BARSTOW AS HISTORY

An Introduction to the Sound World of Harry Partch

I. PREPARATIONS

Introduction

As a composer, theorist, instrument builder, and performer, Harry Partch (1901–74) is a challenging and influential figure in modern American music; yet his work is more notorious than understood, his achievements more legendary than genuinely known. The starting point for his accomplishments in all four areas was his belief that the equally tempered twelve-tone scale was "the basic ingredient [of the] chaos"[1] known as Western music, with its all-too-easy acceptance of intonational standardization. Partch proposed a return to an ancient Greek (and perhaps earlier) system called just or pure intonation, in which pitches and intervals were derived through simple ratio (i.e., rational) relationships, as opposed to the logarithmic method used to temper the standard system. After years of independent research, Partch, whose sensitivity to pitch was highly acute, came to the conclusion that, "when we force acoustic intervals into the [piano keyboard] octave . . . we falsify every interval involved, we effectively close all doors to any further adventures of consonance, and also, amazingly, we close all doors to any meaningful adventures in dissonance."[2] For these reasons, Partch chose to use a tuning system based on his interpretation of just intonation, and to adapt or build string, percussion, and keyboard instruments to play his music. The end result is probably the most impressive instrumentarium ever developed by an individual. Aesthetically, he pursued an affinity for a wide variety of musical and literary sources. He rejected what he labeled the "Abstract"—the Western European concert-hall tradition with its emphasis on pitch over text—in favor of a "Corporeal," visceral, ritualistic, and ultimately communal theatrical performance mode that treats pitch and text equally and borrows from ancient Greek tragedy, Japanese Noh drama, Native American chant, and other story-telling traditions.

Unlike many who proposed alternatives to conventional aesthetics, tuning, and performance precepts, Partch realized his vision fully in both theory and practice. His music, performances, recordings, and films[3] not only set forth his ideas, but helped propel their

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[1]Harry Partch, *Genesis of a Music* (Madison: University of Wisconsin Press, 1949; second enlarged ed., New York: Da Capo, 1974; henceforth *Genesis*), 406. All references are to the 1974 edition unless otherwise indicated as *Genesis* 1949.

[2]Partch, "Monoliths in Music (1966)," in Harry Partch, *Bitter Music: Collected Journals, Essays, Introductions, and Librettos,* ed. Thomas McGeary (Urbana: University of Illinois Press, 1991), 195. References to Partch's *journal "Bitter Music" are set in quotation marks and roman type to distinguish them from references to* McGeary's edition of the same title, which are set in italics (henceforth *Bitter Music*).

[3]For information on major performances during his lifetime, see *Genesis* (468–74), which also includes a discography and filmography through 1972 (484–87). Thomas McGeary, *The Music of Harry Partch: A Descriptive Catalog,* I.S.A.M. Monographs, no. 31 (Brooklyn: Institute for Studies in American Music, 1991; henceforth *Descriptive Catalog*), contains a discography through 1989 (164–85).

development. Partch's most important theoretical text, *Genesis of a Music* (1949; second edition, 1974), contains essential information on his intonation theory, instruments, and major works. The 1974 edition of *Genesis* and *Bitter Music*, a posthumous collection of essays by Partch that includes the 1935–36 musical diary "Bitter Music,"[4] serve as the primary explanatory resources for this volume.

Partch carved out a uniquely personal niche in twentieth-century American experimental music, casting off the European tradition to the extent that it burdened him artistically. Yet he was far from a musical nihilist. For all of his rebelliousness, he also stressed his connections to this same European tradition. For example, he derived his conception of both Monophony and drama from the ancient Greeks.[5] Likewise, his concept of speech-music reclaimed the notion of recitative first developed by the Florentine Camerata in the late sixteenth century.[6] In 1940, Partch wrote, "I had never thought of my work as revolutionary, but only as evolutionary";[7] later in his life, he insisted that "meaningfulness must have roots."[8] A profile of Partch the experimenter, then, must account not only for his unique standing among his peers, but also for his profound sense of tradition.

Partch's iconoclastic personality and the unique nature of his ideas have discouraged all but a handful of musicians from studying his theoretically complex yet stylistically accessible music. While Partch performances and recordings are far more available now than ever before, and *Bitter Music* and the two editions of *Genesis* have received critical attention, the music itself has rarely been examined. This neglect has four principal causes: (1) public performances have been rare because of the need for Partch's unique instrumentarium; (2) the few published scores have appeared only in specialist journals or hard-to-find books, virtually all of them now out of print; (3) Partch's scores express pitch as ratios in just intonation, forcing the rethinking of familiar pitches and intervallic relationships in less familiar fractions; and (4) Partch invented a variety of tablatures, each applicable to only one or two instruments and indicating what actions to take rather than what pitches to play. Partch manuscript scores, therefore, reveal a work's overall texture and rhythm while presenting its pitch content in outline form at best and leaving melodic, contrapuntal, and harmonic relationships almost impossible to determine. This edition rectifies the last problem by translating Partch's tablatures into a modified Western notation on a traditional five-line staff.

A century after his birth, Harry Partch seems a bundle of fruitful contradictions: a Southwest American composer with ancient Greek theoretical leanings; an anti-academic who spent long hours doing research in libraries, laboratories, and the field, and who worked for many years in university settings; an anti-European aesthete who drew upon European recitative; and an American hobo who found resonance in African storytelling, Indonesian gamelan, Noh theater, and other performance modes from around the world. All these seemingly opposing qualities are integral to Partch. While no single composition reveals all sides of his musical and aesthetic persona, *Barstow* offers a revealing glimpse into certain aspects of his artistic character: his sensitivity to the America of the Great Depression and one of its more colorful subcultures; his interest in setting vernacular speech; his borrowings from musical styles he encountered; his search for a balance

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[4] *Bitter Music*, 3–132.

[5] *Genesis*, 20–23. References to Partch's theoretical and aesthetic systems are always capitalized—Monophony, Monophonic—while one-part textures and related concepts are in lower case—monophony, monophonic.

[6] Like the early opera composers, Partch's text-setting theories incorporated the tonal qualities of speech, believed to be the basis for the performance of ancient Greek tragedy (*Genesis*, 9–12).

[7] "Bitter Music," 5.

[8] Partch, "A Quarter-Saw Section of Motivations and Intonations" (typescript of lecture, 1967), 1; hereafter "A Quarter-Saw Section"; partially reprinted in *Bitter Music*, 196–97. Copies of the typescript are held by the Harry Partch Estate Archive (henceforth HPEA) in San Diego and the Harry Partch Archive (henceforth HPA), Music Library, University of Illinois.

between compositional idea and instrumental idiom, especially as his instrumentarium expanded; and his mixture of humor and bitterness.

Early Influences and the Beginning of Monophony[9]

Harry Partch's musical personality was shaped in the American West. Born in Oakland, California on 24 June 1901, Partch grew up mostly in Arizona and New Mexico, frontier territories that became states only in 1912. The eclectic sources of his sound world date back in part to the music he heard and played in his early years.[10] He heard Christian hymns and Mandarin Chinese lullabies from his parents, former Presbyterian missionaries in China who returned to the United States as apostates during the Boxer Rebellion in 1900; his father then worked mostly for the U.S. Immigration Service.[11] Partch recalled "Yaqui Indians, very timid and aloof," living all about him.[12] He listened to unfamiliar music on Edison cylinders.[13] As a teenager, he learned to play several mail-order instruments; he also studied piano, played Chopin (a lifelong love), and performed accompaniments at Albuquerque silent movie houses. In these years, he also composed works such as the lost melodrama *Death on the Desert* (1916).

Partch returned to California in late 1919. By 1920, both parents were dead. Except for two brief stints at the School of Music of the University of Southern California, he continued to pursue a musical self-education. Eventually he settled in northern California, where he spent most of the 1920s.[14] His activities included newspaper proofreading, playing viola in the Santa Rosa Orchestra, ushering for traveling opera companies, and attending Cantonese opera "music club" performances in San Francisco:

> Before I was twenty, I had tentatively rejected both the intonational system of modern Europe and its concert system, although I did not realize either the ultimate scope or the consequences of that rejection. . . . [I] had begun to ransack public libraries, doing suggested exercises and writing music free from the infantilisms and inanities of professors as I had experienced them.[15]

In a Sacramento library in 1923, Partch encountered the book that would prove the decisive influence on his musical thinking, "the key for what [he] had been searching":[16] the English translation of Hermann von Helmholtz's study of acoustics, *On the Sensations of Tone as a Physiological Basis for the Theory of Music,* with appendices by the British acoustician Alexander Ellis.[17]

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[9]Two very different biographical studies on Partch have been published: Philip Blackburn, *Enclosure 3: Harry Partch* (Saint Paul, Minnesota: American Composers Forum, 1997) and Bob Gilmore, *Harry Partch: A Biography* (New Haven: Yale University Press, 1998). Gilmore's book, which received a Deems Taylor Award in 1999, is a detailed study of Partch's life and works; Blackburn's is a bio-scrapbook. Biographical information on Partch may also be found in *Descriptive Catalog* (1–16); Thomas McGeary, "Introduction" to *Bitter Music* (xv–xxiii); Ben Johnston, liner notes to *Harry Partch—John Cage* (New World Records NW 214, 1978); and Walter Zimmermann, "Ben Johnston on Harry Partch," *Desert Plants: Conversations with 23 American Musicians* (Vancouver: Aesthetic Research Centre of Canada, 1976), 347–65. While Partch occasionally produced autobiographical writings (notably the "Bitter Music" and "End Littoral" journals published in *Bitter Music*), he primarily wrote introductions to individual works, lectures on his theories and music, and essays railing against the contemporary musical scene. *Genesis* limits autobiographical discussion to the preface to the 1974 edition (vii–xi).

[10]*Genesis,* viii–x.

[11]Partch recalls his parents sheltering hoboes and prostitutes in their home (*Genesis,* x); this was his first exposure to the kind of people who would figure so prominently in his later life.

[12]"Later, when I heard the Yaqui Spring Ritual on a record, the sounds seemed amazingly familiar to me" (*Genesis,* ix).

[13]"Later . . . I reacted to certain small shafts of intense life—Hebrew chants, Chinese theater, and Congo ritual—with a kind of intimate passion." He recalls a friend's "delight in recognizing something never [heard] before" (*Genesis,* ix).

[14]One break in this residency was his stint as a seaman in Hawaii in early 1922 (*Descriptive Catalog,* 3).

[15]*Genesis,* vi–vii.

[16]*Genesis,* vii.

[17]Hermann von Helmholtz, *On the Sensations of Tone as a Physiological Basis for the Theory of Music,* translated with appendices by the British acoustician Alexander Ellis (London, 1875; hereafter *On the Sensations*), 446–51.

Helmholtz gave close attention to different types of intonation; in one approach, he studied the well-known difficulty for singers to stay in tune when accompanied by an equally tempered piano or organ. He concluded that of three tuning systems—tempered, Pythagorean, and "natural" (pure, just) intonation—only just intonation was compatible with the natural tendencies of singers, while the other systems produced out-of-tuneness.[18] As Helmholtz puts it: *"the intervals which have been theoretically determined . . . and there called natural, are really natural for uncorrupted ears; that moreover the deviations of tempered intonation are perceptible and unpleasant to uncorrupted ears."*[19]

Partch also read Helmholtz's discussions of intervals, scales, modes, keys, degrees of consonance and dissonance (and their resolution), and view of music history from the perspective of evolving musical texture (monophonic to homophonic to polyphonic). Ellis described his own system for comparing pitch—the calculation and comparison of cents[20]—and expanded upon Helmholtz's discussion[21] of "experimental instruments for exhibiting the effects of just intonation" to include harmoniums and organs developed in the United States and Britain during the nineteenth century.[22] With his discovery of Helmholtz and Ellis, Partch's "doubts and ideas achieved some small resolution," and he "began to take wing."[23] Although virtually all his compositions from the 1920s (e.g., a symphonic poem and an unfinished piano concerto, both lost) were written in equal temperament, he did compose a string quartet in just intonation (ca. 1925, lost). For this work he devised a paper covering for the fingerboards to indicate the location of specific pitches. In 1926 or 1927, he began to write a treatise on composition in just intonation, specifically his personal system called Monophony.[24]

Partch spent the year 1929 composing songs for voice and piano, one of which was published in that year.[25] But he declared himself not "wholly satisfied" with any of them. Then, he writes, "came the determination to allow the spoken words of lyrics to govern the melody and rhythm of the music."[26] By 1930, with the completion of the Adapted Viola as incentive,[27] Partch "abandoned the traditional scale, instruments, and forms in toto [and] began to write music on the basis of harmonized spoken words."[28] He had begun to adapt a viola to just intonation in 1928, a process completed in New Orleans, where he had moved in early 1930. The original fingerboard was replaced with a cello fingerboard. Fingering positions were marked by brads hammered into the fingerboard to the left of each string, with lines and numbers indicating the location of each pitch.[29] The Adapted Viola's lowest string is tuned to the cello open G-string (98 Hz), a comfortable low note in Partch's baritone vocal range; G would serve as the fundamental pitch, or 1/1, of Partch's system of just intonation from the early 1930s on.[30] The other three strings are tuned in rising "just perfect fifths," which are about 2 cents (1/50 of an equally tempered semitone) larger than their equally tempered counterparts.[31]

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[18] *On the Sensations*, especially 310–30, 422–28; see also Ellis's Appendix XX, 483–93, 546–49.

[19] *On the Sensations*, 428 (emphasis in original). Partch conducted related experiments (*Genesis*, 192–93).

[20] *On the Sensations*, 446–51.

[21] *On the Sensations*, 421–43.

[22] *On the Sensations*, 466–83.

[23] *Genesis*, vii.

[24] In 1927–28, Partch corresponded with composer-conductor Howard Hanson (*Descriptive Catalog*, 4) in an unsuccessful attempt to get his music programmed on one of Hanson's American Music Festivals.

[25] *While My Heart Keeps Beating Time*, composed under the pseudonym "Paul Pirate," with "new lyrics by Larry Yoell" (San Francisco: Lloyd Campbell Publications, 1929). The song resurfaced in "Bitter Music," with a text by Partch; it is his earliest surviving music (78–80).

[26] Harry Partch, *Exposition of Monophony* (typescript, 1928–33), 50 (henceforth *Exposition*); copy at HPA.

[27] *Exposition*, 50.

[28] *Genesis*, 5–6.

[29] *Genesis*, 198–202. Partch called this instrument either the Adapted Viola or the Monophone, after his system of just intonation; it was later known only as the Adapted Viola.

[30] Evidence in *Exposition* shows that Partch considered C a candidate to serve as the fundamental, even after the completion of the Adapted Viola.

[31] The range and tuning of the Adapted Viola match the tenor violin, a cello-like instrument that has been used in some recent Partch performances.

Partch celebrated the new instrument by burning fourteen years worth of equally tempered compositions in a "kind of adolescent *auto-da-fé*,"[32] symbolizing his "decisive break with the European musical tradition."[33] By December 1930, Partch had completed a setting of *The Long-Departed Lover* by the eighth-century Chinese poet Li Po,[34] his first Monophonic work, for Adapted Viola and "Intoning Voice" (performed primarily in "speech-music" style; see below). Partch spent the next year composing and giving demonstrations of his music and intonation theories in the San Francisco Bay area.[35] At first, he sang and played alone, but soon realized that he could not accompany himself comfortably. For a time, he accompanied the soprano Rudolphine Radil in Bay Area performances, including a 1932 concert presented by Henry Cowell's New Music Society.[36] He later gave demonstrations in Pasadena and Los Angeles, accompanying soprano Calista Rogers.[37] In the spring of 1933, Partch was hired by the Southwest Museum in Los Angeles to transcribe Native American songs from its collection of cylinders made at the turn of the century by the noted ethnologist Charles F. Lummis. Soon thereafter, he completed his early treatise, *Exposition of Monophony* (henceforth *Exposition*). Partch then traveled to the eastern United States, first to Gloucester, Massachusetts (where he completed the last group of the *Lyrics of Li Po,* sometimes called *Poems of Li Po*), then to New York City to seek support for his music, theoretical work, and instrument building.

Speech-Music and the "One Voice": The Lyrics of Li Po

Partch's earliest extant pieces in just intonation were composed between late 1930 and 1933 in New Orleans, California, and Gloucester; most of them are settings of poems by Li Po in translation.[38] All are scored for Intoning Voice and Adapted Viola, ideally to be performed by one individual. The use of Intoning Voice and the solo performance mode are two tenets of a Monophonic aesthetic that Partch calls the "One Voice," the power of the "individual's spoken words":

> Of all the tonal ingredients a creative man can put into his music, his voice is at once the most dramatically potent and the most intimate. *His* voice does not necessarily mean his own voice and it certainly does not mean the specialized idiosyncrasy known as "serious" singing. It means his conception as expressed by the human voice and it means *one* voice.[39]

Partch cites medieval courtly monody, "a rebirth of the spirit of Greek epic chant," as an important embodiment of the One Voice, for "minstrel poet and minstrel composer and minstrel performer were generally one and the same."[40]

In *Exposition,* Partch wrote that the Intoning Voice parts were to be declaimed in a manner reminiscent of "the lines of drama in both ancient Greece and China [where] the tone [i.e., pitch and envelope] to be used was indicated with the word" and where "the relation of words to music, and music to words, [was] in support of the feeling expressed in the quoted line."[41] Partch believed that "the ascendancy of words in music" in ancient Mediterranean and early Christian music had been disrupted by ecclesiastically sanctioned, increasingly florid chant with its melismas and text distortion. "[W]ords, those constituent

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[32] *Genesis,* x.

[33] McGeary, *Bitter Music,* xviii.

[34] Chinese poet (ca. 701–62), an imperial official who spent many years as a disgraced wanderer; like Partch, he was romantic, highly sensitive, depressive, and an alcoholic.

[35] Partch describes the means and goals of a demonstration in *Genesis,* 95–105.

[36] Radil, from Oakland, sang with the New Music Society and was introduced to Partch by Cowell in 1931.

[37] Rogers, a Brooklyn-born Bach specialist, produced musical performances at her Pasadena home; she also sponsored classical and folk music concerts.

[38] Li Po, *The Works of Li Po, the Chinese Poet,* trans. Shigeyoshi Obata (New York: E. P. Dutton, 1928); first published in 1922.

[39] *Genesis,* 7 (emphasis in original).

[40] *Genesis,* 20. Partch was almost certainly unaware of the practice of reusing melodies in the improvisational mode of "minstrel" performance.

[41] *Exposition,* 45.

units of ideas [and] the antithesis of what is called absolute, [were] forced by precept to assume the cloak of the absolute!"[42]—the Abstract notion of "pure music."

The liberating artistic response to church-dominated musical precepts was "the pleasant and romantic art of the troubadours, trouvères, minnesingers, and meistersingers of the eleventh to sixteenth centuries . . . a wedding of instinctive desire to instinctive expression."[43] Partch described their "art of song, in which the words were half recited and half sung," and believed that other European composers had adopted similar principles of vocal recitation: Jacopo Peri (representing the Florentine Camerata), Heinrich Schütz, Christoph Willibald Gluck, Richard Wagner, and Hugo Wolf.[44]

As a concept, Monophony developed along aesthetic and theoretical grounds (discussion of the latter appears in chapter 2). In its most basic and earliest form, the aesthetic concept of Monophony ("oneness of sound" or "unity of sound") derived from two "principles upon which the [early Monophonic] songs are created. First, the line of the spoken inflection determines the melody for the words; second, the rhythm of the words is the intrinsic rhythm of the music. The words are meant to flow in about the spoken tempo, without inordinate sustaining of a single syllable."[45] In *Genesis*, Partch wrote more expansively on this subject when he discussed florid Gregorian chant:

> [One might] also have wondered at the inordinate sustaining of the vowel of a syllable in certain words. A word has four properties: (1) a rhythm (that is, its natural pattern of dynamics, and a reasonable length of time for its speaking to cover); (2) phonics; (3) an intrinsic meaning; and (4) drama (the obligation along with its fellow words to hold the interest). . . . [T]o the extent that the vowel of a syllable is inordinately sustained (1) its rhythm is damaged; (2) its phonics is distorted; (3) its meaning is dissipated; and (4) its drama is demoralized. [I]t would seem . . . that after the words had been accepted as an inspiration they were dismissed without a thought.[46]

Such criticisms echo the beliefs of "reform opera" composers and others with whom Partch felt a kinship.[47]

Partch contrasts this quasi-recitative style with the application of "psychological points," in which "melodies are introduced[,] without words [and their] preaccepted meanings, to be sung in pure vowels and other syllables . . . conform[ing] to a notated rhythm."[48] The Intoning Voice uses such vocalise to express feelings that cannot be put into words, sometimes wistfully, at other times emphatically. For its part, the Adapted Viola may double the vocal line (monophonically, heterophonically, or in parallel motion), provide a drone, ostinato, or counterpoint, or "depict" an event in the text.[49]

The most original characteristics of the *Lyrics of Li Po* lie in their means: subtle and light textures that nonetheless project a nostalgic mood; rapid shifts of extreme feelings without relying on chromaticism or orchestration, or drowning out the texts; and complete avoidance of both Western academic style and the pseudo-Orientalisms beloved of early twentieth-century composers.

Partch set a few other texts during this period, of which three works survive. One of these, *The Lord Is My Shepherd* (Psalm XXIII), was based on a recitation by a San Francisco Jewish cantor, Reuben Rinder. Partch transcribed Rinder's recitation and transformed it into a Monophonic work for Intoning Voice and Adapted Viola (1931)—the first he based

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[42] *Genesis*, 19.

[43] *Genesis*, 20.

[44] *Exposition*, 45.

[45] *Exposition*, 44.

[46] *Genesis*, 19.

[47] In addition to composers mentioned in *Exposition*, Partch added the following in *Genesis:* Claudio Monteverdi, Jean-Baptiste Lully, Jean-Jacques Rousseau, André-Ernest-Modeste Grétry, Hector Berlioz, Alexander Sergeyevich Dargomïzhsky, Modest Mussorgsky, Leoš Janáček, Gustav Mahler, Claude Debussy, Erik Satie, Maurice Ravel, and the Arnold Schoenberg of *Pierrot Lunaire*, a work that Partch greatly admired.

[48] *Exposition*, 44.

[49] This mix of vocal and instrumental approaches may seem at odds with Partch's text-setting aesthetic. The problem is discussed at the end of this chapter under "Corporealism and Abstraction."

on the speaking of someone other than himself. Partch had thereby fused two important elements: his modern version of the recitative of Western reform music drama, and the genuine musicality of actual speech.

The *Lyrics of Li Po* and the other early works are landmark achievements: Partch's earliest surviving application of Monophony, the first compositions for the first Monophonic instrument, and his first use of an English-language adaptation of Schoenberg's *Sprechstimme,* called "speech-music" in Partch's translation. Partch quotes Schoenberg's description of the technique as used in *Pierrot Lunaire* (1912):

> The melody indicated for the speaking voice by notes . . . is not meant to be sung. The reciter has the task of transforming this melody, always with a due regard to the prescribed intervals, into a speaking melody. . . . The rhythm must be kept absolutely strict, as if the reciter were singing . . . with no more freedom than he would allow himself if he was just singing the melody. . . . [W]hereas the sung note (tone) *preserves* the pitch, the spoken note (tone) gives it at first, but abandons it either by rising or by falling immediately after.[50]

In *Pierrot Lunaire,* Partch finds "these glides to be vastly but effectively exaggerated . . . [doing] no harm to the drama, or melodrama, of the piece, but rather to enhance it. Further, the words are heard as spoken words."[51] Yet, he adds, "the consistent Abstractional distortion of word forms in other of Schönberg's compositions . . . leads to the conclusion that [Schoenberg] must consider *Pierrot* as a whimsical adventure."[52] In addition, Partch believed that spoken "recitation in music, even when it is rhythmically integrated as skillfully as in [Schoenberg's] *Ode [to Napoleon,* 1942] cannot be a high form of the Corporeal ideal because of the inharmonic relation between instruments and voice."[53] Here Partch's use of "inharmonic" refers to a clash between pure speech and purely musical sound.

In his own speech-music, Partch was interested in "one of the salient characteristics of spoken words . . . the tonal glide," rarely indicated in scores, even if, "throughout operatic performance . . . singers . . . *do* glide, for dramatic effect, particularly in attack and release." Though probably aware of it, however, composers rarely chose "to rationalize and to notate" this vocal practice. On the contrary, composers from Monteverdi on were guilty of elongating syllables, especially within and at the end of recitative phrases, "sustained beyond the speed of syllable movement in the major part of the phrases," which Partch considered "a capitulation of words to preconceptions of musical form."[54]

In *Barstow,* Partch mixes speech-music (occasionally exaggerated) with singing in his preferred mode, free of "(1) the ubiquitous rolled *r*'s, an articulation common in European tongues but alien to America; (2) precise attack and precise release . . . as opposed to the gliding tones so characteristic of American speech, the portamento of 'faulty attack' and 'faulty release'; and (3) the affected stylization of 'refined' English."[55] Partch thought that classical singers would do well to note "our folk and popular singers [who] unconsciously tend to preserve word form and drama." These singers' manner might include frequent "exploded" consonants, sustained consonants rather than vowels, or words broken off short of their notated time and falling or rising regardless of notation.

For Partch, this yields an ideal: folk and popular singers "personify a directness of word appeal, characteristic of this age and this land, and characterized by suggestions of actual times, actual localities, actual identities, and actual human situations."[56] In Partch's view, medieval troubadours had satisfied the "earthly this-time-and-this-place musical hunger" for those alienated from "the standard and approved ecclesiastical expression." Similarly,

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[50] *Genesis,* 40 (emphasis in original).

[51] *Genesis,* 40.

[52] *Genesis,* 41. Partch might have broadened his conclusion had he known *Erwartung* (1909) and *Die glückliche Hand* (1910–13), two other works by Schoenberg from the time of *Pierrot Lunaire.*

[53] *Genesis,* 41; Partch also places William Walton's *Façade* (1921–22) in this category of "lesser" Corporeal music. He could have included two other Schoenberg works in this discussion: *Kol Nidre* (1938) and *A Survivor from Warsaw* (1947, the year Partch completed *Genesis*).

[54] *Genesis,* 45–46.

[55] *Genesis,* 52 (emphasis in original).

[56] *Genesis,* 52.

the modern American listener unmoved by contemporary concert music hungered for "anything that breaks the formal barriers [of Abstraction] in the direction of Corporeality—hillbilly, cowboy, and popular music, which, whatever its deficiencies, owes nothing to scholist and academic Europeanisms."[57] Beginning with *Barstow*, many of Partch's Monophonic works would incorporate such vernacular elements while maintaining serious aesthetic goals.

Transcribing Native-American Music

Partch's first major musical project of this period took place in the spring of 1933, when he was hired by the Southwest Museum in Los Angeles to transcribe Native-American songs from its collection of cylinders, made at the turn of the century by the noted ethnologist Charles F. Lummis.[58] Arthur Farwell, the "Indianist" composer, had worked on the same collection in 1904–5, but apparently concentrated on Spanish songs.[59] For years, Partch's transcriptions were forgotten and presumed lost; they were only rediscovered in the Museum's Braun Research Library in 1990. The twelve-page manuscript begins with a brief introduction and commentary, followed by transcriptions of twenty-four songs and dance pieces.[60] While Partch follows standard procedure, using equal temperament and familiar dance-based meters and rhythms,[61] he presents five songs both in equal temperament and in just intonation. To Partch, the melodies and performances he analyzed demonstrate "a constant striving for very simple intervals, those possible in our major and minor diatonic scales"; he also believed that the singers were attempting to sing in just intonation, rather than equal temperament.[62]

Partch's transcriptions have a few direct connections to his music. The unaccompanied monophonic textures of these songs exhibit the directness of the One Voice that Partch was then seeking in his own composition. He later borrowed (with acknowledgment) two of the Lummis melodies: a "Bird Dance Song" of the Cahuilla (California) is heard in *The Bewitched* (1955),[63] while a second Native American tune closes *Cloud Chamber Music* (1950), the eleventh and final piece of the *Intrusions*.[64] More important still, the exercise gave Partch another opportunity to transcribe pitch and rhythmic nuances, made especially difficult by the age and limited fidelity of these cylinder field recordings. He was therefore able to tune his ear so finely that, when he undertook "Bitter Music" two years later, he was better prepared to perceive and notate the speech-music of his fellow hoboes. That, in turn, gave him a methodology to draw upon for the "Americana" works of the 1940s, including *Barstow*.

European Journey, American Sojourn: "Bitter Music"

In the summer of 1933, Partch began the longest journey of his life, from Los Angeles to Gloucester, Massachusetts (1933), to New York (1933–34), and to London (1934–35,

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[57] *Genesis*, 52.

[58] For a more detailed study of Partch's experience at the Southwest Museum, see Richard Kassel, "Harry Partch in the Field," *Musicworks* 51 (Autumn 1991): 6–15. See also John Koegel, "Preserving the Sounds of the 'Old' Southwest: Charles Lummis and his Cylinder Collection of Mexican-American and Indian Music," *ARSC Journal* 29:1 (Spring, 1998): 1–29.

[59] Farwell drew upon published sources for his "Indianist" pieces, particularly the work of Alice C. Fletcher, rather than his own Lummis transcriptions.

[60] Partch, transcriptions of Indian songs and dances from the Charles F. Lummis Cylinder Recordings Collection, 1933. Los Angeles: Southwest Museum, Braun Research Library, Partch MS 1.

[61] Comparison of his and Farwell's transcriptions of the same melodies reveal no significant differences in pitch or rhythm.

[62] Lummis Cylinder Recordings Collection, Partch MS 1, 1.

[63] The melody is introduced in the cello in the Prologue, and it recurs in scenes 8 and 10.

[64] While many sources repeat Partch's attribution of the melody to a Zuñi source—e.g., Wilfrid Mellers, *Music in a New Found Land* (New York: Alfred A. Knopf, 1965), 173—and his belief that he heard it as a child in New Mexico, Partch in fact transcribed the tune as "Canción de los Muchachos" in 1933. The error surely stems from the singer's name (Ramon Zuñi); the song is from the Isleta Pueblo (also in New Mexico). For more information see Kassel, "Harry Partch in the Field."

with side trips to Dublin, Italy, and Malta); back to the eastern United States, and returning (on foot and via bus) to Los Angeles (1935). In New York City, Partch gave more Monophonic demonstrations with the Adapted Viola; his search for a vocalist there was unsuccessful. He made contacts, notably with Walter Piston, Aaron Copland, Carl Engel, and Adolph Weiss, and met Cowell again.[65] He began adapting a guitar to just intonation.[66] After two failed attempts to obtain funds, he won a Carnegie Corporation research grant, which enabled him to go to Europe for an eight-month visit in 1934–35.

In England, Partch pursued several projects. He spent long hours doing research in the British Museum, and he revised and enlarged his treatise (now called *Monophony is Expounded*); examined several of the actual instruments discussed by Helmholtz and Ellis; and designed and had built a "chromatic organ" he named the Ptolemy, after the second-century Greek theorist. A harmonium-like instrument, the Ptolemy was designed to play in Partch's Monophonic system as it stood at that time.[67] Its playing area contained six rows of circular keys, each painted according to its place in the Monophonic ratio spectrum; there was also a "diamond keyboard" based on the interlocking mathematics of Monophonic ratios, closely related to the Monophonic Tonality Diamond concept (see fig. 2.10).[68] He had the instrument shipped to a friend, the composer Mildred Couper, in Santa Barbara. It arrived considerably damaged, was neither repaired nor used in Partch's music, and was eventually abandoned.[69]

Partch also met others whose work was related to his own. These included Kathleen Schlesinger, a musicologist who believed that the ancient Greeks used an expanded form of just intonation; she owned several replicas of Greek instruments, particularly kitharas, which made a significant impression on Partch.[70] Another, Wilfred Perrett, was a lecturer in literature with a musical avocation; he accepted the seventh partial (overtone) as consonant, and designed and built a harmonium (the Olympion) with nineteen just tones within the octave, including pitches not found in the final Monophonic scale.[71] The Olympion was the first working keyboard instrument in just intonation Partch had ever seen. He also met the early music revivalist Arnold Dolmetsch, with whom he discussed musical instruments and theory.

Partch's most notable encounter was with William Butler Yeats, with whom he had exchanged letters before going to England. In November 1934, he visited Yeats in Dublin, and he intoned and played for Yeats on the Adapted Viola.[72] Yeats responded positively to his text-setting approach, though he privately expressed some reservations.[73] Partch also pursued his interest in setting Yeats's version of Sophocles's *King Oedipus*.[74] Their discussion gave Partch the courage to ask Yeats to "intone" the choruses from the

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[65]*Descriptive Catalog*, 5. These and other musicians (notably Otto Luening) wrote reference letters for Partch at this time.

[66]This is the original Adapted Guitar I, completed in 1942; it was a six-string instrument with frets, tuned in pairs of octaves (in just intonation, 2/1s). Partch built two later models of Adapted Guitar I, in 1945 and 1952 (actually the original guitar rebuilt; *Genesis*, 203–7). See chapter 4 for further detail.

[67]The Ptolemy is described and pictured in Partch, "A New Instrument," *Musical Opinion* (June 1935): 764–65.

[68]In the early 1930s, Partch designed several "ratio keyboards"; one surviving design reveals a semicircular playing area with multiple rows and circular keys, each painted according to its ratio. For more, see Partch, "Design of the 4 Center 2/1s (Octaves) of the Ratio Keyboard (September 8, 1932)," *Interval* 5/3 (Winter 1986–87): 14–17. Another design was realized as a model in London and incorporated into the Ptolemy (see Harry Partch, "Six Months' Report on Projects to be Executed Under Carnegie Grant for the Year 1934–35," typescript, [London, 1935], Carnegie Corporation of New York folder, HPA).

[69]Partch's unhappiness over the Ptolemy's failure is manifest in the discussions in *Genesis* 1949, 205–8 and *Genesis* 1974, 219–20. "Bitter Music" also refers to the Ptolemy, its "Godmother" (Couper), and its "wake and funeral" (Santa Barbara, 12 November 1935; 99–100).

[70]The meeting is described in Partch, "The Kithara [1941]," *Bitter Music*, 171–73.

[71]*Genesis*, 443–47. The four non-Monophonic ratios provide true 7/4s above four Monophonic ratios; there are a total of nine 7/4 intervals within Perrett's scale.

[72]The meeting is described in Partch, "W. B. Yeats [1941]," *Bitter Music*, 165–68.

[73]In a letter postmarked 17 November 1934, Yeats wrote to Margot Ruddock that Partch "is on his way to Spain to perfect his discovery; it is still, I think, immature. He is very young, and very simple" (W. B. Yeats and Margot Ruddock, *Ah Sweet Dancer: A Correspondence*, ed. Roger McHugh [New York: Macmillan, 1970], 28).

[74]Yeats had given written permission to Partch to set *King Oedipus* before Partch's visit to Europe.

play, which the poet did despite his own lack of confidence in his musical ability.[75] Yeats then took Partch to the Abbey Theatre to work with its actors. A hoped-for second meeting in London fell through, however, and by 1939 the poet was dead. But Partch consoled himself in hard times with Yeats's parting remark: "You are one of those young men with ideas, the development of which it is impossible to foretell, just as I was thirty years ago."[76] Partch's European journey marked both the high point and the last gasp of his personal identification with the Old World, for he never traveled to Europe again. He did not leave willingly, however, but because his grant funds had run out.[77]

The reception of his music in Los Angeles was less enthusiastic than it had been two years earlier: "My greetings, in this, the one city that really encouraged me, are very various. . . . I feel that the former friends of my music are not cordial, so I head north."[78] Partch decided to join the peripatetic homeless, some longtime hoboes, all victims of the economic squeeze of the Great Depression:

> I found it easy, during [my own personal Great Depression], to get just one kind of job—dishwasher and flunky. And if my personal history between 1935 and 1943 were to be frozen in space, it would appear as a finely detailed mosaic made up of an incredible number of dirty dishes, nameless faces in WPA jobs, and almost nameless faces in hobo jungles and fruit harvests. . . . I took my blankets out under the stars beside the American River (the river of gold!) [in central California], carried my notebook, kept a journal, and made sketches.[79]

Partch first called this journal " 'Cause All Our Sins Are Taken Away"[80]—a unique speech-music journal of transcriptions, diary entries, drawings, and observations made as he wandered along the West Coast. Later renamed "Bitter Music," it was long believed lost, being rediscovered only in the 1980s.[81] It provides considerable information on his life and musical thinking during a period about which relatively little else is known. The diary covers from 11 June 1935 to 1 February 1936. The surviving 1940 typescript, prepared for possible publication, opens with a newly written preface describing "a diary of eight months spent in transient shelters and camps, hobo jungles, basement rooms, and on the open road."[82] Interspersed within the written entries are lines, phrases, and paragraphs of text, set to speech-music or melody, all notated in equal temperament and many set to odd piano accompaniments of differing complexity. Partch suggested that "[i]f possible, the book is to be read at the piano."[83]

Most of the speech-music and sung passages that Partch transcribed during this period of wandering came from hobo friends and acquaintances, and he captures their different accents and manners of speaking. Because of his previous experience transcribing Native American songs, Partch was ready for this far more expansive undertaking. According to the 1940 preface, Partch notated "the music of the spoken words in a rough way without instruments, in most cases, very soon after the words were actually spoken. . . . To repro-

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[75] To those who mentioned Yeats's "inability to carry a tune" to Partch, he countered with Yeats's comment, "I hear with older ears than the musician," from his 1906 essay, "Literature and the Living Voice" ("W.B. Yeats [1941]," *Bitter Music*, 166).

[76] *Bitter Music*, 167.

[77] "I say good-bye to ginger beer, yellow primroses, general civility, unfailing courtesy from the powers that be. I do not want to go" (diary entry, Fowey, Cornwall, 30 March 1935, "Bitter Music," 34).

[78] Diary entry, Los Angeles, 30 April 1935, "Bitter Music," 35.

[79] *Genesis*, 323.

[80] *Bitter Music*, 465.

[81] "Bitter Music" survives in a microfilm made by Partch's friend Lauriston C. Marshall, a physicist at the University of California, Berkeley, with whom he shared a Guggenheim Fellowship in 1950–52. It is now housed in the HPA.

[82] "Bitter Music," 5. The typescript is filled with references to drawings and musical examples found at the back of the 1935–36 manuscript; Partch separated these from that manuscript, intending to insert them into the 1940 typescript for publication. The 1940 drawings were new, but based on the original journal's pencil sketches ("Bitter Music," 5).

[83] "Bitter Music," 6. Partch made a (probably unconscious) connection with his silent-movie piano-playing youth: "Passages requiring emphasis and intensification of mood [occur] much as the incidental music might occur in a talking picture" ("Bitter Music," 5). He would become involved in making films in the 1950s.

duce the original effect the words should be spoken quickly, on the tones indicated. They should never be sung."[84]

In a majority of cases, Partch left the transcribed speech as he originally heard it, whether an isolated outburst, a musing, or as a part of a conversational exchange. In those cases in "Bitter Music" where he added accompaniment, the piano part adopts a wide range of textures, from unadorned doublings to full harmonic support, at times creating a give-and-take with the vocal part. In a small number of more ambitious pieces, Partch took advantage of the piano's presence to create miniature dramataic scenes. In one example, he recreates a car ride he took with a kindly Filipino who attempts to convert him to Christianity.[85] Perhaps the most remarkable of these pieces is a "mad scene" near the end of "Bitter Music."[86] Partch is visiting a friend in Los Angeles who is suffering from syphilitic hallucinations. The text jumps around abruptly in a stream-of-consciousness monologue, and the music matches its frenzy with violent, extreme changes of mood. The piano part here is an essential component of this "mosaic," perhaps the first Partch composition that explores contrasting episodes while avoiding "transitional" passages. This form would serve the composer well in his "Americana" pieces, especially *Barstow* and *U.S. Highball.*

Partch finished the process of notating and adding accompaniments to the speech-music while staying with friends in southern California in early 1936. "The accompaniment," he wrote, "is designed to heighten and to reconstruct the original impression or emotion, which is now secondhand to all concerned. . . . The fragments are in no sense 'performers' music'; they are readers' music. If the reader . . . does play the piano, even poorly, the musical passages may be something of an excursion into an art form as old as history, but one which . . . is all but lost. It is an individual form—the expression of one individual to another."[87] This "individual form of expression" is well suited to the intimate performance mode Partch intended for "Bitter Music" and may be identified with the still evolving Monophonic concept of the One Voice.

In "Bitter Music" Partch produced a unique musical diary and an important and moving social document of the Great Depression. In it he proved that he could capture American speech-music in all its characteristic nuances. While using a piano might seem a regression from his Monophonic universe, Partch accomplished three things thereby: writing for a widely available instrument, composing music with a variety and textural richness that the Adapted Viola could not provide, and creating a do-it-yourself work through which anyone who could read music and play the piano could render the One Voice. "Bitter Music" also chronicles Partch's transformation from a deferential supplicant into an embittered iconoclast who would rather beg for food than for his art. As he wrote to a friend on 8 September 1935:

> I will never jolt the leaders of music *with* [my treatise, renamed *Trails of Music*]—but I will jolt them *into* it, eventually, by branding them as the idiots they are. I have been gentle and persuasive all too long. The time has come for combustion and contempt.[88]

Partch came close to publishing "Bitter Music," but the opportunity was denied at the last moment.[89] He put it aside, and, sometime around 1950, he "destroyed the effort . . . without regret, because it had given me a large and already faintly delineated canvas for the collection of ideas that I later called *The Wayward,*" the group of four "Americana" works

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[84]"Bitter Music," 5–6.

[85]"Bitter Music," 101–8.

[86]"Bitter Music," 112–28.

[87]"Bitter Music," 6. Notwithstanding the one-to-one ideal, there have been public performances, theatrical adaptations, and a recording of "Bitter Music."

[88]"Bitter Music," 75 (emphasis in original).

[89]John E. Ludlow, editor of Caxton Publishers, Ltd. in Idaho, tried to publish "Bitter Music" but was overruled by Caxton's proprietor. This story and others are related in Lynn Ludlow, "Notes From a Semi-Incompetent Performer On the Surrogate Kithara (1953)," *1/1: The Journal of the Just Intonation Network* 8:4 (November 1994): 21, 23.

of which *Barstow* is a part.[90] "Bitter Music" itself was thought of for many years, if at all, as a lost item from the composer's workshop. Fortunately, a microfilm of the diary survived.

Partch was finding his way back to Monophony, still basically a one-man, one-instrument proposition. His research into the nature of a truly American "art music" and the building of new instruments would lead to *Barstow* and other Monophonic works inspired by his own years of wandering, in which speech was transformed into speech-music and where narrative mixed the real with the imaginary. As Partch describes it, "Bitter Music" was part of an effort to develop

> a new and great music of the people—not just for this country but regardless of country. . . . I work with words because they are the commonest medium of creative expression. . . . Music is not a desire—it is an omnipresent condition. Tones, like the colors of the sky, mountains, trees, and the body, are inescapable, and not all music is man-made. . . . Much of that which is man-made we ignore, such as the music of speech. Well, I'm not ignoring it.[91]

Corporealism and Abstraction

The five years following the composition of "Bitter Music" were relatively lean ones for Partch, musically and otherwise. He lived in California and Arizona; continued working on his treatise; built his first Kithara (1938), inspired by Kathleen Schlesinger's instruments;[92] and participated in the Federal Writers' Project, contributing to travel guides to Arizona (1936–37) and California (1939–40).[93] But he apparently composed no Monophonic compositions during this period. In late 1940 Partch mailed a letter to Henry Allen Moe of the John Simon Guggenheim Memorial Foundation in New York, together with a preface and table of contents to *Patterns of Music,* the latest metamorphosis of his treatise;[94] only those fragments survive. By the time of *Patterns of Music,* Monophony had nearly reached its final theoretical form. The preface compares the artist's sensitivity to color and the poet's manipulation of language to the "pathetically impoverished language of tone," Partch promising to offer "one particular new trail" to improve the situation.[95] There is a section, "Along the Road to Abstraction," within a chapter on "Spoken Words in Song," no doubt based on the analogous chapter in *Exposition.*[96] But the table of contents makes no reference to the One Voice or its later manifestation, Corporealism.

Sometime between 1940 and 1946, Partch expanded the notion of the One Voice into the idea of Corporealism, which he then set in aesthetic opposition to Abstraction. As he mentions in the preface to the second edition of *Genesis,* the logical progression from the One Voice to the Corporeal "bewildered not a few persons who have witnessed my large works" in the 1950s and 1960s.[97] He introduces the relationship early in *Genesis* by refining his definition of the One Voice concept:

> [The creative individual's] voice does not necessarily mean his own voice. . . . It means his conception as expressed by the human voice and it means *one* voice. The instant when other voices are added to that one voice is an instant of metamorphosis. Thereafter *his* identity is not that of the inner self alone but the identity of a group. The drama and the intimacy of the individual are superseded by a different esthetic or sociological quality.[98]

He then extrapolates the new from the old:

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[90] *Genesis,* 323.

[91] "Bitter Music," 12–13.

[92] *Bitter Music,* 169–73, includes a drawing of a Schlesinger kithara and a photograph of Partch's instrument.

[93] *Descriptive Catalog,* 6.

[94] Partch, letter to Henry Allen Moe, 13 December 1940, from Big Sur, California; Folder 2, John Simon Guggenheim Memorial Foundation Collection, HPA.

[95] "Patterns of Music," *Bitter Music,* 161.

[96] *Exposition,* 44–45.

[97] *Genesis,* vi.

[98] *Genesis,* 7 (emphasis in original).

> For the essentially vocal and verbal music of the individual—a Monophonic concept—the word Corporeal may be used, since it is a music that is vital to a time and place, a here and now. . . . [T]he term could be applied . . . to almost any of the important ancient and near-ancient cultures . . . [in] which music was physically allied with poetry or the dance.[99]

For Partch, this antecedent was fundamental: "Greek drama took its original form from religious festivals; the chorus . . . was an ingredient, but it took its spirit from the epic chant that told a story—one voice and one instrument."[100] In surveying his own work's evolution, Partch points to his years of singing and playing, often alone (1930–47), his earliest Monophonic compositions, "Americana" works such as *Barstow* and *U.S. Highball,* and his setting of Yeats's *Oedipus* (finally completed in 1951, nearly two decades after Partch's first mention of it.)[101]

Corporealism's basis in narrative and movement make it "emotionally 'tactile.' It does not grow from the root of 'pure form.' "[102] On the contrary, "pure form" was the essence of Abstraction, a concept Partch saw imbedded in the European concert-hall tradition he was challenging. The term Abstract

> denote[s] a mass expression, in its highest application, the spirits of all united into one and transported into a realm of unreality, neither here nor now, but transcending both. The symphony is an example. . . . It is always "instrumental," even when it involves the singing of words, because the emotion of an individual conveyed through vitally rendered words would instantly end the characteristic domination of non-verbal "form."[103]

Thus Partch makes a distinction between the Corporeal, "an individual's vocalized words, intended to convey meaning," and the Abstract, "musicalized words that convey no meaning, whether rendered by an individual or a group, because they are beyond the hearers' understanding, because they have been ritualized, or because of other evolvements of rendition."[104] Figure 1.1 gives Partch's list of "instinctive Corporeal attitudes" contrasted with the "Abstract character."[105]

Partch made this opposition a central principle of his aesthetic beliefs, and he would expand its application beyond composition and singing technique to performance spaces, conservatory training, instrumentation, and physical expression. He traces the principle through musical history, from ancient Greece to the early twentieth century, categorizing composers in one category or the other, or as a mixture. In a chapter of *Genesis* called

FIGURE 1.1. Partch's parameters for Corporeal and Abstract music

CORPOREAL	ABSTRACT
• Stories or poems sung, chanted, or recited (folk and popular music)	• Songs where words set mood of music rather than convey meaning
• Drama such as early Florentine opera	• Drama (modern opera) which does not convey meaning due to musical style or "manner of rendition"
• Narrative dance music	• Purely instrumental music ("though programmed music often tends toward the Corporeal")

[99] *Genesis,* 8.
[100] *Genesis,* vi.
[101] *Genesis,* vi.
[102] *Genesis,* 8.
[103] *Genesis,* 8.
[104] *Genesis,* 9. Partch cites the "chants of the Roman church, early in its history" as a positive example of "musicalized words" (*Genesis,* 8); later chant exemplifies its aesthetic opposite, "ritualized" (melodically determined) word-setting.
[105] Adapted from *Genesis,* 9.

"American Musical Tendencies,"[106] Partch analyzes the huge influence of European "Masters of the Concert" on musical life in the United States; how "habit" has given Abstraction an aesthetic monopoly in the West; the effects of "devitalized tricks of 'serious' singing"; the suppression of the body in favor of the cerebral;[107] and his own goal of reviving the Corporeal impulse in the name of Monophony, releasing it from Abstract imposition "to disclose a manner of impressing the intangible beauty of tone into the vital power of the spoken word, without impairing either."[108]

Finally, Partch connects the Corporeal with Monophony, and the Abstract with equal temperament. Just intonation (of which Monophony is an example) has an infinite number of possible pitch classes and modulatory motions. On the other hand, "twelve-tone temperament is a diatonic expediency [and] *does not have the immanent capacity to expand.*"[109] While Monophony permits intervallic accuracy and harmonic expansion, twelve-tone equal temperament "slams doors against any further investigation of consonance [and] dissonance."[110] To Partch, Monophony symbolizes artistic independence and integrity. While "a composer who wants the [equally tempered] system that was used to such admirable advantage by Bach, Beethoven, et al. should most certainly have it . . . he should also have freedom of choice."[111] As he proclaimed in his later years:

> I have seen, through most of my life, how lonely and contemplative investigation of musical-human materials is discouraged by dogma. The doors that are closed *because* of education are the saddest doors that humanity never walked through. . . . Now that we have suffered the present dogmas, in the West, for about 300 years, who would want to exchange them for a different set of rigid stipulations? I wouldn't. Responsible freedom, it seems to me, is the desideratum. The widely revered master-disciple concepts represent, on both sides, too easy an escape into the limbo of *no* responsibility. I have said that if anyone calls himself a pupil of mine I will happily strangle him, but this is simply the expression of an attitude, and—amazingly—in its deeper meaning it is an expression of hope.[112]

II. The Monophonic System: A Primer

The discussion, manuscript score, and transcription in this edition of *Barstow* (1968) require a basic understanding of the tuning and musical system that Partch developed and employed in virtually all his music. (Readers already familiar with this system may wish to skip to chapter 3.) Partch's Monophonic system of just intonation, or Monophony, was the subject of several drafts of a treatise that expanded as his body of work grew and he began building instruments. Begun in 1926 or 1927, the treatise went through several titles and revisions[113] before its 1949 publication, as *Genesis of a Music; Monophony: the relation of its music to historic and contemporary trends; its philosophy, concepts, and principles; its relation to historic and proposed intonations; and its application to musical instruments.*[114] The 1974 second edition has a new subtitle: *An Account of a Creative Work, Its Roots and Its Fullfillments.*

Monophony stemmed from Partch's disdain for the tempering of intervals. In antiquity, theoreticians discussed just intonation, also called pure or natural intonation, in which pitches and intervals were derived by comparing the lengths of sounding strings. These comparisons were limited to simple rational relationships (or ratios), the results of dividing

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[106] *Genesis*, 48–63.

[107] Partch quotes D. H. Lawrence, from *Phoenix:* "We don't live in the flesh. Our instincts and intuitions are dead, we live wound round with the winding sheet of abstraction" (*Genesis*, 54).

[108] *Genesis*, 61.

[109] "A New Instrument," 765 (emphasis in original).

[110] "A Quarter-Saw Section," 12.

[111] *Genesis*, 457.

[112] "A Quarter-Saw Section," 13 (emphasis in original).

[113] The history of this process is related in Richard Kassel, "The Evolution of Harry Partch's Monophony" (Ph.D. diss., City University of New York, 1996).

[114] *Genesis* 1949, foreword by Otto Luening (Madison: University of Wisconsin Press, 1949).

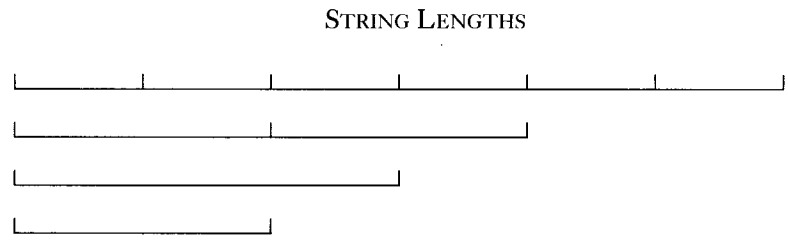
a monochord string into equal parts and comparing the resulting string lengths. In the monochord procedure known as the Harmonical Proportion, "intervals are determined by the relation of the whole string to the half, the half to the third, the third to the fourth . . . or [1 to 2,] 2 to 3, 3 to 4."[115] For example, take a string length (1/1) that produces a "g" (196 Hz) when set in vibration (fig. 2.1). If that string is divided into two equal parts, each half sounds the "g′ " one octave higher (2/1, 392 Hz). The numerator tells how many parts the string has been divided into, while the denominator tells how many of those parts are sounding to produce the pitch. If the string is divided into three equal parts, two of those parts will produce a "d′ " above "g" produced by the whole length of the string (3/2, 294 Hz). One of those parts will produce the "d″ " a fifth above "g′ " (3/1, 588 Hz).[116]

In a second approach, the Arithmetical Proportion, a string "is divided into a number of exactly equal parts, and a scale constructed from the resulting relationships, or ratios; this does not produce equal scale steps."[117] Thus, if a string is divided into ten equal lengths, the ratios formed are 10/1, 10/2, 10/3, etc., up to 10/10 (the full length). After reduction through "octave equivalence" (i.e., multiplying by 2/1 or 1/2), the resulting ratios are 5/4, 5/4, 5/3, 5/4, 2/1, 6/5, 7/5, 5/4, 10/9, 1/1.[118] The repeating ratios result from the fact that 10/2 of any string is twice the length of 10/1 of that string; since a 1/2 (octave) relationship pertains between this pair of ratios, they are, so to speak, in the same ratio pitch class. This holds true for 10/8 and 10/4 as well (fig. 2.2).

Following Hermann von Helmholtz's lead,[119] Partch used just intonation as the foundation for Monophony, selecting "a system in which interval- and scale-building is based on the criterion of the ear,"[120] that is, what Partch considered the unconscious desire for pure tuning. He adopted pitch-class "G" (98 Hz, 196 Hz, 392 Hz, etc.) rather than "C" as the fundamental pitch (1/1) of Monophony, matching the bottom of his baritone vocal range.[121] He arrived at the other pitches and intervals in his tuning system by performing three basic operations with ratios:

1. *Transposing pitches up or down an octave*
   To transpose a pitch an octave higher, multiply the ratio of the pitch by 2 (i.e., 2/1, the just octave). For example, to transpose 4/3 up an octave, multiply by 2/1 and the result

FIGURE 2.1. Derivation of monochord pitches using Harmonical Proportion procedures



[115] *Genesis*, 70.

[116] While Partch rejected equal temperament's terminology for intervals due to its inevitable associations, he uses its terms (always placed in quotation marks) as pedagogical tools to teach Monophony (*Genesis*, 68–69 ff).

[117] *Genesis*, 69. Both principles were traditionally attributed to Pythagoras of Samos, Greek cosmologist of the sixth century B.C., beginning in the century immediately after his death. The claim is beyond substantiation.

[118] Because of octave equivalence, pitch ratios are not treated as simple fractions. In mathematics 10/2 would equal 5, but in pitch ratios 10/2 is "reduced" (i.e., transposed to its lowest octave) by multiplying by 1/2 two times: 10/2 × 1/2 × 1/2 = 5/4 (10/8 reduced). Reduction or expansion through octave equivalence is routinely applied to ratios that require transposition to fall between 1/1 and 2/1.

[119] *On the Sensations*, 320ff.

[120] *Genesis*, 71.

[121] Partch's first Monophonic instrument, the Adapted Viola, has 98 Hz ("G") as its lowest string; all versions of Adapted Guitar 1 have had 98 Hz as the lowest or most central string.