

UNIVERSITY OF CALIFORNIA, SAN DIEGO

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SANTA BARBARA • SANTA CRUZ

CENTER FOR MUSIC EXPERIMENT
AND RELATED RESEARCH - Q-037

LA JOLLA, CALIFORNIA 92093

September 12, 1977

Herbert Shore
UNESCO Project on
Cultural Innovation in
Advanced Technological Societies
P.O.Box 1206
La Jolla, Ca. 92038

Dear Herb:

CME is dedicated to the notion that the interests of our artistic researchers can best be served and supported within a facility which is well equipped with the most current technology, and also properly staffed with persons who not only have the necessary technical and artistic expertise, but have a spirit of cooperation within common interdisciplinary objectives and goals. The Center is seen as a meeting ground for artistic exchange, events, performances resulting from research, information storage and retrieval, and a laboratory for research activities. The interests of CME researchers fall well within the goals and projects of TACT.

Appended proposals are continuations of research and activities which have been a part of CME since its inception in 1972.

A major interest at this time in relation to TACT would be to expand our facilities and staff as described in the attached, in order to better accommodate the proposals we have. The structure of CME is attached.

Sincerely,

A handwritten signature in cursive script that reads "Pauline Oliveros".

Pauline Oliveros
Director
Center for Music Experiment

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Enc.

The structure of CME is as follows:

1. The Technical Studio which includes a laboratory for design and fabrication of analog and digital equipment--a modest shop, an analog electronic music studio for sound synthesis and processing, a computer facility for sound synthesis and processing. The staff includes a digital engineer, an analog designer, a software systems designer and a part-time maintenance technician.
2. The Studio for Extended Performance is a space (formerly a bowling alley) with a performance area 40' X 60'. Audience capacity about 150. The space is equipped with a high quality 4-channel sound system, theatrical lighting which can be computer controlled, projection equipment both rear and front type. The staff includes a lighting technician who also manages the Studio with the help of current Associate Fellows.
3. The Documentary and Archive Unit includes a professional recording studio, a small archive room for auditing or viewing archive materials, equipment for field recording and for modest video documentation. Events taking place in the performance studio can be recorded in the recording studio. A computer retrieval and cross-referencing program has been implemented for the present holdings. CME Publications also exist within this unit. The staff includes a part-time graduate research assistant and assistance from the technical staff and current Associate Fellows.
4. The Colloquium provides an ongoing forum for conferences and research presentations for local and visiting researchers. All such presentations are documented and archived.

CME is housed in one building so that all units are accessible to each other. A part-time director, a full-time administrative assistant, a part-time secretary and graduate research assistants are provided by the University of California. The technical staff has been supported by funds granted by the Rockefeller and Ford Foundations. Additionally the resources of the University of California are available to CME on a recharge basis. Most immediately we would like to develop a proposal to enlarge our staff and expand our facilities.

In particular we would like to expand the Documentary/Archive Unit to become a major data bank in connection with other archives with similar interests. (Project 10 ACT: Data, Documentation and Archives) This would require initially the addition of a full-time archivist and a recordist to our present staff, in order to study the possibilities. Funds are also needed for the transcription and publication of materials.

We see the archive and its potential publications as an essential tool for research and exchange. Some sample institutions for connection with such a data bank are IRCAM in Paris, Smithsonian

The Structure of CME (cont'd)

in Washington, Aesthetic Research Center in Canada, etc. Expansion of the Archive/Documentary Unit would allow accommodation, or partial accommodation of many of the appended proposals.

Funding for our Colloquium would allow the further accommodation of major international conferences. (CME is hosting the International Computer Music Conference in October, 1977 in cooperation with the Music Department)

Our first priority is the Conference on Acoustic Musical Instruments (see appendix). This conference would be the first stage in establishing communication between interested persons, institutions and instrument makers, establishing a center of information storage, retrieval and dispersion, and identifying resources. This relates to OTACT Project 6 Musical Instruments.

Attached is a list of proposals which we would like to accommodate and an appendix of the actual proposals.

LIST OF PROPOSALS

1. The Exploration of Sound in Space: Roger Reynolds

"The aim is to achieve design and construction of a facility to be dedicated to investigating the effects of sound freely distributed in aural space." ACT Project 2 Audio/Acoustical Space.

2. Project: Acoustic Musical Instrument Resources and Related Research: Robert Erickson, Ron George.

"To establish an ongoing conference on musical instruments and an information center for interested persons and organizations."

3. A Multidisciplinary, Multicultural Symposium/Workshop on the Musical Use of the Voice: Extended Vocal Techniques Ensemble, Pauline Oliveros, Linda Vickerman

"To provide a multidisciplinary, multicultural forum wherein people who are professionally interested in the musical use of the voice can meet to exchange information, ideas and insights, allowing existing relationships to be more clearly perceived and generating new questions, procedures and approaches for future research."

4. Proposal to Establish an Ethno-Poetics Project: Jerome Rothenberg

"Collection, translation both technical and interpretive, and meaningful cataloguing of ritual and performance related materials such as oral descriptions of rituals, pictographs, magical writings, etc. Also contemporary poetry and verbal performance related to oral and tribal models."

5. CME-UNESCO Proposal: Allan Kaprow

"This project is to study the conditioning (or facilitating) of consciousness born of participation."

6. Proposition to Establish an Experimental Arts Station: KIVA, John Silber, Jean-Charles Francois

"Experimental Art Stations, like the Experimental Agriculture Stations before them are seen as similar centers of activity, resident resource with resident artists for the materials and means."

7. Well-Tempered Luminorum: John F. Forkner

"I would like to explore the modalities of the instrument as completely as possible." (The luminorum is already constructed.)

LIST OF PROPOSALS (cont'd)

8. Outline and Rationale of Proposed Research: G. J. Balzano

"The proposed research, then can be characterized by both psychoacoustical and musical goals. It attempts to study pitch perception as a function of properties of pitch collections and their underlying temperaments, and to provide a new method for exploring the musical resources of different micro-tonal scales."

9. Proposal to Travel Around the World: Barbara Smith

"I propose to travel around the world--to exchange through bits of new, art works or other products--whatever may be of value to create and pass on pointing to a level of information which may very well be unavailable through the media."

10. Performance and Electronic Instrument Design: Edwin Harkins

"Implementation of a computer input language not only for teaching/learning purposes but for almost unlimited use for composers."

11. Composers Inside Electronics: David Tudor, John Driscoll, Ralph Jones, Martin Kalve

"The development of rotating instrumental loudspeakers for electroacoustical music composition." (and performance)

THE EXPLORATION OF SOUND IN SPACE

Introduction

In some ways it may seem that the province of art is not decisively effected by the development of new materials or techniques. For there is a wide and welcome variety of ways in which aesthetic impulses may reach expression. Nonetheless, technical innovation has always been instrumental in art, and there are compelling recent instances where the availability of new technical resources has had profound impact on the scale and manner of expression within a discipline. Reinforced concrete had such an effect upon architecture. Musical expression has been based throughout recorded history upon organizing the basic characteristics a sound was understood to possess: pitch, duration, loudness, and timbre. The addition of another sound characteristic to this list could, naturally, enlarge the expressive and structural potential of music. For example, the increased formal and dramatic power of music during the 19th c. stemmed in part from the acceptance of dynamics as a musical variable. Historically, music has occasionally made use of rudimentary spatial disposition, as with antiphonal choirs in religious contexts. During recent decades, however, advances in recording and electronic techniques have made it possible to manipulate the spatial qualities of sound with growing sophistication, and composers have been tentatively exploring this new and literally unprecedented terrain.

Current Situation

Multiple channel recording and playback equipment now allows composers to create controlled and consistent results in the design of spatial factors. Not only complex antiphonies, but moving sounds, changes in sound source geometry, and even alterations in the apparent nature of the performance space itself are possible. Working with large computer systems or with modest analog devices, musicians in this country, Europe, and Japan have already produced a considerable repertoire of multi-channel tape compositions. (They include Chowning, Lucier, Reynolds, Stockhausen, Varese, Xenakis, and Yuasa.) Although these works provide listeners with a range of experience previously unknown, their formats differ widely and all reflect compromises in one or another dimension.

There are at least three basic areas in which information and skills need to be developed: 1) understanding the psychoacoustic and cognitive factors in the perception of aural space, 2) designing equipment that allows the manipulation of sound materials freely in aural space (as well as the construction of appropriate performance spaces), 3) developing a clearer understanding of the human experience of space and of the movement of sound sources of variable size within it. It should be emphasized again that the effort to gain control over moving sound in acoustic space represents a reaching out towards genuinely unprecedented components in human experience. Much of the technical capacity required already exists, and knowledge of related psychoacoustic factors is advanced. What is wanting is a sustained, knowledgable program pursued at a properly equipped facility dedicated to this purpose. A clear and compelling case can be made both for the

problem area and for its potential. Various facilities including the Center for Music Experiment at UCSD, the music component of the Artificial Intelligence Project at Stanford, the Institute for Sonology in The Netherlands, and the Nippon Hoso Kyokai in Tokyo have made occasional but uncoordinated and unsustained efforts. The Steel Pavilion built for Osaka's EXPO '70, perhaps the most sophisticated facility in existence for the exploration of sonic space in performance, has lain unused for the past seven years. It is evident that a thoughtful program, capitalizing on knowledge, energy, and capability already in existence, could dramatically redefine our understanding of music and its potential as a uniquely powerful form of abstract human experience. It could do so now.

Proposal

The aim is to achieve design and construction of a facility to be dedicated to investigating the effects of sound freely distributed in aural space; that this program should proceed under the guidance of experienced composers, engineers, and psychologists, with the occasional cooperation of others from allied disciplines such as architecture, dance, cartography, and the visual arts. As the aural aspects of this exploration mature, it would be natural to expand the investigation to include allied arts, but at the outset it should be a focussed and dedicated process.

Three stages are envisioned:

- 1) A meeting (or series of meetings) on an international scale, between composers and engineers who have a demonstrable productivity in the problem area, and of representatives of technical and cultural organizations potentially able to support the development of the proposed research facility. The purposes of this meeting would be to define the field in the most general and yet practical terms, to listen to and evaluate existing examples of sound-space composition, to explore ideal specifications for and location of the proposed facility, to further identify those best qualified to pursue the various facets of such a project.
- 2) A series of meetings (regional and focussed) where the best qualified in various aspects of the project would undertake detailed planning of the proposed facility.

- These areas to include:
- A) technical specification and design
 - B) funding and administration
 - C) ongoing development of the conceptual aspects of understanding and manipulating spatial experience
- 3) The construction and utilization of a facility for the exploration of sound in space.

-Roger Reynolds, CME
University of California, San Diego
August 29, 1977

PROJECT: ACOUSTIC MUSICAL INSTRUMENT RESOURCES AND RELATED RESEARCH

Throughout the world there is an enormous amount of experimentation and research being done by people, both singly and in groups, who are creating new and exciting musical resources as a direct result of the development of new acoustic musical instruments. These instrument designers and builders are using not only older techniques and skills to develop their instruments but new materials and technology as well. This exploration and the development of these instruments are having a definite and positive effect on our musical culture. Due to the lack of an established tradition and the newness of this wealth, little is known of the people devoted to this exploration, their work or their work and music in relation to others. Also, due to the fact that there is no existing network of communication, the type of research, scope, and results are virtually unknown and certainly not available in a larger social context. The purpose of the Acoustic Musical Instrument Resources and Related Research Project is to:

1. Promote communication among instrument designers and builders, performer, composers, teachers, manufacturers and modern recreators of old instruments (i.e., renaissance and medieval instruments).
2. Establish a network of resource centers, nationally and internationally, with the Center for Music Experiment and Related Research acting as the central coordinating agent.

These centers would act to:

- a. Further research and development of new electro-acoustic and acoustic instruments.
- b. Coordinate research efforts.
- c. Seek out new information on technology, materials, music, instruments, etc.
- d. Serve as centers for documentation.
- e. Disseminate materials and information to interested parties.

To implement this project we propose an Acoustic Musical Instrument Conference/Festival. The function of this conference/festival will be to establish contact with persons actively working in the field so that we may become aware of the scope of work being done; open up communications among these people, and in general, function as the foundation for the development of resource centers.

The development of the conference/festival will fall into three phases:

Phase I. Preparation

As preparation for the conference/festival we will contact designers and builders, composers, performers, etc., who are working in the field via travel, telephone and mail. After processing the resulting information we will then be in a position to properly assess the situation and plan the conference/festival. This process has already begun. A mailing list is being developed and some information on people and their work has been accumulated.

Phase II. Conference/Festival

The proposed conference/festival will span a three to five day period. It is planned at this time to hold at least two conference/festivals--one in the fall of 1978, followed by another in the fall of 1979 with the hope of inaugurating an annual event which will occur in various geographic locations. Each conference/festival will concentrate upon areas from the following outline:

- a. Performance--A continuous series of performances running throughout the conference/festival featuring new instruments, compositions, improvisation, multi-media, etc.
- b. Workshops--
 1. Technical--dealing with such topics as design, construction, instruments from found objects, etc., materials, tuning, performance, notation.
 2. Performance--(non-technical)
 - a. Open environments for musicians, non-musicians, and children to directly experience the new instruments.
 - b. Rehearsal and performance situations for composers and performers to compose for and perform on the new instruments.
 - c. Historical--Historical perspectives of recent trends which will include new technology and materials and their influence on the cultural environment, the cultural environment and its effect on technology and materials.

- d. Panel Discussion--An open forum involving all participants of the conference/festival.

The conference/festival will promote a free exchange of ideas in the following areas:

1. Performance concepts of both composed and improvised music.
2. Technical information concerning music both composed and improvised.
3. Sculptural and theatrical aspects of design, music and performance.
4. Instruments from found objects.
5. Technical information regarding construction, mechanical and electro-mechanical operations, materials, tuning and scales, performance techniques, as well as information concerning the development of instrument designs.
6. Notation
7. The integration of new music instruments, music and performance into the musical culture.

For the first conference we plan to feature the work and music of Harry Partch.

Phase III. Follow-up

The establishment of a central resource center within the Center for Music Experiment and the establishment of a network of resource centers both nationally and internationally.

Ron George
Associate Fellow
Center for Music Experiment
September 13, 1977

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Introduction

Among the great number and variety of musical instruments which have been used throughout history the human voice ranks as the most ancient and the most universal. It is also, by virtue of its intimate connection with the spoken language and other non-verbal utterances, probably the most immediate in terms of psychological impact on the listener. The musical use of the voice thus has particular appeal as a research area; the exploration of how, why, what, when and where people sing can generate a truly formidable amount of information about the human body, mind and social condition.

Certainly a great deal of research has already been accomplished in the area of the musical use of the human voice, in the voice sciences, musicology, ethnomusicology, acoustics, psychoacoustics, psycholinguistics, anthropology and other disciplines. However, the picture which emerges is very fragmentary. While much is known about the respiration, phonation and resonance of Western art music singers, through the work of such men as Appleman, Large, Sundberg and Vennard, very little of the same kinds of information is generally available about singers in the Islamic Whirling Dervish sect. Anyone interested in Western performance tradition can simply go to a music library and consult the works of Donington, Dart and the numerous other sources on the subject, but it is extremely difficult to find sources of information about performance traditions in many other musics, frequently because they exist only in oral history form. We may on the other hand consult the work of various authors if we would like to learn about ritual function of music among American Indians, whereas there are few, if any, studies of ritual function of the various other musics found in contemporary American life.

In addition to being full of gaps, the picture is also inclined to be full of misapprehension, which is a natural result of the lack of a multidisciplinary, multicultural approach to the subject. We are often taught, if we are students of a particular kind of music entailing particular vocal behaviours in particular circumstances, that other musical uses of the voice are somehow wrong, in almost a moralistic sense. While it is reasonable to assume that one has to concentrate on certain usages to the exclusion of certain others to become extremely proficient in, let us say, Persian art music, can we reasonably thereby assume that all other vocal musics are intrinsically inferior and inherently dangerous to the continued health and proper functioning of the vocal mechanism? We not only can, we frequently do make such assumptions.

Perhaps the situation can be put in a clearer perspective by the observation that most of the research done to date has not been specifically addressed to the human musical use of the human voice, to how, why, what, when and where we as a species sing. It is true that this is an enormous field, far too great for any body of researchers to cover exhaustively in several lifetimes. It is also true that within even a single culture, how we sing is determined by why and what we sing, which is in turn influenced by when and where we sing. We cannot realistically pursue one thread of this human fabric without quickly becoming entangled with all the others.

If we intend eventually to fill in the missing pieces and to clear away the misapprehensions, the first thing we must do is to clear the air, to remember that to study how people sing is to study humans, to study why people sing is to study humans, to study what, when and where people sing is to study humans. The division of labor into separate disciplines of study is constructive only if we continually bear in mind that each piece must ultimately seamlessly interlock with all the others if the picture is to be free of distortion.

Secondly we need multicultural, multidisciplinary forums so that the many people (singers, teachers, composers, voice scientists, musicologists, etc.) who are profes-

sionally interested in the musical use of the human voice can meet and communicate in a milieu which illuminates in a variety of ways basic common human ground in terms of vocal production, musical structure, and in the personal and social contexts and functions of singing, and which at the same time illuminates the figure, as it were, the diversities which exist from culture to culture.

INFORMAL STATEMENT OF PROPOSAL

The Center for Music Experiment and Related Research proposes to conduct a two-week-long multidisciplinary, multicultural symposium/workshop on the musical use of the voice.

Purpose

The purpose of this symposium/workshop is the provision of a context wherein people who are professionally interested in the musical use of the voice can meet to exchange information, ideas and insights, allowing existing relationships to be more clearly perceived and generating new questions, procedures and approaches for future research.

Investigators

The Principal Investigator would be Pauline Oliveros, composer and director of the Center for Music Experiment. Associate Investigators would be members of CME's Extended Vocal Techniques Ensemble (EVTE) William Brooks, Edwin Harkins, Deborah Kavasch, Philip Larson and Linda Vickerman. The board of referees and advisors would include voice scientists John Large and Johan Sundberg, ethnomusicologists Bruno Nettl and Leanne Hinton, folklorist Sam Hinton, psycholinguists Ursula Bellugi-Klima and Edward Klima, psychoacousticians Gerald Balzano and David Wessel and others.

Visiting Artists

Integral to the symposium would be eight distinguished artists from both folk and art music traditions. The United States would be represented by one art music singer and one American Indian singer; other traditions being considered are the Mongolian reinforced harmonic school, the Tibetan octave multiphonic tradition, the Bulgarian folk tradition which uses yodel-like ornamentation and the Swiss yodelling, Persian Art and Spanish Flamenco traditions.

Structure

The two-week period would consist of four kinds of interlocking activities, all of which would be open to the public:

- A. Performances by the EVTE and the visiting artists.
- B. Lecture/demonstrations and Master Classes conducted by the EVTE and the visiting artists.
- C. Reading and discussion of papers in various connected disciplines.
- D. Panel "summing up" discussions including EVTE, the visting artists and representatives from other disciplines.

Scope

Obviously the entire area of "how, why, what, when and where people sing" cannot be encompassed within a single two-week period. To establish proportions which are both meaningful and manageable a specific facet of the subject, such as voice production, would be chosen as a central topic which would then be examined from a variety of viewpoints. One, of course, would be a comparison of conceptions of voice production present in each of the participating traditions; others might include the relationship of voice production to stylistic considerations such as phrase structure and ornamentation, to the spoken versions of the various languages represented, to emotional expressiveness, to traditional combinations of voices with each other and with other instruments, to the particular kinds of acoustical spaces traditionally used for performance and so on.

Tangible Results

All events in the symposium/workshop would be appropriately documented with sound and video tape and photography. These documents would become a permanent part of the CME Archive, where they would be available to all interested persons. To provide greater general accessibility, many of the events would also be documented in written form and published by the CME publication series. Among the written documents would be a general proceedings publication as well as a series of smaller articles dealing with specific categories of information. Papers which are commissioned for the occasion and papers which are written as a result of it will be reviewed for publication by CME and cited, together with such papers published elsewhere, in the CME Newsletter, "Directions."

Advantages of Location at CME

The location of such a symposium/workshop at the Center for Music Experiment is advantageous from several points of view. Both the Center and the UCSD Music Department with which it is loosely affiliated have in the past sponsored conferences, performances, lectures, workshops etc. in many areas related to the musical use of the voice in both Western and non-Western traditions. Consequently there is already a favorable milieu which includes professionals from many disciplines, from the University and from the community at large, who have a strong interest in seeing such an event come to pass here. The professional experience of the Principal and Associate Investigators make them a logical choice for the planning and implementing of activities of this nature. Pauline Oliveros, in addition to being a composer of international stature, has worked for many years in situations involving people of diverse ethnic and professional backgrounds. The CME Extended Vocal Techniques Ensemble represents a particularly significant resource. These people, who are or have been members of the Music Faculty at UCSD in the areas of theory, composition, performance, musicology and criticism, have during their nearly five years of ensemble existence systematically explored, documented and incorporated into a large performance vocabulary vocal usages of a wide variety of ethnic traditions as well as non-traditional experimental vocal usages. EVTE's extensive experience in conducting performances, lectures, seminars and workshops throughout the United States and Europe make the Ensemble a natural and unique interface among performers from different traditions and between performers and persons of other disciplines.

The CME staff has considerable experience in organizing and implementing large conferences; in this situation they may also have the assistance of the University Extension Service. As regards spacial and technical requirements, CME and the Mandeville Center for the Performing Arts, which has been reserved for the period, would be fully adequate. The city of La Jolla would have no difficulty in accommodating the large number of people who can be expected to attend.

Implications for the Future

This Symposium/workshop represents a significant precedent in the creation of a humanistic approach to the subject of the musical use of the voice. If such an approach is to become fully operational, there will obviously be a great need for more activities of this nature. Therefore, the Center for Music Experiment is regarding this particular event as a pilot project which would ultimately result in an institutionalized, ongoing series of Symposium workshops on the musical use of the voice.

Pauline Oliveros
Linda Vickerman

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Proposal to Establish an Ethno-Poetics Project

My purpose would be to establish an Ethno-Poetics Project (EPP) within the framework of the CME Archive and Documentary Unit, on the premise that most of the material assembled does not only have a "nearly" musical character, but involves a constant interplay with language in its creative aspect. The EPP would, both, deal with materials that have a clearly musical side (principally songs and song cycles) and would also involve the collection of additional ritual and performance related materials such as oral narratives, orations, spoken rituals, oral descriptions of rituals, pictographs, magical writings and etc. In addition to traditional poetry the EPP would also deal with contemporary poetry and verbal performance related to oral and tribal models.

The three basic tasks of the Project are as follows:

1. Collection
2. Translation
 - a. technical
 - b. interpretive

(Both would include the services of poets and scholars)
3. Meaningful cataloguing of materials to stress their relevance to contemporary poetries and to enhance their availability as models.

Jerome Rothenberg

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PROPOSAL FOR C ME-UNESCO

Short Background The most innovative feature of the Happenings of the late 1950's was their literal involvement of audiences. Shortly afterwards, the experiment led to the elimination of the audience entirely and its replacement by participants. Participation became the key concept of the art form.

Parallels began to appear spontaneously in poetry, theater, sculptural environments, film, dance, music and (later) video. At the same time, the boundaries between all the arts began to blur; and similarly between them ^{as a whole} and daily life. In a sense each was participating in the other. "Participation", both as impulse and idea, may well have been symptomatic of a critical change taking place in the West where, until then, the clear separations between art, people and daily life were unquestioned. If this is an accurate insight, it implies far more than a shift in the arts. Western culture may be turning in its own way toward more holistic notions of reality still to be found in certain non-technological cultures, and once prevalent in the remote past. This is not a brief for the far away and long ago. To the contrary. It is to recognize a hopeful sign of the times: technological civilization which seriously contributed to our loss of contact between our minds, our feelings and our bodies, and between our fragmented idea of our selves and society's institutions, may be coming around to providing the means (and pressures) for integrating these fragments. This is by no means a unique thought, but the arts which have traditionally been viewed as early warning signal and as sanctuary for the most alienated of society's souls, may be now providing some helpful tools for adapting to cultural change.

Foreground and Proposal Some of the participational Happenings became "Activities" and evolved during the 60's and 70's into concise models of everyday human behavior. How we use the telephone, self-presentations in public, covert and overt body messages, promptness and tardiness in keeping appointments - are typical examples. These in turn led to investigations of the subtler kinds of awareness we experience within these same everyday conditions: intuition, proprioceptive sensitivity in closed and open spaces, biological time versus clock time, left-handed and right-handed consciousness...

Such lifelike Activities - apparently playful because they are goal-less - are performed in the ordinary world without stage, audience or rehearsal. They require no special skills. But participation and heightened consciousness on an experiential level remain their central point. The participants are the art work and the art work is simply another way of referring to an integrating sense of reality.

The proposal is to study this conditioning (or facilitating) of consciousness born of participation far more closely than has been done up to now. What exactly happens under the special conditions of an Activity? What sorts of feedback techniques could be developed to learn more about the participants' experiences - visceral, intellectual, social, and even transcendent? What sorts of carry-overs are there into everyday life after the Activity? How could these findings be extended into socially useful ways, that is to say, ways

that go well beyond the professional circles of the arts? Can these questions be aided by coordinating the study with social scientists? This experiment would attempt to document the findings over the course of a year, would consider their implications and would propose what might be done next.

Allan Kaprow
Dept. of Visual Arts
Univ. Cal. San Diego

John SILBER
Professor of Music
University of California
at San Diego

Jean-Charles FRANCOIS
Associate Professor of Music
University of California
at San Diego

A RESOURCE CENTER FOR CREATIVE MUSICAL AND ALLIED ARTS

THE EXPERIMENTAL ARTS STATION

In the perspective of a University where would co-exist, on the one hand, a fixed structure devoted to research in the creative arts, to the exchange of information, experimentations in new materials and teaching methods, the presentation and discussion of the problems of our time, with, on the other hand, a mobile structure yet to be invented, wide open to the surrounding community, a structure "on the field," offering off-campus, permanent activities to the general public. We present here a project which would contribute towards the establishment of the second structure, using the possibilities and materials offered by the first.

We think that the concept of the University as a regional cultural center reaching into the living areas of inhabitants themselves, is (a) a positive answer to the crisis of confidence facing the University system in the Western world; (b) an alternative to the very expensive, very exclusive, very difficult to change traditional presentation of the arts; (c) the possibility of developing a truly inter-disciplinary outlook, based more on oral and creative models rather than the traditional literary and cognitive models of our universities; and (d) the possibility of presenting to university students new perspectives for their future economic as well as musical life which are totally lacking at the present time.

We propose the following project:

- I. Our past experiences of creative musical workshops with children and adults has led us to the conclusion that a real alternative to traditional artistic instruction could not happen without a complete break with specialization; that the nature of modern technology, which should be the basis of the involvement of many people in artistic activities, is inter-disciplinary; and that the collaboration of people working in the fields of music, dance, art, theatre, and crafts, as well as other disciplines, is indispensable.
- II. Secondly, we should look for an adequate space in the middle of a medium-size conglomeration, a place that would be handy for the local population to attend (i.e., a city of 50,000).
- III. Experimental Art Stations, like the Experimental Agricultural Stations before them, are seen as similar centers of activity, resident resource with resident artists for the materials and means. The station would be used (a) for the projection of the activity of the group described in (I), in workshops for adults and children and in the presentation of their work; (b) an extension of the university artistic output; (c) a place available for local artists and community groups; (d) a center of documentation in the arts.

The Participants in the Project

The minimum participation for starting this project would be:

- 3 musicians (voice, wind, percussion)
- 2 dancers
- 1 visual artist (involved in lighting and video)
- 1 technological designer (computer, analog)
- 1 administrator (librarian, archivist)

The scope of the research demands the participation of artists involved directly with creativity, with a multiplicity of abilities (teaching and organizing workshops being an important part of the project), and who have a special interest in expanding the scope of their field beyond the narrow specialist and purely technical approach. Their autonomy and their integrity as individual artists should be encouraged in order to keep the widest richness available. The artists will meet as a group devoted to research and experimentation in Mixed Media. Each art form exists in its own right and will be regarded as a separate parallel force. The common research is done on a non-theoretical, non-verbal and non-written basis. The search is for the development of a discipline that would move away from the syntactical and analytical models of traditional Western art, avoiding (if possible) at the same time the pillage of Eastern philosophies, arts and techniques. A discipline that could hopefully be the basis for a new model of oral expression fit for our advanced technological society. It is evident that in this context, technology should play an important supportive role.

The Workshops

In order to fulfill the great need manifested in recent years for active participation by the general public in many human activities on a level of meaningful, small and local involvements, the artists will offer workshops on a permanent basis for children and adults. This is seen as an indispensable way of getting the public highly involved in the activities of artists for a better integration and comprehension. It should also generate new forms of expression and communication more satisfying than the lecture, the concert, the theatre, the exhibition, etc. The workshops would be closely related to the research and activities of the group, its discipline and mode of operation. Artists become guides rather than show, they serve and exemplify rather than be offered for consumption, helping others find their way toward spontaneity, toward abstract states, toward a definition which becomes thoroughly true to oneself. In this way, the public becomes an active part of the creative and experimental process. Resources to achieve these aims are the total expressive qualities of the human body (movements, dance, vocal expression) and technological extensions that allow easy physical access to creativity.

Residencies

The group additionally would offer short-time residencies (minimum two days, up to six weeks) to educational and cultural institutions. These residencies would include creative workshops, technical sessions in the different areas of the artists' abilities, lectures and performances.

The Center for Music Experiment, University of California at San Diego

Strong ties exist between this project and the Center for Music Experiment at UCSD. It is there that the experimental foundations of this project have been carried out through music courses that have served as models for these workshops and through research carried out at CME in the field of computer technology, analog design, instrument designing and building, performance electronics, extended vocal techniques, improvisation, dance, oral communication and mixed media art. As a center of creativity, UCSD would continue to be a strong source of challenging ideas, the Center for Music Experiment to be a resource focal point for research and technical assistance, the ideal training and information-gathering ground for the kind of artist implied by this project.

John SILBER: Performer, conductor, and theorist. Born in 1922, educated at the Eastman School of Music and Indiana University. Present position: Professor of Music, UCSD. Prior positions: Chairman of Comparative Arts, SME, Dallas, Texas, during which time I worked closely with dancers, actors, sculptors, and visual artists, including film ; I have had extensive activity as a conductor and performer of new music in numerous cities in the U.S.; a founding member of KIVA an improvisational group devoted to media work and presently in residence at the Center for Music Experiment, UCSD; author and editor of a number of articles on new music and new music education; recipient of a number of research grants in the field of music improvisation.

Jean-Charles FRANCOIS: Percussionist, composer, conductor. Born in 1942 in Vichy (France). Education at the Conservatoire National de Musique de Paris in percussion, music theory. Studied with Keith Humble composition and conducting. Co-director of Centre de Musique, American Center for Students and Artists in Paris (1966-1968). Principal percussion with the Melbourne Symphony Orchestra (1969-71) in Australia. Joined the Music Faculty of University of California in 1973 and currently Associate Professor. Extensive activities as a soloist and composer in France, England, Italy, Germany, Australia and the United States. Founding member of KIVA, a group devoted to improvisation and mixed media (1975). Associate Director of the Center for Music Experiment (1977).

Initial Budget

Four Center for Music Experiment fellowships	48,000
Supplies and equipment	
instrument design and building, performance electronics,	
archival tapes, lasers, light fabrication and research,	
technical support and secretarial support, office	
supplies	20,000
	<hr/>
TOTAL	68,000

Residencies Travel Support

Two days	\$ 1,000
One week	3,000
Six weeks	15,000

WELL - TEMPERED LUMINORUM

A proposal by John F. Forkner

Since 1967 I have been trying to perfect a performing light-projection instrument for use with music and as a means of musical expression in itself. Kinetic visual imagery is a less developed and possibly a less intuitive esthetic medium than the music of sound. Accordingly, one of the main directions of my research has been the attempt to find a satisfying balance between visual and acoustic imagery. For this purpose I have constructed and performed with a number of increasingly complex visual performance instruments of a type that I call "Tympanum Luminorum". These instruments are opto-mechanical in nature rather than electronic (video), and are designed to project directly onto a moderately large theater screen. Since the operating principle of these instruments is mechanical, they correspond more closely to acoustical rather than electronic musical instruments. Luminorum's closest relative is the pipe organ (particularly the tracker-action type).

The most recent version of the Luminorum has 33 separate image modules (roughly corresponding to the stops on a pipe organ) each playable from a flexible mirror "keyboard". The image modules are separated into three channels arranged so that three simultaneous layers of images can be produced. The image layers can each have any one of 30 fixed colors, or alternatively, can have continuously variable color controlled by two foot pedals . Three additional controls on each channel allow a variety of subtle changes of contrast and light distribution. Thus, this latest Luminorum has the potential for the complex variety of expression of a fairly large pipe organ.

The construction of this latest instrument is about to be completed, and represents nearly a ten-fold increase in complexity over its predecessor. In the four years that I have been playing with the earlier instrument, I have developed the rudiments of compositional and performance technique- including the beginning of a notation system. With the advent of the more elaborate instrument, both compositional form and playing technique will need to be extended considerably.

What I would like to do over the next year is to produce what I call the "well-tempered Luminorum". That is, I would like to explore each of the modalities of the instrument as completely as possible both technically and in composition. This exploration can take several directions. The instrument itself is not meant to be a totally fixed entity. There are a number of interesting technical possibilities including: downward projection onto a floor screen (of especial interest for use with dance): separate travelling motion of the three channel images (for wall or large screen): interpolation of concrete images and distortion of such images;and, simultaneous generation of sound from the light signals themselves to achieve a light-sound blend. Compositionally there are also a number of interesting questions: how to satisfactorily contrast the image layers (counterpoint); movement transition-entering and leaving the "stage"; color blending and changes- to enhance layering; form transition- soft to hard edge, simple to complex, etc. ; and, further evolution of an easily readable notation scheme for visual composition.

Since kinetic visual composition has very strong ties to dance forms, I would also like to explore this analogy by discussion and work with dancers and choreographers. Because of the dance analogy the Luminorum images work well with live dance performance. In working with dancers I would also like attempt some collaborative compositions- including dancers playing Luminorum itself.

The work that I would do would be documented as fully as possible including sketches, slides and- if funding permits- videotape or motion pictures.

JOHN FREDERICK FORKNER

Born: August 21, 1928 - Philadelphia, Pennsylvania

Present Residence: 2670 Solano Way, Laguna Beach, California

Education: I attended Drexel Institute of Technology from 1947 to 1952 studying mechanical engineering and earning a bachelor's degree. My hobby of designing and building telescopes, together with work experience at Philco Corporation, led to continuing my education at Drexel and obtaining an M.S. in Physics in 1958. My thesis "Gross Aspects of the Spherical Aberration Function" was an ambitious attempt to understand why lenses are so difficult to design.

Engineering
Background:

I went to work for the Philco Corporation immediately upon graduating Drexel in 1952, and started with designing test devices for radar equipment. This work expanded to include design of more complex systems, including large antennas used for satellite tracking. Eventually my interests in optics and my education led to working in optical design, particularly infra-red systems. With the advent of the laser, I moved into optical design associated with laser applications. In 1971, I decided to leave Aeronutronics (to which I had been transferred from Philco in 1965) to try free-lance consulting in optical engineering and to have time to follow my increasing involvement in art and technology. I am presently continuing consulting and developing special projection systems of my own design.

Art & Technology
Background:

A visit to Expo '67 in Canada so excited me by the uses of sound and light to transcend the difficulties of a multi-lingual audience, that I immediately started the design of a performing light projector, and patented same. I showed the machine several times in Laguna Beach, my home; and shortly thereafter met Richard Maxfield, the electronic composer, and collaborated on a number of local performances. A fortunate coincidence brought the artist, Robert Whitman, to Aeronutronics for a three-month residence during Maurice Tuchman's Art and Technology project for the Los Angeles County Art Museum. My interest in optics (and my beard) led to collaborating with Mr. Whitman in developing an environmental piece involving projected real-images, requiring me to invent a new large-mirror imaging system. This environment was constructed and presented as part of the Modern Arts portion of the U.S. pavilion at Japan's Expo '70. I partly re-designed and expanded the piece in collaboration with Mr. Whitman for an extended showing at the Los Angeles County Art Museum in 1971, as part of the A & T Show. Through Mr. Whitman I also became involved in the E.A.T. (Experiments in Art and Technology) organization, based in New York and Los Angeles. My involvement at that time was mostly moral support during the difficult design and construction of the 90-foot spherical mirror environment, later installed for Pepsi-Cola at Expo '70. Later I worked closely with the E.A.T. group in Los Angeles on a number of exploratory projects including a proposal to H.E.W. for a traveling art and technology van for schools in low-income areas.

CHRONOLOGY

- 1967-68 Designed and constructed first version of performing visual projection instrument, the "TYMPANUM LUMINORUM"
- 1968 Various performances with LUMINORUM, including collaborations with composer, Richard Maxfield and dancer, Leonora Portney-performances at USC and Laguna Beach museum
- 1969-70 Collaboration with artist, Robert Whitman, on real-image projection environmental piece for Los Angeles Co. Art Museum show "ART AND TECHNOLOGY" exhibited in U.S. pavilion of Japan's EXPO' 70
Advisor to E.A.T. group on design of large mirror environment for E.A.T./PEPSI-COLA pavilion at EXPO' 70
- 1971 Designed and built second version of LUMINORUM for visual art show at Hayward State University, Cal.
Collaborated with artist, Ardison Phillips, on large optical illusion environment called "DISTANCE ZERO" for Fullerton State University, Cal.- supported by Judith Thomas Foundation
- 1972 Worked with Ardison Phillips on second version of DISTANCE ZERO, involving projection with high energy argon laser-for Los Angeles State University, Cal. symposium: "Focus-Shelters for Mankind"
Was invited by Pauline Oliveros of Univ. of Cal. San Diego to work with Project for Music Experiment at UCSD
Designed and built small, portable lighting mechanism to provide lighting for Beckett's "PLAY" performed by group under Kenneth Gaburo at PME/UCSD
- 1973 Designed and built special optical projection system for creating a light environment "MOON-POOL" for use with Pauline Oliveros' meditation group at PME/UCSD
Designed and built third version of LUMINORUM for performance in PME/UCSD symposium: "Voices and Visions"
Appointed Fellow of Project for Music Experiment
- 1974 Designed and built very, compact portable lighting system for a small travelling performance group under Kenneth Gaburo
Delivered lecture series "Light as Energy, Light as Geometry, Light as Music (a performance with dancer Elaine Singer) at PME/UCSD
- 1975 Designed and performed special lighting for Pauline Oliveros' piece "CROW II" given as part of the opening of the new Mandeville Center for the Performing Arts at UCSD
Prepared first written composition for LUMINORUM for performance with the two-piano "Vision L'Amen" (two movements) by Messiaen at a Fresno Musical Society concert
- 1976 Prepared LUMINORUM composition for commissioned piece "Mid-night Rainbow" by Martin Grusin of UCSD
Formed performance group "Music of Sound and Light" with Ron and Joan George of UCSD
Designed and started construction of greatly expanded version of LUMINORUM instrument

CHRONOLOGY (cont'd.)

1977

Completed construction of new (fourth) version of
LUMINORUM

Collaborated with composer, Martin Grusin on his piece
"CHANT" for voice, dancer and LUMINORUM (funded by grant
from the National Endowment for the Arts

Technical Papers:

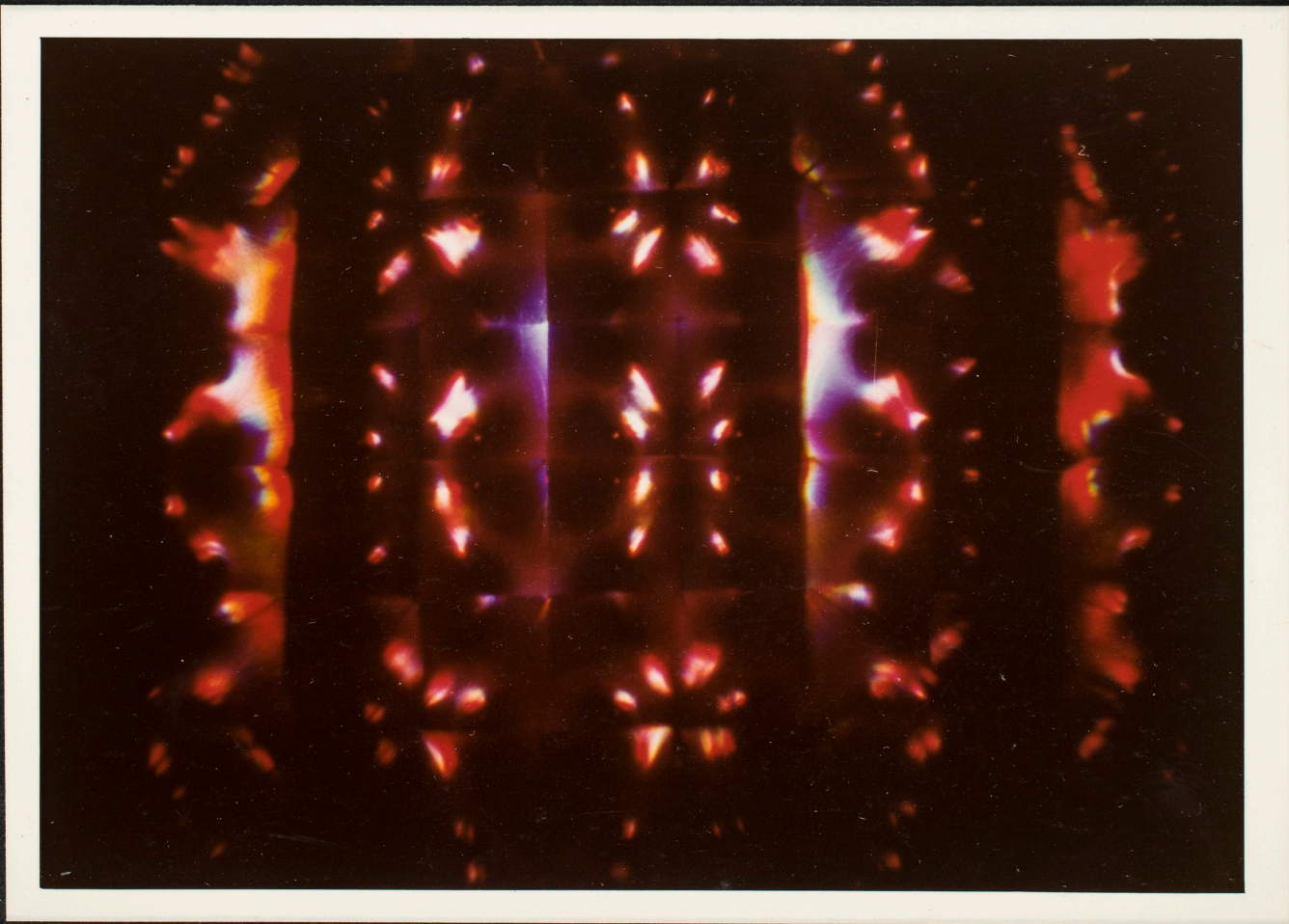
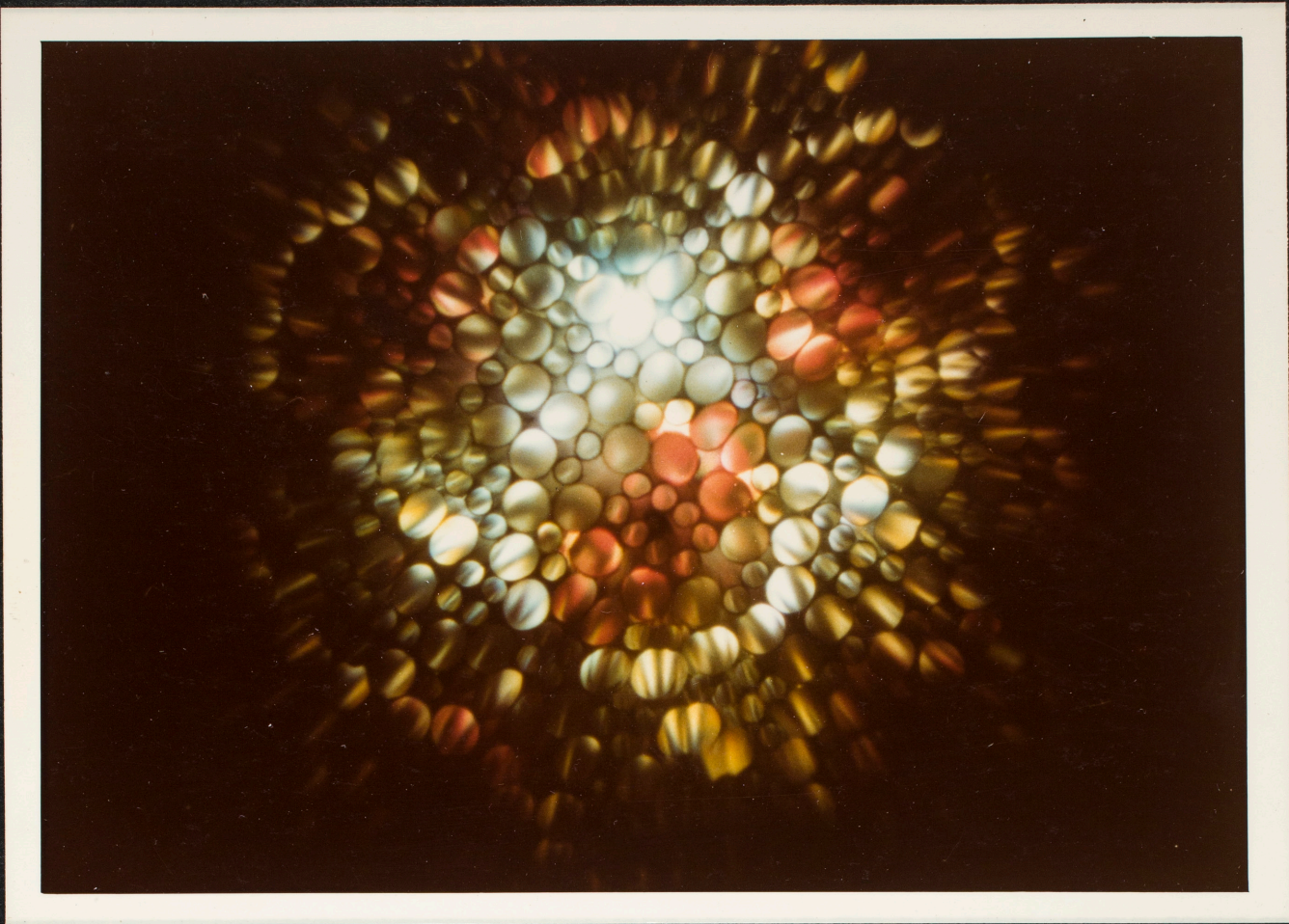
- "Note on Recent Demonstrations of New Color Mechanisms", S. Berg and J. Forkner, Journ. Opt. Soc. Am., 1959.
- "A Method of Visualizing High-Order Spherical Aberration and OSC", John F. Forkner, presented at spring meeting of O.S.A., Jacksonville, 1959.
- "A Non-Framing, Fiber Optics Motion-Picture Camera," J.F. Forkner and J. W. Jewitt, Phot. Sci. & Eng. 1964.
- "Enhancement of Weak Photographic Images by Coherent Optical Processing", J. F. Forkner and J. W. Jewitt, presented at S.P.S.E. meeting, 1965.
- "A Photographic Recording Medium for 10.6u Laser Radiation", J.F. Forkner and D.D. Lowenthal, Appl. Optics, 1967.
- "Laser Obstacle Detection and Warning System", J. Halligan and J. Forkner, Philco-Ford and J. Ziomek and E. Marsh, Ford Motor Co. presented at Detroit A.S.M.E. meeting, 1971.

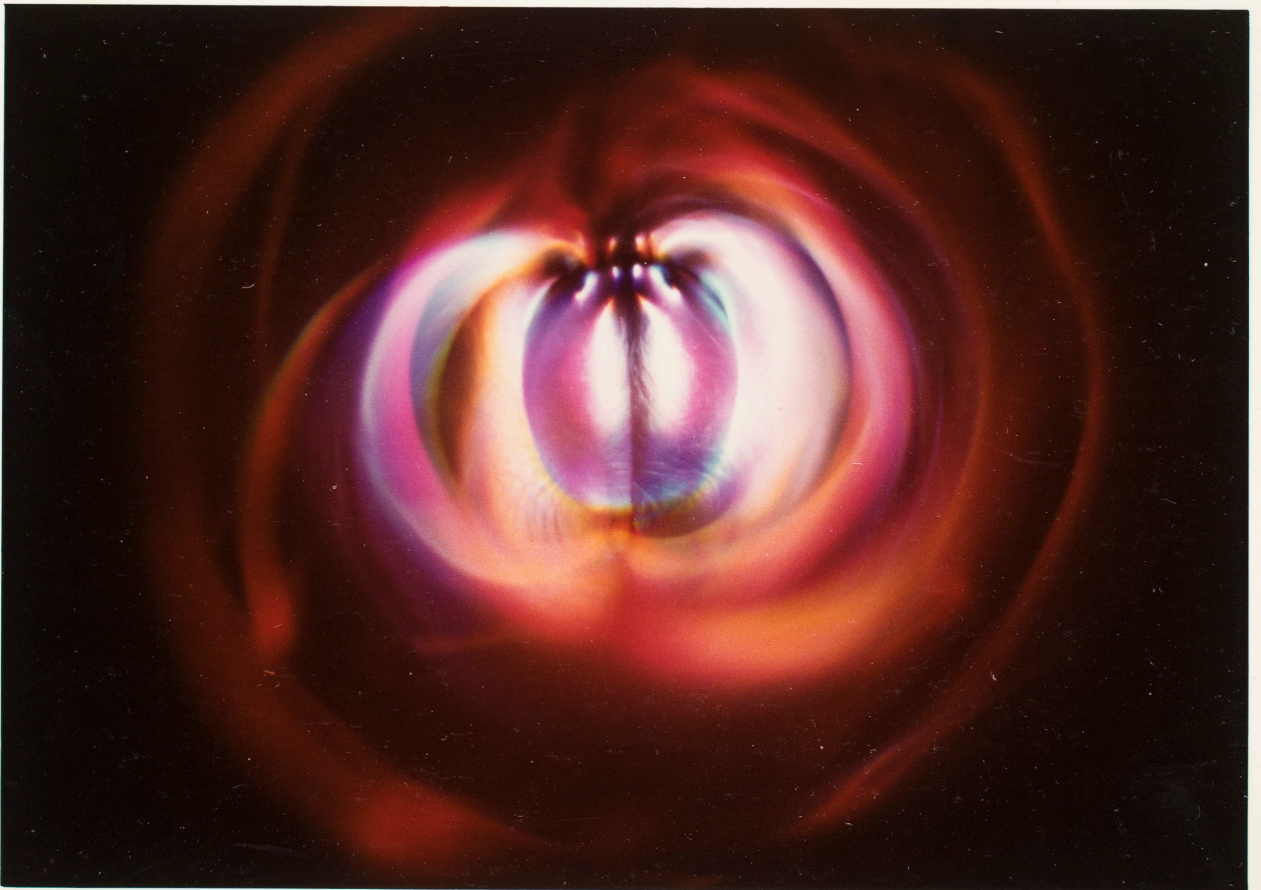
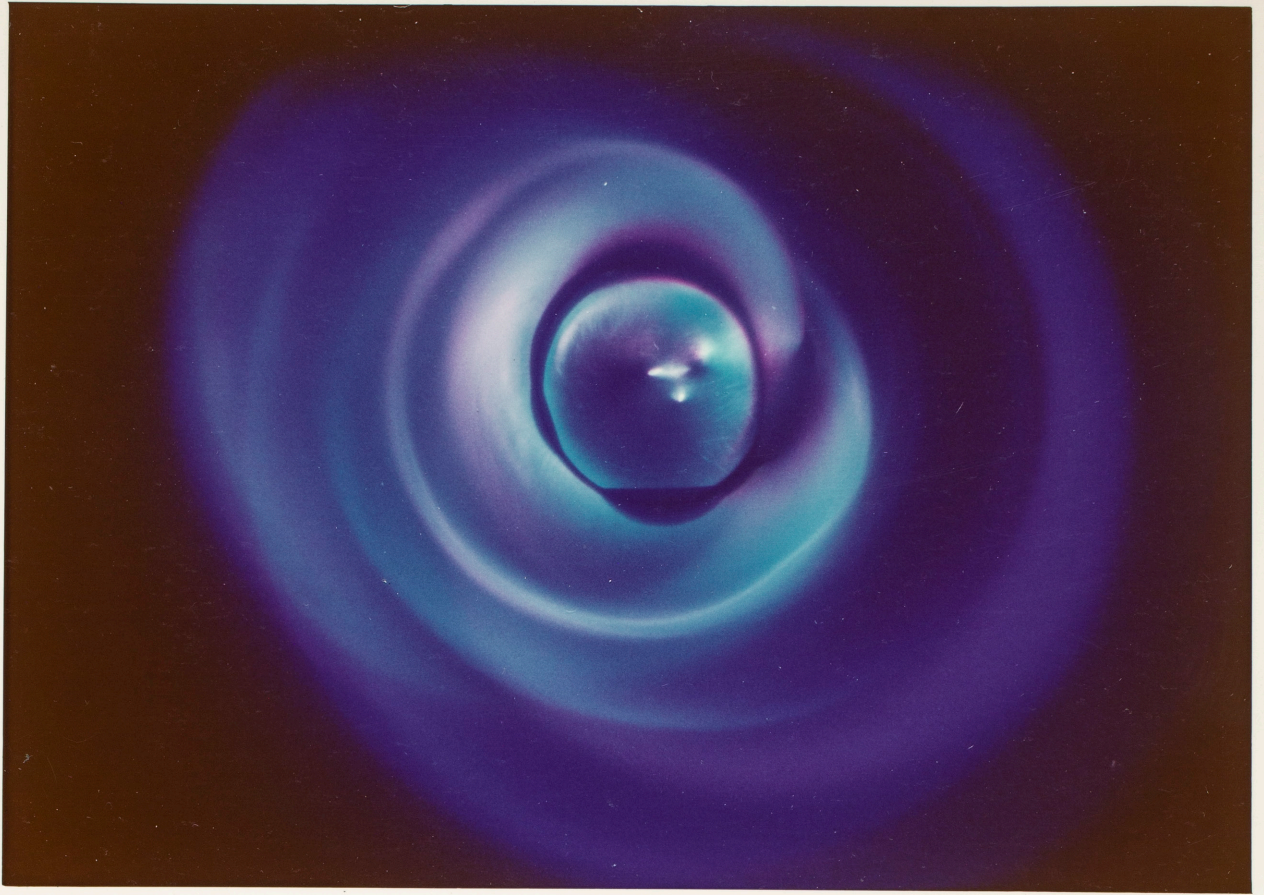
Patents:

- "Laser Q-Switching Device", 1969. (Assigned to Philco-Ford Corp.)
- "Light Projection Machine", 1971.

Art & Technology
Lectures and
Contributions:

- "Environmental Art", lectures on evolution of the Whitman environment and of the E.A.T. pavilion at Expo '70 presented by J. Forkner and A. Phillips for Henry Seldis' survey series, sponsored by the Judith Thomas Foundation.
- "Optics in Art and Technology", lecture by J. Forkner for E.A.T. series given at California State College at Long Beach as part of advanced studies program, 1971.
- Diary of the construction of the Whitman mirrors by Laguna Beach Unitarian church group, included in the catalog of the Art and Technology Show L.A.C. Art Museum, 1971; written with Riva Morton.





OUTLINE & RATIONALE OF PROPOSED RESEARCH

G.J. Balzano

Most current psychoacoustical research on the perception of pitch has studies, and varied, properties of single tones. However, the proliferation of musical scales through the ages, plus the well-known perceptual fact that melodies preserve their identity under transposition, both strongly suggest that the perceptible properties of pitch are determined rather by the system of relationships generated with other perceived pitches. The starting point for the present investigation is that pitch is a configurational, or contextually given property of pitch collections or pitch sets, and that the perceptual quality of a given pitch class is a function of, and can be modified by alteration of, the total set of pitch classes comprising a pitch event or pitch sequence. The perceptual status of a tri-tone, for example, is different when embedded in a pitch event constructed from a whole-tone scale than when embedded in one constructed from a major scale. The tri-tone's perceptual qualities should also vary further as a function of whether it is a member of a 12-tone equal-tempered chromatic scale. Indeed, according to the present formulation, part of the reason that microtonal scales have appeared not to offer significant new musical resources, as yet, may be because the microtonal qualities have usually been forced to assume roles, or nuances of roles, that have been inherited from 12-tone chromatic scale resources.

The proposed research, then can be characterized by both psychoacoustical and musical goals. It attempts to study pitch perception as a function of properties of pitch collections and their underlying temperaments, and to provide a new method for exploring the musical resources of different micro-tonal scales. These aims will be served by administering a variety of pitch recognition, interval indentifications, melody recognition, periodicity detection, and other tasks designed to elucidate the various kinds of information human listeners can extract from pitch sequences. Together they constitute an information processing approach to pitch perception and its contextual determinants.

Psychoacousticians have tended to lose sight of the fact that the discovery and creation of music was one of the very first results of experiments on pitch perception. The present research is a long overdue attempt to merge the divergent strands of scientific and music-theoretic approaches to this unique dimension of pitch.

PROPOSAL TO TRAVEL AROUND THE WORLD

I propose to travel around the world taking a group of 5 to 7 people including me--along who see the world each differently from a particular perspective--to stay long enough in each selected place on our journey so as to get a feel for the whole nature of the people and place. To exchange thru bits of news, art works or other products if feasible and compile en-route an ongoing artifact of our journey in the form of--news, poetics, song, music, social insight, cultural understanding and information, reportage, art, theory performance or whatever may be of value to create and to pass on --pointing to a level of information which may very well be unavailable thru the media.

At each site or location to create a stele as a marker of the journey--in each place learning and using a local technology for its fabrication--steel to basket weaving and making and marking this stele in collaboration with the people we visit.

I assume the journey might take at least a year to complete; it could very well be provocative--and/or threatening.

Types of persons who might be valuable to have as members of the groups--aside from myself as an artist.

1. Botanist
2. Anthropologist
3. Healer
4. Poet
5. Musician
6. Sociologist
7. Filmmaker--and/or video

Barbara Smith
32 So. Raymond
Pasadena, Calif. 91105

1-t

PERFORMANCE AND ELECTRONIC INSTRUMENT DESIGN

Edwin L. Harkins, Ph.D.
Acting Assistant Professor
Department of Music
University of California, San Diego
La Jolla, Calif. 92093

My involvement with the Center for Music Experiment and Related Research (CME) since 1972 has been basically in two areas-- performance and electronic-instrument design. For the 1977-78 academic year I will continue my research activities in the following ways:

- A. For the fifth consecutive year I will be a member of the Extended Vocal Techniques Ensemble--an ensemble which, from its inception has been concerned with exploring the potential of the human voice for musical-theatrical contexts. The resultant large vocabulary arose both from experimentation and from the study of other musical cultures. The ensemble has performed and lectured extensively throughout the Western United States and has done two very successful European tours each of the last two years. In addition we have collaborated with theatrical, video and film artists and have been involved in scientific research projects with an odologist and a laryngologist.

Endeavors for the coming year include performances in Vancouver, B.C., Europe, a Midwestern U.S. and Canadian tour, and the possibility of our first commercial recording.

- B. In 1973-74 I designed a rhythm machine essentially for teaching-learning purposes. The design of the digital circuitry and much of the actual building of the machine was done by Robert Gross, Technical Director at CME. The machine proved successful and now enters its third year at UCSD as an integral part of the Music Department's Basic Musicianship Program. The project has been helped by two grants from the University Administration-- one from the research committee and recently, one from the Chancellor's Committee on Instructional Improvement.

With the implementation of sound-generating computer systems at CME, it seemed only natural to attempt to realize the potential of the concepts embedded in the machine by taking advantage of the capabilities of the CME computer. Thus, last year I designed, again with the help of Robert Gross, a language for the input of rhythm. The program was written in Algol by Donald Gregory of the APIS Department at UCSD and ran on the University's Burroughs 6700 computer. In order to facilitate the actual real-time use of the program with audible results, it was necessary to translate the program to PASCAL, a language compatible with the CME

PERFORMANCE AND ELECTRONIC INSTRUMENT DESIGN (cont'd)

PDP-11 computer and to interface it with existing CME sound-generating languages. With the help of a grant from the Chancellor's Committee on Instructional Improvement this is now being completed by Charles Chapin of the APIS Department at UCSD.

During the coming year this computer language will be used both as a rhythmic teaching-learning tool and as an input language (with almost unlimited capabilities) for composers. A paper describing the system will be presented at the 1977 Computer Music Conference to be held at CME in October, 1977.

1-t

Composers Inside Electronics
Closter Road
Palisades, New York 10964
(914) 359-2259

25 August 1977

Pauline Oliveros, Director
Center for Music Experiment
UCSD
Q 037
La Jolla, California 92093

Dear Pauline,

Composers Inside Electronics are making application to NEA for composers' fellowships in research related to creative activities (see attached proposal). Our proposal to NEA involves a residency at an institution for a period of approx. one month. During this time the group will be involved in the development of rotating instrumental loudspeakers.

Our group project necessitates the use of a large workspace and office facilities, exclusively for group use. The workspace area should be secure, with facilities for medium scale mechanical construction; also needed is a large undampened open space for acoustical testing (minimum of 50'x50'x12'). We prefer workspace which receives natural light.

The type of construction envisioned would involve woodworking, metal work, welding, plastic molding, and electronic assembly and testing.

We are presently soliciting facilities as well as support for the project. In order to fulfill the application requirements for the fellowship we would appreciate a written reply. Thank you very much for your consideration.

Sincerely,

John Driscoll
Royal Jones
Martin Salvo
David Tutor

(Composers Inside Electronics)

JD,RJ,MK,DT/mk
Enc.

This proposal requests support for collaborative research, the intended result of which is the development of rotating instrumental loudspeakers for electroacoustical music composition. A variety of devices is desired, each capable of variable speed rotation on multiple axes, and of varying degrees of sound focusing.

The specific areas of research are:

- (1) the design and development of physical drive mechanisms, rotating frame elements, and output devices (acoustic drivers and lenses);
- (2) the study of the acoustical interactions of focused sound sources in complex spatial motion; and
- (3) the design of packaging for the transportation and assembly/disassembly of the devices in order to facilitate performance.

John Driscoll

Ralph Jones

Martin Kalve

David Tudor

(Composers Inside Electronics)

August 1977

John SILBER
Professor of Music
University of California
at San Diego

Jean-Charles FRANCOIS
Associate Professor of Music
University of California
at San Diego

A RESOURCE CENTER FOR CREATIVE MUSICAL AND ALLIED ARTS

THE EXPERIMENTAL ARTS STATION

In the perspective of a University where would co-exist, on the one hand, a fixed structure devoted to research in the creative arts, to the exchange of information, experimentations in new materials and teaching methods, the presentation and discussion of the problems of our time, with, on the other hand, a mobile structure yet to be invented, wide open to the surrounding community, a structure "on the field," offering off-campus, permanent activities to the general public. We present here a project which would contribute towards the establishment of the second structure, using the possibilities and materials offered by the first.

We think that the concept of the University as a regional cultural center reaching into the living areas of inhabitants themselves, is (a) a positive answer to the crisis of confidence facing the University system in the Western world; (b) an alternative to the very expensive, very exclusive, very difficult to change traditional presentation of the arts; (c) the possibility of developing a truly inter-disciplinary outlook, based more on oral and creative models rather than the traditional literary and cognitive models of our universities; and (d) the possibility of presenting to university students new perspectives for their future economic as well as musical life which are totally lacking at the present time.

We propose the following project:

- I. Our past experiences of creative musical workshops with children and adults has led us to the conclusion that a real alternative to traditional artistic instruction could not happen without a complete break with specialization; that the nature of modern technology, which should be the basis of the involvement of many people in artistic activities, is inter-disciplinary; and that the collaboration of people working in the fields of music, dance, art, theatre, and crafts, as well as other disciplines, is indispensable.
- II. Secondly, we should look for an adequate space in the middle of a medium-size conglomeration, a place that would be handy for the local population to attend (i.e., a city of 50,000).
- III. Experimental Art Stations, like the Experimental Agricultural Stations before them, are seen as similar centers of activity, resident resource with resident artists for the materials and means. The station would be used (a) for the projection of the activity of the group described in (I), in workshops for adults and children and in the presentation of their work; (b) an extension of the university artistic output; (c) a place available for local artists and community groups; (d) a center of documentation in the arts.

John SILBER
Professor of Music
University of California
at San Diego

Jean-Charles FRANCOIS
Associate Professor of Music
University of California
at San Diego

PROPOSITION FOR AN EXPERIMENTAL ARTS STATION

In the perspective of an University where would co-exist, on the one hand, a fixed structure devoted to research, the exchange of information, experimentations of new teaching methods, the presentation and discussion of the problems of our time, with, on the other hand, a mobile structure yet to be invented, wide open to the surrounding community, a structure "on the field," offering off-campus, permanent activities to the general public. We present here a project which would contribute towards the establishment of the second structure, using the possibilities and materials offered by the first.

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