

Qilyaun

Scott Deal

The shaman drums. He goes into trance.
His soul moves free....His spirit goes down.
He dives through the tundra.
It is hard to get through.
It is cold and dangerous.
He enters. He is gone...

-From Ancient Land: Sacred Whale
by Tom Lowenstein

Qilyaun" is the Iñupiaq word for the shaman's drum. Translated literally, it means "device of power". The drum is the shaman's vehicle for spirit journeys. The shaman rides the sound of the drum to and from the spirit world.

-John Luther Adams

In 1995 I accepted a position as an Assistant Professor of Music at the University of Alaska Fairbanks. I had recently completed my studies at the University of Miami, where I first encountered the music of John Luther Adams, listening to a CD recording of *Earth and the Great Weather*. As a result of that experience, while preparing for the adventure of moving to the far north, I resolved to meet him.

Re-settling to Alaska was an amazing adventure. In addition to the thrill of my first tenure-track university position, I was living in a strange and captivating place. Alaska is wild, potent, gigantic and empty, seemingly devoid of roads or other manifestations of humanity. That emptiness is replaced with towering mountains, snow-filled forests, vast plains, great rivers, and everywhere, wildlife. In comings and goings, I saw more animals in their natural surroundings than the rest of my life altogether: Grizzlies, Polar Bears, Whales, King Salmon, Great Horned Owls, Bald Eagles, Moose, Wolves and Caribou. The weather was equally striking, with bone-dry air, and winter seasons that span October to May, at times as cold as -50 degrees Fahrenheit. The subarctic sky is all daylight June to August, and almost continuously dark November to January. The Arctic night possesses a vivid light, filled with the Aurora Borealis, snow reflections, and long sunrise/sunsets that cast pink, orange and red colors upon a cold, clear sky.

I had many vivid experiences that first year, but two are worth mentioning here. The first occurred en-route to Alaska via the *Columbia*, a ferry sailing from Bellingham, Washington. One afternoon we steamed into the proximity of a large

group of Humpback Whales, gathering for migration to waters near Hawaii. Pods, or small groups of whales, appeared all around the ship as far as the eye could see, leaping out of the water, as well as vigorously smacking the surface with their tails, at times repeating in regular pulse, hitting the water hard....really hard. Everyone onboard was mesmerized, and some people mentioned they had heard of, but never witnessed the spectacle. It was an electrifying moment.

The second was my first experience with live Eskimo music and dance at the Alaska Festival of Native Arts. Dance ensembles from throughout the Subarctic travel to Fairbanks annually to perform at the three-day festival. A dance group will have anywhere from 5 to 15 drummers, with as many dancers, and everyone sings. Of particular interest to me was their drum, called a *qilyaun* in the Inupiat language. The qilyaun is a large frame drum with a handle, held in one hand while the drummer, seated, either lightly taps or plays with terrific loudness. It has no shell, but is simply a round wooden frame with a skin stretched tautly across. When the drummers are playing intensely, the noise is impressive and distinct. Their drumming is visceral, played seated, but leaning forward, intent. Much of the music is comprised 5/8 and 7/8 phrases, such as 2-2-3, or 3-2. They performed all night, one hour at a time, group after group, hailing from tiny villages throughout Alaska, Canada and Siberia.

As good fortune would have it, John lived in Fairbanks, and in short time we became friends. We used to meet at the local favorite restaurant Thai House, or at his studio, outside of Fairbanks on Moose Mountain where we would talk late into the night. Occasionally we'd meet for a sauna and dinner with friends of his that included the conductor Gordon Wright, Fairbanks physician Leif Thompson, and the poet John Haines, to name a few. Having both grown up as drummers, we had similar musical influences and experiences. John had performed timpani in the Fairbanks Symphony, which became part of my job duties at UAF. And my new-found enthusiasm for Inuit drumming was a source of much discussion, as John holds a special love for, and impressive knowledge of, Native Alaskan culture. Another connection was that when we met, he was completing *Strange and Sacred Noise* for the Percussion Group Cincinnati, a professional trio whom I studied with at the University of Cincinnati College-Conservatory of Music in the 1980's.

We conversed extensively about music, pouring over scores and listening to pieces together. From those conversations several ideas stand out as relevant to *Qilyaun*. One important concept was the idea that his music would create a sense of place in which to experience sound. This place is where every part touched by the sound becomes the piece: the acoustics of the sounding instruments, "the acoustics of the performance space, and the psycho-acoustics of our own hearing" (1998). John also discussed the fact that he sought singularity as a pure musical vehicle. He sought to create music that is devoid of

expectation or resolution, and that invites one into a “deeper experience of the sound itself”.

My concern is not with musical "ideas" and the rhetoric of composition, but with the singular sonority -- that sound which stands for nothing other than itself, filling time and space with the vivid, physical presence of a place. Immersed in the enveloping presence of elemental noise, in the fullness of the present moment, we just may begin to hear, with the whole of the self, something of the inaudible totality of sound.

In 1997 I received funding to award a commission for a percussion solo through the Fairbanks Symphony Association, and I approached John about the project. At the time John was considering creating an Eskimo opera, so we began discussions with the idea of a 7-10 minute piece that would become a solo segment of the larger work, dealing with the subject of the shaman-drummer. During our deliberations, we considered using a qilyaun, experimenting with various ways to perform with it. Ultimately, there was difficulty in perceiving it as a solo instrument in part because playing with one hand limits its versatility, and since it has no shell, its resonant character had limitations. Instead John selected a concert bass drum because it produces a deeply sonorous, enormous sound. And, much like the *qilyaun*, the bass drum is *singular*.

Another area of discussion pertained to the inclusion of an electronic component to the piece. I had been engaged with combining percussion and electronics for a number of years and was keen to continue this path. Since percussion and electronic textures are primarily comprised of unpitched noise, the integrative possibilities are fertile, and their combined use has produced landmark musical literature. John Cage's *Imaginary Landscape* (1939-42), and *Cartridge Music* (1960); as well as Karheinz Stockhausen's *Kontakte* (1960) and *Microphonie I*, (1964) are representative of classic works that blend the salient aspects of both mediums into compelling musical experiences. In our very early discussions, John was skeptical about creating an electronic work as he had always steered clear of the sounds associated with it. He had incorporated electro-acoustic processes in some of his work, but was always careful to use only acoustic sounds created live by the performers of his works. For example, certain segments of *Earth and the Great Weather* employ a series of delays among the string parts as part of the compositional structure. However, one additional factor made using electronics for the piece attractive: we had a world-class concert hall for the premiere.

The Charles W. Davis Concert Hall at the University of Alaska Fairbanks is a place that musicians love to perform in. It was built in the late 1970's during the heyday of the Trans-Alaska Pipeline, when the state was flush with money and intent on developing infrastructure. The home of the Fairbanks Symphony and

the Arctic Chamber Orchestra, it is a beautiful hall both sonically and visually, yielding a rich sound with a sustained, yet subtle resonance. The design of 900-seat hall creates an open ambiance that is spacious yet intimate. John knew it well, having performed and also recorded several of his works there. We possessed access to the hall in order to work out ideas and we also had solid beginnings of an inventory of audio resources. This led us to conclude that before us lay the opportunity to create something really spectacular with electronics. Quickly the discussion turned to a longer work, of concert length. As our discussions ensued, John conceived the idea of using modified delay systems to fully exploit not only the resonance of a large drum, but the entire space. In other words, during the premiere I would play bass drum (and much more), but the hall would become the *qilyaun*.

With the addition of electronics, we decided to bring a sound designer into the project to create a multi-delay/feedback system that would give treatment for 3 delay lines, one on each side, and one in the rear. John asked Nathaniel Reichman to be part of the project. Nathaniel was a former student of John's at Bennington College who was raised in Alaska, but now lived on the East Coast. We worked on the system Nat designed in the Davis hall in November 1997 and during April 1998, in a lead-up to the premiere. We also enlisted the help of Michael Henchman, a local engineer for the telecommunications firm Alaska Communications Systems (ACS), who helped us wire the hall and manage the many audio issues that arose through the work. We constructed a system that included large speakers mounted behind the screen facades on the sidewalls above the audience. Microphones were seated approximately 6 feet in front of 3 speakers (two on the side and one in the rear), in order to pick up the delay lines and re-feed them into the system.

Eventually John conceived a three-movement work for solo percussion, digital delay, and spatial resonance. The first movement, scored for bass drum, became the final published piece. The second movement was scored for 8 cymbals, tam tams and crotales, and the third, 8 toms, 8 cymbals, and kick drum. Each of the movements utilized the customized digital delay and resonance spatialization system. They also all used the similar linear-mirror musical structures, meaning that each movement progresses to completion of a specific process, deemed a half-way point. The second half is the exact music in reverse, to the first note of the work, thus two mirrored halves. The working title for the premiere performance was *The Immeasurable Space of Tones*.

What follows is an analysis of *Qilyaun* from structural, audio, and performance perspectives. The score used for the structural and performance analysis is the current edition of *Qilyaun*, for either bass drum quartet or single drummer with digital delay. While there were three movements to the original work, this score is identical to the original first movement, and observing the full score for four

players creates the digital delay feeds perfectly. The other two movements are discussed, but not analyzed, as that goes beyond the scope of this article. Those movements should figure well in a broader study of John's unpublished work.

Structural considerations

The piece is a set of rhythmic constructs performed in strict four-part canon. Layers of bass drum rolls produce sonic waves that deaccelerate, then accelerate to a unison conclusion. The tempo marking is precisely quarter note=80 throughout. The piece is composed in such a way that the first and second halves precisely mirror each other, with the mirroring process beginning at measure letter R (m145). The piece divides easily into four sections (figure 1):

Figure 1: Overall compositional structure

Section 1 Begin through H mm. 1-72	Section 2 Letter I through Q mm. 73-144	Section 3 Letter Q through Z mm. 145-215	Section 4 Letter R Through LI mm. 216-309
Fast (32nd notes at quarter note=80) with incrementally decreasing sizes of crescendo-decrescendo waves.	Rhythmic deacceleration	Rhythmic acceleration	Fast (32nd notes at quarter note=80) with incrementally increasing sizes of crescendo-decrescendo waves.

In sections 1 and 4, the 32nd note remains constant throughout. Rhythmic and textural interest is created with the use of cresendo-decrescendo waves that shorten in duration every eight measures. Figure 2 outlines the number of waves per eight bars from measure A to H.

Figure 2: number of cresendo waves per eight measures, Section 1.

	Begin	A	B	C	D	E	F	G	H	I	J
Drum 4	1	2	3	4	5	6	7	8	18	-----	-----
Drum 3	-----	1	2	3	4	5	6	7	8	18	-----
Drum 2	-----	-----	1	2	3	4	5	6	7	8	18
Drum 1	-----	-----		1	2	3	4	5	6	7	8

At letter H, the swells increase to 8 over four bars, then 8 over two bars (one each quarter note), then accents on the upbeat over 32nd notes for two bars, then odd 32nd notes accented over two bars (figure 3).

Figure 3: Qilyaun letter H:

H

The figure displays two systems of musical notation for the Qilyaun letter H. Each system begins with a measure number '99' in the top left corner. The notation consists of four staves. The first three staves in each system feature a series of notes with swells (trapezoidal shapes) that increase in amplitude over time. The fourth staff in each system contains a series of notes with accents (triangles) and dynamic markings: *mp* (mezzo-piano), *mf* (mezzo-forte), and *f* (forte). The second system shows a more complex rhythmic pattern in the fourth staff, including a series of 32nd notes and accents. The notation is presented in a clean, black-and-white style with standard musical symbols.

The contraction of the crescendos in the first section create a sense of buildup in the music, leading to a heightened intensity as they then morph into a plateau of fff volume while then rhythmically beginning the deceleration process.

Sections 2 and 3 constitute a gradual deceleration-acceleration. This is accomplished by reducing the number of notes by two each.

Placed on a graph (figure 4), one can see how the number of strikes in each measure line up, so that the performer (or performers) are constantly phasing in and out of a unison with the other voices. In performance, the highlighted measures became measures of complete unison.

Figure 4: Letter L graph

32	30	28	26	24	22	20	18
16	15	14	13	12	11	10	9
8	8	7	7	6	6	5	5
4	4	7/2	----	3	3	5/2	----

Figure 5 shows Letter L in score form.

Figure 5: Letter L.

L

90 9:8 9:8 9:8 8 8 15:8 15:8 7 7 7 7

All Accents!

9:8 9:8 8 8 15:8 7 7

9:8 4 4 7:4

5:4 7:4

Qilyaun **M**

100:13:8 13:8 6 6 6 6 11:8 11:8 5 5 5 5 9:8 9:8 8 8

13:8 6 6 11:8 5 5 9:8 4 4

7:4 3 3 3 3 5:4 5:4

7:4 3:2 3:2 5:4 5:4

At letter N the sonic deacceleration continues, but in a different texture. FFF accented strikes in combination with ppp rolls occur at steadily expanding time intervals, one per number of quarter note beats listed (Figure 6).

Figure 6: Letter N (m. 113)

† **N**

The musical score for Letter N (m. 113) consists of four staves. Above the staves, the number of strikes per four-bar phrase is indicated: 4, 4, 7:4, 7:4, 3, 3, 3, 3, 5:4, 5:4. The first two staves show rhythmic patterns with notes and rests. The third staff shows a similar pattern with some notes. The fourth staff shows a wavy line representing a roll, with accents (>) and dynamics (f, p, pp) indicated below. The dynamics start with *ffpp* and then alternate between *f* and *p* for the subsequent strikes.

Figure 7 shows how the four parts are lining from letter Q. At letter R, the structure begins the mirrored reverse process begins, leading to a finale return to the opening of the piece.

Figure 7: Letters Q through T: Each space represents 4 bars, numbers represent strikes per four bar phrase.

Letter	Q		R		S		T	
Drum 4	4	3	2	2	1	1	1-----	0-----
Drum 3	2	2	1	1	1-----	0-----	1-----	0-----
Drum 2	1	1	1-----	0-----	1-----	0-----	1	1
Drum 1	1-----	0-----	1-----	0-----	1	1	2	2

In Section 3 (letter Aa, m. 216), the construct of crescendo waves returns, this time decreasing in numbers per 8 bars (figure 8).

Figure 8: number of crescendo waves per eight measures, Section 3.

	Aa	Bb	Cc	Dd	Ee	Ff	Gg	Hh	li	Jj	Kk	Ll
Drum 4	10	8	7	6	5	4	3	2	1	1	1	1
Drum 3		10	8	7	6	5	4	3	2	1	1	1
Drum 2			10	8	7	6	5	4	3	2	1	1
Drum 1				10	8	7	6	5	4	3	2	1

In the original premiere, the end of the piece was followed by the digital delay/feedback aura, that lasted roughly another 10 minutes.

Sound Design

Since the digital delay and spatialization was such an important aspect of the work, I asked Nathaniel to contribute his recollection of the sound design, which follows:

“The musical goal of the electronic processing in *Qilyaun* was to accentuate and amplify the naturally occurring resonances in the performance space. In broad terms, we mic'ed the percussion instruments, amplified them, and sent them through a series of delay lines that would feed loudspeakers and our carefully controlled feedback matrix.

The first loudspeaker was placed directly in front of the performer, facing the audience, and we amplified the performer's direct sound by mic'ing the bass drum fairly closely. The performer was fed a click track that was calculated to coincide with our delay lines. The direct sound was fed into a 24-second delay line, the output of which fed another loudspeaker at the back of the hall, facing the back of the audience. We made every effort to make the delayed sound of the bass drum sound as close as possible to the original, live sound. The direct (electronic line-level) output of the 30-second delay line was also mult'ed and sent to a second 30-second delay line, which in turn fed a loudspeaker at the left of the audience. This was also mult'ed and sent to the third (and last) 30-second delay line, which fed a loudspeaker facing the audience's right. The overall effect was that one would hear a phrase coming from the bass drum, and subsequently hear exactly the same phrase at the rear, left, and right with 30-second intervals. This was the easy part.

We then placed microphones roughly 6 feet away (and sometimes more) from each loudspeaker, and mixed their output into the delay matrix. Without the delays in place, there would have been instant and near-deafening feedback. But with the delays, we avoided direct feedback. We made every effort to mix the mic'ed sound of the loudspeakers back into the delay matrix at the same level as the direct sound from the bass drum. But the mics were far enough away from the loudspeakers to pick up naturally occurring resonances in the room, and these resonances were doubled, tripled, quadrupled, etc. as the sound moved around the room. We became keenly aware of the most likely resonant frequencies (which also were the ones that would occur during direct feedback), and notched the first two or three out using very narrow parametric eq's. After these first two or three were removed, a small orchestra of quieter resonating frequencies in the room presented themselves.

During rehearsal, we would tune the system of delays and feedback as closely to the space as we could, and the infinitely re-processed sound

of the percussion instruments would turn into big beautiful washes of abstract sound moving around the hall. In Fairbanks, Alaska, at the Charles W. Davis Concert Hall, we had great success managing these sounds. These rehearsals gave us the confidence to perform *Qilyaun* in other halls, and as soon as we did, we realized just how difficult and tenuous it was to recreate the first experience.”

Eighteen months after the premiere, we gave a second performance at Oberlin College. There, with less preparation time and unfamiliar equipment, the process proved even more challenging, and the consequent sonic results were not as satisfying. Difficulties notwithstanding, JLA’s desire to extrapolate an “aura” out of the resonance was central to the project, and it seeded notions of what could be done for future works. Again, Nathaniel writes:

“The very delicate nature of this feedback system and the tremendous effort needed to initiate it caused John Luther Adams to look elsewhere for the same musical result. His concept of the electronic "aura" in the pieces following *Qilyaun* came from this experience. The creation of these auras (*Red Arc/Blue Veil, Dark Waves*) was quite similar to the process used in *Qilyaun*, but instead executed in the more highly-controlled studio environment.

Performance Considerations

There were numerous discussions regarding coloristic considerations for the piece, including tuning of the drums, types of heads, selection of mallets, microphone placement, etc. John favored as large a bass drum as possible, pitched as low as it could sound good. He also favored large, general articulation mallets, but we both knew that the spectrum of colors and sounds called for a truly versatile stick. For both of the big performances, I used a pair of Andrew Feldman staccato timpani mallets with bamboo handles. These succeeded in pulling out the drum’s lower fundamentals while vividly sounding 32nd notes at quarter note=80.

With heavy use, bass drums are prone to rattle, and eliminating every rattle became a mammoth project itself. All of the spring-loaded lug mounts were removed, the springs were wrapped in teflon and the spaces stuffed. We mic’ed the bass drum with a pair of Neumann U-87’s running through a Manley pre amp. The cymbals, gongs and drums were mic’ed with a variety of devices, ranging from Sure SM 57’f for the drums to an array of condenser mics for the metallic instruments.

Qilyaun has two primary challenges for the performer. The first is sustaining an energetic yet accurate pace of 32nd notes throughout the first and third sections.

Playing a large bass drum with a loose head and big mallets requires significant energy to sustain the 32nd note waves of crescendos-descrescendos, especially in reaching the dynamic levels the music calls for. I used to shift from one set of muscles to another as I went through the piece, in order to rest some while others were working. I could drum with my back, shoulder and elbow muscles, and also wrists. There was also a matter of pacing, much like in running a race, in order to deliver an even amount of intensity throughout.

In the fast sections, during the crest of a wave (fff), the drum is responsive to the 32nd note strikes. But when going down to ppp the already excited head flops about, which in turn creates a considerable stick rebound variance, challenging the performer to be vigilant in order to keep all notes sounding consistently.

Sections 2 and 3 pose a different challenge for the performer. While not as physically demanding, the timing of the performer (or performers) must clearly articulate the metric process, convincingly sounding the various numerical pairings in the canon (figure 9).

Figure 9: Letter Z, showing metric lining up of notes in the canon between all parts.

Even though both John and myself refer to the deacceleration/acceleration with those words, it is important for the performer *not* to not think of the music it as such, but rather as a number of notes per measure (or per two measures), while strictly observing the quarter note pulse. In short, the tempo never wavers. In JLA's work, there is a need for taut rhythmic applications on the part of the performers. I practiced each metric value repeatedly, so that wherever I was in the music, the notes values were not only correct, but (to say in slang) 'they rocked'. This was also really important in our deliberations. The rhythms had to have a sense of momentum, however irregular.

Learning the part this way provided me the best opportunity to line up the four parts throughout when playing with three other versions of myself via the digital delay system. When I was able to practice with the delay system going, I listened to the click as softly as I could in order to hear as the sound from the speakers were rounding the house, they would sweep back onto the stage. JLA wanted to avoid what he considered “romantic era” crescendos..of countless dramatic orchestral timpani rolls, long on the build and then a steep ascent in the last few beats. John’s crescendos are more angular, with a steady gradual climb to the top, a very brief moment, then a steady, but deep descent.

World Premiere: April 18, 1998

In the days of April leading up to the performance, John, Mike Henschman, Nat Reichman and myself were in the Davis Hall each night from roughly 8 pm to 3 am, the times the hall was open for us to work uninterrupted. The dress rehearsal was a complete run of the now 70-minute work, with a small invited audience of about a dozen friends. It was then we first were able to step back, experience the work in full and realize that we had a truly unique piece in our hands. The April 18 world premiere concert began with *Burst* for four snare drummers from *Strange and Sacred Noise*, performed by my students. The stage was then cleared, and John took to the stage for opening remarks. Much of what he spoke about was related to the program and notes, which follow:

The Immeasurable Space of Tones (1998)**

for solo percussion, recirculating feedback and spatial resonance

I. Time, the Drum, and Tone Emerging

II. Spectral Waves

iii. ...And Swirling Thunder

Scott Deal, Percussion

***Premiere Performance*

Commissioned by the Fairbanks Symphony Association

Sound design by Nathaniel Reichman, Michael Henchman and John Luther Adams

Lighting design by Dale Kormitz

“Even where there is nothing to be seen, nothing to be touched,
nothing to be measured,
where bodies do not move from place to place, there is still space,
And it is not empty spaces; it is space filled to the brim,
space becomes alive’
the space that tones disclose to us.”

Victor Zuckerkandl

“John Cage defined ‘experimental music’ as ‘music, the outcome of which is unpredictable’. By that definition, this new work is easily the most experimental music I’ve ever made”. The score is through composed and conventionally notated. But the essence of this music arises in the spaces between the notes, and in the resonant spaces of the performance space.

All of the sounds are acoustical in origin, and produced “live” by the percussionist. No synthesizers, samplers or prerecorded sounds are employed. The only electronic processing is amplification and time-delayed recirculation of the percussion sounds, which are slowly transformed by the natural acoustical resonances of the Davis Concert Hall.”

John Luther Adams

There was a big crowd in the Davis Hall that evening. John has a solid following of enthusiasts in Fairbanks, and the community came out in force. The evening began with a performance of *Burst*, a movement for percussion quartet from *Strange and Sacred Noise*, performed by my students. Then came the big work, in three movements without pause. The first movement is the most difficult. It was a swirling cyclone that gradually transformed into multi-layered washes of noise-like aura. The metallic second movement was serene and ethereal, performed with soft rolls and chime-like strikes. It seemed to float weightlessly inside the space, producing high-frequency melodies that John later described as “angel voices”. It has several huge crescendos on a large tam tam that are simply fantastic to experience. The third movement, performed on the large drumkit, was an electrifying return to the intensity of the bass drum movement with an explosive mix of skin and metal. Commenting on the final movement, John’s wife Cindy told me it was like sitting in the middle of a firestorm. The piece required athletic and intellectual rigor that brought me to the brink of exhaustion. Yet there was something transformative about being pushed to the limit while counting madly, as delayed drums swirled around my ears like speeding freight trains. I’ll never forget it.

The audience response to the premiere was overwhelming, with over 10 minutes of standing ovation and many curtain calls. On a certain level, I believe they thought it was a cool piece and that they enjoyed my drumming. However, there was more in air that evening. Many solos elicit audience reaction based on the performer’s ability to give a dynamic rendering, and certainly this music required that kind of energy. However, John doesn’t really compose solos, as such. With his music, there is no rendition, nor drama, and there is no individual. Rather, he calls for commitment to the moment itself, empty of all save time and sound. I would not have felt any less strongly about the performance even if no one had applauded. We all felt that way....John, Nat, the crew, and the audience. Together, we stilled ourselves for the simple experience of being enveloped in ecstatic, elemental noise.

