

TUNING IN OPPOSITION:
THE THEATER OF ETERNAL MUSIC AND
ALTERNATE TUNING SYSTEMS AS
AVANT-GARDE PRACTICE IN THE 1960'S

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Introduction:

The practice of microtonality and just intonation has been a core practice among many of the avant-garde in American 20th century music. Just intonation, or any system of tuning in which intervals are derived from the harmonic series and can be represented by integer ratios, is thought to have been in use as early as 5000 years ago and fell out of favor during the common practice era. A conscious departure from the commonly accepted 12-tone per octave, equal temperament system of Western music, contemporary music created with alternate tunings is often regarded as dissonant or “out-of-tune,” and can be read as an act of opposition. More than a simple rejection of the dominant tradition, the practice of designing scales and tuning systems using the myriad options offered by the harmonic series suggests that there are self-deterministic alternatives to the harmonic foundations of Western art music. And in the communally practiced and improvised performance context of the 1960's, the use of alternate tunings offers a

utopian path out of the aesthetic dead end modernism had reached by mid-century. By extension, the notion that the avant-garde artist can create his or her own universe of tonality and harmony implies a similar autonomy in defining political and social relationships.

In the early 1960's a New York experimental music performance group that came to be known as the Dream Syndicate or the Theater of Eternal Music (TEM) began experimenting with just intonation in their sustained drone performances. Group members La Monte Young (b. 1935) and Tony Conrad (b. 1940) each claim credit for introducing just intonation into the group's "Dream Music." Although the two had a personal and artistic falling-out that has lasted for over forty years, Young and Conrad have continued to employ the practice of just intonation in their own music. Despite the aesthetic similarities in their work, Young and Conrad personify very different conceptions of the social and political implications of the use of alternate tunings.

Just Intonation: Historical and Theoretical Background

The exact definition of just intonation varies among theorists. Some emphasize the historical approach by defining it as a system of tuning intervals to rational number ratios. Others define just intonation as a method of tuning intervals derived from the harmonic series. In any case, pitches in just intonation are denoted as fractions or ratios and are understood to be relative to a fundamental pitch. The fundamental tone is described as *unity*, or 1/1. 1/1 is the basis of American composer Harry Partch's concept of *monophony*, or a system of organized pitches based on the human ear's ability to

detect musical relationships as expanding from this unison tone.¹ Besides the octave $2/1$, the most consonant interval in relation to the fundamental is the perfect fifth, which is denoted as $3/2$ and is an octave-reduced expression of the third harmonic $3/1$. The frequency of any interval can be determined by multiplying its fraction by the fundamental. So if the fundamental pitch $1/1$ has a frequency of 400 Hz then the perfect fifth or $3/2$ has a frequency of $400 \times 3/2$, or 600 Hz.

Greek philosopher Pythagoras of Samos is generally credited with the “discovery” of the harmonic division of a string that led to the earliest use of just tuning in the sixth century B.C. However, in his seminal *Genesis of a Music*, Partch suggests that the practice can be traced back to ancient China.² In any case, during the time of the Pythagoreans and their sect of tuning specialists, the *harmonists*, the third harmonic was considered the highest consonant prime number harmonic. This is presumably because the harmonists were unable to detect any higher harmonics on their string instruments. Thus the Pythagorean diatonic scale can be said to be a three-limit tuning system because it contains no intervals with numbers divisible by prime numbers greater than three, and as a result the scale contains some very dissonant intervals, especially the major third $81/64$, its complement major sixth $27/16$ and the major seventh $243/128$. In the fourth century B.C. Archytas added new scale degrees based on the fifth harmonic: $5/4$, $6/5$, $8/5$, and $5/3$. A prime limit of five provides these acoustically consonant intervals and includes the important, but heretofore absent from the Pythagorean system, major and minor thirds and major sixth. However, intervals based on five were not acknowledged as truly consonant until Zarlino in the sixteenth century.³

¹ Harry Partch, *Genesis of a Music: An Account of a Creative Work, Its Roots, and Its Fulfillments*, (New York: Da Capo, 1974), 71.

² Partch, 362.

³ Partch, 91.

The seventh harmonic, although widely in use in the traditional and classical music of the non-Christian world, has always been a source of contention in Western music. In the early seventeenth century a French monk and music theorist named Marin Mersenne, recognizing that the timbre of a trumpet contains a pronounced seventh harmonic, made the case that intervals derived from the number seven should be considered consonant.⁴ However the governing forces of the time, primarily Italian academics, rejected the number seven and it was effectively banned from Western music for hundreds of years.⁵ Introducing the number seven provides several new simple number ratios including the microtonal minor seventh $7/4$, 31 cents flatter than the equal tempered minor seventh. The just minor seventh interval sounds alien and noticeably flat at first, and yet it is unmistakably consonant because there is no acoustic beating. In experiments conducted by acoustics researcher Arthur Benade in which trained musicians were asked to detect consonant intervals between two tunable oscillators, test subjects identified $7/4$ and its relative $7/5$, a consonant tritone, as having audibly identifiable “special relationships.”⁶

It is worth noting that many American avant-garde composers who employ just intonation have embraced the number seven and consider the scale degrees derived from seven to be consonant. The first among these was Harry Partch, who in the early twentieth century went past the number seven to adopt an eleven-limit tuning system. And in the early 1960's Tony Conrad and La Monte Young incorporated the just minor seventh interval into their drone performances in the TEM, recognizing it as the likely

⁴ Matthew Shirlaw, *The Theory of Harmony*, (New York: Da Capo, 1969), 30.

⁵ Kyle Gann, “Between U S: A Hyperhistory of American Microtonalists,” *NewMusicBox*, September 2001, <http://www.newmusicbox.com/page.nmbx?id=17tp00>.

⁶ Arthur H. Benade, *Fundamentals of Musical Acoustics*, (New York: Dover Publications, 1990), 295.

source of the “blues” seventh.⁷ By including the number seven these composers appreciably expanded their intervallic options.

For example, in a seven-limit tuning system there are two different options for consonant minor thirds: $6/5$, or 316 cents, and the slightly narrower $7/6$, or 287 cents. The choice depends on the needs of the composer or performer and the context of the piece. If the work is primarily concerned with difference tones, as is the music of Young and Conrad, then this choice adds a richness of materials. Although these two minor thirds are less than a quartertone apart, their difference tones impart very distinct flavors to each interval. If the fundamental tone is C4, then the difference tones of $6/5$ and $7/6$ are the just-tuned equivalents of A1 flat and F1, respectively. When played in a high enough register on an instrument rich in harmonics, such as a violin, this difference tone can be heard as a third voice in the bass register. So when heard along with the difference tone entity the $6/5$ minor third sounds more “minor” while the F difference tone in the $7/6$ interval makes it sound more “major.” This effect can be heard in much of Conrad’s solo violin music and he frequently demonstrates it in his lectures on the harmonic series.

Seven-limit just intonation also offers multiple options for semi-tone and whole-tone intervals, microtones, and for most scale degrees, and it is easy to see how just intonation led to a wide variety of tuning systems and radical ideas about instrument design by the beginning of the Baroque era. However, the limitations of keyboard instruments and the demands of increased harmonic complexity, chromaticism, and key modulation forced Western tuning through a progression of compromise systems of temperament. The “well-tempered” system that was in use in the late seventeenth and early eighteenth centuries allowed for key modulation while maintaining some just

⁷ Tony Conrad, . “LYssophobia: On FOUR VIOLINS,” notes to *Early Minimalism Volume One Volume One*, (Table of the Elements, 1997), 23.

interval relationships. This is said to have lent different characters to different keys, depending on their relationship to the key in which the tuning was based.⁸ Finally, by the middle of the eighteenth century a twelve-tone, equal temperament system was firmly entrenched and, aside from the perfect fifth, the Western system of tuning had become only an abstract reference to its original acoustical foundations.

Rediscoveries and New Directions for the Avant-Garde

When La Monte Young and Tony Conrad first began experimenting with harmonic tunings in the early 1960's, they were simultaneously reviving a historical practice that had been abandoned in Western Music for over two centuries and expanding upon the work of the previous generation of American maverick composers who had ushered alternate tuning practice into the modern age. However, the modernist aesthetic had peaked in the 1950's and was on the decline by the time the TEM began rehearsing in Young's downtown loft.

In his 1957 article for the *Partisan Review* Richard Chase summarized the mid-century dilemma of the avant-garde and proposed strategies for a future resurgence. Chase claimed that the avant-garde was a permanent and essential cultural force, yet one whose modernist task, namely, "the aesthetic experimentalism and social protest of the period between 1912 and 1950," had been successfully carried out.⁹ Chase also suggested that the movement had "expired of its own success."¹⁰ According to Chase, the key to the resurgence and future success of the cultural vanguard would depend on its ability to see beyond distinctions of "highbrow," "middlebrow" and "lowbrow" culture. This flexibility

⁸ David B. Doty, *The Just Intonation Primer: An Introduction to the Theory and Practice of Just Intonation*, (San Francisco: The Just Intonation Network, 2002), 4.

⁹ Richard Chase, "The Fate of the Avant-Garde," *Partisan Review*, 24 (1957), 364.

¹⁰ *Ibid.*

had already been seen in the earlier generation of musical avant-garde, specifically in the appropriation of traditional forms by Charles Ives, Henry Cowell and Harry Partch. The improvisational performance practice and use of alternative venues by the TEM and other members of their New York avant-garde milieu would blur the boundary between “highbrow” and “lowbrow” even further in the 1960’s.

Harry Partch, Henry Cowell, Ben Johnston and Lou Harrison had established themselves as leading figures in the American modernist avant-garde in the first half of the twentieth century, and an experimental approach to tuning was a principal concern in their work. Partch’s *Genesis* had first been published in 1949, and by the late 1950’s the work of Helmholtz was influencing the 1960’s generation of the avant-garde just as it had Partch in the 1920’s.¹¹

Interestingly, Conrad cites neither of these as sources of his interest in alternate tunings. Instead he says he learned about intonation and harmonics from Robert Knudsen, a concert violinist with whom Conrad studied in high school. Knudsen instructed his student to play slowly and without ornamentation, and with a focus on double-stop voicings so that Conrad could develop an ear for the harmonic relationships in intervals.¹² In the mid-1950’s Conrad discovered Heinrich Ignaz Franz Biber’s *Mystery Sonatas* and was drawn to the Baroque composer’s use of scordatura tunings and emphasis on timbre. Conrad also had an affinity for the pre-bravura, Baroque violin technique that Conrad likened to hillbilly fiddle playing, in which the “bow stays down on the strings more, and vibrato functions more as an embellishment than as an adjunct of every note.”¹³ In 1959 Conrad heard North Indian classical music for the first time, and was enthralled by those aspects of the music that he had discovered in his own playing: sustained drones,

¹¹ Partch, vii.

¹² Conrad, 10.

¹³ Conrad, 12.

repetition, the emphasis on intervallic rather than harmonic movement, and the acute attention to intonation.

A math student at Harvard, Conrad adapted easily to the expression of pitches as ratios, and by the time he moved to New York in 1962 he had a firm grasp on the concepts of just intonation. However Conrad's interests at this time extended beyond tuning theory. He was aware of the modernist dilemma, which he saw as a post-Cagean crisis. He recognized a potential way out of the crisis when he first heard Young and his wife Marian Zazeela perform as part of an improvisational performance series at the 10-4 gallery:

The music was formless, expostulatory, meandering; vaguely modal, arrhythmic, and very unusual; I found it exquisite. What I heard in this music was two parts of what I later saw as three. First, I heard an abrupt disjunction from the post-Cagean crisis in music composition; here the composer was taking the choice of sounds directly in hand, as a real-time physicalized (and directly specified) process - in short, I saw redefinitions of composition, of the composer, and of the artist's relation to the work and the audience. As a response to the un-choices of Cage, here were composerly choices that were specified to a completeness that included and concluded the performance itself. [Conrad, 15]

It is Conrad's view that Cage's work and the activities of Fluxus, via which Young's conceptual work and organizational efforts had already established him in the New York scene, had signaled the end of modernism and the authoritarian role of the composer, and that it was mutually understood by its members that this was the context in which the TEM began working. However, by the end of 1965 core members Conrad and

John Cale had departed the group. Cale left to focus on the project that would eventually become the Velvet Underground and Conrad left because ongoing disagreements with Young had become insoluble.¹⁴

Subsequently, Young claimed sole authorship over all of TEM's music. Young and Zazeela have never allowed Conrad and Cale, or deceased TEM members Angus Maclise and Terry Jennings to hear the many hours of recordings made of their rehearsals. This is despite the fact that, as Conrad puts it: "At their core, the hundred or so recordings of Dream Music emblematically deny 'composition' its authoritarian function as a modern activity."¹⁵ Conrad views Young's stance as retrogressive, an embodiment of the arch-modernist ideal of authoritarian "composer," and has furthermore stated that Young's post-TEM work is steeped in another symptom of Euro-centric modernist art, Orientalism.¹⁶

However, this is a case in which history differs depending on whose account you are reading, or perhaps upon the agenda of the historian. K. Robert Schwartz makes no mention of Conrad in his Phaedon book *Minimalists*, and reports that the 1963 version of the TEM consisted of Young, Zazeela, Cale and Maclise.¹⁷ In his book *Four Musical Minimalists: La Monte Young, Terry Riley, Steve Reich, Philip Glass*, Keith Potter minimizes Conrad's role in the TEM and, in an apparent effort to substantiate Young's authorship claims, includes an image of Young's score for the TEM piece *Day of the Antler*. The algorithmic score clearly indicates parts for individual performers and uses just intonation pitch nomenclature. And, although the score was

¹⁴ Keith Potter, *Four Musical Minimalists: La Monte Young, Terry Riley, Steve Reich, Philip Glass*, (Cambridge: Cambridge Press, 2000), 73.

¹⁵ Conrad, 24.

¹⁶ Tony Conrad, "MINor premise," notes to *Early Minimalism Volume One Volume One*, (Table of the Elements, 1997), 44.

¹⁷ K. Robert Schwartz, *Minimalists*, (London: Phaidon Press Limited, 1996), 37.

transcribed in order to apply for a Guggenheim award rather than for performance, it would seem to support the notion that, at least by 1965, Young had a compositional and leadership role in the group.

In addition to the dispute over authorship in the TEM are the conflicting accounts of who actually introduced the idea of using just intonation to determine pitch choices. Young claims responsibility for the practice of indicating pitches in ratio form as well as the “musical structures involved in their elaboration.”¹⁸ Conrad’s account contradicts this completely:

The third route out of the modernist crisis was to move away from composing to listening, again working “on” the sound from “inside” the sound. Here I was to contribute powerful tools, including a nomenclature for rational frequency ratios, which ignited our subsequent development. [Conrad, “LYssophobia: On FOUR VIOLINS,” 20.]

Like Conrad, Young had been working with sustained sounds for a few years before he began to implement just intonation. However, prior to Young’s first exposure to Indian classical music, his background had been quite different than Conrad’s. Young had been involved with the West Coast jazz scene of the late 1950’s and his academic training was in serial composition. His *Trio for Strings* from 1958 and *Composition 1960 #7 (July)* both employ long, sustained notes. *Trio for Strings*, composed when Young was a music graduate student at UC Berkeley, is often cited as his first minimal work, although it was composed using serial methods. *Composition 1960 #7 (July)* hints at Young’s burgeoning interest in psychoacoustics and timbre through its employment of

¹⁸ Potter, 73.

sustained perfect fifths, composed to enhance attention to the structure of the harmonic series within the interval. The piece also addresses the belief shared by Young and Conrad that sustained tones are required to “train” the ear to hear difference tones and other acoustical phenomena present in just intervals.

By the end of Young’s involvement with the pre-Fluxus activities at AG Gallery and Yoko Ono’s loft, his own critique of the state of the avant-garde echoed both that of Richard Chase and Peter Bürger. Young was vocally critical of his financially successful associates and maintained, “art should aim for self-sufficient exploration and not saleable product.”¹⁹ By 1963 Young had distanced himself from Fluxus and from the overtly political agenda of George Maciunas. His attentions turned away from the concept art of the previous three years and returned to more directly musical efforts, mainly his work with the TEM.

By all accounts, the Dream Music of the TEM had little potential for commercial co-optation. Their sound was loud and abrasive, featuring amplified violin, viola, voice, and at times saxophone, percussion and other stringed instruments droning on intervals that were brazenly dissonant to the ears of the indoctrinated. Performances typically lasted for hours and there was no concern for presenting any semblance of linear form. The structure of the music had to be discerned from *inside*, and as such it required attention, participation and a time commitment from the listener. Concerts were often held in loft spaces and drug use was prevalent. Young claims that the whole group was under the influence of drugs for every performance.²⁰ In what reads like an answer to Richard Chase’s challenge, Conrad describes the counter-cultural stance of the group’s activities:

¹⁹ Potter, 54. Quoting Young.

²⁰ Potter, 67.

The first was the dismantling of the whole edifice of “high” culture. Also around this time I picketed the New York museums and high-culture performance spaces with Henry Flynt, in opposition to the imperialist influences of European high culture... Other counter-cultural components of the Dream Music picture were our anti-bourgeois lifestyles, our use of drugs, and the joy which John Cale and I took in common pop music. [Conrad, “LYssophobia: On FOUR VIOLINS,” 18]

But the static, disinterested nature of the music also meant that the listener could enter and leave the Theater of Eternal Music as he or she pleased. The very idea of “Eternal Music” suggests a phenomenon that is a fixture in the field of time, a permanent structure defined by periodicity and held in place by the unchanging relationships between numbers. In this early minimalist music the form and the content are one and the same, created in the moment through listening, improvising and interfacing with natural phenomena. This was art music that operated without the need for written, publishable scores, traditional concert venues, or the commonly accepted tuning system. So whether or not Young has a legitimate claim to authorship, the TEM enterprise embodied a stance that was at once communal, self-deterministic and oppositional, and that diminished, if not totally neutralized, the role of the composer.

Post-TEM Trajectories

Since parting ways with Young in 1965, Conrad’s musical efforts have continued to focus on long duration violin drones and just intonation. And he has persisted in imbuing his work with his intransigent socio-political views, albeit from a decidedly post-modern perspective. His seminal solo release is a four-CD collection titled *Early*

Minimalism Volume One. Although it was released in 1997, *Early Minimalism* addresses what Conrad believes to be an inaccurate and politically corrupt version of history.

Conrad maintains Young's refusal to release the group's recordings serves as a hermetic seal on the history of early minimal music and the TEM, and allows Young to exploit his own status as a composer to make his claims about authorship.

The set includes *Four Violins*, recorded by Conrad in 1964. The piece consists of four simultaneous tracks of Conrad playing his signature violin drones and is presented as a defiant refusal to allow others to define his role in history. Other tracks on *Early Minimalism* were recorded in the mid-1990's but are presented as historical reconstructions of the TEM's harmonic innovations, as indicated by their titles: *April 1965, May 1965 and June 1965*.

The liner notes to Conrad's 1995 release *Slapping Pythagoras* consist of a scathing polemic against the ancient Greek philosopher. It may seem somewhat incongruous given the Pythagoras' ostensible role in the development of just intonation, but Conrad asserts that Pythagoreanism was an anti-democratic movement during a time when nascent democracy was in a fragile stage of early development. According to Conrad, the Pythagoreans ascribed mystical status to Number, and that the discovery of proportional harmonics was held up as evidence of a Cosmological Order. To Conrad, this Cosmic Order also implies a social and political order in which the individual must accept his or her place. Conrad writes:

Pythagoras forged our Western arithmetical understanding of musical intervals, comprising (1) an ethical bond between music and the sanctity of Number and () the identification of number ratios with Harmonic consonance... The Pythagorean use of numbers as "symbola" (that is, oracular sayings) situated arithmetic in a special realm, between the physical and the abstract. To effectuate and reinforce

the Idealization of Number (which is the Pythagorean heritage in music, mathematics, and astrology), Pythagoras substituted a Theology of Number for the pragmatics of counting. [Conrad, “Slapping Pythagoras,” notes to *Slapping Pythagoras*, (Table of the Elements, 1995)]

The charges Conrad makes against this mythical Pythagoras -- elitism, authoritarianism, the use of secret knowledge as an instrument of control, the appropriation of other cultures -- can be read as thinly veiled indictment of Young, who by 1995 had kept the contributions of other TEM members locked away for thirty years. Conrad has criticized Young for squandering the radical aesthetic and social potential of their 1960's activities by adopting a retrogressive, modernist stance on authorship. Conrad has stated, “Like Fluxus, minimal music was capable of supporting a radical iconography, but its populizers made this impossible.”²¹ Conrad hints at his vision of a “radical iconography” in his frequent allusions to radical democracy and heterophony, the latter being a musical analogy to the former.²²

In contrast to Young, who for many years kept secret the tunings for his most important just intonation work, Conrad is very explicit about the intervallic materials in his music. In the liner notes to *Slapping Pythagoras* Conrad explains that the musical intention of the release was a desire to exploit the consonances that lie between the notes of the rigid, evenly-spaced diatonic scale, a legacy of the Pythagorean system. He delineates the interval factors that accomplish this by falling on quarter-tones and sixth-tones -- 7, 11, 13 and 14.²³

²¹ Conrad, “MINor premise,” 39.

²² Conrad, notes to *Slapping Pythagoras*. Conrad frequently refers to radical democracy, an ideological relative of anarchism that arose in the mid-1980's.

²³ *Ibid.*

In March of 2008 Conrad gave a series of lectures in Brooklyn called “The Harmonic Series and Applied Basic Arithmetic as Bases for Musical Practices.” In these lectures Conrad covers just intonation theory, but also characteristically illuminates the history of Western music theory and science in the context of socio-political control structures. Conrad makes the case that theoretical models in music, mathematics and science have historically been used by those in power to maintain control and put down opposition.

In the lectures Conrad elaborates on an idea about the composer’s role in Western art music that he had put forth a decade earlier in the *Early Minimalism* liner notes. In 1997 Conrad wrote:

The score for EARLY MINIMALISM: JUNE 1965, which only I play, arose from a different kind of writing than the presumptuous authorship of the modern Composer, whose “vision” s/he (typically he) conveys to Earth as a scored military dispatch. For the Composer, the score is to exercise control, to tell people what to do. [Conrad, “nAMing: April, May, June,” notes to *Early Minimalism Volume One Volume One*, (Table of the Elements, 1997), 60.]

In the lectures from March, 2008 Conrad suggests that the newly authoritarian role of composer that emerged in the sixteenth century coincided with the rediscovery of Roman military techniques among the Western European powers. The resulting organizational paradigm, in which the military leaders were removed from the field of battle and their orders were carried out by the mechanically disciplined lower-class soldiers, replaced the previous model of heroic, feudal warlords. The new military structures enabled the Western powers to conquer the world, and the celebrated military

paradigm permeated other aspects of European society, including politics and music. According to Conrad, the orchestra was now organized as a military force, and the composer was now analogous to the general sending down specific, precise orders to the disciplined troops.

Conrad maintains that the harmonic series presents today's musicians with a wealth of material and that it is as vital an avenue of exploration as it was in the 1960's. Conrad has been touring regularly since his mid-1990's recordings on the Table of the Elements label. These releases heralded a new popularity and an exposure of a younger generation to his work and his role in the history of minimal music. He had previously been known primarily as a filmmaker and video artist and has been professor of Media Studies at the University of Buffalo since the 1970's.

La Monte Young has also continued to work with the ideas developed within the TEM, just intonation and extended durations. In fact, two of Young's works from the 1960's, *The Well-Tuned Piano* and *The Tortoise, His Dreams and Journeys* officially remain works-in-progress.²⁴ Young's post 1960's work has dealt with just intonation systems of increasingly higher prime number limits. The most recent version of his Dream House installation in New York features continuous sine wave tones derived from higher number ratio factors and a prime limit of 71. Minute microtonal division has been a subject of interest since Young began composing his seminal work *The Well-Tuned Piano* in 1964. *The Well-Tuned Piano* is a thematic, improvised work of extended duration for a piano retuned to a twelve-notes-per-octave, seven-limit system devised by Young. The tuning was kept secret for years until Kyle Gann deciphered it and convinced Young to make it known. In 1993 Kyle Gann published a thorough analysis of the work detailing the tuning and structure in *Perspectives of New Music*.

²⁴ Potter, 70.

The Well-Tuned Piano, while a sonorous study in acoustic resonance on a massive scale, actually has little of the sense of stasis of the drone-based work of the TEM. Young admits that *The Well-Tuned Piano* features a much more classical approach to harmonic and thematic structure as well as technique.²⁵ But it shares with the drone work what Richard Taruskin describes as “the idea of infinite extension in time” and employs “a technique of synchronizing the musical rhythm with the acoustical beats arising out of the justly tuned intervals to set up a continuous resonant aura in the performance space and thus defeat the piano’s quick sonic decay.”[Richard Taruskin, “A Harmonious Avant-Garde?” *The Oxford History of Western Music, Volume 5: The Late Twentieth Century*, (New York: Oxford University Press, 2005,) 360.]

In contrast to Conrad, Young has had little to say about the socio-political implications of his work, although there remains a utopian idealism in his compositional approach. Young prefers to place his work in a metaphysical and spiritual context, and the rigor he applies to tuning and performance practice reflects his concern with spiritual purity. Young embraces the Pythagorean notion of Harmony of the Spheres:

Pandit Pran Nath said that when you're singing and you're perfectly in tune it's like meeting God. The meaning of this statement is that the concentration is so much to sing perfectly in tune that you literally give up your body and go to a higher spiritual state. Sound... Musicians like to think that sound is the highest form of meditation, that it takes you the furthest. Certainly, in my experience this

²⁵ Frank J. Oteri, “La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri,” *NewMusicBox*, (October 2003) <http://www.newmusicbox.org/article.nmbx?id=2216>.

is the case. I feel through sound I have come closest to God and closest to the understanding of universal structure. [Oteri.]

Young and Zazeela became disciples of Indian Hindustani vocalist Pandit Pran Nath in 1970, and the couple invested themselves completely in the guru-disciple relationship. Besides the continuing refinement of his epic works, Young's musical energies have focused on the mastery and pedagogy of Pran Nath's Kirana style of singing. Young and Zazeela presently teach the style to a new generation of disciples.

Conclusion and Current Intervals

As of this writing the conflict between Tony Conrad and La Monte Young over TEM authorship persists. In 2000 Table of the Elements released *Inside the Dream Syndicate Volume One: Day of Niagara*, a collection of recordings of the Theater of Eternal Music from 1965 that was not authorized by La Monte. The recording was in most respects a bootleg, somehow illicitly copied from Young's master recordings, and the poor sound quality reflected this. Young's immediate public response, in the form of a press statement on their MELA Foundation's website, reiterated Young's claim of authorship and claimed that the performance on the recording was an early version of his composition *The Tortoise, His Dreams and Journeys*. The press release also demanded that Table of the Elements credit Young as the composer, pay him "fair remuneration" for the work, and re-master the work from Young's original tape.²⁶

²⁶ La Monte Young, "Statement on the Table of the Elements CD Day of Niagara April 1965," (MELA Foundation, July 10, 2000), <http://www.melafoundation.org/statemen.htm>.

A few months later the Wire Magazine published “An Open Letter to La Monte Young and Tony Conrad” by fellow minimalist composer Arnold Dreyblatt. In the letter Dreyblatt confesses to having made an unauthorized copy of the *Day of Niagara* tape when he was working as Young’s tape archivist in the 1970’s and to making another copy for a colleague in the mid-1990’s. Dreyblatt speculates that he was responsible for the “leak” and apologizes to Young and Zazeela. But Dreyblatt also uses the letter as an opportunity to implore that Young and Conrad settle their differences:

For those of us who cherish the contributions of both parties, recent developments have been doubly painful. We find ourselves confronting two opposing world views, both of which seem valid: one accepting the role of the composer/author in a central and traditional role, the other presenting a collective model, with a decentralized structure.

La Monte, in a recent response, acknowledges the input of Tony and John Cale as being in “the realms of performing, acoustics, mathematics, and philosophy”, while not in composition. He claims to be “extremely interested in arriving at a fair and just solution...” [Arnold Dreyblatt, “An Open Letter to La Monte Young and Tony Conrad,” (July, 2000). www.dreyblatt.de/pdf/Letter%20to%20the%20Wire.pdf]

Conrad was the next to respond publicly. His letter, characteristically expansive and intransigent, restates his previously expressed views on Young’s authorship claim and addresses Dreyblatt’s plea for a compromise:

Thus by 1966, after John Cale had quit the collaboration for the Velvet Underground and I to work in film, Young found himself left with the physical recordings which embodied and remained from the collective process of Dream Music - a residue that had not been “marketed”, and which he found he could only “market” effectively by reinscribing the work within the cultural paradigm of “composition”, however this function might have been displaced from its locus in the Western musical tradition by Young’s Orientalism. All of this goes to say that in those days the ethos of heroic modernism led many of us into ungovernable personal and professional quandries...

I take Arnold Dreyblatt’s contribution as a positive and honest gesture toward reconciliation. At the same time, his first person testimony, as one of a scant handful of auditors of Dream Music tapes not filtered through Young’s personal interests, will inevitably steel the resolve - that the music should not be made a victim of the grasping reflexes of its custodian - among those of us who hear, in Day of Niagara, a previously inaudible music, “revolutionary conceptually, and as well exceptionally rich in terms of sonority and the infinitely rich timbre of the bowed strings, with the voices mixed ‘inside’ [- a sound that] was never again to be equaled.” [Conrad, “An Open Letter to La Monte Young and Tony Conrad,” (July, 2000), www.dreyblatt.de/pdf/Letter%20to%20the%20Wire.pdf.]

Forty years after their collaboration in the creation of a sonorous, unified structure of harmonic sound in the Theater of Eternal Music, Conrad and Young advance insistently on their antipodal paths. Conrad presses forward on his radical democratic, post-modern artist/activist enterprise while Young’s musical practice has become “a form

of esoteric religious practice, a discipline to be carried out by and in the presence of initiates rather than performed before the general public.” [Taruskin, 360.]

Regardless of how these two artists present their contrasting versions of history, and whether or not authorized recordings of the TEM are ever released, their work together in the 1960’s proposed one utopian solution to the dead end of modernism. By using alternate tunings and as a foundation for sonic organization, Young and Conrad’s work presented a static place of repose, where the composers, performers and listeners were able to explore the structure of Nature in real-time. And their endeavor took place spontaneously, without regard for the traditional roles imposed by the Western art music tradition or for compliance with social and political power structures.

Bibliography

- Benade, Arthur H. *Fundamentals of Musical Acoustics*. New York: Dover Publications, 1990.
- Chase, Richard. "The Fate of the Avant-Garde." *Partisan Review* 24 (1957): 363-375.
- Conrad, Tony. "LYssophobia: On FOUR VIOLINS." Liner notes. *Early Minimalism Volume One Volume One*. Table of the Elements, 1997.
- Conrad, Tony. "MINor premise." Liner notes. *Early Minimalism Volume One Volume One*. Table of the Elements, 1997.
- Conrad, Tony. "nAMing: April, May, June." Liner notes. *Early Minimalism Volume One Volume One*. Table of the Elements, 1997.
- Conrad, Tony. "Slapping Pythagoras." Liner notes. *Slapping Pythagoras*. Table of the Elements, 1995.
- Conrad, Tony. "Tony Conrad's Response to *An open letter to La Monte Young and Tony Conrad*, 2000." (2000). <http://www.dreyblatt.de/pdf/Tony%20Conrad%20Response.pdf>
- Doty, David B. *The Just Intonation Primer: An Introduction to the Theory and Practice of Just Intonation*. San Francisco: The Just Intonation Network, 2002.
- Dreyblatt, Arnold. "An Open Letter to La Monte Young and Tony Conrad." (July, 2000). www.dreyblatt.de/pdf/Letter%20to%20the%20Wire.pdf
- Gann, Kyle. "Between U S: A Hyperhistory of American Microtonalists." *NewMusicBox*, (September 2001). <http://www.newmusicbox.com/page.nmbx?id=17tp00>
- Oteri, Frank J. "La Monte Young and Marian Zazeela at the Dream House: In Conversation with Frank J. Oteri." *NewMusicBox*, (October 2003) <http://www.newmusicbox.org/article.nmbx?id=2216>
- Partch, Harry. *Genesis of a Music: An Account of a Creative Work, Its Roots, and Its Fulfillments*. New York: Da Capo Press, 1974.

Potter, Keith. *Four Musical Minimalists: La Monte Young, Terry Riley, Steve Reich, Philip Glass*. Cambridge: Cambridge Press, 2000.

Schwartz, Robert K. *Minimalists*. London, Phaidon Press Limited, 1996.

Shirlaw, Matthew. *The Theory of Harmony*. New York: Da Capo, 1969.

Taruskin, Richard. "A Harmonious Avant-Garde?" *The Oxford History of Western Music, Volume 5: The Late Twentieth Century*. New York: Oxford University Press, 2005, 351-410.

Young, La Monte. "Statement on the Table of the Elements CD Day of Niagara April 1965." (MELA Foundation, July 10, 2000).
<http://www.melafoundation.org/statemen.htm>