It's becoming difficult to recall the United States music scene without a prominent contingent of women composers, now that Joan Tower, Meredith Monk, Shulamit Ran, Chen Yi, and Joan La Barbara, among others, appear with increasing regularity in classical music venues. But when the present anthology was released by Tom Buckner's pioneering label, 1750 Arch LP, in Berkeley in 1977, nothing comparable was available.

The original album title intentionally contained no reference to the gender of its participants. *New Music for Electronic and Recorded Media* was taken from a similarly named graduate degree program in the Music Department at Mills College in Oakland, from which many women (alongside many men) emerged as successful composers following their study of electronic music with Pauline Oliveros, Anthony Gnazzo, Robert Ashley, Maggi Payne, David Behrman, Paul de Marinis, and other supportive and innovative faculty.

As producer of this collection, I brought to the project many years of interest in the fate of the careers of female composers, including elder stateswomen Germaine Tailleferre and Peggy Glanville-Hicks, two particular favorites. When I discovered the iconoclastic scores of Johanna Beyer languishing in obscurity at the American Music Center archive in 1965, her curiously truncated career pointed out the complications confronting women composers, who naturally wanted to be taken as seriously as their male counterparts. Thankfully, times are better now for women composers and opportunities somewhat more plentiful.

It should be noted that 1750 Arch frequently limited its LPs to twenty-two minutes per side in order to obtain the highest-quality playing surface for its releases. Therefore, in the case of this anthology, several pieces (including those of Annea Lockwood and Megan Roberts) are heard in condensed form. In order to replicate this historical release, no effort has been made to re-introduce longer segments of those works or to add other works. The original liner notes are also reprinted in their entirety.

Notably too, this anthology marked the first commercial LP appearance of Laurie Anderson. Philip Glass recommended her to me just as the anthology was being completed. When her sample tape of five brief but provocative selections arrived from New York, it was difficult to choose from among the various offerings, and finally I decided to include two instead of one. Shortly thereafter Anderson performed in the Mills College Student Union to an audience of no more than twenty people, confirming her then-total obscurity. What a pleasure, therefore, to witness the subsequent stratospheric trajectory of her career a few short years later.

Some notes on the other participants: The rehearsal session for Johanna Beyer's *Music of the Spheres* took place at the home of Allen Strange, who had painstakingly arranged the instrumental music, full of glissandi, for electronic instruments. The one acoustic sound in this performance is that of a triangle, and during the course of the afternoon it became apparent that the designated player simply couldn't strike the instrument with the restraint of a trained percussionist. I volunteered to take over the job and thus became a part of the ensemble. This performance was the first act of what now is a full-blown revival of Beyer's music, complete with publications (Frog Peak Press) and performances (notably by Essential Music in New York). The electronically programmed lion's roar (this was before the availability of digital sampling) seemed an effective attempt to imitate this percussion instrument popular in the thirties with Varèse, Cowell, and others. Although a work of Beyer's appeared on a 78-rpm subscription release by Henry Cowell's New Music label, this marked the first commercial release of her music on recording. So too, this disc presented first appearances on disc of Laurie Spiegel, Megan Roberts, and Ruth Anderson.

Annea Lockwood, now a tenured faculty member at Vassar College, has enjoyed a stellar career as an inspiring teacher as well as an innovative musician. A more complete version of *World Rhythms* is available on the Experimental Intermedia (XI) label.

Pauline Oliveros continues to inspire audiences internationally with her active schedule of performing, composing, teaching, and organizing. Her nonprofit organization, the Pauline Oliveros Foundation, located in Kingston, New York, has successfully underwritten numerous projects of hers and other composers.

Laurie Spiegel, who has since invented an ingenious interactive computer program, Music Mouse, continues to live and compose in New York City. Her cavernous flat on Duane Street, once the end of the deserted Earth in southern Manhattan, now has been engulfed by the almost total gentrification of Tribeca, but Spiegel herself maintains a purity of artistic purpose and integrity which is incredibly admirable.

Megan Roberts, a true forerunner, was one of the earliest "punk" electroacoustic composers in new music. *I Could Sit Here All Day*, filled with obsessive and cathartic wailing, is meant to be experienced at full volume, and presages the work of Diamanda Galas, for one. Megan currently resides in Ithaca, New York.

Ruth Anderson, now retired from Hunter College's music faculty, lives in upstate New York and Montana. Among her recent works, the beautiful text-sound, phonetic rendering of Louise Bogan's poem "Little Lobelia," using only its vowel sounds, has been released on an XI compact disc.

Finally, Laurie Anderson's most recent work continues to be issued by Warner Brothers, for whom we are grateful for permission to reproduce these two early works. In 1994, her book *Stories from the Nerve Bible*, an engrossing twenty-year retrospective of her work from 1972 to 1992, was released by Harper Perennial.

It is a great pleasure to have the present compilation re-released by the distinguished firm of Composers Recordings, Inc. Over the years, the rarity of this album has frustrated numerous aficionados, and single copies reputedly have traded hands for hundreds of dollars. But the very rumor of this project and its original release gave great encouragement to the composers involved and to women composers in general and that in itself has made this a very satisfying undertaking.

-Charles Amirkhanian, September 29, 1996, Woodside, California

New Music for Electronic & Recorded Media

The music on this album exhibits an exciting, wide-open, freewheeling approach to the medium of electronic music which has come to be typical of this genre in the late 1970s. No longer are composers obsessively concerned with the agonizing, expressionistic, and purely "electronic" (synthesized) sound formulas that marked much of this music composed between the mid-Fifties and the late Sixties. Instead, today we have composers willing to mix media and sonic materials in thoroughly inventive ways to achieve ends that are new-sounding, and often more engaging, than that of the "academic" avant-garde.

This is the outgrowth of a fundamental change in concerns which has been evolving not only among the composers on this album but also in a growing segment of the musical avant-garde, of which these members are some of the most fecund and inspired. These new sources of inspiration certainly were not as widely shared fifteen years ago. Several composers represented here are deeply concerned with Eastern influences: meditation, healing, trance, states of serenity. Others are inspired by traditional (or "ethnic") musics and their subsequent metamorphoses into such popular forms as rock-and-roll. Still others bring to bear a sense of wit and satire, rarely a prominent feature of avant-garde music in the early 1960s.

Another gratifying turn of events in the 1970s has been the emergence of a substantial number of firstrank women composers in a field traditionally dominated by males. Although there always have been women composers, until this recent period, society in general, and the music world in particular, has discouraged them from composing careers. Particularly in the United States, where the struggle of the women's movement has been waged most successfully, there have been a great number of composers such as Pauline Oliveros, Annea Lockwood, and Laurie Anderson, whose music has been instrumental in beginning trends and influencing others to carry on similar experiments in veins which they first have mined.

To quickly survey the contents of this album, we begin with the late Johanna M. Beyer (1888–1944), who in 1938 composed her *Music of the Spheres* as a part of her political stage work *Status Quo*. Scored for "three electrical instruments or strings" with lion's roar (a percussion instrument) and triangle, *Music of the Spheres* is one of the first composed pieces of electronic music. Thirty-nine years after its birth it received its first performance on March 13, 1977, during a recording session for this LP at 1750 Arch Studios in Berkeley. Beyer was a student of Henry Cowell and was in close touch with the composer Percy Grainger, both of whom were for many years involved in the pursuit of the then-elusive dream of electronically produced sound made available in a fashion usable by composers. But her career ended with her premature death in 1944 (she was in her mid-fifties) and her music has rarely, if ever, been played in the interim. The fascinating combination of acoustic and electronic instruments in her piece anticipates by decades this now common practice.

Pauline Oliveros's *Bye Bye Butterfly* (1965), composed at the San Francisco Tape Music Center, is a realtime tape-delay collage work that typifies the humor in many of her compositions of that period, including pieces in which performers were called upon to produce absurd theatrical actions. Her later work, drawing on meditation processes for its basis, has been a most successful, and widely copied, method of obtaining total integration of audience and performer.

Annea Lockwood's *World Rhythms*, using no electronically generated tones whatsoever, incorporates several levels of recorded ambient sounds, accompanied by widely spaced strokes of a large gong. She has spent the past decade developing a body of meditation-inducing compositions which uncannily tap the deepest recesses of the unconscious in a peaceful, quiet, and quite powerful way.

Ruth Anderson is working with healing processes as a basis for her present compositions. Her steadystate piece *Points* is a hypnotic, calming essay in pure sine tones. Anderson's body of work has gone largely unpublished and unrecorded, although she has been an important influence through her very inventive teaching at Hunter College in New York for many years.

Laurie Anderson uses the recorded medium to create fascinating "songs" molded in pop vocal style but charged with an avant-garde musical sensibility and an incisive poetic sense incorporating a healthy dose of humor and satire. These pieces, often performed in a theatrical manner, feature Anderson's voice, half-singing, half-crooning, against curious repetitive instrumental figures overdubbed in separate "passes" of the tape (on different tracks of a multi-track recorder).

Megan Roberts lately has been exploring the medium of rock-and-roll. Her first effort along these lines was *I Could Sit Here All Day*, an example which retains less of the rock influence and more of the avant-garde character of her previous work. Nevertheless there is a feeling of ritual, raw power, and a driving momentum to this piece that centers it closer to certain traditional African musics—the pure source—than to Roberts's expressed inspiration, the Dave Clark Five.

Finally, Laurie Spiegel, a Juilliard alum, equally at home with the Elizabethan lute and the GROOVE hybrid system of computer programming, gives us a computer-generated piece that offers a new and exhilarating perspective on traditional Southern mountain banjo picking.

Any complete survey of the staggering variety of electronic music by women would run for many more LPs than could be attempted by one record company. In Los Angeles, Bebe Barron was an early pioneer in the medium, as was Ruth White (one of a small but distinguished list of students of the composer George Antheil).

Currently in the East, members of the Columbia-Princeton group, Pril Smiley and Alice Shields, are very active and have been recorded commercially several times. Liz Phillips, Charlotte Moorman, Joan La Barbara, Daria Semegen, Barbara Kolb, Doris Hays, and Beatrice Witkin continue to produce fine work and are active in teaching, writing, and concertizing, all to good effect.

On the West Coast, much credit is due the Center for Contemporary Music at Mills College (Oakland, California), one of the nation's most active hot points for new-music activity. The campus, once exclusively for women (male graduate students have been admitted for many years), has long been known to have had one of the West's best music departments. Under the direction of Robert Ashley, himself a leading figure in the emergence of live electronic music, the strong encouragement of women graduate students in composition has given us such talented composers as Maggie Payne, Beth Anderson, Ann Sandifur, Peggy Ahrens, Jill Kroesen, Virginia Quesada, and numerous others. Frankie Mann, Shells Booth, and Joanna Brouk, working independently in the West also have made significant contributions. And in Southern California, Emma Lou Diemer (University of California, Santa Barbara), Beverly Grigsby (California State University, Northridge), and Zina Louie (Los Angeles City College) command important teaching posts.

Also of great importance is the music of the French composer Eliane Radigue, who lives in Paris and who composes lengthy steady-state pieces which are model studies of pure intonation. Others working in France include Corinne de Luna and American-born Eugenie Kuffler. In England, Lily Greenham, and in Holland, Tera de Marez Oyens, have employed their considerable backgrounds in music theory and composition to make fascinating pieces in the text-sound (sound poetry) genre. And flutist-composer Christina Kubisch of Milan has made a deep impression with her theater pieces, heard in 1976 at Phill Niblock's loft in New York.

This is only a sampling of the many composers who might be investigated by those who are more than casually interested in the wealth of material available. Hopefully, others will be inspired to recognize and program such pieces in concert and, most important, on record. For today it is the latter medium which is responsible for ninety percent of the music experienced by most people in the United States, and in the avant-garde field, communication internationally is largely maintained by the exchange of commercial LPs.

This first anthology of women's electronic music demonstrates great refinement and skill at work in a variety of different styles, several of which are unfamiliar or new even to those who follow contemporary music. The fact that these pieces are more listenable than that of the Sixties avant-garde does not point to a musical regression as some critics have overeagerly assumed when discussing modern works using, say, consonant harmonic structures. Rather, and I think this is a common denominator for these pieces and something that women composers and artists have been instrumental in legitimizing again for this period in time, these works signify a new consciousness of the relationship of art to human life and the important and positive interaction that can be the role of a more personalized art in our day-to-day experience. *—Charles Amirkhanian, August 1977*

Johanna M. Beyer: Music of the Spheres (1938)

Very little is known or remembered about the German-American composer Johanna Magdalena Beyer (1888–1944), whose complete extant works (more than fifty of them) have resided undisturbed since her death in the library of the American Music Center in New York City. She was born in Leipzig in 1888,

probably came to the United States after the turn of the century, and took up composition studies in middle age with the dean of American experimentalists, Henry Cowell, whose secretary and assistant she also became for a period in the late Thirties.

Living mostly in lower Manhattan, she composed numerous suites, "movements," and sonatas for chamber combinations, six symphonic works, four string quartets, and a quantity of songs and choral pieces mostly in the "dissonant counterpoint" mode. There is a tone of quiet desperation in her November 16, 1937, letter to composer Percy Grainger: "Now despite that I have had concerts in London, San Francisco, Boston, New York, I am hardly known. Many New York composers know me of course. . . ." (collection of the Library of Congress). These were not encouraging years for serious women composers.

In another letter to Grainger dated August 14, 1938, Beyer reports, "I have finished my *Status Quo*, pageant to music." Ray Green, a composer and president of the American Music Edition in New York recalls visiting Ms. Beyer in her apartment and studio in Greenwich Village in early 1938 at the request of Cowell. "From her description of the piece it was political in motivation and she was quite vehement by what she thought of as the political injustice of the period in which she was living. She was very indignant about the 'status quo' as she talked to me. My impression of her was that she was a person passionately devoted to her conviction. I don't recall any performance of *Status Quo*." (Letter to Charles Amirkhanian, March 6, 1977).

Allen Strange, a composer and member of the Electric Weasel Ensemble, which has recorded *Music of the Spheres* for this CD and which gave the public premiere of the piece on August 27, 1977, at the Cabrillo Music Festival in Aptos, California, is responsible for the realization edited for this performance. He writes, "This music is a Quartet based on a sequence of eight pitch classes structured into various canonic relationships for two melodic voices. The half-step implications of the primary melody give rise to a two-note ostinato/drone for the third and lowest voice. The fourth voice, a triangle, is used to delineate the end of either the completion of the pitch set or a canonic sub-section. It would be presumptuous to say that the music was really serial in construction, but the pitch ordering hints, at least, to a linear manner of organization.

"Realization of the score presented the ensemble with two kinds of consideration—technical and musicological. The score calls for 'strings' or 'electrical' instruments. Between 1920 and 1948, over twenty different kinds of electronic instruments were utilized in concert situations in America alone—the Theremin, Ondes Martenot, Trautonium, La Croix Sonore, Dynaphone, Rhythmicon, Oscillon, and Multimonika, to name just a few. Just what Ms. Beyer meant by 'electrical instruments' is clarified a bit in the score by occasional gross glissandi indications and a footnote that the ostinato voice make the glissandi 'as subtle as possible.' This probably implied the use of a Theremin, Ondes Martenot, or even a manually operated oscillator. The ensemble has made an arbitrary decision to keep the timbres limited to sine and triangle wave shapes with minimal augmentation. The score indicated a linear accelerando from XX=52 to XX=208 gradually over a 54-measure period and then gradually back to XX=52 over a 70-measure period. To keep the metric evolution even and consistent, a calibrated electric metronome was used to generate a pulse. This pulse was used, in turn, to trigger a sequencer programmed for the two ostinato pitches. This metronome was then manually played, following measure-by-measure tempo variations.

"Music of the Spheres was intended as an interlude between two sections of Status Quo and is scored for a 'lion's roar' and triangle. The 'lion's roar' grows out of an ostinato 'D' played by the piano in the preceding dance so the ensemble divided to create an 'electric' lion in order to have control of the implied pitch of the roar. We also felt that this minor deviation from the orchestration was really more effective than the traditional rope and drumhead technique for playing lions. The only other artistic license used in these realizations is some subtle dynamic phase shifting (accomplished by means of sub-audio frequency shifting to enhance the stereophonic space. The instruments used in this realization were designed by Donald Buchla." The performers, recorded by Robert Shumaker in the studios at 1750 Arch Street on March 13, 1977, were Allen Strange, Steve Ruppenthal, and David Morse (Music Easels); Brenda Hutchinson (pulse control); Donald Buchla (frequency shifter and lion tamer)—all members of the Electric Weasel Ensemble—and guest artist Charles Amirkhanian (triangle). *Music of the Spheres* is published in *Soundings* magazine, issue 7–8 (1973), edited by Peter Garland. Issue 10 of the same periodical contains Beyer's *Three Movements for Percussion* (dedicated to John Cage, 1939).

Annea Lockwood: World Rhythms (1975)

Born in New Zealand (July 29, 1939), active for many years in England and West Germany, and currently living in Crompond, New York, Annea Lockwood is known widely for her creation *Glass Concert* (Tangent Records, London), in which a great variety of rich and beautiful sounds are heard in isolated succession, played on various shapes and types of glass. She is co-editor, with Alison Knowles, of *Women's Work*, a journal of performance art, and she currently teaches at Hunter College in New York City.

For many years Lockwood has collected recordings from all over the world of the sounds of different rivers. The River Archive, as it has been come to be known, has been contributed to by countless individuals with tape recorders who send new tapes and who may request, in exchange, a recording of any of the previously archived rivers. Lockwood's interest in ambient sounds is consistent with her ongoing investigations in the field of psychoacoustics (on repetition stimuli), and in a similar vein, she produced a series of excellent programs for BBC Radio on "trance music" of many cultures.

Some of her latest works are described in a recent letter to the author (August 3, 1977): "Singing the Earth, Singing the Air—participatory—involving sensing at-oneness with both of these elements. Malaman—a chant using ancient words for sound from many languages; Spirit Catchers—electronically tuning from one to another of four people who are speaking a flow of associations formed on a personal possession; Women's Voices (in progress; funded by a grant from the New York State Council on the Arts)—a series which includes four tape pieces based on personal interviews with females about their lives—this is a ritual, not a performance piece, done at the various major moon festival times—the ritual, using voices and drums, aligns the stages of women's lives with the phases of the moon."

With Ruth Anderson and two other women, she has been working exploratorily with the process of healing through sound. "We use vocal sound, our own, as a form of quartet and the recipient sits in the center and uses the sound as a direct form of nourishment." Lockwood also has been studying and applying Lawrence Le Shan's processes of psychic healing through meditation. She periodically gives workshops on "Sound used as a tool for self-healing" at Bedford Women's Correctional Facility in New York.

World Rhythms consists of ten channels of sound (previously taped) which are amplified and sent to ten loudspeakers in such a way that each channel is relayed (unmixed with any other channel) to a particular speaker. Each channel relays one of the following environmental sounds, (1) pulsars, (2) earthquakes, (3) volcanic activity, (4) geysers and mud pools, (5) rivers, (6) peepers, (7) fire and crows, (8) a storm on a lake, (9) wave lapping on a lake shore, and (10) human breathing. Levels are controlled during the performance, individual channels faded in and out, allowing for as many of the possible combinations of sounds to be heard, ranging from one channel alone, to all ten channels simultaneously.

A gong is played during the performance. The player produces gong resonances at the slowest rate at which they still can be perceived by the player as an inner continuum, reflecting some changing, inner physiological rhythm in a network of feedback between player and environmental sound, and between player and gong. The piece is intended to last from thirty-nine to ninety minutes in concert performance

with the ten speakers distributed around the perimeter of the performance space. It is accomplished with two quadraphonic tape decks and one stereo, or one quad and three stereo decks.

Pauline Oliveros: Bye Bye Butterfly (1965)

One of the most widely influential and respected members of the American avant-garde, Pauline Oliveros is an associate professor of music and the director of the Center for Music Experiment at the University of California at San Diego. Her research interests include investigations of modes of consciousness in relation to composition and performance, electronics in music, and experimental intermedia.

Born May 30, 1932, in Houston, Texas, her composition studies began at the University of Houston under Paul Keopke in 1951, the year she wrote her first composition, *Ode to a Morbid Marble*, for piano solo.

After moving to San Francisco in 1952, she began composition studies with Robert Erickson along with Loren Rush, Terry Riley, and Stuart Dempster, all of whom have gone on to distinguished music careers on the West Coast. She composed a Trio for Clarinet, Horn and Bassoon (1955) as well as Variations for Sextet for flute, clarinet, trumpet, horn, cello, and piano (1959), which the following year was awarded the Pacifica Radio composition prize. Her chorus piece *Sound Patterns* (1962) was awarded first prize in that year's Gaudeanus Foundation Competition, and Oliveros traveled to Holland for the premiere performance.

In 1960, with composer Ramon Sender, Oliveros had started Sonics, a center for concrète and electronic music at the San Francisco Conservatory of Music, which was to serve as the incubus for the San Francisco Tape Music Center, established by Morton Subotnik and Sender in 1962 during Oliveros's European stay. In 1963 Oliveros rejoined the Center, then located in the loft space of Ann Halprin's Dancers Workshop company, and in 1964 her Duo for Bandoneon and Accordion (with optional mynah bird obbligato, seesaw version) was premiered there. The set, designed by Elizabeth Harris, featured David Tudor and Oliveros on opposite ends of a seesaw (accompanied by a live mynah bird), functioning as a moving sound source. The piece was non-electronic altogether.

In 1961 Oliveros composed *Time Perspectives*, a concrète piece realized in her home on a Sears & Roebuck home tape recorder and using cardboard tube filters and bathtub reverberation in the work's composition. By 1964 she was composing with electronically synthesized sounds at the Tape Music Center studio. *Bye Bye Butterfly* was created there in 1965. In 1966 Oliveros studied briefly with Hugh LeCaine at the University of Toronto, where she created *I of IV*, *II of IV*, *III of IV*, and *V of IV* (she lost count and later found a fifth piece after already having numbered the series), the first piece of which is commercially released on Odyssey Records 3216 0160.

For 1966–1967 she was appointed director of the Tape Center, now located on the campus of Mills College in Oakland. And in 1967 she moved to San Diego to assume her present position. Before leaving the San Francisco Bay Area she presented a "Tapeathon" at the loft of Ronald Chase in which all her tape pieces were played end to end. The process lasted twelve hours in all.

At this point Oliveros entered her final period before "giving up composing in the rational mode" and beginning her series of *Sonic Meditations*. In 1968 she wrote a theater piece for two string basses, *Double Basses at Twenty Paces (for Bertram Turetzky)*. In 1969 she was commissioned to compose a live electronic piece for Merce Cunningham's dance *Canfield*, which remained in the Cunningham company's active repertory for many years. Finally, in 1970, on commission from Illinois Wesleyan University, she wrote *Meditation on the Points of a Compass*, for twelve soloists, large chorus, and audience, a work she describes as "a mandala piece," and one which led directly to her next phase of activity.

From 1971 on, Oliveros originated and developed her Sonic Meditations, which are compositions in the

oral tradition utilizing a variety of meditation techniques. These usually involve the intimate participation of all present, following a period of instruction and initiation into the workings of the process set up by the composer for the particular occasion.

Among these works are *Crow Two* (1974), a ceremonial opera commissioned by the Creative Associates at the Center for Creative and Performing Arts, State University of New York, Buffalo; *Rose Moon* (1977), a ceremonial piece commissioned by Wesleyan University, Middletown, Connecticut; and *Bonn Feier*, awarded the 1977 Beethoven Prize by the city of Bonn and premiered there in the Marketplatz as a piece of "stadtmusik" (city music) by thirty musicians, actors, and dancers with members of the general public.

Sonic Meditations are available from Smith Publications, 1014 Wilmington, Baltimore, MD 21223. An Oliveros article, "On Sonic Meditation," appears in the *Painted Bride Quarterly*, Vol. 3, No. 1, Winter 1976, 527 South Street, Philadelphia, PA 19147.

About *Bye Bye Butterfly* Oliveros writes: "This work is a two-channel tape composition (with an enclosure) made at the San Francisco Tape Music center in 1965. It utilizes two Hewlett-Packard oscillators, two line amplifiers in cascade, one turntable with record, and two tape recorders in a delay setup. The composer arranged the equipment, tuned the oscillators, and played through the composition in real time."

Though certainly not pre-planned by the composer, this fine, improvised musical gem, composed by an outspoken advocate for women's rights, symbolically bids farewell not only to the music of the nineteenth century but also to the system of polite morality of that age and its attendant institutionalized oppression of the female sex. The title refers to the operatic disk which was at hand in the studio at the time and which was incorporated into the ongoing compositional mix.

Laurie Spiegel: Appalachian Grove I (1974)

The career of Laurie Spiegel (born September 20, 1945, in Chicago), which might have gone in any one of several different directions, happily is traversing several simultaneously. As a freelance composer, she has written incidental music for the stage, educational television, and experimental video. Her music is widely performed in concert, often in conjunction with dance, and she has produced commercial music for radio and television as well.

Her extensive musical background includes study at Juilliard, where, among other things, she studied the classical guitar with Oscar Ghiglia and Renaissance and Baroque lute with Suzanne Bloch and Fritz Rikko. Her composition teachers include Jacob Druckman, Emmanuel Ghent, and Michael Czajkowski. Since 1970 she has composed electronic music, and since 1973 she has worked extensively with the GROOVE (Max Matthews) hybrid system, using a digital computer to control analog audio synthesis equipment, at the Bell Laboratories in Murray Hill, New Jersey.

Spiegel has been identified closely with the development of experimental color video, having collaborated with Nam June Paik, Bill and Louise Etra, and Tom DeWitt in the production of tapes for the thirty-nine week VTR series which was recently shown on WNET-TV in New York City. She herself is pursuing the composition of what she terms "visual music," the aim of which will be to create real time, ongoing programs of abstract, evolving video images.

Just as she uses the computer to automate certain musical compositional processes (which themselves are her basic compositional work)—these then can be manipulated in different ways to form diverse compositions from a single process—Spiegel is experimenting with processes involving moving, changing visual images which function as abstractly as musical sounds yet have the capacity to move an audience in the same ways that composers have done with sound for centuries. For example, feelings of centeredness which are the products of drone music might be similar to the response to mandala-shaped visual images with moving parts. Equally, feelings of tension, peace, or closure might be achieved through the use of such principles as proximity, similarity, foreground-background relationship, and continuously evolving subject matter, or by manipulation of such parameters as color and texture.

Among Spiegel's most important compositions to date are *The Expanding Universe* (1975), *Waves* (1975), and *Patchwork* (1976). All three are computer-generated tape pieces, as is the selection on the LP, *Appalachian Grove I* (1974), and were created at the Bell Labs. *The Expanding Universe* is a half-hour meditation piece which evolves slowly and organically and allows the listener to focus on either single tones or a unified texture—the border between these phenomena being rather elusive to the listener. The ballet, *Waves*, has been performed by the Elliot Feld Ballet and Kathryn Posin Dance Company in New York's Central Park and City Center, and in a least twelve Latin American countries. Scored for nine acoustic instruments and pre-recorded tape, the work was commissioned by the American Dance Festival.

The three pieces in the suite *Appalachian Grove I* were composed in 1974 and were Spiegel's first attempts at computer-generated tape music after thorough study of the GROOVE programming system invented by Max Matthews. It was composed just after a visit to the Fiddler's Grove Festival in North Carolina and is indicative of Spiegel's affection for traditional banjo and fiddle playing, which stems naturally from her study of other plectra. By means of computer control she is able to create a fascinating interplay of modal stereophonic hockets and also to change from pointillistic pulses to more extended ones with ease. Like *Patchwork*, she notes that the piece "was composed in reaction to an overdose of heavy, sad, introspective contemporary music." This is the first piece of the group of three.

Megan Roberts: I Could Sit Here All Day (1976)

Megan Roberts is one of the growing number of avant-garde composers who recently has turned her attention to rock-and-roll music after experimenting with various experimental media including dance, video, theater, and electronic music. She was born October 12, 1952, in Hempstead, New York, and at the age of two moved to California, where she has lived since. She is now a resident of Oakland, where she finished her music studies at Mills College Center for Contemporary Music under the direction of Robert Ashley and David Behrman. Other teachers include Emma Lou Diemer at the University of California, Santa Barbara, and Charles Moon at Humboldt State University (Arcata, California).

Roberts's principal works to date include her one-month installation of choreographed sound called *Suite for a Small Chamber* in which the movements of the dancers triggered electronic devices and tape-loop playback machines. In her video piece *Factory* (1976) she approached the medium by attempting to produce a percussion piece visually; the very fast and disjunctive cuts from one image to another provided a driving and highly rhythmic feeling to the overall piece, while the colors and motion of the subject matter add interest in the same way that the musical parameters of pitch and timbre do it in a piece of music. The basic principle harks back to the same treatment given film by Fernand Léger in his classic *Ballet Mécanique* some fifty years earlier.

Recently Roberts presented her intermedia work *As I Like It* at the performance art center "80 Longton Street" in San Francisco (January 14–15, 1977). The event presented a study of violence in several media—video, movement, electronic sound, and rock-and-roll, without imposing any moralistic evaluation.

Roberts recently has recorded with the rock-and-roll group Novak, and the ensemble's first 45-rpm single features her song, "Oh, Farrah," a love song addressed to the currently popular pin-up poster of the actress Farrah Fawcett-Majors. The 45 is issued by her company's label Dumb Records, published by Dumb Music Co.

The piece on this record, *I Could Sit Here All Day*, was inspired by Roberts's collaboration with Bill Novak, another expatriate avant-gardist now involved in the art rock-and-roll scene. (Numerous composers on the West and East coasts are involved now in this phenomenon, and talk of a large festival amounting to an old-fashioned "battle of the bands" at The Kitchen in New York is now under way.)

The work was composed in January 1976 and subsequently has been revised slightly as further performances of the piece have been undertaken. The version heard here was mixed by the composer at the Mills Center for Contemporary Music. Performers include Danny Sofer, drums; Phil Loarie and William Novak, vocals; and Megan Roberts, Moog synthesizer; bird recordings, and final mix-down from the 8-track master tape. The piece was presented live at the 1976 Cabrillo Music Festival in Aptos, California, with an ensemble of four drummers performing the steady, underlying drum pattern in ear-shattering unison.

Although inspired, according to the composer, mostly by her analysis of what appealed most to her in rock-and-roll—the strong beat, the intense vocals in which understanding of words is not always important—the overall sound of this piece is more akin to traditional African music than of Roberts's prototypical inspiration—the Dave Clark Five. Perhaps it is just this aspect of the piece which makes it most appealing to those involved in the avant-garde, who, since Debussy, Cowell, Bartók, and other seminal influences, have taken more than a passing interest in the music of cultures foreign to that of Western Europe.

Ruth Anderson: Points (1973–74)

Ruth Anderson (born March 21, 1928, in Kalispell, Montana) has enjoyed a varied and fruitful career in music, spanning a number of interests from her activities as a flutist (she studied with John Wummer and Jean-Pierre Rampal), an orchestrator for NBC (assisting Robert Russell Bennett, under whose name her craft was featured), and an associate professor of music at Hunter College in New York (where, in 1970, she designed and installed the Hunter College Electronic Music Studio, of which she is the director).

Anderson received her B.A. and M.A. from the University of Washington. She studied composition under Darius Milhaud. Postgraduate work was also done at Columbia and at Princeton, where she received a fellowship. Among her other honors are awards from the Martha Baird Rockefeller Foundation and two Fulbright grants for study in Paris.

In composing she has ranged freely, producing instrumental works, tape pieces in concrète and electronic modes, text pieces, and sound installations. In her teaching she has led sound and meditation workshops, stressed hearing studies and listening techniques, sensory interrelationships, and mixed media.

Among Anderson's other compositions, her tape collage *SUM* (*State of the Union Message*) incorporates snippets of television commercials intercut with an actual presidential address. It was composed "between pieces' one January, taking about as long as the president to prepare the message, saying as little and by omission as much, and using the one medium we all share." Along with *Points*, this piece reveals the composer's painstaking attention to minute detail and perfection, as well as an interest in textmusic and the effects of mass media on the quality of our lives as individuals.

Presently, her primary concern is the use of sound (vocal and electronic) in healing. Mystical and healing powers long have been ascribed to music in many traditional cultures the world over. Among the advanced Western composers of our century such figures as Alexander Scriabin, Ivan Wyschnegradsky, Dane Rudhyar, Alfred Laliberté, and Cyril Scott have concerned themselves with related phenomena. It is refreshing to see these timeless winds blow over us once again in the electronic era via Anderson's very beautifully distilled *Points*.

She writes, "*Points* is built from sine tones which are the basic building blocks of all sound. As the smallest unit of sound, a sine tone is a single-frequency focal point of high energy. In this work, such points occur on various arcs which float in and out of one another. Separate sine waves enter at five-second intervals, accumulate in a long veil on one channel while another set of sines then is introduced on the second channel, and continuing this way with the veils of sound shifting in and out of each other.

"The high focus of energy of a sine wave, the outsize breathing interval of five-second entries, the calm of the veils, and timeless quality are some of the elements I can isolate which have made this a healing piece, one that constantly generates in listeners a sense repose and quiet energy."

It should be added that this music, which sounds as if it might be simple to compose, presents rather exasperating problems, in fact. The composer states, "Sines are extremely difficult to record, and then it's difficult to maintain a copy of sines without collecting burbles on tape—this is a strong reason for wanting the piece on record where burbles don't collect."

Laurie Anderson: New York Social Life and Time to Go (for Diego) (1977)

One of the most exciting and innovative composers of her generation, Laurie Anderson was born in Chicago on June 5, 1947. She holds a B.A. in art history from Barnard College and an M.F.A. in sculpture from Columbia University. As a performance artist she has worked with film-sound-talking pieces for several years, performing at the Museum of Modern Art, the Whitney Museum, the La Jolla Museum (California), the Berlin Festival (Akademie der Künste), and various other museums and universities in the United States and in Europe. A record of some of her pieces was released in 1977 by the Holly Solomon Gallery in New York City, and her *Notebook*, a collection of scores and photographs of her performances, was published by the Collation Center (distributed by Wittenborb Art Books, NY) in 1977.

Anderson's music is not purely electronic—she uses the multi-track technique of the pop music world to construct amusing and very original talking songs in which the musical accompaniment to the voice is often based on imagery contained in or suggested by her texts. Often she performs on several tracks herself, using the multi-track recorder as a musical sketchpad to accommodate her desire to perform in ensemble with herself. This enables her to have considerable control over various subtle nuances of each work to a degree that would be impractical to control by written scoring.

An important aspect of her work is the literary one. Her texts are original prose works or poems which are often anecdotal in nature, an offshoot of the tradition started in this period by the stories in John Cage's lecture piece *Indeterminacy* (1959). These texts, and sometimes stories about the original inspiration of various texts and their music, have been exhibited with accompanying photographs in gallery situations, and a recent installation of Anderson's work also featured each song available to be played on discs via a jukebox which contained twenty-four 45-rpm singles.

John Howell, reporting on Anderson's appearance at the October 1976 Berlin Festival, hints at the powerful impression Anderson makes in presenting her works live: "An Anderson performance is packed with sounds, from particular noises to full-blown songs all used to call up those emotions which seep into consciousness through visceral responses, oscillations of the eardrum and gut before anything else. . . . Her performances are made up of a number of such dense build-ups, forming a web of connections that unifies the different images. As the individual elements coalesce into larger units, so do the various sections accumulate toward a clear overall statement. . . . Anderson works at a relationship to the audience that is rare among artist-performers but fundamental in theatre: a desire to please. Her straightforward presence (facing the audience, lots of eye contact, talking right to you) is yet another objective correlative for the emotional appeal her performances finally make." (*Performing Arts Journal*, Vol. 1, No. 3, Winter 1977)

The whimsical nature of her work is exemplified by the title of one ninety-second composition featuring a stuttering vocal track modified by frequency shifting: *If You Can't Talk About It, Point to It (for Screamin' Jay Hawkins and Ludwig Wittgenstein)*. Another particularly amusing piece is written in reggae style: *It's Not the Bullet That Kills You—It's the Hole*. The piece is a lightly chiding song dedicated to the conceptual artist Chris Burden, whose performance of his own work which required a bullet to be shot into his arm exemplified an extreme posture (approaching a John Wayne-ish caricature) of the macho male artist of the present decade.

Two 1977 compositions by Laurie Anderson appear on this record, *New York Social Life* parodies artists' conversations in an era which has left behind the leisurely café banter of 1920s Paris. Scott Johnson (on tambura) provides the instrumental accompaniment to Anderson's vocal tracks.

Time to Go (for Diego) is a haunting portrait of a guard at the Museum of Modern Art whose duty it is to ask visitors to leave at closing time. Scott Johnson, this time on guitar and organ, worked with Anderson (violin and vocals) in arranging the piece, about which Anderson writes, "*Time to Go* is part of a series I'm doing called 'It depends on who you're talking to,' which centers on saying the same thing to various people and working with the slight changes in inflection and tone that result. . . . I tried to stabilize melodic lines and use irregular pauses to imitate Diego's clearing-out tour-duty of the museum." Indeed, the biting quality of the guitar track very effectively parallels the verbal image of Diego snapping his fingers at the museum visitors to rouse them out of their "art trances."

SELECTED DISCOGRAPHY

Laurie Anderson

Big Science. Warner Bros. 2-3674. *Mister Heartbreak*. Warner Bros. 2-25077. *Talk Normal: The Laurie Anderson Anthology*. Rhino76648. *The Ugly One With the Jewels*. Warner Bros. 45847. *United States Live*. Warner Bros. 25192 (4 CDs).

Ruth Anderson

I come out of your sleep. Experimental Intermedia XI 118. *SUM (State of the Union Message).* On *Lesbian-American Composers.* CRI CD 780.

Johanna M. Beyer

Dissonant Counterpoint. Sarah Cahill, piano. New Albion NA 114. Suite for Violin and Piano. New World Records 80641-2.

Annea Lockwood

Breaking the Surface. Lovely Music LCD 2082. The Glass World. Nonsequitur/What Next? Recordings WN 0021. A Sound Map of the Hudson River. Lovely Music LCD 2081. Thousand Year Dreaming. Nonsequitur/What Next? Recordings WN 0010. World Rhythms. Experimental Intermedia XI 118.

Pauline Oliveros

Alien Bog/Beautiful Soop. Pogus Records P 21012-2. Crone Music. Lovely Music LCD 1903. Deep Listening. New Albion NA 022. Electronic Works. Paradigm Discs PD 04. No Mo. Pogus Records P 21023-2. Primordial/Lift. Deep Listening DL 33. The Ready Made Boomerang. New Albion NA 044. Springs. Deep Listening DL 9. Tara's Room. Deep Listening DL 22. Timeless Pulse. Deep Listening DL 21.

Laurie Spiegel

Cavis Maris. On The Virtuoso in the Computer Age—III. Centaur Records CRC 2166. The Harmony of the World. Table of the Elements TE 300-5 (LP). Obsolete Systems. EMF 119. Unseen Worlds. Aesthetic Engineeering AE 1001-2. (available from the composer)

Electronic/Electro-acoustic music titles on New World Records

Milton Babbitt. *Philomel.* New World Records 80466-2. *Columbia-Princeton Electronic Music Center 1961–1973.* New World Records 80521-2.
Alvin Curran. *Maritime Rites.* New World Records 80625-2.
Kenneth Gaburo. *Five Works for Voices, Instruments, and Electronics.* New World Records 80585-2.
Alvin Lucier. *Vespers and Other Early Works.* New World Records 80604-2.
Ingram Marshall. *Ikon and Other Early Works.* New World Records 80577-2.
Richard Maxfield. *The Oak of the Golden Dreams.* New World Records 80555-2.
Gordon Mumma. *Electronic Music of Theatre and Public Activity.* New World Records 80632-2. *Pioneers of Electronic Music.* New World Records 80644-2.
James Tenney. *Selected Works 1961–1969.* New World Records 80570-2.
David Tudor. *Rainforest (two versions).* New World Records 80651-2.
David Tudor/John Cage. *Rainforest 3/Mureau* (simultaneous performance). New World Records 80540-2.
Vladimir Ussachevsky. *Film Music.* New World Records 80389-2.

SELECTED BIBLIOGRAPHY

Gann, Kyle. American Music in the Twentieth Century. New York: Schirmer Books, 1998.

——. *Music Downtown: Writings from* The Village Voice. University of California Press, Berkeley and Los Angeles, 2006.

Holmes, Thom. *Electronic and Experimental Music: Pioneers in Technology and Composition*. 2nd edition. New York: Routledge, 2002.

Annea Lockwood: World Rhythms is published by the composer (BMI).
Pauline Oliveros: Bye Bye Butterfly is published by Deep Listening Publications (ASCAP).
Laurie Spiegel: Appalachian Grove I is published by the composer (ASCAP).
Megan Roberts: I Could Sit Here All Day is published by Big Deal Productions (BMI).
Ruth Anderson: Points is published by the composer (BMI).
Laurie Anderson: New York Social Life and Time to Go are published by Difficult Music (BMI).

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Digital remastering of New World Records reissue: Paul Zinman, SoundByte Productions, NYC

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Johanna M. Beyer (1888–1944)
 Music of the Spheres (1938) 5:57
 The Electric Weasel Ensemble: Allen Strange, Stephen Ruppenthal, David Morse, Music Easel synthesizers; Brenda Hutchinson, pulse control; Donald Buchla, frequency shifting and mix; Charles Amirkhanian, triangle

2. Annea Lockwood (b. 1939)	
World Rhythms (1975)	8:24

3. Pauline Oliveros (b. 1932)Bye Bye Butterfly (1965)8:03

 4. Laurie Spiegel (b. 1945)

 Appalachian Grove I (1974)
 5:23

5. Megan Roberts (b. 1952) *I Could Sit Here All Day* (1976)
6:25
Danny Sofer, drums; Phil Loarie and William Novak, vocalists

6. Ruth Anderson (b. 1928) Points (1973–74) 5:26

7. Laurie Anderson (b. 1947)New York Social Life (1977)3:26Laurie Anderson, voice, telephone; Scott Johnson, tambura

8. Laurie Anderson *Time to Go* (1977) 2:54 Laurie Anderson, voice, violin; Scott Johnson, guitar and organ

Total time: 46:44

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