BANG A GONG

BY MARK DERY

The music of Harry Partch (1901-74) is wine for Dionysians who drink through their ears. Rowdy and ribald, sublime and sorrowful, moon-mad and sun-addled all at once, it is an intoxicating mix of the Christian hymns and Chinese lullabyes sung by his parents, Presbyterian missionaries who had lived in China, the Mexican ballads and Yaqui Indian songs that echoed through a boyhood spent in Arizona and New Mexico, the hobo rhymes and riffs he picked up while riding the rails during the Depression, the Okie folk tunes he heard when he worked as a grape-picker in the California vineyards, and the exotic forms—Hebrew cantillation, the music of Congo puberty rituals, Indonesian *gamelan*, Japanese *noh* and *kabuki* music, ancient Greek airs—encountered during his autodidactic musical education. • But the most potent ingredient in Partch's music is truth. It thrums like an electrical current through nearly every piece he wrote. If art is a quest for truth, then Harry Partch is the truest American composer.

TED TOURTELOT/ HP ARCHIVE

Harry **Partch with his Harmonic Canon I.**

THE DO-IT-YOURSELF MUSICAL UNIVERSE OF HARRY PARTCH

As he observes on "The Instruments of Harry Partch," the introductory record that accompanies the two-record boxed set *Delusion of the Fury*, "I've been 'doing my own thing' for more than [illegible]-and-a-half decades. This thing began with truth, and truth does exist." • Truth, for Partch, began not with airy philosophical rumination [illegible] with hard, cold facts—for starters, the fact that equal temperament is woefully out of tune. Undaunted, he bulldozed the house that Bach built and rebuilt it on firmer ground. Inspired in part by the Hermann Helmholtz-Ellis treatise on acoustics, *On the Sensations of Tone*,

he devised his own tuning system based on the scientifically accurate intervals of just intonation rather than the intervallic compromises of equal temperament. [*Ed. Note: For more on Partch's unique tuning system, see page 52.*]

Of course, instruments with fixed intonational properties, such as the piano, couldn't accommodate Partch's new system. Lesser souls would have thrown up their hands in despair; Partch simply got out his toolbox and set about hammering together a homemade orchestra on which to play his alien scales. His first instrument, an "adapted viola" with the microtonal increments of his tuning system marked along its extended fingerboard, was completed in 1930. Despite chronic poverty and the worrisome nature of housing, transporting, and maintaining his growing "family," Partch continued to design and construct new instruments well into his later years. That family, which ultimately grew to 25 members, is now housed at the Department of Music at San Diego State University.

Danlee Mitchell, curator of the Harry Partch Instrument Collection at San Diego State University, with some of Partch's creations (L to R): bamboo marimba (nickname: 'boo'), Harmonic Canon I, Spoils of War (named for its suspended artillery casings), diamond marimba.

Partch's fragile sound sculptures, in which bamboo, gourds, and eucalyptus boughs are seamlessly integrated with industrial rubbish, borrow from Asian, African, Greek, and Martian aesthetics. Walking among them suggests a stroll through a grove of extraterrestrial trees heavy with strange fruit. There are "cloud-chamber bowls"—Pyrex bottles suspended from a rack and played with soft mallets, "cone gongs" that look like giant mushrooms but are in fact nose cones of airplane gas tanks mounted on stems, a "mazda marimba" fashioned from gutted light bulbs, a "Zymo-Xyl" ("zi-mock-sil") made out of hubcaps, liquor bottles, wood blocks, and an aluminum pot lid, and the "Spoils of War," a clean-out-the-closet instrument incorporating brass artillery shells, tongued pieces of bamboo, a *guiro* (a gourd raspidore often used by Latin bands), and what Partch called "whang guns"—spring steel Flexatones that can be made to produce a cartoony boinging by means of a footpedal. Here and there, mallet instruments such as the diamond marimba, bamboo marimba, and "Marimba Eroica," fabricated from bamboo and Pernambuco blocks, spring up like the freakish flora in Ray Bradbury's *Martian Chronicles*.

Certainly, Partch's music is dominated by percussive timbres and often features intricate rhythms. For example, *Daphne of the Dunes*, from *The World of Harry Partch*, is a study in ever-shifting meters, with pulse sub-divisions of five, seven, and nine predominating. According to Danlee Mitchell's liner notes for the Columbia recording of the piece, one passage is written in 31/16, with five unequal beats per measure, the beats sub-divided into sixteenth-note groupings of 5-5-7-9-5; another is written in a polymeter of 4/4-7/4 over 4/8-7/8.

But Partch's music is rich in harmonic and melodic content as well. Large, 72-stringed lyres called kitharas, based on ancient Greek precursors, together with zither-like "harmonic canons" and his keyboard instruments, Chromelodeons I and II, articulate dreamy, drunken harmonies and sharply spliced melodies whose almost microscopic movements make them sound at once ecstatic and melancholy to the tempered ear.

The Chromelodeons, in Partch's words, are "old-fashioned reed organs, rebuilt and retuned." He built the first instrument of this type, the "Ptolemy," in 1934. Chromelodeon I, constructed in 1949, has two banks of reeds per key, while Chromelodeon II, which dates from 1954, has three; each instrument's range spans three microtonal octaves. The seven-white, five-black keyboards of these wheezy old harmoniums have not been changed in any way, other than being color-coded with bright squares of paint to designate the various intervals they represent. Though parts for his other instruments are written in tablature, a numerical system that tells an instrumentalist which bar to strike or string to pluck, Partch's Chromelodeon passages are written in the treble and bass clefs using traditional notation, a concession the composer wryly compared to "(using an old) track over which to run a newly conceived train." Of course, the idea is in essence the same as that behind tablature: The notes tell the player which key to depress and when. The sound that emerges, however, is from another planet. The organ reeds have been filed to the specifications of Partch's 43-step octave, so that when the keyboardist plays, say, a written *F#*, he or she in fact hears something close to a low *Eb* (actually, 11/7 in Partch's terms). "It's like sitting down at a piano, looking at a piece of music, starting to play it, and realizing that someone has prepared the piano the way John Cage did," chuckles Danlee Mitchell.

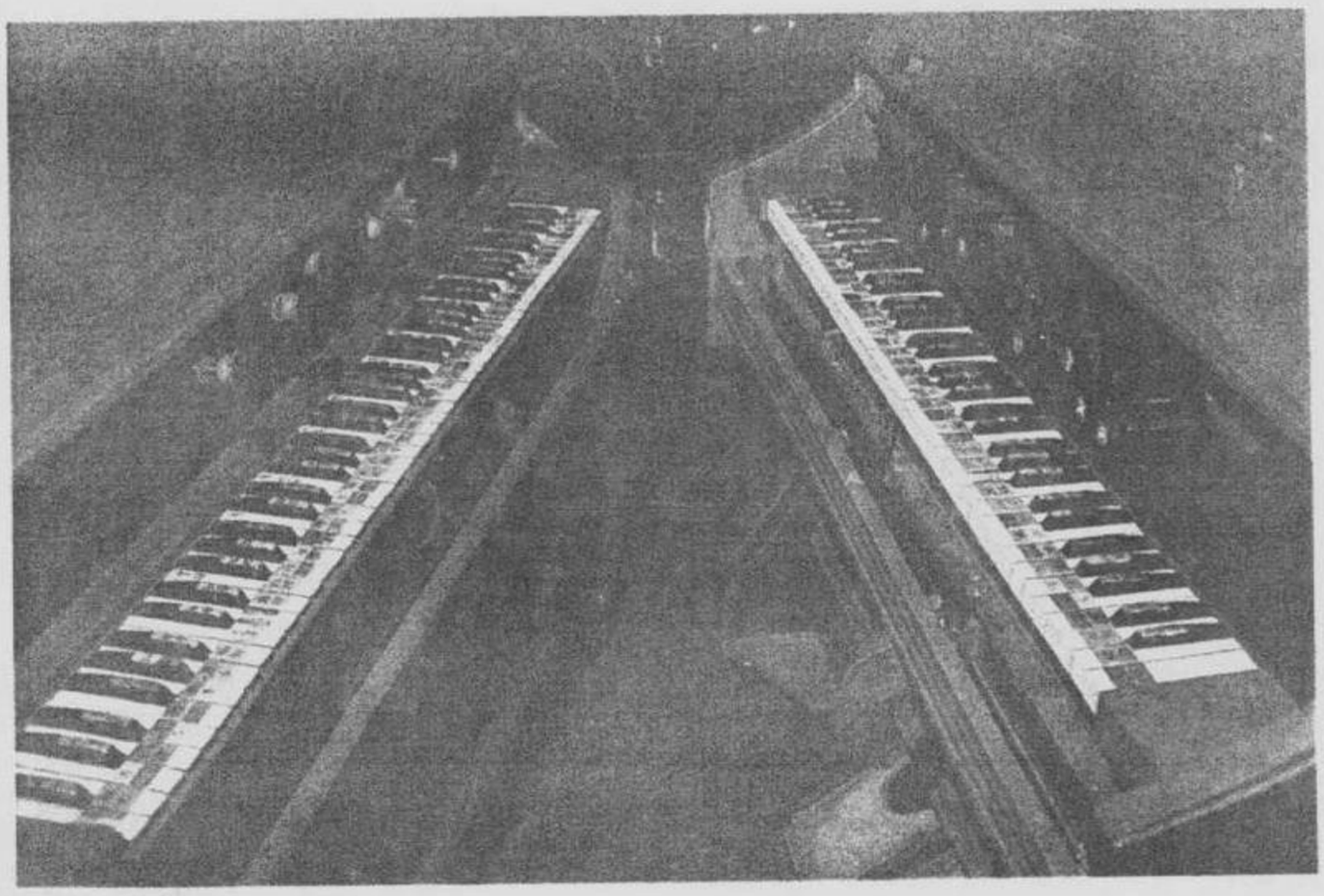
A conductor of numerous Partch performances and performer on several Partch recordings, Mitchell knows a thing or two about Chromelodeons. "Chromelodeon I is the more basic instrument," he notes. "It's got an abbreviated keyboard; many reed organs do not have a full piano range. Still, Chromelodeon I has almost three octaves within its basic keyboard. A reed organ, of course, has more than one bank of reeds; they did this to give you doubled octaves. Partch uses this feature to stretch his one octave to three. [*Ed. Note: In othe*

words, by making use of the additional bank of reeds, Partch was able to make his Chromelodeon span three of his 43-note octaves on keyboards that otherwise would have accommodated only one.] Plus, up at the player's left, above the keyboard, is a sub-bass unit [*i.e.*, a lever system that extended the instrument's range below that of its footpedal bass], which Partch found somewhere and installed on the instrument. Chromelodeon II has the full-sized piano keyboard, which allowed Partch to set more than one octave of his tuning system on the basic bank of reeds. On the other banks, he tuned the reeds so that you get interesting chords *per key* if you pull the right levers.

"Playing the Chromelodeon is very holistic in nature. You're pumping the organ with your feet, producing the air that's going through it, and you can subtly control the volume of the instrument, its phrasing, and so on. You can construct passages with tiny, voice-led resolutions where the intonation is so beautiful, so subtle, so moving, that playing the instrument becomes an incredibly satisfying experience.

"The Chromelodeon has a very human vocal quality, and its role in Partch's music was often a vocal one. In instrumental settings, the vocal imagery occurs in the Chromelodeon, and that's where the intricate harmonic manipulation occurs. Good passages for examining Partch's use of the Chromelodeon can be found in *Delusion of the Fury*, especially the 'Exordium' and 'Sanctus' parts. He has, in those two sections, really lush harmonic passages played on the Chromelodeons.

"In *Revelation in the Courthouse Park*, the Chromelodeons often double vocal lines, and if there's a vocal harmony, they'll further harmonize it. In 'Daphne of the Dunes,' Partch uses the Chromelodeon



Partch's Chromelodeons II (L) and I.

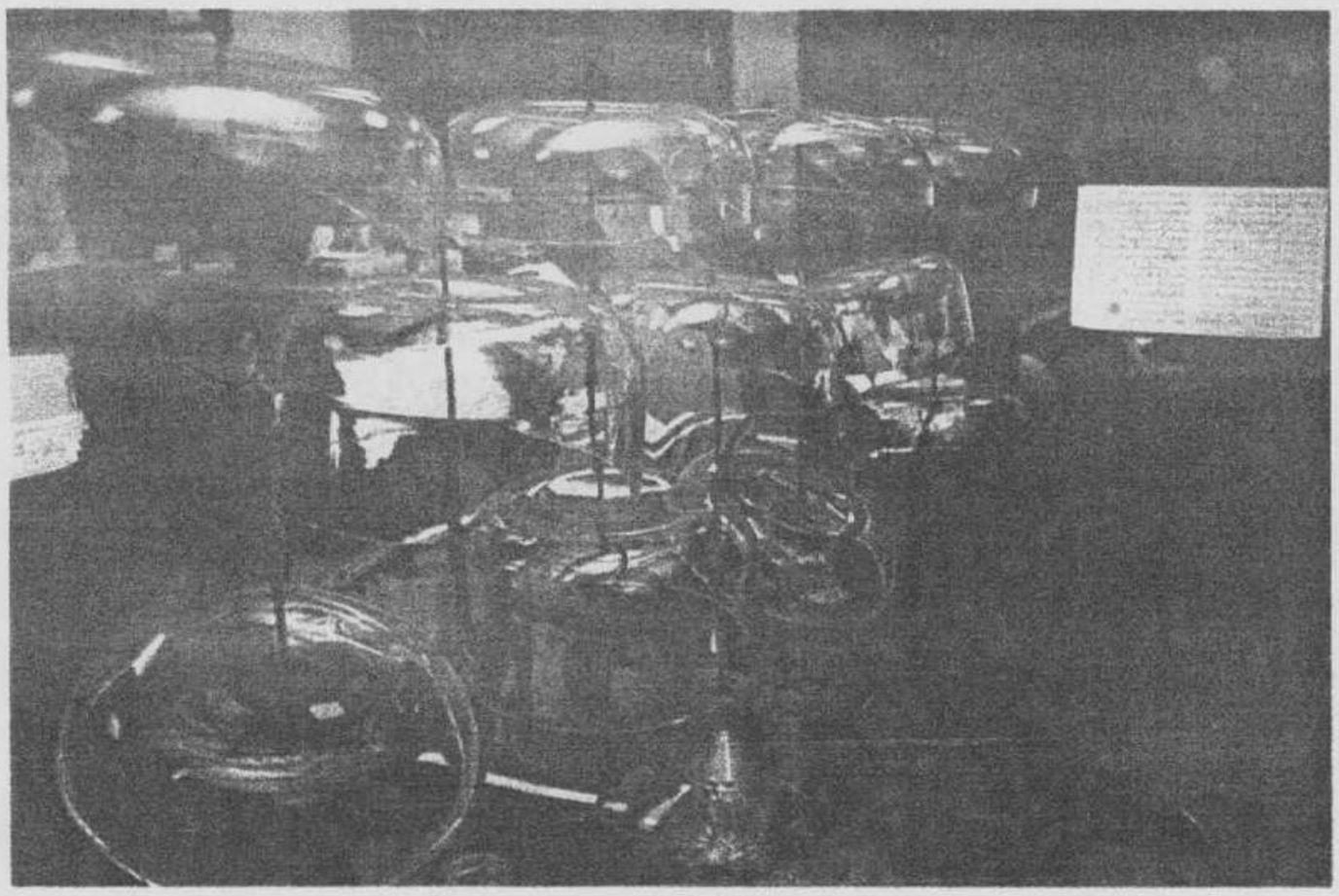
HARRY PARTCH IN 1990

Partch's influence is wide-ranging and deeply felt, from the mainstream to the underground. Rather than fading away, it seems to be gathering strength. "Harry Partch has never ridden as high as he's riding right now," confirms Bart Hopkin, publisher and editor of *Experimental Musical Instruments*, a newsletter based in Nicasio, California. "The time is right for a rethinking of our approach to intonation, and when people do that, they have to go back to Harry Partch." Hopkins's publication, along with San Francisco's Just Intonation Network and New York's American Festival of Microtonal Music, serve as nerve centers for a vital, bustling underground of composers and players who have followed Partch's lead.

In addition, Partch's shadow falls long over an ever-growing contingent of one-of-a-kind instrumentalists, of whom former Partch assistant Dean Drummond is one example. Reverberations of Partch's music can be heard in the sweetly tinny tinkling of the Zoomoozophone, a 31-tones-to-the-octave mallet instrument constructed from 129 aluminum tubes. Drummond, who mounted a performance of several Partch pieces at New York's avant-garde Bang-on-a-Can Festival this May, recently received a $45,000 grant from the Andrew W. Mellon Foundation. With it, he plans to build replicas of nine Partch instruments, on which his ensemble, Newband, will perform Partch pieces as well as original works. "This," Drummond enthuses, "is truly a dream come true—for me, for Newband, for New York, and maybe for the future of music."

Finally, there are those whose use of timbre, sense of drama, and approximation of Partch's "intoning voice"—a sort of Partchian variant on Schoenberg's *sprechstimme* ("speaking voice"), in which words are half-spoken, half-sung—bears the imprint of the late composer. Tom Waits is certainly one of these. It's no coincidence that Francis Thumm, whose pump organ, angklung, glass harmonica, and prepared piano playing lend a decidely Partchian air to Waits's *Swordfishtrombone* and *Franks Wild Years* (both on Island), is also a Chromelodeon player in the Harry Partch ensemble.

"Tom saw us in the mid-'70s, when we did *The Bewitched* at UCLA," recounts Thumm, "and it just knocked the socks off him. Later, Tom and I went through the prologue to *Genesis of a Music*, which I think is one of the most beautifully written accounts of a musical coming of age I've ever read. When he was getting ready to make *Swordfishtrombone*, he said, 'Why don't you come on as co-arranger and musical advisor?' I think the values that I brought to that record had everything to do with the textures I'd been around with Partch. And I think Partch's spirit of musical adventure, of seeing what can happen in the studio, has invaded me and the people I've worked with, including Tom, who's always ready to hear a new idea by an instrumentalist during a recording session." ■



Beautiful to the eye and ear: Partch's cloud-chamber bowl.

to introduce strong dissonances, symbolizing Daphne's cries for help as she's being pursued by Apollo. In 'On the Seventh Day Petals Fell in Petaluma' [from *The Music of Harry Partch*], the Chromelodeons have a very strong contrapuntal role when combined in duets with any one of a number of partner instruments. And in *The Bewitched*, the Chromelodeon gives secondary harmonies, accompanying the adapted viola."

The Chromelodeon can also be heard, blowing lustily and murmuring pensively, on Partch's last work, "The Dreamer That Remains." Francis Thumm, a music teacher at San Diego's Point Loma High who has played in the Harry Partch Ensemble since 1971, performs the Chromelodeon part in the version of "The Dreamer" heard on *Music of John Cage and Harry Partch*.

"I think I'd taken a class with Danlee Mitchell at San Diego State University," recollects Thumm. "One day he tapped my shoulder and said, 'We're making this documentary [*The Dreamer That Remains*] about Harry Partch, and we need somebody to play the Chromelodeon. Would you like to do it?' I said, 'Absolutely!' I was overwhelmed.

"When I met Harry, I had been working on the part, learning it note for note just as you would a Bach toccata, the whole thing being rather awkward to me. The Chromelodeon is a physically cumbersome instrument to play, with the constant pumping of the footpedals causing a slight continuous motion of the instrument and performer. The action of the keys isn't always uniform or predictable, and you have to develop a commensurate technique to achieve the organist's desirable legato. And because of the tuning arrangement, the finger spacings are decidedly 'unpianistic' during melodic passages that sound simple and diatonic. The swell pedal, op-

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PARTCH'S MONOPHONY: AN ALTERNATIVE TO EQUAL TEMPERAMENT

With 43 divisions to the octave as opposed to the 12 commonly found in Western music, Partch's system of monophony—so called because all degrees are expressed in terms of their relationship to a prime fundamental—opened the door to an unexpected universe of tonal colorations and dramatic subtleties. The technically inclined will want to satisfy their curiosity about this system by seeking out Partch's autobiography-*cum*-acoustic treatise, *Genesis of a Music*, which offers a thorough explanation of his theories. For most readers, a paragraph from the book will suffice:

"The major contribution of monophony as an intonational system is its realization of a subtle and acoustically precise interrelation of tonalities, all stemming or expanding from unity, 1/1. This interrelation is not capable of manifold modulations to dominants or any other common scale degrees; it is not capable of parallel transpositions of intricate musical structures; it does not present any tone as any specific tonality identity. Conversely, it is capable of both ordinary and hitherto unheard modulations to the natural limits imposed by just intonation and the arbitrary limit of 11 [imposed by Partch for purely practical reasons having largely to do with instrument construction]; it is capable of an expanded sense of tonality. . . . It is capable of great variety in that expanded sense."

Danlee Mitchell, a professor of music at San Diego State University and curator of the Harry Partch Instrument Collection and Archive, probably knows more about Partch's tuning system than anyone else. "Partch wanted chords that were in tune," he states flatly. "In equal temperament, chords are not in tune. For example, the third is sharp, the seventh is quite sharp, and the eleventh is horribly out of tune. Partch's theory of consonance is based on science, not aesthetics. In his system, if a chord is out of tune, it's dissonant. If it's in tune, it's consonant. It has nothing to do with the arbitrary harmonic practice that's been going on in the West for 300 years, where you say, 'Well, we're going to make a ninth chord dissonant, and we're going to make its resolution to a major or minor triad consonant.' That's purely subjective! Partch's consonance and dissonance are objective. If one of the notes in a chord is detuned, then the chord is dissonant. When the chord's root doesn't change and the notes that are out of tune re-

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erated by the thigh, allows for wonderful vocal-like groans of diminuendo and crescendo, made even more colorful by the close tonal intervals and the stops that double notes in octaves and thirds.

"Well, when Harry showed up for the first rehearsal, he asked me if I had any questions about the part, and I said, 'Yeah, there's this passage here.' I played the section, trying to pump, and said, 'Is this what you want?' And Harry goes, 'Oh, no, no, no, man! Lemme just show you!' He sits down and starts pumping and puts the flats of both hands on the keyboard, just slaps them down, and *yanks* that son of a bitch up and back down again! It made this *vrrawww*! And I went, 'Whoa!'

"That one instance influenced the way I approached the instrument forever. I became much more raw with it: I fought with it, I was more savage with it. I developed a real freewheeling personal relationship with the instrument. Before, I was playing in a very distanced, academic respectful manner. I was Apollonian, and Harry *Dionysed* me."

Thumm wasn't the only one Dionysed by the bearded Bacchic composer. Reading about the man, talking with those who knew him, and most of all listening to his music, one gets the impression that Partch's whole life consisted of a desperate attempt to grab all of existence in a rib-cracking bear hug.

"Every time I sit down at the Chromelodeon," confides Thumm, "I feel Harry's presence. He was a real character, and he had such a love of people and of music—a child-like sense of wonder. Once, he found a little paper with these rules of love on it, written by two youngsters. It was all about how you know when you're deeply in love: 'Holding hands means quiet infatuation,' 'Prolonged staring into the eyes connotes true love,' and so on. Harry read it aloud, going, 'Omigod, listen to this one!' He delighted in things like that.

"When I tell my high school students about Partch, I tell them that it doesn't really matter whether you're attracted to his music. The main thing is that here's a person who passionately believed in something and pursued it. He happened to be a musician whose music required him to build his own instruments, but the moral of this story is, if you have something you're dreaming about, go for it. If it requires that you do new and bizarre things, then *do* them, and don't worry about what society says."

Mitchell, who was almost certainly Partch's closest associate for many years, shares Thumm's attitude toward the fiercely uncompromising composer. "Partch as a personality," he has written in an unpublished essay, "was . . . fanatically dedicated to his mission. His music was the center and sole purpose of his life. His instruments were his children and received constant attention. When intellectually or aesthetically challenged he could reduce to dust almost any person naïve enough to question his . . . beliefs. . . . He was a student of history, language, anthropology, and sociology, and was . . . familiar with all the musics of the world. In short, he was an ecstatic joy to be in the presence of. He loved humanity, and did not consider himself to be above it, and always brought out the best [in] anyone sincerely interested in his work." During a recent interview, Mitchell added, "Harry was a highly individualistic person, a pioneer spirit. He didn't permit any bullshit in his life."

Partch had little patience with what he acidly referred to as "the European chauvinism of New York, the mindless caterwauling of Hollywood recording studios, and the 'we-sell-by-the-yard' mood music people." Confronted with a throwaway society in which music was reduced to the aural Novocaine that seeps from our radios and floods our supermarket aisles, he stood his ground and demanded magic. He believed that music should be not abstract but "corporeal," by which he meant holistic and cathartic, reuniting mankind's Dionysian and Apollonian aspects, which he insisted Western thinking had rudely severed. This belief is reflected in the staging of *The Bewitched* (1956), *Revelation in the Courthouse Park* (1960), *Delusion of the Fury* (1966), and many other music theater works he composed. In them, Partch augured the mixed-media "happenings" of the '60s and the performance art of the '70s: His musicians wore eye-grabbing outfits, danced, and sang while playing exotic instruments that doubled as a backdrop for the action going on around them. During one of the spontaneous, hilarious harangues that pepper the "Instruments" album, Partch blusters, "We are reduced to specialties: a theater of dialog without music, for example, and a concert of music without drama—basic mutilations of ancient concept! Specialization . . . is self-defeating, because it denies fulfillment. I want my musicians . . . to get out on the stage floor and become a moving, playing chorus." His carpentry's deft blend of scrap metal and natural materials, his wedding of hard science and the occult in a tuning system whose rigorously mathematical underpinnings never got in the way of the magical effects he sought to produce, and even his sexuality—Partch was bisexual—can be seen as part of an overall desire to reclaim the right-brain, spiritual, some might say fe-

The massive Kithara II, based by Partch on ancient Greek designs.

male qualities forgotten by a left-brain, materialistic, "male" society.

"Partch's whole creative approach, which demands a lot of the intuitive resources, is something that the West is very suspicious of," says Mitchell. "We in the West tend to be a very analytical scientific bunch, and we tend to be very suspicious of spiritual inclinations, other than a belief in Christianity, of course. Although Partch's theories are highly scientific—he investigated the science of acoustics in far greater depth than most of the music community—his music is in essence an expression of the Dionysian aspect of man's psyche.

"We live in a culture where music has become a product. We've lost a lot of the spirituality of music. Most people, it seems, are only interested in getting into music for quick media success. American culture is highly controlled right now, and all of our decisions in pop music are based on marketing, which to me is a tragedy. I think technically-oriented music magazines are a nightmare: They're programming young minds to put out a pop product that has very little artistic merit. What we have is money managers running the music industry: The Harvard Business School graduates are in the driver's seat."

It's high time someone took a stout stick and drove the moneylenders from the temple. Sixteen years after Partch's death, his music is more timely—and more sorely needed—than ever. When he lamented, in 1972, two years before his death, that art had come to a sad pass when "the searching musician must humble himself before banks of highly technical equipment, and cater to those technicians and administrators who have been chosen to preside," he clearly foresaw our present state of affairs.

Perhaps new thinkers will come forth, with new thoughts. The "Instruments" album ends with an electrifying exhortation in which Partch insists that "the creative man will rise above, he will transcend the mutilations." "For every deeply sincere offering," he insists, "there is a corresponding deep and sincere hunger." With typical Partchian melodrama, the instruments beneath his voice-over swell suddenly to a thunderous crescendo and stop on a dime.

Most of us spend much of our lives shackled by society's prescriptions and proscriptions, unaware that we are chained. Partch saw those fetters and struck them off with a single unerring blow. "When I was 14, I began to write music," he recollects in the movie *The Dreamer That Remains*, "and I said right then and there that I would not be straitjacketed by anyone. I [was] going to be completely free." The inherent flaws in the prevalent tuning system galled him, so he invented an intonational system that was more to his liking. "The inherited forms and instruments of Europe's 18th century" could not accommodate his new tuning, so he tossed them on the ash heap and built his own orchestra. The notion of robots in tuxedos interpreting the scribblings of some long-dead composer while listeners dozed mortified him, so he devised a music theater influenced by Greek tragedy, Japanese *kabuki*, mime, dance, vaudeville, and the fireside yarn-spinning of hoboes. He accepted nothing, questioned everything. There was not, and has never been since, a music maker like him.

At the end of his preface to the second edition of *Genesis*, Partch quotes a child's poem that, he says, touched him "in an extraordinary way":

Once upon a time
There was a little boy
And he went outside.

That boy was Partch, and he left the door through which he passed wide open, waiting. Any who wish may follow. ■

FOR FURTHER . . .

Viewing

The Dreamer That Remains: A Portrait of Harry Partch (available for rental from

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HARRY PARTCH

Continued from page 54

New Dimension Media, 85895 Lorane Hwy., Eugene, OR 97405).

Reading

Partch, Harry, *Genesis of a Music*. Da Capo Press (New York).

Listening

The Bewitched, Composers Recordings Inc. (170 W. 74th St., New York, NY 10023).

Delusion of the Fury, Columbia.

Dean Drummond (untitled at press time; includes performance of Partch's *Two Studies on Ancient Greek Scales*, arranged for flute & Zoomoozophone), Mode Record Service (available from Newband, 95 W. th St., #34G, New York, NY 10025).

Music of John Cage & Harry Partch, (includes early works & Partch's last composition, "The Dreamer That Remains"), New World (3 E. 54th St., New York, NY 10022).

Music of Harry Partch, Composers Recordings Inc.

Pitch (microtonal works, including Partch's "In the Springtime on the Southside of the Yangtzee Kiang" for voice & viola, & "December 1942" for voice & fretless guitar), Pitch (318 E. 70th St., #5FW, New York, NY 10021).

Rational Music for an Irrational World (collection of just-intoned works, including Partch's "Ulysses Departs from the Edge of the World" for bamboo marimba & jazz wind instruments), Just Intonation Network (535 Stevenson St., San Francisco, CA 94103).

Revelation in the Courthouse Park (Partch's setting of Euripides's *The Bacchae*, recorded at the American Music Theater Festival, Philadelphia, 1987), Tomato (dist. by Welk Record Group, 1299 Ocean Ave., Ste. 800, Santa Monica, CA 90401].

Tellus #14 (cassette, includes Partch's "O Frabjous Day!") (available from 595 Broadway, #602, New York, NY 10012).

World of Harry Partch (includes "Daphne of the Dunes," "Castor & Pollux," & "Barstow"), Columbia.

PARTCH'S MONOPHONY

Continued from page 52

"Now, if you take the basic 43 notes in Partch's system and you plot how many major and minor chords there are, you get 14 majors and 14 minors. It beats equal temperament [Ed. Note: *In other words, where major and minor chords can be rooted on any of the 12 notes in the equal-tempered diatonic scale, Partch's system of 43-note octaves includes 14 positions on which consonant major or minor chords can be positioned.*] Furthermore, Partch's harmonies are much more complicated than those found in equal temperament, because all of the notes can be in tune, giving you perfect intonational relationships, whether you want two notes or 11 notes in your chord. In a Partch chord progression, in terms of voice leadings, you can have some notes moving in wide leaps and some moving in tiny increments. The closest distance between any two pitches in Partch's tuning is 14 cents, and the largest is about 35 cents. When you get an out-of-tune chord going into another chord that's in tune, with these microtonal voice leadings, it's an *incredible* thing.

"I can't put these harmonic relationships in 12-note terms, since Partch expressed pitches as mathematical ratios. I will say, though, that Partch often employs triadic harmony as well as seventh-chord harmony that, again, has both bold and subtle movement, with microtonal shifts of notes where inner voices are moving in cents while the more prominent voices are moving in larger intervals. When I say 'larger intervals,' though, I mean intervals usually not larger than a half-step. If you immerse yourself in a Partch work, listening to its small intervalic relationships, and then you listen to a keyboard instrument like that piano, a half-step sounds a mile apart!" ■