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## **Santa Fe Reporter Voices**

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#### ***Electronic Sounds***

#### **By Peter Kobel**

Santa Fe has long had a reputation as a center for the performance of music. But the music that comes to mind tends to be classical: the opera, the Chamber music, the Orchestra of Santa Fe. However, although the fact isn't as well-publicized, Santa Fe is also a haven for the musically avant-garde.

Though there are no splashy, \$25 famous-artist posters to advertise them, a number of these modern composers and performers are working away on the sidelines, experimenting with the electronic medium.

Tucked away in a garage filled to the ceiling with electronic equipment, a couple of video artists are putting together electronic works that pulse through a TV screen. Another pair of musicians is adapting Ravel's "Mother Goose" to a keyboard synthesizer. Still another avant-garde musical activist is bringing experimental performances to Santa Fe as well as working on her own compositions, which use not only vocal and instrumental sounds, but innovative contributions from the insides of a piano and a water faucet.

While these artists may seem less conspicuous than the opera singers or violinists, they are nevertheless putting Santa Fe on another kind of musical map.

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These composers and performers are part of a musical period that didn't begin until shortly after World War II, with the commercial availability of tape recorders.

Historically, however, the search for ways to produce sounds electronically goes back to the 18th century. The invention of the phonograph in 1877 by Thomas Edison and Emile Berliner (who worked independently) was very important; it proved that in theory, at least, acoustic sounds could be successfully recorded and preserved.

There were some remarkable failures as well. Thaddeus Cahill of Massachusetts created a fantastic and complex mechanism that he called the telharmonium. He worked for 11 years at turning electrical signals into sound, using rotary generators and telephone receivers. Cahill introduced his machine to the public in 1906. It weighed 200 tons.

The telharmonium failed in large part because Cahill couldn't get sufficient volume; amplifiers and loudspeakers hadn't been invented yet. Nevertheless, Cahill's ideas were really sound; he was simply a couple generations ahead of his time.

Another forerunner of electronic music was the Italian futurist painter, composer and inventor, Luigi Russolo. In 1913 Russolo called for the destruction of all the music of the past, to be replaced by a new kind of music more accurately reflecting the new industrial state.

He produced a number of mechanical devices, called "intonarumori" (noise intoners"), such as his "scoppiatore" ("exploder"). In 1913 and 1914 he gave "noise concerts" in Genoa, London and Milan, where they caused a riot. Ironically, all of his machines were destroyed in Paris by the industrially-produced forces of World War II.

Other electronic instruments of importance invented before World War II were the theremin, the Ondes Martinot and the trautionium.

Currently, the electronic composer uses any of three categories of instruments: tape recorders; sound synthesizers, dating from the early 1950s; and computers, first used in music in the late '50s.

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Bill Martin and Kent Reynolds formed the Canyon Foundation in Santa Fe in 1978. With the aid of NFA and private grants, they have collected an impressive electronic studio, which includes two state-of-the-art Prophet-10 synthesizers.

By far, the most commercial of the artists under discussion are working primarily in a traditional-classical mode, using keyboard synthesizers. Martin and Reynolds have orchestrated classical works to great effect, such as Bach's "Jesu, Joy of Man's Desiring," Ravel's "Mother Goose," and Debussy's "Reverie."

They also write their own compositions, often in a soft, impressionistic manner, as in their piece, "Dreams," performed at a benefit around Christmas time last year at Hill's Gallery.

Martin and Reynolds also participated in the Community Outreach program with the Orchestra of Santa Fe, traveling around the state giving performances for 18 months, and they played in the OSF's Bach marathon for three years.

Last summer they provided special effects for the Santa Fe Opera production, "A Schoenberg Evening." They also recorded opera singer Janet Northway's voice, and she sang a duet with the recording. *Time* magazine praised the "eerily ecstatic duet" and a "gloriously jangling doorbell," which Martin and Reynolds produced electronically, using virtually every piece of equipment they had.

The Canyon Foundation has also worked with individual composers such as Joe Weber, who is composing an opera based on the Mayan creation legend; local composer Michael Moore, and Taos composer Tom Ehrlich, whose double LP, "Stars," was released recently.

The 38 year-old Martin describes electronic music as "a natural extension of our musical consciousness. There are new vistas of technology in the arts that no one even imagined 20 years ago."

Both Martin and Reynolds say that their favorite contemporary electronic performer is Isao Tomita. They caution that the field of electronic music is still young; and that a composer of Bach's power hasn't yet appeared in their field.

Martin and Reynolds compose their pieces separately or together, but work on the orchestration collaboratively. Martin readily admits, however, that Reynolds is the more informed technician.

"We can't really separate it. It's the synergistic process of our minds that really makes our music possible." Martin said. As much as possible, he says, they like to perform live.

The Canyon Foundation's current project is a full-length ballet, "Tu'wanasavi," commissioned by Ballet West. "Tu'wanasavi," from the Hopi word for "center of the universe," will premiere in September 1982 at the Santa Fe Opera.

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Marcia Mikulak is a woman of wideranging interests and talents. The 32 year-old is an accomplished pianist, an arts administrator and a composer.

Mikulak has two albums to her credit, one devoted to the piano music of Dane Rudbyar, and another, to be released soon, called "Gardner Jencks, Selected Works for Piano, 1942-1980." Jencks is a Tesuque composer. Mikulak's first album, the product of a long collaboration with Rudhyar, was widely praised by critics.

For three years, Mikulak has produced "Explorations in Music" series, with the aid of grants from the New Mexico Arts Division. Among others, she has brought electronic composers Robert Ashley and Pauline Oliveros and performance artist Jim Pomeroy to Santa Fe. This year she presented two tape concerts moderated by Susan Otori, a KUNM announcer. They included works by Charles Amirkhania, Conlon Nancarrow and James Tenney.

Mikulak also composes works specifically for tape, using only acoustic sounds. The technique is reminiscent of "musique concrete," one of the earliest styles of modern electronic music, which evolved in Paris in the late '40s.

The practitioners of "musique concrete" insisted on using only "natural" sounds and noises created by man, his artifacts and his environment.

Mikulak's 15 minute composition, "Pipe Dreams," uses vocal, instrumental and natural sounds such as breathing, spoken text, gongs, an unnamed, homemade drum-string instrument, water faucets and the insides of a piano, which are plucked scratched or hit with a mallet.

The effect is often haunting and mysterious, particularly when she uses her unusual piano technique. Some humor is injected into the piece by the text, a testimony for the Mark Eden breast development program, read in two voices which overlap. One voice is confident and self-assured, the other desperately insecure.

Mikulak will present "Pipe Dreams" with slides and movement June 13 at St. John's College. She will also be performing piano works by Gardner Jencks, Shulamit Run and Ann Kish.

Mikulak also composed a score for Bruce King's Vietnam play, "Dustoff," performed last fall. Here is an eerie piece of music using voices and rustling leaves that sound like rain, and evocative of the heart of darkness the play portrays.

"I don't know where my ideas come from," says Mikulak. "I'm just curious about possibilities. I don't think my work has fulfilled my potential."

Mikulak describes her work as tentative, a process rather than an artifact. "If we can get into a way of watching a process, that's important. Not wanting a certain effect, because that's all you get, is the effect."

"When I work," she continues, "I will not know what I am looking for. I will enter into the medium of sound. The piece constructs itself on that premise.

"Rather than work with the known, I prefer to work with the unknown. Rather than work with the visible, I want to work with the invisible."

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Woody and Steina Vasulka are better known as video artists than as musicians. However, Steina is a classically trained violinist, having played with the Icelandic Symphony Orchestra and in New York City in 1971.

Woody is the musical composer of the two. "It's all his," Steina says. "I was so trained in traditional music, I'm not free."

Woody admits that he doesn't have much background in music. He has a degree in industrial engineering, and also studied film at the Academy of Performing Arts in Prague in the early 60's – the center of the Czech New Wave films. He played the trumpet in a jazz band as a teenager and was a jazz critic for "Rovnost," a daily newspaper in Brno, Czechoslovakia, his home town.

“Everyone in the leftist avant-garde at the time (the mid 50’s) was fascinated by negro art,” he says. “They loved jazz music. This goes way back to when Picasso discovered African art.” When I have visited the Vasulkas, I have usually found them listening to reggae music.

The music that Woody makes is done on a synthesizer without keyboards; rather than keyboards, there are only dials for signal generators, modulators, filters, etc. The music reflects his background in engineering; it is definitely machine music. He likes to play it loud, and it is full of the sound of giant generators, dynamos in a huge dam, releasing a flood of sound.

He says he doesn’t like keyboard synthesizers: “Keyboards impose themselves on the structural understanding of sounds, even on the rhythm. There are certain human limitations in using keyboards, as well.

He uses two drifting oscillators (the sound-generating part of a synthesizer), and explains, “The two frequencies combine or beat against each other and result in an artifact – a heterodyne.

“Everything is done in real time. In real time, you have to let it go, you don’t have that much control.” His music is very varied. “The West,” inspired by an early trip out here from New York, is more like “traditional program music,” he comments. The piece conveys the vastness and the hugeness of the West.

Vasulka has also done a number of compositions that he describes as being “like marches.” They are very reminiscent of Emerson, Lake and Palmer in concert, a sort of protracted, full-fledged air raid.

And, some of his work is more like songs. One piece, with its long mournful cries, sounds very much like Morton Subotnick’s “The Wild Bull.”

The music can be very abrasive, as in “Calligrams,” a score for a video by Steina. Parts of it are frictional to an extreme, like the grating of giant pieces of metal.

Although the Vasulkas now work with video a great deal, Woody says that the technology doesn’t interest him particularly. He uses it because he has to. I have watched him tear his machines apart and modifying them. While playing his music, he can be seen fiddling with knobs and levers on his preamp and equalizer; dressed in a laboratory smock and sporting a goatee, he looks something like a mad scientist. It is obvious, in spite of what he says, that he finds some aesthetic pleasure in the machines themselves.

The Vasulkas are currently working on a video opera based on the life of Paganini. Ernest Gusella will play Paganini, and composer Robert Ashley will play Hector Berlioz. Stage design will be done by Santa Fe sculptor Brad Smith.

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James Tenney, who has lived in Santa Fe since January, no longer uses electronics in his compositions and hasn’t for more than a decade. Tenney is still important in the movement because he has such a large (and fascinating) body of work in the electronic medium; he also did some of the earliest work in the area of computer composition. His reasons for abandoning electronics and computers are intriguing.

Tenney worked with Lejaren Hiller at the University of Illinois at Champaign-Urbana in the Experimental Music Studio while working on his M.A. In 1957 Hiller and Leonard Isaacson attracted a great deal of attention by producing the first piece of music composed with a computer, the “Illiac Suite,” for string quartet. From 1961 to 1969, Tenney used computers as a tool for composition and the generation of sounds. Early examples of Tenney’s use of computers are “Noise Study” (1961), which sounds like a starship blasting off, and “Dialogue” (1963).

Who composed the computer music? “I did,” he responds.

After a pause, he muses, "The only philosophical problem is in the area of chance music or indeterminate music. By using a computer subroutine you can generate random numbers, which you can treat as notes in your composition.

"You see, by using the computer, the burden of the creative process has been shifted. You don't have to agonize over what the next note will be. The overall form or texture is what's important."

He compared the chance music to the work of pointillist painter Georges Seurat, whose paintings are made up of little dots. "The precise location of an individual dot is unimportant. It's the overall effect that matters. By using a computer you can create large canvas and not be bothered by small details."

After nine years of composing computer music, Tenney "OD'd on electronic studios. "It was just too involved," he says. "I spent 25 hours a day, eight days a week in the studio. A lot of the job was spent on the development of hardware and software, rather than composition. I was dealing too much with purely engineering problems that seemed peripheral to the main work of the composition."

Since 1969, Tenney has been mainly interested in musical ideas related to acoustic rather than to the electronic medium.

Tenney has also garnered a reputation as a performer. He played piano accompaniment on two LPs of Charles Ives' songs on Folkways Records. He was an original member of the Steve Reich Ensemble, then called Steve Reich and Musicians, formed in 1966.

*End of article.*