

CEC Communauté électroacoustique canadienne Canadian Electroacoustic Community

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COMMUNITY REPORTS

A column about past, present and future ongoing in international electroacoustic and related communities [index (../communities/index.html)].

Electronic Music in Israel

by Bob Gluck

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Introduction

The origins of electronic music in the State of Israel closely followed developments in Europe, in particular, Germany. The founding figure of the field in Israel, Josef Tal, was first exposed to electronic music in the late 1920s in Germany and, years later, toured major studios in Europe and the United States, and developed a studio in Jerusalem based upon models that he observed during his travels. Tal's *Oratorio* for chorus and tape, aired on Israeli radio, also represented the first electronic music heard by the Israeli public, in the 1950s.

In the 50 years since Tal's initial work in Israel, music by electronic music composers born in the country has become as diverse as its population. The first Israeli works reflected the European and American roots of the field, finding inspiration in Joseph Tal tour the studios of Europe, Tzvi Avni the Columbia-Princeton Electronic Music Center in New York, and Yizhak Sadai, the GRM studio of Schaeffer. Younger composers have begun to seek new directions rooted not only in these same sources, but in other traditions, as well.

Joseph Tal and The Israel Center for Electronic Music at the Hebrew University

Josef Tal (1910–) was born in Poland and studied at the Staatliche Akademische Hochschule für Music in Berlin with Paul Hindemith. Hindemith pointed him in the direction of early electronic music. Tal studied electronics and sound generation, along with other students, in the lab of engineer Friedrich Trautwein, inventor of the Trautonium (1928), a synthesizer prototype.

While Tal arrived in Israel in 1934, he did not return to electronic music until the late 1940s, owing to a lack of equipment and public interest. He taught at, and subsequently directed the Jerusalem (later renamed Israel) Academy of Music, through 1952. His opposition to the dominant Israeli compositional approach at the time resulted in his being viewed, in his words, as an “enfant terrible”. Tal was a strong believer in the value of electronic instruments and their potential to transcend the limitations of acoustical means of sound production.

The founding of the first studio in Israel, the Israel Center for Electronic Music at the Hebrew University was the result of a six-month UNESCO research fellowship on which Tal toured major international electronic music studios, in 1958. He traveled in search of models upon which to build. Tal's effort was actually not the first such attempt. Israeli nuclear physicist and political figure, who proved pivotal in helping Tal raise funds for the purchase of equipment, was involved in a brief, aborted effort in 1957 to open a studio modeled upon the WDR studio in Cologne, Germany, with

the participation of composer Herbert Brün. Brün had left the country two years earlier in search of opportunities in Germany, but was uninterested in proceeding beyond a meeting in at the Cologne studio with Freier and Gottfried Michael Koenig, a principal composer at the studio.

Many elements of the new studio, which was under development beginning in 1959, followed the model of the Cologne studio, including oscillators, filters and tape recorders. However, the instrument that formed the core of the studio emerged from Tal's last stop on his international tour. While in New York City, at the Columbia-Princeton Center For Electronic Music, he learned, from Vladimir Ussachevsky, about a new invention by Canadian inventor Hugh Le Caine, called the Multi-track. First built in 1955, this device could replay six independent magnetic tapes, with the speed and direction of each tape separately controllable. Le Caine's idea was to design an instrument to facilitate composition in the Parisian musique concrète tradition of Pierre Schaeffer. The Multi-track built for Tal's studio was completed in 1961, at which point it was delivered to Jerusalem. It required a trip by Le Caine to correct set it up.

Along with his technician, Sailes, Tal taught electronic music and composed in the new studio, for nearly two decades. Upon his retirement in 1980, Menachem Zur became director and remained in this role until the University closed the studio, for a variety of reasons, in the 1990s.

Tzvi Avni and the Electronic Music Studio at the Academy of Music and Dance in Jerusalem

A decade after the founding of Tal's studio, the second electronic music studio in Israel, was established by Tzvi Avni (1927–) at the Academy of Music and Dance in Jerusalem, in 1971. Avni, born in Germany, began his musical studies, shortly after his immigration to Israel in 1935, at the Tel Aviv (now named Rubin) Academy of Music. Edgard Varèse encouraged Avni to study electronic music, and thus he traveled to New York City to work at the Columbia-Princeton Center for Electronic Music. He studied with Vladimir Ussachevsky between 1963 and 1964, composing his first work, *Vocalise*. Avni returned to Israel and designed the new Jerusalem studio based around an ARP 2600 analog synthesizer and two Revox tape recorders, to which a plate reverb unit and additional recorders were subsequently added. A technician offered individual instruction and technical support. Avni retired in 1995, and Menachem Zur became studio director.

Yizhak Sadai and the Electronic Music Studio at the Rubin Academy of Music in Tel Aviv

A third Israeli studio was founded in Tel Aviv during this first generation of electronic music activity. It was created in 1974 by Yizhak Sadai (1935–), who immigrated from Bulgaria in 1949. Sadai has a strong affinity for the compositional and theoretical approach of Pierre Schaeffer since the early 1960s, when he worked with with Schaeffer, Francois Bayle and Guy Reibel at the Groupe de Recherches Musicales (GRM) in Paris. The new studio was sponsored by the Faculty of Fine Arts at Tel Aviv University and the Tel Aviv Foundation for Literature and Art. British born engineer Don Goodman (1938–) served as studio technician from the time of the studio's founding through 2003, offering assistance and technical support to students. The original analog equipment included three Studer reel-to-reel tape recorders, a sizable Moog synthesizer, which featured two keyboards, nine oscillators and two filter modules, a Revox amplifier and a pair of JBL loudspeakers. One distinctive feature of the studio was Goodman's interest in periodically building new devices, including a vocoder, ring modulators and a custom mixer. During the 1980s, the studio became a digital facility, the Center for Computer Aided Music, and acquired a Synclavier II programmable digital synthesizer.

The aesthetic emphasis of the Tel Aviv studio reflected Sadai's interest in the work of Pierre Schaeffer, who was bestowed the title of Honorary Member of the Faculty of Arts at the University. During this period, Sadai organized a series of concerts of electroacoustic music at the Auditorium of the Tel Aviv Museum with the participation of invited composers connected with the GRM, including Bayle, Reibel and Bernard Parmegiani. Upon Sadai's retirement, Raviv Gazit (1949–), a graduate of the Academy, became director. He is a composer of electronic film and theater soundtracks for Synclavier and other instruments. The studio, which became a digital facility renamed the Center for Computer Aided Music, has been a member of the International Federation for Electroacoustic Music, affiliated with UNESCO, but it was closed by the University in 2003.

Recha Freier and Testimonium

Poet Recha Freier (1892–1984), who was instrumental in rescuing thousands of young people from the Nazi Holocaust, championed contemporary and electronic music after immigrating to Israel. Freier helped support new works through the founding of the Israeli Composer Funds, in 1958, and by establishing, with composer Roman Haubenstock-Ramati, Testimonium, in 1966. This triennial festival featured newly commissioned works, often with libretti by Freier, that address Jewish “historical events and spiritual creations.” The festival ran from 1968 through 1984 and included music by Karlheinz Stockhausen, Iannis Xenakis, Tzvi Avni, Yizhak Sadai, Yehoshua Lakner, Mauricio Kagel and others, some of them incorporating electronic sounds. Unfortunately, it proved impossible to continue Testimonium after Freier’s death.

The Second Generation Trained in Tel Aviv

A number of composers trained in the Tel Aviv studio, among them Joseph Dorfman, Yossi Mar-Haim, Raviv Gazit, Amnon Wolman, Betty Olivero, Danny Oppenheimer and Ron Kolton. The most senior of these composers, Russian immigrant, Joseph Dorfman (1940–2006) was one of the first musicians to perform contemporary music from the West in the Soviet Union. During a six-year period, 1974–80, he composed electroacoustic music on Tel Aviv Academy’s Synclavier II and at the Electronic Music Center in Columbia University. Dorfman teaches at the Rubín Academy, where he has been a mentor to many younger composers and has created a substantial body of work for instrumental and vocal ensemble. Another composer and researcher of note, Daniel Oppenheim (1954–) works in the Human Centric Tools team at the IBM T.J. Watson Research Center at in Hawthorne, New York. For a decade, he was on the staff of the Center’s Computer Music Group, following graduate studies at Stanford University’s Center for Computer Research in Music and Acoustics (CCRMA). Oppenheim’s interests include the design of intuitive interactive computer user interfaces for composers and the application of those ideas more generally to computing. Amnon Wolman (1955–) is a composer of works for acoustical instruments and live electronics and tape and an educator. Formerly the director of computer music programs at Northwestern University and Brooklyn College (CUNY), Wolman now lives in Israel, where he teaches and composes. Yossi Mar-Haim (1940–) learned the musique concrète tradition from Yizhak Sadai and, at Julliard, the music of Mario Davidovsky, Charles Wourinen, Tzvi Avni, Karlheinz Stockhausen and Luciano Berio. His creative work has featured music for outdoor environments and live electronic performance.

Arik (Arie) Shapira and the Haifa University Studio

The currently most active electronic music studio in Israel, at Haifa University, was founded in 2000, by another graduate of the Tel Aviv Academy, Arie Shapira (1943–). Political controversies about his highly original work caused Shapira to leave a prior position at the Tel Aviv Academy, opening the door to the creation of this new center. While the primary function of the studio is to support the studies of pop, rock and jazz-oriented music students and Art students, a number of electroacoustic composers have emerged, including Avi Elbaz, Uri Pesach, Itsik Mizrachi, Gil Wasserman, Keren Rosenbaum and Guy Rosenfarb. Shapira’s works include music for orchestra and rock group and a series of text-based electronic compositions, including the *Kastner Trial, Electronic Opera in Thirteen Scenes* (1994), a setting of the trial transcript of a difficult and pivotal event in the early history of modern Israel. The main instructor in the Haifa studio is a product of the institution, composer Avi Elbaz.

Among the younger composers who have remained in Israel, former Shapira student Gil Wasserman (1965–) has carved out a unique place in the landscape of electronic music in the country. Wasserman performs live electronic music with home-designed circuitry, along with Ilan Green (1963–) as the duo, Krechtz. The two musicians design and construct their own instruments, supplemented with commercial gear and unusual devices including balloons, circuit-bent toys and sensor gloves.

Studio Directors and Composers Trained at the Jerusalem Academy

Two graduates of the studio at the Jerusalem Academy of Music and Dance are well-noted figures in electronic music in Israel. Menachem Zur (1942–), influenced by Mario Davidovsky at Columbia University, composes works that focus on the shaping of short, individual sounds and sound gestures, divorced from their original source. Zur directs the Electronic Music Studio at the Jerusalem Academy. He has composed music for chorus and instrumental ensembles and tape, among his numerous other works. A fourth Israeli studio was founded by conductor and composer, Eitan

Avitsur (1941–), at Bar Ilan University. Avitsur has taught at Bar Ilan since 1971, where he opened the Electro-Acoustic Music Program in 1990 and the University Computer Music Laboratory in 1995.

Notable among Jerusalem Academy graduates who work in the United States, Jonathan Berger (1954–) continued his studies at the California Institute of the Arts and at Stanford University's CCRMA, where he currently teaches. Berger is a researcher and composer of music for acoustical instruments and interactive electronics. He has a strong interest in algorithmic works, "particularly the idea of taking structure to the level of timbre and microtime..." A former Jerusalem Academy student who has remained in Israel, Kiki Keren-Huss (1955–) is an independent composer of music for instruments and tape, and sound installation. She is largely self-trained in electronic music and works in a home studio.

The Jerusalem Institute of Contemporary Music and Stephen Horenstein

In the late 1980s, a third institution devoted to contemporary music was founded in Jerusalem by Stephen Horenstein (1948–). American-born Horenstein, a composer, educator and saxophonist, immigrated to Israel in 1980 and established the Jerusalem Institute of Contemporary Music in 1987. The Institute includes a "hyperinstrument" workshop, a term that refers to electronic expansions of acoustical instruments. That same year, Horenstein created the Institute's resident experimental music ensemble, the Jerusalem New Music Ensemble. His own works integrate traditional Jewish source material, live, interactive electronics, environmental composition, and psychoacoustic experiments in the perception of time.

Israel Computers and Music Forum (ICMF)

In the 1990s, it became clear that Israel was home to an increasing number of researchers in areas related to composer music, acoustics and related fields. Thus, the ICMF was organized in 1994 by Shlomo Dubnov to

conduct multi-disciplinary research in computer science, engineering and acoustics in the field of music; to encourage composers into producing new works of music using new technologies; to promote computer-aided musicological research, and to serve as a means of exchange among those researchers; to establish continuous relationships with the international musical and scientific communities; to promote pedagogic efforts in the field; to promote production of public events that bring to the public eye the results of computers and music activity and the evolution of musical thought.

The ICMF has held five meetings in Israel from 1994–96, hosted by several of the Universities. The organization maintains a listserv (<mailto:il-cmf@cs.huji.ac.il>) and an ftp site.

Three of the most significant Israeli researchers, two of them now in the United States, are Shlomo Dubnov, Dan Gang and Gil Weinberg. Shlomo Dubnov (1962–), who trained as an electrical engineer, computer scientist and composer, is a researcher and composer interested in audio processing and retrieval methods, modeling sound timbre and texture using statistical methods. He has worked at IRCAM in Paris, Ben-Gurion University, and currently, at the University of California at San Diego. Dubnov has composed works for acoustical instruments and live electronics, as well as multimedia sound and light installations. Gil Weinberg (1967–) is a researcher, composer and educator, currently on the faculty of the Georgia Institute of Technology (Georgia Tech). Best known for his creation of the "Beat Bug" while in graduate school at the Massachusetts Institute of Technology (MIT) Media Lab, Weinberg is interested in designing hardware and software that allows expressive collective musical engagement for children and adults. Dan Gang (1962–), a graduate of the Artificial Intelligence lab at Hebrew University's Institute of Computer Science, continued his studies as a Fulbright Post-Doctoral Fellow at Stanford University. His interests in the intersection of artificial intelligence, music and cognition, led Gang to found MusicGenome, a company that uses artificial intelligence and music cognition models to predict the musical preferences of listeners, for use in music sales.

Other Composers of Note

A composer whose work creatively integrates his multiple ethnic background is Rajmil Fischman (1956–). Born in Lima, Perú, Fischman immigrated to Israel in his youth and then moved to the United Kingdom to study and, later, join the faculty of Keele University. He also designs software,

which has been distributed as part of the Composer's Desktop Project. Two second generation composers who have remained in Israel are Dan Yuhas and Dror Elimelech. Dan Yuhas (1947–) is a composer of orchestral, chamber, vocal, and most recently, electronic music, which he studied with Hugh Davies in London. Yuhas founded the Israel Contemporary Players, for which he opened a small recording studio, operated by Didi Fire. Dror Elimelech (1956–) is a composer of live electronic and instrumental music. He founded the Other Israeli Music concerts and Night Happening new music forum.

Developers of New Technologies: Waves

Israel is not only a home to researchers, but also technology companies. One of them, Waves, a pioneer in digital signal processing software, was founded in 1988 by Israeli-born Gilad Keren (1959–) and Meir Shaashua (1963–). Its home base is Knoxville, Tennessee and Tel Aviv. Waves plugins draw upon the company's psychoacoustic expertise feature Maxx technology that enhances audio performance in consumer applications. Earlier in his career, when Keren was a recording engineer and producer for an Israeli rock band, he became fascinated with vocoders. He trained in Applied Mathematics at the Technion, in Haifa. Shaashua grew up as a musician with interests in electronics, building electronic gear for his rock band. He began formal technical training in the army. The two friends began discussing plans for a collaboration when Motorola released the DSP 56000 digital signal processing circuit in 1986. It became the base for Waves' subsequent gear, including their first plug-in, the Q10 Equalization. Developed in 1993, it was the first such technology to enter the commercial marketplace. A major influence on their work was mathematician and audio theorist, Michael Gerzon (1945–96), best known for his development of Ambisonics, an approach to surround sound.

Observations

Electronic music composed by Israeli composers is quite diverse, reflective of the ethnic, national and other variety of its people. The work of some composers, for example Yizhak Sadai and Menahem Zur, reflects the abstraction of European tradition. Other composers such as Tzvi Avni, Joseph Dorfman and Arik Shapira draw upon the sounds of the Hebrew language in their music. Others yet, such as Stephen Horenstein and Rajmil Fischman, integrate traditional Jewish musical elements. What many, but not all of these composers share in common is the desire to explore the nature of Israeli identity. The first generation of composers tended to explore biblical themes, a trend that has declined as Israel has grown increasingly secular, in a time of growing cleaves between religious and secular forces.

Electronic music in Israel has not received substantial public or institutional support. Two of the three original academic studios have closed in recent years. The very active Haifa University studio and the Bar Illan studio remain. Electronic dance music is the only widely known musical form that engages technology. Few national prizes have recognized the work of electronic music composers and in one major case, this proved controversial. Many of the more important younger composers have emigrated to the United States, where they have thrived, continuing the traditional of Israeli musical creativity in the field. Many retain strong ties to their homeland, leaving the possibility of a resurgence of activity in the future. There is reason to hope that electronic musicians working in popular forms will create more experimental work, bridging the gap between these musical worlds and providing broader exposure for the field. Nevertheless, when viewed as a whole, music by Israeli composers around the world, offers an impressive internationally based body of work. This is especially true given the small size of the country.

Additional resources

An interview with Joseph Tal may be found on the EMF Institute website (<http://emfinstitute.emf.org/articles/tal03/tal.html>) . Two useful additional web resources about Israel composers include the Israel Composer's League (<http://www.israelcomposers.org/>) and the Israel Music Institute (<http://www.imi.org.il>) .

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Biography

Bob Gluck is a composer, pianist, historical writer and designer of computer interfaces for musical performance. His music spans jazz performance, free improvisation, and avant-garde concert music. Gluck is Associate Professor of Music at The University at Albany, where he directs the Electronic Music Studio. His essays have been published in Leonardo Music Journal, Organised Sound, Computer Music Journal, Journal SEAMUS, Leonardo, Living Music Journal, Ideas Sónicas, Tav+ and at the EMF Institute.

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