

PETER THOEGERSEN (b. 1967)

THREE PIECES IN POLYTEMPIC POLYMICROTONALITY

Peter Thoegersen, synthesizer

1. *Milko* (2013–16) 28:25

2. *Irrational Quartet* (2018) 30:17

3. *Herniated Lumbar Discs Much Better Now* (2018) 8:10

TT: 67:03



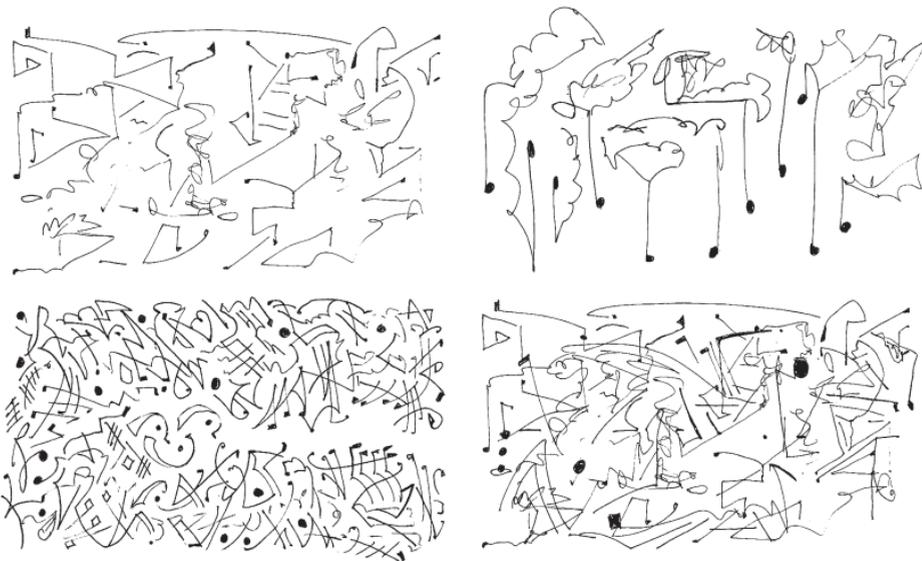
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PETER THOEGERSEN

THREE PIECES IN POLYTEMPIC POLYMICROTONALITY



The author of these notes has spent his life explaining radical music, and the music on this disc may be the most radical I've ever written about. **Peter Thoegersen** (b. 1967 in Los Angeles, living in Ventura) is not yet a name known to the music world; not for any lack of connection to other famous musicians, but because he came to composition late, and because his artistic aims are so broad and complex that they have taken years to evolve. His aesthetic is well defined, and he is upfront about having a name for it: "Polytempic Polymicrotonal Music." That means he has musical layers simultaneously moving in different tempos, plus, even more radically, that he has different microtonal scales playing at the same time. Few composers have aimed at such fervent and heterogeneous multidimensionality. And yet, while Thoegersen's music can seem overwhelming at first, running through it is a level of charm and simplicity that belies the initial impression.

The first thing to keep in mind is that Thoegersen is a virtuoso drummer. After forming an inexplicable attachment to classical music (especially Bach) as a child, he devoted himself to the drums at age eleven. He played in garage bands around LA, and was such a prodigy that he was taken as a student by the great bebop drummer Freddie Gruber (1927–2011), who had played with Charlie Parker. Thoegersen's dream, he says, was "to become the world's greatest drummer," and it was apparently no idle fantasy. Part of the polytempic aspect of his music stems from his ability to play four different rhythms at once with his two hands and two feet. (An early trap set piece titled *3:4:5:7* referred to tempos he could keep distinct at once.) But Gruber, he says, told him, "You think like a composer." Even today a large part of Thoegersen's output is extremely frenetic drum solo pieces, sometimes involving drum machines. But after becoming obsessed with Chopin's harmony at age twenty-three, he eventually returned to college late, at California State University, and persevered to get a doctorate at the University of Illinois in 2012, at the ripe age of forty-five.

Thus, Thoegersen wrote his first notated composition, a saxophone duet, at age 30. With a fearlessness about contacting famous musicians that he has demonstrated repeatedly, he showed it to Los Angeles composer William Kraft, who found it so

sophisticated that he wouldn't believe it was the composer's first composition.

Few people wait until mid-career to write their doctoral dissertation, and Thoegersen's is an unusually mature exposé of his musical preoccupations. Titled (with some understatement) "Polytempic Polymicrotonal Music: A Road Less Traveled" (http://www.academia.edu/1901545/Polytempic_Polymicrotonal_Music_A_Road_Less_Traveled), it is a summary of divergences in tempo and pitch systems throughout history, starting from the ancient Chinese and Greeks (which latter were known to sometimes mix scales, or *genera*, during a single musical performance). He argues that "polymicrotonalism" (a word that first appears in Gardner Read's 1990 book *20th-Century Microtonal Notation*) has often resulted naturally from performance practice, and he locates a seminal precursor in Charles Ives's *Universe Symphony*, a work that Ives left unfinished, but which, in its reconstructions, created heterophonic structures above a bed of pulses moving at different tempos. An even more direct predecessor was the obscure French composer Jean-Étienne Marie (1917–1989).

A disciple of Messiaen and Milhaud whose life was changed by a meeting with Mexican microtonalist Julián Carrillo, Marie advocated (as shown by chart examples in Thoegersen's dissertation) dividing the whole-step into two, three, five, and six parts within the same piece. Thus one scale would be conventional twelve-tone, one 18 equal steps to the octave, one 30, and one 36, all with different and in some cases incommensurable step sizes. Though he expands on it, this more or less becomes Thoegersen's pattern: The *Irrational Quartet* recorded here has one voice in 27 equal divisions of the octave (EDO), one in 31 EDO, one in 16 EDO, and one in 14 EDO. Such scales in themselves have become common among microtonalists in recent decades, but most microtonalists have shown a theoretical commitment to exploring only one scale at a time; the composer who advocates mixing is a real rarity. Thoegersen traces the impulse back to the Greek tuning theorist Aristoxenus (born c. 375 BCE), and also attributes to it a metaphysical connotation. The Tibetan view of man, he likes to note, attributes to him six layers besides the physical, like haloes, and thus his polymicrotonal music seems to exist on several dimensions at once. (He is also interested in theories of reincarnation which posit our

soul's simultaneous existence on different planes and in different tempos.) "I believe," writes Thøgersen, "that not only can single-system microtonality sound beautiful in its verticality, but that mixed temperaments and tunings also sound beautiful in their verticality [p. 74]."¹

The polytempic side of Thøgersen's aesthetic is slightly more mainstream, well documented in the music of Charles Ives, Henry Cowell's ground-breaking 1930 book *New Musical Resources*, and the polytempo music of Elliott Carter, Brian Ferneyhough, and especially Conlon Nancarrow, who spent his life writing music for player piano, fulfilling Cowell's rhythmic theories with different tempos running simultaneously, from simple complexes like 3:4:5:6 and 17:18:19:20 up to irrational relationships such as tempos based on \underline{e} (the base of natural logarithms) and π . To some extent this tendency aligns Thøgersen with the totalist, or metametric, movement of 1980s and '90s New York, in which composers like Mikel Rouse, Michael Gordon, Art Jarvinen, Larry Polansky, John Luther Adams, (and myself) wrote music dividing the musical bar into different divisions at once. Thøgersen, however, takes ensemble performability less into account (hoping that someday performers will evolve who can handle such difficulties), and has gone considerably further out in the rhythmic aspect.

Plus, since pitch and rhythm follow the same numerical laws—a perfect fifth is a 3-against-2 rhythm sped up until it is perceived as pitch—for Thøgersen polytempo and polymicrotonality are analogues of each other, different manifestations of the same phenomena. "So," he writes, "are polymicrotonal pitches perceptible to the ear? Yes, and by framing polymicrotonal structures in relief by putting them in differing tempos, the independence required in order to hear is met with more drama, and efficiency, by deliberately misaligning the vertical structures in such a way that individual pitches can be

¹ Peter Thøgersen, "Polytempic Polymicrotonal Music: A Road Less Traveled" (http://www.academia.edu/1901545/Polytempic_Polymicrotonal_Music_A_Road_Less_Traveled).

discerned within the context of seemingly dense textural implications [pp. 93–94]."² Thøgersen's vast numerical structures, then, are an attempt to embody an esoteric mysticism, one that in his view has been inherent in music since the beginning.

We come, then, to *Milko* (2013–2016), one of Thøgersen's most ambitious and monolithic works, a continuum of misalignment so relentless as to become almost minimalist in its overall effect. The piece is named after a beloved cat ("and my best friend," he adds—Thøgersen is really, *really* fond of cats). A cognitive dissonance to be overcome is that Thøgersen's pieces are often scored, theoretically, for acoustic ensembles, but realized electronically because the tempo and pitch constructions are too quixotic for current human performance capabilities. Thus *Milko* is scored, on paper, for woodwind and brass quartets, solo cello, and percussion. But the woodwinds need to be capable of sixth tones (36 equal steps per octave), the brass of eighth tones (48 equal steps), the cello of twelfth tones (60 equal steps), and the percussion of fourteenth tones (84). Deviations from the twelve-tone scale are marked on the score in cents (1200ths of an octave) above each note. The version of *Milko* we hear here negotiates these dimensions without difficulty. It also puts its own spin on the score, for Thøgersen takes a rather Ivesian approach to textual fidelity; the score is one thing, the performance another, the recording yet something else, and all versions are authentic variations on the central idea.

Likewise, the marked tempo is twenty beats per minute for the virtual woodwinds, thirty-two for the brass, forty-seven for the cello, and eighty-four for the percussion. All sections begin in 4/4 meter, but the woodwind notes open with tuplets of forty-two 32nd-notes, the percussion in quintuplets moving to septuplets, and so on, so that we have tempos within tempos and wheels within wheels. Thøgersen begins composing, he says, by working out the rhythms he wants, drummer-like, with his hands and feet, notating them when he feels satisfied with the result, and this is often perceptible in the music. Pitch he thinks of as the coloring of the rhythmic skeleton, and he is less

² Ibid.

interested in precise contour than in the impression of non-matching pitch planes.

All of this might make *Milko* sound like a work of mammoth opacity, an attempt to outdo Stockhausen's *Gruppen* in washes of sonic overload, yet that's not the piece's effect at all. Many of the tuplets are outlined by single repeated notes, many of the tempo contrasts by repeated chords, and the solo cello line sometimes has the effect of a plaintive chorale. Because Thøgersen is not ideologically committed to either the dissonant or consonant end of the tonal spectrum, his multidimensionality is not an automatic route to chaos. The utter mutual independence of the lines from each other conjures the gentle complexity of nature, of creatures carrying out diverse tasks while taking little notice of each other, but the parts do not cover up or conflict with each other. Though he carefully distances himself from the nature-imitating Spectralists of post-serialist Europe, the music has the feel of a carefully composed analogue of an environmental recording, a continuum of coexisting gestures.

The *Irrational Quartet* (2018) is a far less dense piece, yet even more radical in its processes. The four lines that comprise this half-hour work were written, and are notated, independently, synchronized only by being identical in duration. The piece is indeed a quartet, and could be played, if playable at all, by a string quartet. The title is a literal description of the piece's motivations and processes, for its structures revolve around the irrational numbers \underline{e} , π , ϕ (the Golden Ratio, approximated by the Fibonacci series), and the square root of two. Each quartet line (respectively identified as \underline{e} , π , Fibonacci, and "root 2" in the score) is divided into three sections, with the first and third using the same tempo and division of the octave, and the "middle movement" using a different tempo and a smaller number of pitches related to the outer sections as an approximate Golden Ratio:

	First/third mvmts.:		Middle mvmt.:	
	Tempo	EDO	Tempo	EDO
\underline{e}	163.1	27	4.16	16
π	188.5	31	63.1	19
Fibonacci	97.1	16	184.5	10
root 2	84.85	14	92.6	8

(There is a similarity here to Elliott Carter's *A Symphony of Three Orchestras*, whose movements begin independently in each ensemble, though the effect here is much less dense.) The tempos, specified to digits not found on any metronome, were arrived at as a way to get a number of beats in each part proportionate to the four irrational numbers that generate the piece. The piece is pervaded, then, by a kind of mystic faith that the ratios made by these ancient numbers will guarantee some cosmic significance.

Such imperceptible numerical underpinnings are reminiscent of the high tide of twelve-tone serialism in the 1950s, yet the musical surface here traffics in much more perceptible phenomena. For his melodic sense Thøgersen relies heavily on the tetrachords of ancient Greek music and Arabic *maqam* theory, and also on an idea he took from the composer Béla Bartók on the compression of intervallic structures. As a result, quick melodies tend to run up and down exotic scales, so that the piece's contrapuntal lines are often easy to distinguish (especially if stereo separation is maintained). Bartók's idea was that the notes of a melody (for instance, that which opens his *Music for Strings, Percussion and Celesta*) could be mapped onto another scale to create a similar melody with larger or smaller intervals, and Thøgersen's range of scale-step sizes grants him a fluidity in this respect that Bartók could have only dreamed of. Thus the linearity of the piece's four lines (though contrasted at times with mostly consonant chords separated by long silences) creates a more playful, less fragmented chaos than was typical of high modernism.

Following these hyper-structured panoramas, the disk's finale is more intimate. Running through Thøgersen's output is a series of piano solos called *Piano Collections*,

fifteen as of this writing, some playable by an actual live pianist, others containing impossible tempo overlays and microtonal scales up to (in no. XIV) 128 pitches per octave. No. XV, here, is titled *Herniated Lumbar Discs Much Better Now* (2018), and it was indeed written following a painful interlude of back pain; if his music is abstract, Thoegersen's titles are often startlingly personal. Avoiding the long-overworked duality of tonal vs. atonal, he thinks about pitch in terms of what he calls “centricity,” using certain pitches as anchor points and stacking similar intervals around them in both directions. And so the lines, though non-repeating, dart playfully, accelerating and decelerating, sometimes fixating momentarily on rhythmic riffs like a drummer stretching the meter for a cadenza. Trills are common, and it is Thoegersen's practice to leave the size of trills variable, just as a drummer will often build a crescendo by alternating among instruments.

In total, these three pieces emphasize a particular side of Thoegersen's output. He remains active as a drummer, often realizes ensemble pieces with friends, writes microtonal and/or theatrical works for soloists, and has written a series of microtonal string quartets that rival those of Ben Johnston in difficulty. The image his music creates of ornately mathematical structures filled with intuitively friendly melodies maps on to the personality of the man himself: outspoken and acerbically ruthless in his musical opinions, Thoegersen is also marked by a jolly sense of humor and an inexhaustible love of cats and other animals that make him ultimately less imposing and more personable than he might seem at first. The same can be said for his music. And by going further than anyone else has gone in terms of this particularly American concept of fusing the polytempic with the polymicrotonal—extending and combining the conceptual worlds of Ives, Cowell, Nancarrow, Partch, Carter, even Frank Zappa, and many others—he has created a special place for himself within American music.

—Kyle Gann

Kyle Gann is a composer who has two discs available on New World Records, Nude Rolling Down an Escalator and Custer and Sitting Bull. His most recent book is Charles Ives's Concord: Essays after a Sonata.

Peter Alexander Thoegersen (born 1967, Los Angeles) earned his Doctorate in Music Composition at the University of Illinois, Urbana–Champaign, in 2012. Thoegersen wrote his thesis on Polytempic Polymicrotonality, previously untouched as a stylistic genre, with a single precursor in the literature, Charles Ives's *Universe Symphony* (1915, unfinished until Johnny Reinhard's version, 1996). Polytempic Polymicrotonality offers expansive potential for the re-emergence of pitch and rhythm in contrast to extended-technique noise gestures prevalent today. Thoegersen has written a strictly polytempic polymicrotonal series of string quartets—the voices in completely different tempos, character, and tuning—intended for live players. He will complete ten, after which he will create a drums and percussion series. Himself a drummer, Thoegersen extrapolates rhythms and explores polytempo and four-way independence, wherein each independent “limb” becomes its own part, or voice, with its own tempo, and ultimately, its own microtonal system—approaching a radical new polyphony not yet practiced in musical literature.

Performances of his works include the Two Days and Two Nights of New Music festival's international premiere of *Dreams Like Little Movies*, a work for microtonal bassoon in Johnny Reinhard's 128-octave overtone series tuning, in Odessa (2017); and a world premiere of his duo for bassoon and violin, *Summer in Helsinki* (in 128), a reciprocal and fast-paced composition in microtonal narrative, in Helsinki (2017). Three of his works received their U.S. premieres this year in New York—*Summer in Helsinki*, *Dreams Like Little Movies*, and *I Am a Force of Nature*, for Felix del Tredici on trombone (in 128). *Facebook: What's on Your Mind?*, a song cycle in gradually increasing equal divisions of the octave for synthesized microtonal piano and mezzo-soprano, will receive its world premiere in Paris in autumn 2019.

Produced and engineered by Peter Thoegersen

Milko (July 27, 2018), *Irrational Quartet* (June 28, 2018), and *Herniated Lumbar Discs Much Better Now* (March 25, 2018) were all recorded in Ventura, CA.

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