Crup pisture

Pandie Ohuriss, Tof Row 12th from left, mackregor Elementary School, Honstor, Texas 1939
write to Pauline Olvecioz,
music Defit., University of Culiformia at San Deejo. Po Box 109 La golea, Califomia 92037 for a resume, if you an interestiod.

Many Strands

From a Sound Journal
Septi2, 1972 Bob Brown brought a Gavanese Gamelan from Cal tits for om world hnsie Semmar. The music is gentle, caress ing and floating. An opposite to the Believe Gamelan which is strident and arousenig. S listened and slowly sauk into a delicious trance which is like light sleep, although the muncie is very much fresent in this altered stats of awareness. When the frecie endert, $\delta$ "woke up" marvelously refreshed after the end of a long, hand day at the enid of a long, hand fist week of selvol.

OAt. 8 - Walking along the sidewalk at Cal State umivenity Lift., recently, Shend a rustling. I sour someleaves whirled by the urind against the sidewalk. The sound continued as my ears and eyes traveled to a sustlnig fommtain, the ultimate destination of the sound of the rustling leaves. Wind munged with water.
Unity through variety - variety through unity.
Slemento: Similarity of the sounds (unity), the transient periling of the leaves, the static nature of the fountain (variety), the direction of the moving sound (variety). How cen unity dominate without destroying variety and vice versa? How can the two frincifles illuminate eachother?
(Like two mirrors held opposite, reflecting each other)
a man's voice piercing
THROUGh THC AIR,
the northern stars echo
A beating fulling block
BASHO: THE NARROW
(Philosophical reflection)
Hardily a hint
of their early death,
cicadas singeing
in the trees.
isis.

Otis. Everything has to do with music.
Elephant Ears!
oct. 23 From the Theitan Book of the Dead: Evamo-Wents "Tibetan lamas, is chasing their rituals, employ seven (os eight) asst of musical instruments: big drums, cymbals (commonly of brass) Conch sheets. bells (line the hand belle used in Christain Mass service), timbrels, small clarioneto (sonudring like Highland bag fires), big trunfreto, human thigh bone trumpet. Although the combined sounds of there instruments are far from being melodious, the lamas maintain tut they fosychically produce
in the devote an attitude of deep veneration and faith, because they are the counterpart of natural sounds which one's own body is heard producing when the fingers are fut is the ens to shut out external sounds. Stoppering the ens thus, there ane heard, a thudding pound, like that of a big drum benin beaten, a clashing sound, as of cymbals, a soughing sound as of a arid moving through a forest - as when a conch shell is blown; a ringing as of bells, a shasp tapping sound, as when a tinubrel is used; a moaning sound, like that of a clarinet, a bass moannig sound, as if made with a big trumpet and a shriller pound as of a thigh bone trumpet.
hot only is this iviternoting as a theory of Tibetan mAnic, but it gros a che to the esoteric interfarititisin of the symbolicial natural sounds of Truth which. are said to froceed from on to be, the intellectual faculties wither the human mentality."

Ot. 23 Visiting NMCE rehearsal this mooing: (New Music chornit ensemble, Dieted by Kenneth Gabo as prat of Project for Music. Experiment) The entrancevibrations - Identity search, role and game playing, mot fetched but some yaw and maw. Clear up the face. Hey! Linda, you musized a lot of agarette aches over by my chair. st's thrive to begin. WHERE is GABURO!?

Shall we begin somettmin? (after all there are visitors present, Strangers tob.) Millnig around. I meditate.' The annex resounds. Gabur armies. Attención.

The TXishold Exercise
What is the threshold of edibility? Jor whom? Transmit at the threshitl. Teed back. O.K. \& am sitting nicely, on the way to Neva. AHead jerk. Arm awake. Head Jerk. How does our automatic gain control work?
$\qquad$

$-H P E_{S H} O L$.
$\qquad$
The threshold changes with environmental inclusion/ intriusion. Masking phenomenon. Damping factor, standing waves. HEy! ant through ale that.

SOFTER $S$ poOFTER $S$ Sss OFTER $S$ OF TER
How did o knows the price was over? How did they know? Second tins it hafifened again. I knew because my eyes ofened. They knew because they stopped.
you must become the recewier in osier to transmit. at the threshold of audibility. You must become the tianamitter in order to receive at the threshold
of audibility. You meed Confucian commitment to the rale.

Instruction Piece No, 2 for NMCE: Sit sir a circle. Smoke. Make all thought of activity secondary to the act of smoking. Perceive the smoke and the act of smoking, during the entries bumnig of the ajareta or cigarettes.

Ot. 24 Yester Ingber (Karate Master and Theonticial Pigyicist) fronted out yotaday mooing, that in order to examine a minute lapses in attention, thus the probe, attention, must focus to a smaller joint than the lapse in attention. This is true because one needs a forobe which is smaller than the area to be examined. If attention can be focused to the fine forint meassany, then the ambler mass (fine focussed attention) is attracted to the langer mass. (Yapoe in itterttosi) instand of vice veraco In order to take in a large area one must lear to deforius the eyes. Clarity of detail is saciaficial for the quantity or overall view. Defounsuig also nests the eyes. What is the reaction time, f wonder, between focus and deforms? The range? From micro vision to macro vision? From external to internal? Can one observe the switching function fromextemal to internal? How about defocmasing the ears? How fine is the focus needed to comprehend in telegeice or information? How
to listen to music as a whole, time becomnig space? This happens as an internal phenomenon. hozart heard in a fess a whole comfroitiois. So do $\delta$ when encky. Then the hand work of "uarravelation." Sometimes not so espy.
(Wow te by prams blocks?
In flaying Stravinsky, one must exchange probe (time unit) in order to fafform the rhythms correctly. ere. ot then FF or is, of is the smallest unit. One must switch from felling Al's to follnig of's. What is the reaction time?
Oc. 22
Stuart Dempotero' Concert: A new musician this time and I have known him for 15 years. He wo always gook. Cowed flung anything. Two yeans ago he was excellent, an absolving fra former but today Dempster is in a new realm. It is easy to exclaim about dynamic mange; it is wide and supent, facility is remarkable, accuracy near froffect, asticulatosis incredible, all these things and more, but the total picture is inexplicable. Dempster is ont of the way, long lir the true Stu! I sugfrect that his devotion to the DisikiDoo, an Australian meditation instrument played by the Aborigines, YoGA, Bates Eye Exercises and Adele Davis' vitamin regimen is playing a large she in his transformation. Then in you stu for a treninendous send if for us
at UCSD.
hove.
Tsun-youn hui in a recital for $P_{i}$ ' Pá and Chin. Use are indeed fortunate. The Buddha z carved on the ends of the taming forego of the Pi' Pa' were all fou smiling. What a follow up to Dempoter! Mr. Li, of dreanned your concent over again last might. You were a magical figure is the dream as you were in reality.

The Chunize Cool:

The fugire sits quietly, robed and released, footie fronted frigers. The music grown through e the instrument, speaking subtly, passionately. It is fictoriil, like calligraphy. Each sound, it oundifes Sealiedescopic unages. It broad prallette, scaled to a meditatwir mange. Would that s coned hear with your ears while you are flaynig. This music is as much for the player as the listener, a dynamic difference in frojectiós between Went and East. The listener must froject into the music swathes that vice versa as in the wester Count tradition. The anflication was necessary. What a freessunc it must be, to be able to haw at the scale of the dynamic range of the cHin in an of en environs trave you heard a fin drop lately?

The Yaqui Indian Cool:
"How cu fo step talking ts myself?" "Rit of all you must use your ease to take some of the border from your eyes. We have been using. on eyes to fudge the world service the time we wen born. We talk e to thess and to onselves mavily about what we see. It warrior is aware of that and listens to the world; he histeins It the soumels of the world." Don guan Goumney to gytlan : An es castaneda

On normal Wrtanig conscesimess, national conscurnines as we call it, is but me sfrecial the of consciovisuens, whilst all about it, fruited from it by the filmiest of screens, there lie fotestiri forms of consciorioners entirely different." William games.
hor.ro. Freedom of motion is a forming seed. Marjorie Burton from Inicoln, hehaska. she wo an assistant to 7.M. Alexander (The Pisurrestaris of the Body), famous durnig the 20á for neexander technique ; exercised for ne alyinnig the body to its natural frozitios. Mo. Bass stows's message was very seriffle:" Freedom of motion is the nearest we get to relaxation". She worked with on students, easuig the head away from the body. saying" lead with the head easuig ufoward, the body will follows."

Ha hands an magical heaters. I felt them on my meek for hours after wand. "What are you doming. Which you don't meed to do? A fixture which is immobile (ygoubodys fleynnis froition) will tend to do that to you music." As she moved froples' hansen and stretched their axum while they wore flogging, dramatic changes occurred in tone quality for the better. "You meed, not a froitios but a relationshijb."

Dec. 9 D. Mow fred Clones hes been here the past thor wets. $A$ nite has a book frith coming on Bismedical Engineering (Concernnig the measurement of emotion) which is not to be massed. He is a marvelous musicians as well as fohysislogist. at Poctelend torfital. Besides explaining his Sentic cycles, a thaisnig method for the direct expression and measurement of ennotion, he has been provoking us with statements like = "The last quartets of Beethoven are faychedelic; intended to trigger internal seas rather thar ont and physical responses. Beethoven was intirested in Eastern philosophy dunning the third prod." (Cymes also has visited Goethes' house in Germany which is fainted ecconding to Gotthes'theory of colours. Goer the was a man who level accordnig to his thews $\overline{\text { un . I }}$

Dec. 20 Om the way to Berkeley. Yooknig forward to meetring with composer Anna Yook wood, face toft lace after serial years of correstrondence.
Dec. 24. Ama Lockwood has several fidarios, induding a grand, flaunted first so ni her garden at Gatihoure Cottage, Essex. Ingatestone, England. They have been there for a year and a half. One is planted so a tree, as it grows through it, will eventually carry the primo up in to the air. At intervals, Anna goes to the garden and records the pane passage on each fueviso. They are bemig timed by the elements. They stileplery. (How will she eventually reach that fravio sis the tree? An up in the air cedlunce?
Anna is also collecting a rwier archie. She is necaining recordings of different rives of the world from freinds and cooperative flesfle from everywerere. She intends to play this collections in sequence when she has enough. Send her a rives. (For best result make a long recording close milked)
Anna is a very special woman. St was like meeting a long lout sister.

Yet. 9 Vivian Dine affeareel and was truly fine. She teaches at Bennington college, Vermont. Beside comproing she is a terrific frianst. Hes oven music rungs with authenticity (CMl Recordings) She wan a purfile of

Ruth Cousford Seegen (aremaitiable compoces who died tor going), thus unitike most of us fensales., had a morlel aind mover considesed herself un maturalin for writing Music. Her comproitiois comes out of the tindition of Cowele and Sves. She delwies that muaic ext Cremsly well as a fuinist. She velated her effreruice of the 30 à and remnided no that there wre mot many compriens anound is thore days. Then, they ale teneur ench otheo. She mentioned the "Bonlangerie" and how Autr Cowford wos a munber of the early Nrout Guard. Significint that there was at east one noman in that early gronps and that hadia Bonlenger, a womans, inflenancus so mary of the Amencian comproers.
Jeb-ro Pondit Phour hathe with his dexiple, Terry Aleyy, flowting dreamily around the canspus.
horth Sndian singnig, very high sfiritival diociplinie. Studuts in his semmiar recerivel a gift of niestinable value.

Project for music Esperiment (better knowon at UCSD as PME), funded by Rockefeller, diricted by Rogens Reynoleds, prasticifrants manyford

Image: PME biildnig (au ex.harine Bannack bowling alley) flsating gently shyurand, vibating madly while below Rogerat his deok pedaling fianticilly to beep the whole thing aests. Undunaatre the dedk.

Varen Reynolds fredaluig move franticilly to keefo Roger a loft.

PME staff, fellowes and researchers, have doubled the infurt at UCSD. By the sond second week of Jale quaiter the activity was at the level of the spring freak last-year. Lin and of wondened if we wowld collapree at the end of the finst month. (7lash: illness wos samfrant durning Ganuary-Debruary including youstotuly)
Some of the activitis: : NMCEII, Seven mern bers rehearse disly, senaniz, mornig, vocelzing exfloming hingusties musieally. Meseacher Aone Zagiove, Inine from Canada. offering semmias in chrial movement.
INSERT PME Printed Brochures hese on Compucts Conference and on Psychornowstis and fercefotion. ete.

Deb.ro my offain with Beethoven continues. First S. see him in drag on the cover of the Defruary assure of ti Fidelity magazine. Itmph!, the editors are off as usual, everyone known by now that he was really a Levin.

But to top it off, in December, $\delta$ visited ny former nom teacher sash Sasoton. As $S$ approached his house, Sheand a familiar time but a very sta thing timbre to say the least. fascinated, I tried to comprehend this strangely beautiful version of the second movement of the Pathetigine Sonata. Inside, Earl solved the mystery forme: 400 home at some ham players convention wailnig away on this arrangement. He promised me a dub of the tape too! What a sound! 400 horns. What ambrerice.

What sound is most familiar to you?
Yester Ingle. Kainite master. "Somithuig like, Buhhnnu internal sound $\delta$ listen to during meditations." max Matthews - Bell Labs -" I guess -. . the viohn. ho, the human voice may be much more frimbis.
Dedre Gentmes - Psychology - "Some ones' voice \& guess." gun Charles Francois _ Frenchman "hr owrstalturg Chris Will - Compmiter Squevice - "The song S sing to myself when form frat dey dreaming."

Veadimic Vooss-Comprozen." My breathnig"
Alan Gohmson Administrative Asst. "Ny smotenig,
Heidi Vous Gusden. Composer
" hoy name"
Steve Gerber - Comporer "My son talking"
Bartara Alvariz - Herself
Ganneo Camplell-Profeasn "A fure 3nd, 5:4 ratio. \& can pich that ont in an instrut."
Youse Wiegins - Secretasy "Probably muy daughtrs' vorice."
Bonmie Barnett - Associate "The ponned of my blood flownigg through my veino. Wrom! witom! witem

Srene Solomon - Secretury
Warren Burt-Composer.
"The telefhove mingnig."
"Trequenay modulation."

Charlie White Comproen PME "The sound of mug can.
hed Sublette - Comprocer "A high frequency to tore which is the hum of my nervons system."
Seene Jackeon-Student of cultwre "the."
Gotur hizelle - Compoces -" The sound of Mny unnid working
Yaroy Livingston_Clarnit " Inside drumming Elvion Zondon - funows muse - "Myonm vaice, S guese. Elnior Barron-Leucadiain" oooh, you can't askme that!"
Ahim Yucier - The only Talking Machine of it' kind - "My speech:"
El Kobin_Confuters PME " stó actually a long stong. the husy upstais flushnig the toilet. St somnds like nt. Vesuvius ermpting" Po." Itave dgou bean to Mt. Vesuvius?" "No, but s have a conceft win of whit it sounds like!"

Ron Robboy lellist. "Stranely enough its probably antemobiles.
Pon Grum-Baavan PME "The cound of ths ocewn, S guess' tred hayer-Compooer - "S can't anower! Sdon't korow!' "The compond of my esteel ferms."
Taittring $y_{i}$ - Vidini PME " Every sound"
Hl hercain - Enitar " All the sounds"
Gary yoler - PME. "My owo voice and biids."
hee Warner_Carinit PME "J can't thrinte of a sound that's most famileair to me!!
Yuida Vickarman - Singa - PME" A sound S hem is the air "the nuovement of air Shearwhen Sim mot distracted.
Susan Plemer Composen" The sound of my braithing and other goseral body hums drums sounds."
Phil Yarron Smizu Due " The ofennig of been cans" gack Leung Comproen "Thank you."
Grack Paseess. Samme." The trilet feusheng" Itrowand Crook -The Star. PME "A biid in the momeng."

Trom husic and Gour smotions: Liveright: "What coned be more unique or more individual than what one frerson says he expertence? This is what is meant by subjectivity. This ie the pame ogre. the sueritist refors to as the "erros of pubjectivity"
"It does not requive much study to see the possible envion er that may bi committed in the complete acceptanci of one ferson's experince
as typrial of other frons' experiences
"Individuals differ in the way they expernerice the wold around them. They have no contholover these discrepancies, which are basically involuntary."

Vis a Dis Meisenfergá frrmaiple:
"Sf we cannot accept with certitude any angle persons observation of a relativity simple and objective phenomenon, because he is likely to be at varnaice with pome other server, what shall we make of the tremendous variability whichmeets us when we examine many frevson's observations of the way in which they react to music oveven to a pimple tonne?"

MATERIALS EFFECTS LISTENERS OBJECTIVES
"Pythagoras wo of the ofinion then music contibintes greatly to the heath if used in an afferapriate pmanmes."

What Music???!
The trouble with Music Therapy, tho field, is that the assumption that music is something existing ontsible the individual and was created (mot is) by elite individuals to be imposed on person no empty recefiticho. The ultronate therapy would
be to reconnect the individual with his/her own music well sfrnigs. Draw the music out. Value hisfher pomade. Esfrecially the ones lost of subjugated as a result of language.
"bod made a statue of clay in his our Mnajes, and asked the soul to enter ito it; but the sone refresed to be imprisoned, for is mature is to fley about freely and not to be limited or bound to any sort of capacity The soul did mot wish in the lest to enter this prison. Then God asked the angels to play thin music, and as the angels flayed the pone was moved to ecstasy, and through that ecotacy, in order to make the music more clear to iseef, it entered this body. And it is toed Ant 1 Hafiz said, "People say that the sone, on hearnig that song, entered the body, but in reality the soul it self was song' Hafiz, Sufi Pact
of Persia.

PME Conan I
10 February 1973
Music of the Sixties. The frecies all seemed short, Gui Takahashi playing furans fiendishly Eovta (1963) has fiendish fewino part. Elution Houdon Conducting the perolenig brass. Lend.

Difficult. Moving, An asougived onderving, engagnig the plages in conceritratisi to a froint. With my eyes dosed, the movernent of the brass was a subtle nuance. The space reflecting, faithfully, cancelling (fro mm foritisis) any high contrast in the sounds from the varying. proitions of the instruments. Guigi with taped fingers to purport his Olymifinis flugniz. my eyes spring often to witness the cadence. (low hid my eyes know?) Early death. "cont is a laid of homage to Parmenides Janis Xenakis
Inuaic for Solo Performer (1T65) Nevin Lucier Seine Barron-Atpha pounce. to Goth Mizelle smiply and carefully applied the electrodes to has. Barroris head, the audience became unvowally quiet and attentive. Since the procedure is unfoniciais at a concert, expectancy is replaced by fascination. This is a thentricis constant in the frearion performances that ofwitmessed in the sixties, with Yucier frertomnig. The drama intensified, the lights were low and Imurfohy's law wen Q into effect. (of anything can go wrong it will.) Director Reynolds "no you know this is the Project for Music Experiment and pometimics ex periments fail. Bear with us and we will find the problem" hare drama as 4 technician. fuzz, fume and pore over the reculcitime equipment
(The problem was mot in the equip mont, but
existed as a result of an inadvertant act. Some one plugged something else into a critical arinit unlenowingly causnis hum. A common realyiatis. of Mmibliys' Low which complements Evicksons Low "The danu thing dotenit wonk" The auduence wait, rains beat beautifully and furiously on the rofl. he. Baron never awareness, in order to generate Repha, a brain wave of, to 13 hy . Wepha is a correlate. of receptivity. The skies of the performer lies in the ability to keep generating Nepha boots and to increase the anglitese of the bursts. (yogis can'gencrate continuous Thepha afeir years of antigenic trainuin.) This shied is hi
inverse provponteri to manipulation and usurer ionise frospoitesi to manifonlation and usually vanish with asosinalizatoris. When the free began again, Ms. Barron had maintained her cool and one coned hear the result of sher Alpha which consed spenteers to reaonate histruments such as dimes, cymbals etc. Unfortunatiy, after all was working the tectmiciin stopped the price tor soon. He had obviously mot remained calms and aware but had lapsed into Beta, a higher frequency correlate of judgemental activity. Emily death.
"From the beginning, \& was deternincel to make a live performance work despite the delicate uncertainty the equipment, difficult to handle even under
controlled labriatoy conditions. Srealyid the value of the EEG situation as a thents element and hnewr from experanice that hive sounds an mose interictinjs than tapled ones. I was also tonched by the mnege of the uninobile if not fravalyzed human bevig whs, by merely chancuig states of visial atturtion, cans actrint a lange configunation of commipmiation with what afpeens to be frower froma sfinitual realm. If found the Nephan quiet thunder extremely beantiful and mistast of sfroilnig it by proossing, chove to use it as an active fowe si the same way one uses the powa of a rive. Aevir huciai

In Mamotuin - Eotehan Gomez (quastt) 1964 Trumpet-Ed Itathins, Trombone Grhn hizeler. Clarinet helvai Warner, Baritine, Phit Yarson.
"Estebru Gormez is concerned with very subte and grechal deviations from a 'referma sonoity. withni which the ividividheal instruments are not distinguishable" Pobt. Ishley
Bensty died an early death. Why mot a whole evening or bring seespnig, bags and frovisions. Cump with if for 3 dayo. We all deprive ourseves. Do you remenber hour long your attention sfran was as a chili?
" For the histener as well as for the frerformen werythris depenids on attentiveness, on epperiencing the subter shifts betwien unaninity and diziontin

Have you forgotten that attention is mot a matter of reduction? Have you so lite that you pay it mother than gris it?
String Quartet ho. 2 (1963-64) Michael Von Biel gin stark, Tai Irani Li. Violins, Ed Kobrin, Viola Senior Barron, Cello.
Complex spectas. Busy. Players tensely engaged.
Typist
smart score
from program
"The price is univived with the maximum articulation and atimaig up of the groin materials under a certain local performance situation." m. vow Biel. The bowl preformance condition us this care involved low level amplifixation in order to distribute the materials move clearly throughout the space. The complexity of the pound gamut is character istic of the sixties and miterpreted often by virgin lars as loud. St is complex but mot lond. Tondmes is illusory when the ear is attempting to analyze and integrate a wile land sound. Fie performance. Seven murices. Early death.

Bridges, (1968) yuji Takahashi Electric Keyboard Yugo Takahashi, Amplified Cells drone Elnion Barron.

Mont bridge of Königsberg diagram (next to takahashis 'picture is program) here flense.

The electomi sound had a watery flow and never changed its timbal character. Thus one rs attention could flow with the round as it moved is detail dynamically and ri location. The amplified cells drone with mucistonal changes unzierted timbal relief. No of sank further under, it all stiffen tor noon! carly death.
"Bridges I deals with melodic intervals. There ave is pitches and several mule of tranitisi. Pitches an thought of as landmarks. Intervalsidre streets which determine you trave? from sue to another. This is also the basie unage of the Persian Dost gale system. Their seven modes are named after ancient cites, and music is metaphorical travel among them. In mathematics, the theory of graph hs deals with similar situations. The insitisitor of this theory, Leon hard Euler, arrwid at the idea in solving the problem of the seven bridges of Koenigsberg (Kaliningrad). Euler concluched Slut it is infrossible to fid a froth crossing
each of there seven bridges once and my once. To prove this, however, it was necessary for him to develop what later becm the theory of graphs. St is this theory that $\delta$ have aphid to the construct sion of sequences of fitches. The scape of its possible application is not limited to any particielan pyotern, tempremertal, tonal or modal, however, the same theory coned equally well be applied to timbres, sound pounces in sfrace - to any collection of modes and connecting froths. Such an abstraction seems to derive it power from mechanisima already sin planted in on brains." yuje Tabeneohi
Music of THE SİTIES. EARLY DEATH

## ：NUMUS＂WEST：

 ヨツアリ゙
feature：

valen

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Front Cover: MUTATIS MUTANDIS (Composition No. 12 for Interpreters) by Herbert Brun. Ink graphic drawn by a plotter under control of a computer programmed by the composer. Reprinted with the permission of the composer.

Write to Pauline Oliveros, Music Dept.,
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92037, for a resumé, if you are
interested.


Pauline Oliveros, top row, 12th from left, MacGregor Elementary School, Houston, Texas, 1939.

# Many Strands 

by Pauline Oliveros

From a Sound Journal
Sept. 29, 1972: Bob Brown brought a Javanese Gamelan from Cal Arts for our World Music Seminar. The music is gentle, caressing, and floating. An opposite to the Balinese Gamelan, which is strident and arousing. I listened and slowly sank into a delicious trance, which is like light sleep, although the music is very much present in this altered state of awareness. When the piece ended, I "woke up" marvelously refreshed after the end of a long, hard day at the end of a long, hard, first week of school.

Oct. 8: Walking along the sidewalk at Cal State University, L. A., recently, I heard a rustling. I saw some leaves whirled by the wind against the sidewalk. The sound continued as my ears and eyes traveled to a rustling fountain, the ultimate destination of the sound of the rustling leaves. Wind merged with water.

Unity through variety-variety through unity.

Elements: Similarity of the sounds (unity), the transient swirling of the
leaves, the static nature of the fountain (variety), the direction of the moving sound (variety). How can unity dominate without destroying variety and vice versa? How can the two principles illuminate each other? (Like two mirrors held opposite, reflecting each other.)

A man's voice piercing
Through the air,
The northern stars echo
A beating fulling block.

> -Basho:

The Narrow Road to the Deep North
(Philosophical reflection)
Hardly a hint
Of their early death,
Cicadas singing
In the trees.
-Ibid.
Oct. 12: Everything has to do with music.

## Elephant Ears!

Oct. 23: From the Tibetan Book of the Dead, Evans-Wentz. "Tibetan
lámas, in chanting their rituals, employ seven (or eight) sorts of musical instruments: big drums, cymbals (commonly of brass), conch shells, bells (like the hand bells used in Christian Mass service), timbrels, small clarionets (sounding like Highland bagpipes), big trumpets, human thigh-bone trumpets. Although the combined sounds of these instruments are far from being melodious, the lámas maintain that they psychically produce in the devotee an attitude of deep veneration and faith, because they are the counterparts of natural sounds which one's own body is heard producing when the fingers are put in the ears to shut out external sounds.

Stopping the ears thus, there are heard a thudding sound, like that of a big drum being beaten; a clashing sound, as of cymbals; a soughing sound as of a wind moving through a forest-as when a conch shell is blown; a ringing as of bells; a sharp tapping sound, as when a timbrel is used; a moaning sound, like that of a clarionet; a bass moaning sound, as if made with a big
trumpet; and a shriller sound as of a thigh-bone trumpet. Not only is this interesting as a theory of Tibetan music, but it gives a clue to the esoteric interpretation of the symbolical natural sounds of Truth, which are said to proceed from or to be the intellectual faculties within the human mentality."

Oct. 23: Visiting NMCE rehearsal this morning (New Music Choral Ensemble, directed by KennethGaburo as part of Project for Music $E \times p e r i m e n t)$. The entrance-vibrations-identity search, role and game playing, not pitched but
some yaw and maw. Clean up the space. Hey! Linda, you missed a lot of cigarette ashes over by my chair. It's time to begin. WHERE IS GABURO!?? Shall we begin something? (After all, there are visitors present. Strangers, too.) Milling around. I meditate. The annex resounds. Gaburo arrives. Attención.

## The Threshold Exercise

What is the threshold of audibility? For whom? Transmit at the threshold. Feed back. O.K. I am sitting nicely, on the way to Theta. Head jerk. Am awake. Head jerk. How does our automatic gain control work?

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The threshold changes with environmental inclusion/intrusion. Masking phenomenon.

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How did I know the piece was over? How did they know? Second time it happened again. I knew because my eyes opened. They knew because they stopped.

You must become the receiver in order to transmit at the threshold of audibility. You must become the transmitter in order to receive at the threshold of audibility. You need Confucian commitment to THE RULE.

Instruction Piece No. 2 for NMCE: Sit in a circle. Smoke. Make all thought or activity secondary to the act of smoking. Perceive the smoke and the act of smoking during the entire burning of the cigarette or cigarettes.

Oct. 24: Lester Ingber (Karate Master and Theoretical Physicist)
pointed out yesterday morning that in order to examine a minute lapse in attention, that the probe, attention, must focus to a smaller point than the lapse in attention. This is true because one needs a probe which is smaller than the area to be examined. If attention can be focused to the fine point necessary, then the smaller mass (fine focused attention) is attracted to the larger mass (lapse in attention) instead of vice versa.

In order to take in a large area, one must learn to de-focus the eyes. Clarity of detail is sacrificed for the quantity or overall view. De-focusing also rests the eyes. What is the reaction time, I wonder, between focus and de-focus? The range? From micro-vision to macro-vision? From external to internal? Can one observe the switching function from external to internal? How about de-focusing the ears? How fine is the focus needed
to comprehend intelligence or information? How to listen to music as a whole, time becoming space? This happens as an internal phenomenon. Mozart heard in a flash a whole composition. So do I when lucky. Then the hard work of "unravelation." Sometimes not so easy. (How to bypass blocks?)

In playing Stravinsky, one must exchange probes (time units) in order to perform the rhythms correctly; i.e., then ord, is the smallest unit. One myst switch from feeling d'sto feeling ${ }_{5}$. What is the reaction time?

Oct. 27: Stuart Dempster's Concert: A new musician this time and I have known him for 15 years. He was always good. Could play anything. Two years ago he was excellent, an absorbing performer; but today Dempster is in a new realm. It is easy to exclaim about dynamic range. It is wide and superb, facility is remarkable, accuracy near perfect, articulation incredible ... all these things and more, but the total picture is inexplicable. Dempster is out of the way-long live the true Stu!

I suspect that his devotion to the Dijiridoo (an Australian meditation instrument played by the aborigines), Yoga, Bates Eye Exercises, and Adele Davis' vitamin regimen is playing a large role in his transformation. Thank you, Stu, for a tremendous send-off for us at U.C.S.D.

Nov. 3: Tsun-Yuen Lui in a recital for Pi Pá and Chin. We are indeed fortunate. The Buddhas carved on the ends of the tuning pegs of the Pi Pa were all four smiling. What a follow-up to Dempster!

Mr. Lui, I dreamed your concert over again last night. You were a magical figure in the dream as you were in reality.

## The Chinese Cool:

The figure sits quietly, robed and relaxed, poetic pointed fingers. The music pours through the instrument, speaking subtly, passionately. It is pictorial, like calligraphy. Each sound, its own life, kaleidoscopic images. A
broad palette, scaled to a meditative range. Would that I could hear with your ears while you are playing. This music is as much for the player as the listener, a dynamic difference in projection between West and East. The listener must project into the music rather than vice versa, as in the Western tradition. The amplification was necessary. What a pleasure it must be to be able to hear at the scale of the dynamic range of the Chin in an open environment! Have you heard a pin drop lately?

The Yaqui Indian Cool:
"How can I stop talking to myself?" "First of all, you must use your ears to take some of the burden from your eyes. We have been using our eyes to judge the world since the time we were born. We talk to others and to ourselves mainly about what we see. A warrior is aware of that and listens to the world; he listens to the sounds of the world."

> -Don Juan Journey to Ixtlan: Carlos Castaneda.
"Our normal waking consciousness, rational consciousness, as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different."
-William James.
Nov. 10: Freedom of motion is a primary need. Marjorie Barstow from Lincoln, Nebraska. She was an assistant to F. M. Alexander (The Resurrection of the Body), famous during the '20's for Alexander technique; exercises for realigning the body to its natural position. Ms. Barstow's message was very simple: "Freedom of motion is the nearest we get to relaxation."

She worked with our students, easing the head away from the body saying, "Lead with the head easing upward, the body will follow." Her hands are magical heaters. I felt them on my neck for hours afterward. "What are you doing which you don't need to do? A fixture which is immobile (your body's playing
position) will tend to do that to your music."

As she moved people's heads and stretched their arms while they were playing, dramatic changes occurred in tone quality for the better. "You need, not a position, but a relationship."

Dec. 9: Manfred Clynes has been here the past two weeks under the auspices of Project for Music Experiment. He has a book forthcoming on Bio-medical Engineering (concerning the measurement of emotion), which is not to be missed. He is a marvelous
musician as well as physiologist at Rockland Hospital.

Besides explaining his Sentic Cycles, a training method for the direct expression and measurement of emotion, he has been provoking us with statements like, "The last quartets of Beethoven are psychedelic, intended to trigger internal states rather than outward physical responses. Beethoven was interested in Eastern Philosophy during the third period." (Clynes also has visited Goethe's house in Germany, which is painted according to Goethe's theory of colours. Goethe was a man who lived according to his theories.)

SEX







Dec. 20: On the way to Berkeley. Looking forward to meeting with composer Anna Lockwood, face to face after several years of correspondence.

Dec. 24: Anna Lockwood has several pianos, including a grand, planted just so in her garden at Gatehouse Cottage, Essex, Ingatestone, England. They have been there for a year and a half. One is planted so a tree, as it grows through
it, will eventually carry the piano up into the air. At intervals, Anna goes to the garden and records the same passage on each piano. They are being tuned by the elements. They still play. (How will she eventually reach that piano in the tree? An up-in-the-air cadence?)

Anna is also collecting a river archive. She is receiving recordings of different rivers of the world from friends and cooperative people from everywhere. She intends to play this collection in sequence when she has enough. Send her a river. (For best
results, make a long recording, close-miked.)

Feb. 9: Vivian Fine appeared and was truly fine. She teaches at Bennington College, Vermont. Besides composing, she is a terrific pianist. Her own music rings with authenticity (CRI Recordings). She was a pupil of Ruth Crawford Seeger (a remarkable composer who died too young), thus unlike most of us females, had a model and never considered herself unnatural, consciously or unconsciously, for writing music. Her composition comes out of the tradition of Cowell and Ives. She delivers that music extremely well as a pianist.

She related her experience of the ' 30 's and reminded us that there were not many composers around in those days. Then, they all knew each other. She mentioned "Boulangerie" and how Ruth Crawford was a member of the early Avant Garde. Significant that there was at least one woman in that early group and that Nadia Boulanger, a woman, influenced so many of the American composers.

Feb. 10: Pandit Pran Nath with his disciple, Terry Riley, floating dreamily around the campus. North Indian singing, very high spiritual discipline. Students in his seminar received a gift of inestimable value.


Project for Music Experiment (better known at U.C.S.D. as PME), funded by Rockefeller, directed by Roger Reynolds, participants manifold.

Image: PME Building (an ex-Marine barrack bowling alley) floating gently skyward, vibrating madly while below Roger at his desk pedaling frantically to keep the whole thing aloft. Underneath the desk Karen Reynolds pedaling more frantically to keep Roger aloft.

PME staff, fellows, and researchers have doubled the input at U.C.S.D. By the second week of fall quarter the activity was at the level of the spring
peak last year. Lin and I wondered if we would collapse at the end of the first month. (Flash! Illness was rampant during January-February, including yours truly.)

Some of the activities: Ken Gaburo's NMCE IV-seven members rehearse daily, sensing, moving, vocalizing, exploring linguistics musically. Researcher Arne Zazlove, mime from Canada, offering seminar in choral movement.

## PSYCHOACOUSTICS AND PERCEPTION

Monday through Friday, February 26-March 2, 1973
PME Conference participants include:
Reinier Plomp: Deputy Director of the Institute for Perception, TNO, Soesterberg, the Netherlands, and Head of its Psychoacoustics and Speech Analysis Branch.
Fred Wightman: An Assistant Research Psychologist in UCSD's Department of Psychology, has done work in pitch perception both in the Netherlands and at UCSD.
James Fish: An oceanographer at the Naval Undersea Center, San Diego, is working primarily with the bioacoustics of marine mammals.
David Green: Professor of Psychology at UCSD has been concerned recently with temporal acuity.
Donald Norman: Professor of Psychology at UCSD, has worked in the areas of memory and attention, and presently is investigating the mechanism of question answering.
Max Mathews: Director of Bell Laboratories Acoustical and Behavioral Research Center and author of the MUSIC $V$ and GROOVE programs.
DISCUSSION: "Pitch Perception as a Problem" Reinier Plomp, Fred Wightman
ILLUSTRATED LECTURE: "An Introduction to Marine Bioacoustics" James Fish
SEMINAR: "Tonal Consonance \& Dissonance" Reinier Plomp
PANEL DISCUSSION: "Topics in Psychoacoustics and Perception" David Green, M. V. Mathews, Donald Norman, Reinier Plomp
SEMINAR: "Violin Resonances and the Electric Violin" M. V. Mathews
SEMINARS: "Timbre as a Multi-dimensional Attribute of Complex Sounds" Reinier Plomp
Session 1: "General Background"
Session 2: "Current Developments"
LECTURE: "Smoothing of Low Frequency Tones" M. V. Mathews
GENERAL DISCUSSION: All Participants
ILLUSTRATE D SEMINAR: "A Catalog of Computer Sounds" M. V. Mathews
PME CONFERENCE

COMPUTER PROGRAMMING IN MUSIC
Wednesday and Thursday, February 14-15, 1973
PME Conference participants include:
M. V. Mathews is Director of Bell Laboratories' Acoustical and Behavioral Research Center and the author of the MUSIC V and GROOVE programs.
Yuji Takahashi is a composer and performer long associated with the use of computer programming for composition and sound synthesis.
John Gray has worked in Stanford University's Artificial Intelligence Center during the past two years and has had an integral role in the development of timbric and sound localization work there.
Edward Kobrin is a Fellow of the Project for Music Experiment and developer, with Jeff Mack, of the Hybrid II 16-channel system.
INTRODUCTIONS \& INQUISITION
ILLUSTRATED LECTURE: "The Hybrid Computer Operating System, or "If You Give Me $\$ 30,000$, I'Il Have A Second Brain"-Edward Kobrin
DISCUSSION
LECTURE/DEMONSTRATION: "The Computer Generation \& Graphic Representation of Instrumental Timbres"-John Gray
DISCUSSION
ILLUSTRATED LECTURE: "An Introduction to Computer Music"-M. V. Mathews
SEMINAR: "Towards a Real Time Performance Computer"-M. V. Mathews
DISCUSSION
ILLUSTRATED LECTURE: "Programmed Creation: Composing As a Numerical Game"-Yuji Takahashi
DISCUSSION

10110
Feb.10: My affair with Beethoven continues. First I see him in drag on the cover of the February issue of Hi Fidelity magazine. Hmph! The editors are off as usual; everyone knows by now that he was really a Lesbian.

But to top if off, in December I visited my former horn teacher, Earl Saxton. As I approached his house, I heard a familiar tune but a very startling timbre, to say the least. Fascinated, I tried to comprehend this strangely beautiful version of the second movement of the Pathétique Sonata. Inside, Earl solved the mystery for me: 400 horns at some horn players' convention wailing away on this arrangement. He promised me a dub of the tape, too! What a sound! Four hundred horns. What ambience.

What sound is the most familiar to you?
Lester Ingber, Karate Master: "Something like, 'Buhhh-,' an internal sound $I$ listen to during meditation."
Max Mathews, Bell Labs: "I guess..., the violin. No, the human voice may be much more familiar."
Dedre Gentner, Psychology: "Someone's voice, I guess." Jean Charles Francois, Frenchman: "My own talking."
Chris Wells, Computer Science: "The song I sing to myself when I'm just day-dreaming."
Vladimir Voos, Composer: "My breathing."
Alan Johnson, Administrative Assistant: "My smoking."
Heidi Von Gunden, Composer: "My name."
Steve Gerber, Composer: "My son talking."
Barbara Alvarez, Herself: "KABC."
James Campbell, Professor: "A pure 3 rd, 5:4 ratio. I can pick that out in an instant."
Louise Wiggins, Secretary: "Probably my daughter's voice."
Bonnie Barnett, Associate: "The sound of my blood flowing through my veins. Whom! Whom! Whom!"
Irene Solomon, Secretary: "The telephone ringing."
Warren Burt, Composer: "Frequency modulation."

Charlie White, Composer, PME: "The sound of my car."
Ned Sublette, Composer: "A high-frequency tone which is the hum of my nervous system."
Irene Jackson, Student of Culture: "Me."
John Mizelle, Composer: "The sound of my mind working."
Larry Livingston, Clarinet: "Inside drumming."
Edwin London, Famous Muse: "My own voice, I guess."
Elinor Barron, Leucadian: "Ooooh, you can't ask me that!"
Alvin Lucier, The Only Talking Machine Of Its Kind: "My speech."
Ed Kobrin, Computer, PME: "It's actually a long story. The lady upstairs flushing the toilet. It sounds like Mt. Vesuvius erupting." P.O.: "Have you been to Mt. Vesuvius?" "No, but I have a conception of what it sounds like!"
Ron Robboy, Cellist: "Strangely enough, it's probably automobiles."
Ron Grun, Bassoon, PME: "The sound of the ocean, I guess."
Fred Mayer, Composer: "I can't answer! I don't know! The sound of my steel drums."
Tai-hsiang Li, Composer and Violin, PME: "Every sound."
Al Merian, Guitar: "All the sounds." Gary Yoder, PME: "My own voice and birds."
Mel Warner, Clarinet, PME: "I can't think of a sound that's most familiar to me!!"
Linda Vickerman, Singer, PME: "A sound $I$ hear in the air, the movement of the air I hear when I'm not distracted."

## MATERIALS EFFECTS

"Pythagoras was of the opinion that music contributes greatly to the health if used in an appropriate manner."

## What music???!

The trouble with music therapy, the field, is the assumption that music is something existing outside the individual and was created (not is) by elite individuals to be imposed on persons as empty receptacles. The

Susan Palmer, Composer: "The sound of my breathing and other general body hum-drum sounds."
Phil Larson, Singer, PME: "The opening of beer cans."
Jack Leung, Composer: "Thank you." Jack Pasless-Samme: "The toilet flushing."
Howard Crook, The Star, PME: "A bird in the morning."

From Music and Your Emotions, Liveright: "What could be more unique or more individual than what one person says he experiences? This is what is meant by subjectivity. This is the same ogre the scientist refers to as the "error of subjectivity."
"It does not require much study to see the possible error that may be committed in the complete acceptance of one person's experience as typical of other persons' experiences."
"Individuals differ in the way they experience the world around them. They have no control over these discrepancies, which are basically involuntary."

Vis-à-vis Heisenberg's Principle: "If we cannot accept with certitude any single person's observation of a relatively simple and objective phenomenon, because he is likely to be at variance with some other observer, what shall we make of the tremendous variability which meets us when we examine many persons' observations of the way in which they react to music or even to a simple tone?"

## LISTENERS OBJECTIVES

ultimate therapy would be to re-connect the individual with his/her own music well springs. Draw the music out. Value his/her sounds. Especially the ones lost or subjugated as a result of language.
"God made a statue of clay in his own image, and asked the soul to enter into it: but the soul refused to be imprisoned, for its nature is to fly about freely and not to be limited or bound to any sort of capacity. The
soul did not wish in the least to enter this prison. Then God asked the angels to play their music, and as the angels played the soul was moved to ecstasy, and through that ecstasy, in order to make music more clear to itself, it entered this body. And it is told that Hafiz said, 'People say that the soul, on hearing that song, entered the body, but in reality the soul itself was song.' "

> -Hafiz, Sufi, Poet of Persia.

PME Concert 1 - 10 February 1973 Music of the Sixties: The pieces all seemed short. Yuji Takahashi playing piano fiendishly. Eonta (1963) has fiendish piano part. Edwin London conducting the strolling brass. Loud. Difficult. Moving. An assigned ordering, engaging the players in concentration to a point. With my eyes closed, the movement of the brass was a subtle nuance. The space reflecting faithfully, cancelling (from my position) any high contrast in the sounds from the varying positions of the instruments. Yuji with taped fingers to support his Olympian playing. My eyes swung open to witness the cadence. (How did my eyes know? Early death.
"Eonta is a kind of homage to Parmenides."
-lannis Xenakis.

Music For Solo Performer (1965): Alvin Lucier, Elinor Barron-Alpha source. As John Mizelle simply and carefully applied the electrodes to Ms. Barron's head, the audience became unusually quiet and attentive. Since the procedure is unfamiliar at a concert, expectancy is replaced by fascination.

This is a theatrical constant in the previous performances that I witnessed in the sixties with Lucier performing. The drama intensified, the lights were low and Murphy's law went into effect. (If anything can go wrong, it will.)

Director Reynolds: "As you know, this is the Project for Music Experiment and sometimes experiments fail. Bear with us and we will find the problem." More drama as four technicians fuss, fume, and pore over the recalcitrant equipment. (The
problem was not in the equipment, but existed as a result of an inadvertant act. Someone plugged something else into a critical circuit unknowingly, causing hum. A common realization of Murphy's Law, which complements Erickson's Law: "The damn thing doesn't work.")

The audience waits; rains beat beautifully and furiously on the roof. Ms. Barron never abandons her meditative state, calm awareness, in order to generate Alpha, a brainwave of 7 to 13 hg . Alpha is a correlate of receptivity. The skill of the performer lies in the ability to keep generating Alpha bursts and to increase the amplitude of the bursts. (Yogis can generate continuous Alpha after years of autogenic training.) This skill is in inverse proportion to manipulation and usually vanishes with visualization.

When the piece began again, Ms. Barron had maintained her cool and one could hear the result of her Alpha, which caused speakers to resonate instruments such as drums, cymbals, etc. Unfortunately, after all was working, the technician stopped the piece too soon. He had obviously not remained calm and aware but had lapsed into Beta, a higher frequency correlate of judgmental activity. Early death.
"From the beginning 1 was determined to make a live performance work, despite the delicate uncertainty of the equipment, difficult to handle even under controlled laboratory conditions. I realized the value of the EEG situation as a theater element and knew from experience that live sounds are more interesting than taped ones. I was also touched by the image of the immobile if not paralyzed human being who, by merely changing states of visual attention, can activate a large configuration of communication equipment with what appears to be power from a spiritual realm. I found the Alpha's quiet thunder extremely beautiful and instead of spoiling it by processing, chose to use it as an active force in the same way one uses the power of a river."
-Alvin Lucier.

In Memoriam-Esteban Gomez (quartet) (1964). Trumpet, Ed Harkins; Trombone, John Mizelle; Clarinet, Melvin Warner; Baritone, Phil Larson.
"Esteban Gomez is concerned with very subtle and gradual deviations from a 'reference sonority,' within which the individual instruments are not distinguishable."

> -Robert Ashley.

Beauty died an early death. Why not a whole evening or bring sleeping bags and provisions? Camp with it for three days. We all deprive ourselves. Do you remember how long your attention span was as a child?
"For the listener as well as for the performer, everything depends on attentiveness, on experiencing the subtle shifts between unanimity and dissent."

> -Robert Ashley

Have you forgotten that attention is not a matter of seduction? Have you so little that you pay it rather than give it?

String Quartet No. 2 (1963-64). Michael Von Biel, Jim Stark, Tai-Hsiang Li-Violins; Ed Kobrin-Viola; Elinor Barron-Cello. Complex spectra. Busy. Players tensely engaged.
"The piece is involved with the maximum articulation and stirring up of the given materials under a certain local performance situation."
-M . von Biel.
The local performance condition in this case involved low-level amplification in order to distribute the materials more clearly throughout the space. The complexity of the sound gamut is characteristic of the Sixties and interpreted often by virgin ears as loud. It is complex but not loud. Loudness is illusory when the ear is attempting to analyze and integrate a wide-band sound. Fine performance. Seven minutes. Early death.

Bridges / (1968): Yuji Takahashi. Electric Keyboard-Yuji Takahashi; Amplified Cello-Elinor Barron.


Michael Von Biel: String Quartet No. 2

The electronic sound had a watery flow and never changed its timbral character. Thus one's attention could flow with the sound as it moved in detail dynamically and in location. The amplified cello drone with microtonal changes inserted timbral relief. As I sank further under, it all stopped too soon! Early death.
"Bridges $/$ deals with melodic intervals. There are 15 pitches and
several rules of transition. Pitches are thought of as landmarks. Intervals are streets which determine your travel from one to another. This is also the basic image, of the Persian Dastgah system. Their seven modes are named after ancient cities, and music is metaphorical travel among them.

In mathematics the theory of graphs deals with similar situations. The initiator of this theory, Leonhard

[^0]Euler, arrived at the idea in solving the problem of the seven bridges of Koenigsberg (Kaliningrad). Euler concluded that it is impossible to find a path crossing each of these seven bridges once and only once. To prove this, however, it was necessary for him to develop what later became the theory of graphs.

It is this theory that I have applied to the construction of sequences of pitches. The scope of its possible application is not limited to any particular system, temperamental, tonal or modal; however, the same theory could equally well be applied to timbres, sound sources in space, to any collection of modes and connecting paths. Such an abstraction seems to derive its power from mechanisms already implanted in our brains."
-Yuji Takahashi
MUSIC OF THE SIXTIES. EARLY DEATH.


[^0]:    

    The Pregel runs across Königsberg and surrounds Kneiphof. There are seven bridges. Is a walker able to cross every bridge once and only once?
    

    Supply a set of rules for the given pitches of transition from one to another. Discover various paths following the rules.

    Yuji Takahashi: Bridges 1

