previous students to the level of this year's class. It is my opinion that the training in modes of attention and awareness that the current students are receiving is showing a marked improvement in their acquisition of musicianship skills. During the lab period their critical perception of pitch, rhythm, and ensemble techniques is far in advance of the students I have worked with in Music 100. I attribute this to Pauline Oliveros' teaching techniques. In particular I have noticed a positive group spirit in the sight singing lab which reinforces solo performance. It seems that the group's concentration diminishes tension and nervousness and tends to generate a self-confidence during individual sight singing. In addition, the group's training for constructive criticism is instant feed back for the individual and a learning situation for the group as well.

My own teaching techniques have improved since doing the ensemble exercises. I am discovering more effective means of centering class attention, pacing drill work, and how to constructively coordinate differing levels of achievement in a class situation.

Hence, I am strongly in favor of Pauline Oliveros' proposal. Futhermore, the innovative teaching grant would produce unknown data. It is possible that this data could form a model for new and more effective teaching techniques in basic musicianship as well as other skill courses.

To NMCE

the following was written in response to a participatory visit ~~during~~ to a rehearsal of Kenneth Gaburo's New Music Choral Ensemble VI (check number) NMCE was then a part of PME (Project for Music Experiment since then ~~become~~ changed to Center for Music Experiment and Related Research, which is an Organized Research Unit of the University of California San Diego) NMCE rehearsed daily for several hours. the members of NMCE included Lui Barron, Howard Crook, Ann Chase, Philip Larsen, + Linda Vickerman. (Check Poster)

The Contribution of Women as Composers

the following essay was written in December 1973 and submitted ~~to the~~ as part of a ~~grant~~ proposal to the Faculty Fellowship Program for Research on the Role of Women in Society of the Ford Foundation. The proposal was ~~rejected because of my lack of a PHD. I am rather grateful for that as such research as I proposed would have taken time away considerably from my own creative efforts~~. not funded. The Contribution of Women as Composers is published here for the first time.

Subject: The Contribution of Women as Composers

There are two modes of creativity: (1) Active, purposive creativity resulting from cognitive thought, deliberate acting upon or willful shaping of materials, and (2) Receptive creativity, during which the artist is like a channel through which material flows and seems to shape itself. Both modes can be available to a single individual yet cultural trends often reinforce one mode at the expense of the other. Synchronization of these two modes would seem to be not only a more complete way of working but a means towards more balanced efforts through a synthesis of the analytical way and the intuitive way.

Balanced efforts certainly make use of both modes. The working methods of Beethoven and Mozart show quite clearly in the following letters of these two composers respectively:

> "When I am, as it were, completely myself, entirely alone, and of good cheer--say, travelling in a carriage, or walking after a good meal, or during the night when I cannot sleep; it is on such occasions that my ideas flow best and most abundantly. Whence and how they come, I know not; nor can I force them. Those ideas that please me I retain in memory, and am accustomed, as I have been told, to hum them to myself. If I continue this way, it soon occurs to me how I may turn this or that morsel to account, so as to make a good dish of it, that is to say, agreeably to the rules of counterpoint, to the peculiarities of the various instruments, etc.
>
> "All this fires my soul, and provided I am not disturbed, my subject enlarges itself, becomes methodized and defined, and the whole, though it be long, stands almost complete and finished in my mind, so that I can survey it, like a fine picture or a beautiful statue, at a glance. Nor do I hear in my imagination the parts successively, but I hear them, as it were, all at once. What delight this is I cannot tell! All this inventing, this producing, takes place in a pleasing lively dream. Still the actual hearing of the tout ensemble

is after all the best. What has been thus produced I do not easily forget, and this is perhaps the best gift I have my Divine Maker to thank for..."

-- A Letter, Wolfgang Amadeus Mozart,
Life of Mozart, Edward Holmes.

"I carry my thoughts about with me for a long time, often for a very long time, before writing them down. I can rely on my memory for this and can be sure that, once I have grasped a theme, I shall not forget it even years later. I change many things, discard others, and try again and again until I am satisfied; then, in any head, I begin to elaborate the work in its breadth, its narrowness, its height, its depth and, since I am aware of what I want to do, the underlying idea never deserts me. It rises, it grows, I hear and see the image in front of me from every angle, as if it had been case [like sculpture], and only the labor of writing it down remains, a labor which need not take long, but varies according to the time at my disposal, since I often work on several things at once. Yet I can be sure that I shall not confuse one with the other. You may ask me where I obtain my ideas. I cannot answer this with any certainty; they come unbidden, spontaneously or unspontaneously. I may grasp them with my hands in the open air, while walking in the woods, in the stillness of night, at early morning. Stimulated by those moods which poets turn into words, I turn my ideas into tones which resound, roar and rage until at last they stand before me in the form of notes."

-- Beethoven, from a Written Conversation
with Louis Schlössen (1822 or 1823)
Composers on Music, Edited by Sam Morgenstern.

It is striking that the intuitive process is recognized by both composers but it is not necessarily voluntarily called upon, but taps the artist on the shoulder in unguarded moments. Though each composer recognizes that ideas arrive spontaneously in relation to a special emotional tone and during restful or non-working activity, neither speaks of being able to bring about these necessary conditions for encouraging intuition voluntarily.

There are many accounts from scientists as well as artists engaged in highly-creative work, on the dramatic results of switching from the active, analytical mode to the receptive, intuitive mode.

The mathematician Jacques Hadamard records that

> "On being very abruptly awakened by an external noise, a solution long searched for appeared to me at once without the slightest instant of reflection on my part--the fact was remarkable enough to have struck me unforgettably--and in a quite different direction from any of those which I had previously tried to follow."
>
> --The Creative Process, Brewster Ghiselin, New American Library.

Also Kekule solved the chemical problem of the benzine molecule, a ring rather than a chain of carbon atoms, when in a fatigue (or alcohol) engendered daydream he saw a snake swallow its tail. His intuition gave him the answer in the form of an image while his analytical efforts pursued the wrong theory. Again there is recognition of the intuitive mode but no conscious effort to promote the proper conditions for its presence.

Western Society seems to value most highly, not only its results, but the active analytical mode itself. The development of this mode is fostered almost exclusively in education, often to the detriment of men and women who would develop more readily using the intuitive mode, or one-sidedness appears in those whose capacities lean towards the analytical. It is very much like the insistence on right handedness to the exclusion of left handedness. Emotional problems often accompany such education eventhough a natural left hander might succeed in becoming a right hander. Actually it would be fairer to foster the development of both handedness,

equipping the individual with valuable tools for coping with the world as well as demonstrating adaption. Instead we live in a right handed world, WITH LEFT HANDERS SUFFERING THE CONSEQUENCES.

Artists who are locked into the analytical mode with little or no access to the intuitive mode are apt to produce one sided works of art. Certainly many of the totally determined, serial works of the post war years seem to fit that category. The opposite possibility is also true. Works produced intuitively with little or no complementary rationale tend to seem aimlessly one sided.

But why is intuition so often left to chance? Cultural traditions ordain how women as well as men ought to behave. Traditionally men are encouraged in self-determining, purposive activity, while women are encouraged to be receptive and dependent. Again emotional problems can arise when an individual's tendencies are more receptive than active. This is dramatically illustrated in education, when active, self-determining women begin to underachieve in order to avoid loss of self esteem in the realm of femininity as shown in the studies of psychologist Matina S. Horner of Harvard. Because women are expected to seek the adoration and approval of men, they must not win in competition with men. Success, particularly in higher education, for women becomes failure. But if her nature is self-determining, such failure represents a conflict of interest which is often never resolved and can become crippling emotionally. The same conflict arises if a women succeeds in purposive activity, for then she consciously or unconsciously expects the loss of her femininity. She has violated the cultural paradigm. Men of course experience similar difficulty in the opposite mode. A receptive, dependent man suffers in his failure to meet

cultural expectancies for him.

Recognized composers of Western music have been men. Women have been traditionally discouraged from entering this field. Composers actively determine what others, primarily men, shall do. Women because of their cultural roles do not share this experience. Societies actively control the music to be heard. The influence or power of music is well known. "The character of a nation's music cannot be altered without changing the customs and institutions of the state." (Plato, The Republic) But women are emerging in the 20th Century as composers and are entering other traditionally male dominated fields as well. The active influence of women now has some chance of being felt through music as well as other exclusively male fields. This phenomenon may well represent the primary meaning of the liberation movement in the world today. That is, the recognition and re-evaluation of the intuitive mode as equal to and as essential as the analytical mode for an expression of wholeness in creative work. Oppression of women has also meant devaluation of intuition which is assigned to women's roles culturally. The examples previously cited of creative working methods show the role of intuition to be associated with mystique or mysterious appearance, unbidden, in otherwise normal, actively pursued, analytical work. Would not any human being benefit from the knowledge and ability to call on intuition as well as analysis at will?

It is my hypothesis that the emergence of women in male dominated fields means a move towards the inclusion of intuition as a complementary mode of creativity. Women is the symbolic representation of intuition culturally as man is the symbolic representation of analytical activity, culturally. It is a significant evolutionary development towards synthesis

or wholeness. Neither mode is exclusively the province of one sex or the other. The two modes must be available in any human being, making a more complete expression available in any field.

Since very little attention has been devoted to women as composers my research will be focused on the following questions:

~~Following are some questions which could generate research.~~

(1) Do women have something to teach men because of their cultural specialization and vice versa?

(2) What trends arise in the comparison of many compositions of women? of men? of men and women?

(3) What working methods do women employ in composing? What working methods do men employ?

(4) What methods or conditions might be employed to promote and train intuition in music composition?

(5) How could this work apply to creative activity in general?

I would expect to find that men as well as women rely on intuition in composing, but the attitudes toward intuition might differ considerably. The study of working methods might release important information for the encouragement of women in this field as well as other fields. I would examine first several hundred scores of works by naive composers. This opportunity comes from a unique music course offered at the University of California, San Diego, which requires that its non-musicians compose. It would be interesting to discover and compare these individual approaches to

creative activity through interviews. Their responses would be relatively free from training imposed by normal musical educations.

I would also examine the scores of recognized women and men composers for trends and make interviews concerning their working methods.

During the first part of the fellowship period I would expect to collect the necessary materials and arrange to talk with the composers. During the second period I would sift the data and the third period would be devoted to the writing of a monograph describing the results of the study and its prospective conclusions. I would expect to publish the results in an interdisciplinary journal. Most of the work would be carried on in my own residence except for field trips for interviews.

Proposed Budget

Recording Tape	$100.00
Airfare	1,000.00
Travel Expenses	500.00
TOTAL PROPOSED BUDGET	$1,600.00

Clerical assistance to be provided by the Music Department, University of California, San Diego.

The Poetics of Music

The 'Poetics of Music' was an early attempt to explore a broader definition of music which included the perceiver and to find questions to encourage such an exploration which might apply to all music and all musicians. The "Poetics of Music" is published here for the first time.

THE POETICS OF MUSIC

Music is a multi-dimensional, dynamic process unfolding as a relationship between an individual, or a group of individuals, and sound vibrations. The question What does one hear? has produced many specialized categories of musical study, each with its own specialists within a historical, theoretical, critical or predictive community. Such communities tend towards linguistic isolation. As analysis becomes more exhaustive, language becomes more exclusive. While focus is a necessary and desirable tool for study and artistic development, the narrowness which specialism tends to produce, can be crippling to musicians.

In order to maintain or bring about balance, the individual must have alternatives, a choice of possible directions, flexibility as well as stability and focus within this multi-dimensional, dynamic process which is music. Such balance requires a broad musical consciousness developed from an extensive awareness of all categories of musical study, and their relationships, as well as concentration on particular roles. This awareness must be based or centered in the present while encompassing the past and future. Music as a whole, all roles and relationships must be experienced in various ways and from different perspectives in order to be synthesized. Awareness is a tool for synthesis. It is diffuse and inclusive, complementary to concentration or focus; it can support the intensity of specialism by providing a broad field from which to draw energy for concentration.

To develop such a tool, the question might become, How does one hear? Such a question necessarily promotes exploration of the nature of one's role as well as the nature of one's physiology

within the musical process. Understanding must be sought of the nature of other's role within the same process. The resulting awareness tends to produce an inclusive, interdependent atmosphere with the necessity for a common language between the listener, the composer, the performer and the instrument maker in all their variations. This calls for the conscious training of intuition and feeling as well as observation and analytical skills, in order that one may experience and come to value the roles of others through imagination and reflection as well as present reality. In this way one may gain depth and perspective on one's own role and relationship in the multitude and collective energy of music.

Since all processes are dynamic, one must allow for and be prepared for change. Changes in role, relationship and valuation must occur as the process unfolds. How does one hear? also means how does one affect and effect relationships with sound as well as others; how are others affecting, effecting such relationships?; How is music?.

Such questions cross such artificial boundaries as theory, musicology, aesthetics, composition or performance; enter other disciplines such as Psychology, Biology or Physics; and call for continual examination and integration. History changes as the future unfolds and enfolds the present.

In the final synthesis one seeks synchronization of what one hears with how one hears in order to center the specific within the general nature of music. Well-balanced musicians are not only competent, communicative and productive within a chosen direction, but also capable of intelligently and sympathetically

meeting all forms of music which exist today and all musicians as well.

-Pauline Oliveros

November 29, 1973

* AWARENESS BECOMES GLOBAL ATTENTION IN THE LATER ARTICLE ~~SUCH AS~~ 'SOFTWARE FOR PEOPLE'.

Pauline-what is this from Sonic Meditations

above FG. 6

- keeping the details FN of breathing

*The details of the breathing process are many. One might select any detail as the focus of attention or the process as a whole. For example, one might focus on the passage of air in and out of the nostrils, or the passage of air through the throat, or the feeling of expansion and compression in the body, etc. Such a detail once selected must remain as the focus of attention.

Soft Ware for People
Collected writings of P.O. 1963 – 1979

P 1963 Karl Kohn: Concerto Mutabile

P 1968 Some Sound Observations

P 1969 The Poetics of Environmental Sound

P 1969 Tape Delay Techniques for Electronic Music Composition

P 1970 Don't Call Them Lady Composers

P 197 Valentine (On Electronic Music Schwartz

P 1972 Three themes

P 1972 Five Scenes

P 1973 Divisions underground

P 1975 Many Strands

U 1975? Rags and Patches

P 1973 Single Stroke Roll Meditation

V 1973 Sonic Images

P 1973 On Sonic Meditations

U 1973 Dialogue with Basho

Ford Foundation Proposal

U 1973 Meditation Project : A Report

A Model (Tool) of Advice to Young Women Artists & anybody else who wants it.

P 197 In Memoriam Nikola Tesla Music

U The Poetics of Music

P On the Need for Research Facilities for New Music & Related Arts

P Software for People

U Rose Mountain Slow Runner

U 1979 Alvin Lucier

P To Make a Universe of Sound

P Crow Two A Ceremonial Opera

U To Valerie Solanas and Marilyn Monroe In Recognition of Their Desperation (Program Note 1975-76 Season St Paul Chamber Orch.

theater Pieces or My Work from 1957 —

Career Narrative

Modes of Attention + Awareness in the Teaching of Basic Musicianship