Nollman, Jim
Getting Into the Groove
Trans. Revista Transcultural de Música, núm. 12, julio, 2008
Sociedad de Etnomusicología
Barcelona, España

Available in: http://www.redalyc.org/articulo.oa?id=82201211
Getting Into the Groove

Jim Nollman

Abstract
The present article is an excerpt from Nollman's book *The charged border – Where whales and humans meet*, in which an experience of interspecific musical interaction with orca whales *Orcinus orca* is described. Orcas were chosen as the subject of the musical experiment because, in contrast to almost all other dolphin species, they vocalize nearly all the time within a frequency range that fits the confines of human hearing.

Although non-scientific in strict terms, the present article offers an insider musician's perspective on the issue of interspecific human-animal musical interaction, that is of great interest and value for the zoomusicological research and speculation.

Key words: human-animal musical interaction, orca whales, musicking

Resumen
El presente artículo es un extracto del libro de Jim Nollman titulado *The charged border – Where whales and humans meet*, donde se describe una experiencia de interacción musical interespecífica con orcas de la especie *Orcinus orca*. La elección de las orcas como sujetos para este experimento musical responde a que, a diferencia de otras especies de delfines, las orcas vocalizan casi todo el tiempo dentro de una frecuencia que encaja dentro de los confines del oído humano.

A pesar de que no se trata de un artículo estrictamente académico, el texto de Nollman resulta valioso en la medida en que ofrece la perspectiva de un músico sobre el tema de la interacción musical interespecífica entre seres humanos y animales, lo cual constituye un ejemplo de gran interés y valor para la investigación y la elucubración dentro de los confines de la zoomusicología.

Palabras clave: interacción musical ser humano-animal, orcas, prácticas musicales

Audio sample
"BEST EVER w orcas" (MP3)
Jim Nollman playing electric guitar, transmitted underwater, with wild orcas responding; an excerpt from a two hour long session.

The presence of so many children at the Orcananda camp, is just one factor that distinguishes our own bio-musical research with orcas from the four of five other orca research stations strung out along this strait that separates our little island from the rugged east coast of Vancouver Island. The children's participation is critical to understanding our special brand of non-scientific research. The whales swim past our little cove several times a day in their matrilineal pods consisting of a grandmother, her sons and daughters and her daughters' sons and daughters, etc. The young orcas, juveniles as the biologists refer to them, get to vocalize with us whenever they wish. It seems appropriate that our own human family groups get to conduct communication research with their family groups. Does it matter if a child can't
We choose the orcas as the subject of our musical experiment in interspecies communication because, in contrast to almost all other dolphin species, orcas vocalize nearly all the time within a frequency range that fits the confines of human hearing. They vocalize so loudly we sometimes hear them fifteen minutes before we see them swimming our way, although still a mile from the cove. These whales cruise close to shore in an inland sea located two hundred miles north of Vancouver. Biologists call these whales residents, which simply means they swim back and forth in the same waters for months at a time without every leaving. These residents feed primarily on salmon which migrate through here in great abundance.

Resident orcas talk among one another in two distinct modes: the frequency modulated whistle and the pulsed click train. "Frequency modulated" means melodic. The pulsed click train is rhythmical. In other words, the orcas use musical concepts to communicate among their own kind. To hear orcas call back and forth to one another, and then interact with them, Orcananda's sponsoring organization, Interspecies.com, has assembled a sound system with underwater recording and transmitting capabilities built inside our trawler which is anchored in seventy feet of water just inside the cove. A single switch powers up a keyboard, a few microphones, an electric guitar all of which are plugged into a mixer then run through a fifty watt amplifier and outputted to the underwater speakers. This sound system is basically a telephone line to the whales. To optimize stereo separation, hydrophones (underwater microphones) dangle forty feet apart off the bow and the stern. The underwater speakers suspend starboard and port at midship. If we like the conversations we hear, we tape them for posterity.

If it's little children using the orca telephone, the whale's innate loudness and edgy abruptness can breed either excitement or fear, and sometimes both simultaneously. A few children bang on the synthesizer with their tongues hanging out, consumed by the pose rather than by any sounds they make. When a whale vocalizes, they bang more often. When the whales turn silent, the banging turns frenetic as if fury might be able to communicate the children's need for interaction. Neither the notes they play, nor their choice of rhythm correlates much to what the whales vocalize.

"Do you think that's what the whales like?" I ask.

"Yes," a little voice pipes in, "the whales like it when we play music with them." When I demonstrate various ways to synchronize their sounds to the whale's vocalizations, the children try it once or twice, then fall back to banging. How could I expect any different? These young children already reside in a world where animals are self-aware, communicative, and possessed of rich emotional lives. The results they find playing to Orca don't sound the least bit like Bambi harmonizing with Thumper. When the offshore pod of resident Keikos fails to join in singing "chopsticks", the children's attention wanders.

Some parents who come aboard our recording studio/boat presume that the orcas must naturally be drawn to young children. They thus invoke a naive view of the aesthetic border between our two species as a Peaceable Kingdom where innocence is always celebrated and hard work disdained. Whales must be compassionate and wise; they love us and they love our children even more. So when the orcas fail to respond as their fantasy dictates, these parents wonder what could possibly be wrong. Maybe the studio isn't child friendly? They turn up the thermostat, hide the synthesizer, and lead the kid's in a rendition of "row, row, row, your boat". The children sing enthusiastically. Who can deny it's cuteness? But it makes no difference. The whales' rubbery, bone-jarring screams remain child-unfriendly and aloof.

Playing music with orcas is far better understood as an expression of conceptual art than as a bio-musical variation of Edward Hicks painting. To keep going at this work, a musician must revel in counterintuitive phrasing, dissonance, and nearly unbearable stretches of silence. The slightest hint of synchronized rhythm may sometimes be the only verification of our correspondence. Those of us who persevere for more than an hour, more than a week until, finally, we visit Orcananda every summer for more than a decade, celebrate a radical paradigm that insists animals are sentient beings both capable and amenable to an aesthetic interaction.
observation. Most musicians find the sonic rewards too few and far between and the intellectual rewards too unmusical.

A few children become interested in the details of the charged border at about age ten or eleven. One day a boy asks to use the keyboard to work out a phrase he heard an orca singing the night before. A girl spends the day composing a song to sing through the underwater speakers. These children are often as naive as the younger children in their choice of music, but now they have acquired the new, essential traits of perseverance and patience. They realize an interaction may not take place the first time or even the tenth time they try. They have an inkling of what it means to honor the process of close listening. An adult is delegated to gather up these initiates just after dark, row them out to the big boat, where the sound engineer sits them down in front of a microphone. Everyone on board waits, makes small talk and popcorn. An hour or two may pass. But the orcas will come. They swim past our cove between nine and midnight. It's happened that way almost every single night for eight summers in a row.

We hear them vocalizing through the speakers, sounding like a cross between an elephant and an soprano sax. They are still a mile or two up the strait. I turn on the mike switch. The child singing, concentrating hard to draw the whale closer, getting into a mutual groove. The rest of us keep our mouths shut, offering no cues about what the whales "might like to hear instead". To limit the player's experience, not to mention the orcas experience, seems prejudicial and pompous. We have uncovered no evidence—at least in the vast realm of Western music—that a whale responds better to Bach played perfectly by a virtuoso than to some determined girl singing "Come little orca won't you play with me, sha-lalalala-la-la". We've tried it both ways. Sometimes the Bach gets a response. Sometimes the little girl. No matter what transpires, adults who attend these sessions agree that the experience is both touching and profound, displaying the formative human mind engaged in the creative process of reaching out to another species for the first time.

My rationale to permit both children and non-musicians access to the sound system is sometimes judged "unprofessional" by those researchers who insist we attach far more scientific rigor to this long term study. They recommend we focus the sound transmissions to a few pure tones spawned on a sine wave generator, monitored on an oscilloscope, perhaps modulated in accord with the pods specific direction of travel, or distance from the boat. They tell us to combine these controlled transmissions with visual cues such as a flashlight turned on and off in synchrony with certain notes. All these ideas are worthy, and I would gladly fit any valid experiment into our schedule if someone would simply administer it, and agree not to interfere with my preferred music-making regimen. That our work prospers without control is an important reason Orcananda attracts musicians, not cognitive scientists and behavioral biologists. We are artists whose relationship with the whales is more an affair of the heart, the ear, and the gut, than of the mind and the spreadsheet.

Those of us who have observed many people play with the whales over several years times have reached an admittedly un-provable conclusion about the orca's response. These whales are attracted primarily to music-makers who are having a good time. While the orcas do not seem to display a special interest in compositional virtuosity — for example, a soloist rendering Mozart with great precision — they seem highly attuned to soloists and ensembles who play with soulfulness. Musician's call this expression of a smooth path that guides movement effortlessly: getting into the groove. The mechanics of rhythm, harmony, and timing take on substance greater than the sum of its parts. It carries the players aloft on the flow of the music even as they perform it. What affects the players likewise affects the audience, turning the sensual experience communal. George Will has written that, "to be in a groove is not to be mechanical, it is to be an animal, with the grace that only something living can have." Yes that’s why it works! It is to be an animal. For this reason, the groove seems as capable of mitigating the species barrier as easily as it cuts through the performer/audience barrier.

Not to imply that we don’t impose a few rules to guide interspecies music making. First, we conduct our musical experiment only after dark. Near Vancouver island, one does not presume to play and record underwater music with orcas during daylight without contending with considerable noise pollution from boat motors rumbling and whining along the freeway of the Strait. Biologists and whalewatching boats tag behind the pods from sun up to sundown and we
prefer to avoid their close scrutiny. Second, we never chase the whales and, instead play our music from a boat anchored at the same spot year after year. If the whales do not come to us, the interaction does not happen. Third, our objective is interspecies communication, so we never transmit recorded music into the water. Although a whale may certainly respond to a recording, a recording can not respond to a whale. And last, we never re-transmit whale sounds back into the water again. This trick of digital delays and tape recorders is what biologists do in their own exceedingly un-communal approach to test the waters of interspecies communication. But they refer to it as “playback” which voids it of any sense of aesthetics or communication. To my mind, such a cold, technological approach can offer nothing vital to the communal ground we wish to nurture.

Flautist Gene Groeschel visited Orcananda one summer bearing an elk call made from a round paper membrane stretched across an aluminum lozenge and played by placing it against the roof of one's mouth. Humming vibrates the membrane which is modulated by moving the tongue. In the mouth of a virtuoso like Gene, the elk call bore such an uncanny resemblance to the local orcas that other musicians were incapable of discerning between a whale and the elk call. Although the orcas never showed any special interest in the elk call, I asked Gene to retire it for the same reason I reject electronic echoes. It was the only time I ever made such a request.

Over the years, musicians have discovered various techniques to facilitate interspecies music-making. Foremost is the routine of adding rhythmical silent spaces to an improvisation as an invitation for a whale to fill in the hole. If the orca vocalizes only in the allotted space most people regard it as a response. Some times it is, although congruency is not always what it seems. For instance, a player may hear an orca vocalize a specific phrase, E-D-E, and respond by repeating those same notes. The orca vocalizes the pattern a second time, the player likewise mirrors the phrase again. Back and forth it goes. Then the whale turns silent. A waiting game ensues. Usually, the musician loses patience, repeats the phrase again, first slowly, then (like the little children) faster as if a concerted rush of sound is what it takes to get the orca back on track.

Except the whale was never off-track. It was never responding to the music, and would have made the same sounds if the musician hadn't played anything. This was not a jazz band expressing the majestic interaction of improvisation, but a musician expressing simultaneity with the whale’s tone, a bit like a singer in a karaoke bar. This simultaneity of response is of the same basic ilk as Paul Winter's affable studio compositions that include animal calls as overdubbed elements. However, a lack of correspondence does not absolutely suggest failure. We are musicians, not cognitive scientists. Improvising melodies with the wind can be a worthwhile musical endeavor even though none of us considers it communication. If it sounds good, we like to hear it, record it, and encourage other musicians to try it. In other words, it is still music. But it is not interspecies communication.

Pointing out this crucial distinction, especially to a newcomer, sometimes leads to dispute. "What do you mean I wasn't communicating? I heard it! The whales were talking to me!" I have pondered long and hard why so many players persist in confusing orca Karaoke with real-time communication. The mistake is partly a function of a charged playing environment. Our studio is a rocking boat anchored in a wilderness cove. The sessions usually occur late at night, often with a hard rain pounding on the roof. The candlelight we favor to conserve electricity casts an eerie glow over the proceedings, contorting shadows. When the wind blows, the waves come up, the boat rocks, the floor moves, sometimes enough to knock a musician from one wall to the other. The underwater speakers resound with colossal gurgles, oddball kerplunks, the banging of a dinghy, the glissando whoosh of an anchor line flexing against the hull, the obscure croaking of bottom fish. The total effect is disorienting, so much so that certain water noises have prompted listeners to examine their clothing for signs of wetness.

Then the whales arrive. From faraway, their whistles resound through the speakers like a saxophone chorus playing a beebop refrain. Certain calls occasionally rise above the fray, slithering, soaring, and dive-bombing with the wild abandon of a Charlie Parker solo. Other calls seem to balance this boldness; they fold in upon themselves like a dainty flower closing its petals at sunset. A musician plays a few tentative notes in response. The whales turn silent for a
moved closer. If they come close enough, the orcas echolocating the boat, perhaps trying
to discover the source of the music. At two hundred feet, the clicks remind us of a woodpecker
knocking on a tree. At twenty feet, they sound like a machine gun fired directly into the boat
cabin.

Now the orcas are whistling at such a loud volume their calls seem to explode into the darkened
room, settling in like an army of occupation. The overall sensation is not so much that the orcas
are close by and vocally active but, rather, that one of them has inhaled the boat with all of us
inside it. We feel like latter-day Jonahs and Geppettos, although if not precisely swallowed
whole into the belly of the whale, then certainly our ears are being sucked inside the moist lips
of it's vibrating blowhole. Vocalizing at the volume of a loud rock and roll band, every sound an
orca makes (and some it doesn't) suggests linkage. When a skilled musician mimics their calls
with aplomb, no one aboard is left unaffected. By the time the whales have made their exit,
everyone feels spit out, exhausted, quenched...and witness to a bona fide encounter. At such a
moment, the question of whether the dialogue was genuine or counterfeit seems moot, a sorry
attempt to superimpose an analytical frame over a profoundly emotional and spiritual
experience.

One might imagine it takes nothing more than a little practice to tell the difference between
whale karaoke and Interspecies Communication. It takes more than that. These respondents
really are whales, a truth that confounds a player even as it hints of a secret knowledge.
Although I have devoted thirty summers of my life exploring music with 10 species of whales, I
would have never learned the difference between interaction and simultaneity by paying
attention only to the sessions as they unfolded on the boat. I learned it, instead, by studying
recordings of the same events in the comfort of a home studio. The knowledge came to me in a
rush, like glimpsing a face hidden within the folds and textures of a surrealistic painting. The
moment I heard the difference, I heard it ever after. Unfortunately, the distinction hinges on a
close listening of musical inflections, and defies a literal explanation.

Though describing the signs of interaction may be difficult, the techniques that foster
communication are straightforward. A developed sense of courtesy is fundamental. Off by
playing quietly. Treat the music as an invitation. Visualize the bond of time and place as a
sanctuary filled with music. Feel what it means to get on whale time. If the orcas to leave, let
them go. And please, don't try to communicate; it's an oxymoron that impedes nexus. Remain
humble to the fact that music — especially "beautiful music" — is both an individual judgment,
and a species-specific presumption. The sounds a musician casts into the water may just as
easily be interpreted by an orca as an intrusion, or even worse, as the acoustic analogue to
poisoned meat set out to kill coyotes. The orca who draws close to a sound session today, may
have to dodge a fisherman's bullet tomorrow. This is not conjecture. In 1986, 80% of the orcas
in these waters possessed bullet scars. Much of the violence was perpetrated by fishermen who
perceived the salmon-eating whales as a threat to their livelihood. Fortunately, the advent of
whale-watching and eco-tourism has caused this wanton gunfire to diminish markedly.

The repetition of a simple musical phrase outside the whale's own repertoire sometimes gets a
result. I once spent two nights repeating the same twelve-bar blues riff on an electric guitar. On
the third night, a young bull, known as A6* to researchers, joined in by improvizing over the
chord progression. Like a jazz instrumentalist playing a solo, the orca kept his accompaniment
harmonically and rhythmically consistent, making the chord changes on the correct downbeats.
His phrasing was notably austere, perhaps 15 notes in the verse, although not unlike the sparse
trumpet solos favored by Miles Davis during his Bitches Brew period. Did A6 vocalize with the
intentionality of Miles Davis? Actually, his performance seems too much in the groove to be
interpreted as anything else. A Japanese film crew recording the event giggled when the orca
responding. By the end of the verse they were sighing in disbelief.

As the second verse A6's solo imposed itself on my brain as human/whale communication of
historic proportions. Under such weight, the interaction faltered. I initiated a burst of single
notes with the intent of extending the fragments of his solo. But with the chord structure
essentially vanished, there was no framework for the whale or I to track. Within four more bars
A6 resumed his normal pattern of vocalizations, and soon departed the area. Perhaps this novel
always wonder what might have transpired had I not committed the blunder of trying to own the moment rather than surrender to it. This "solists" interaction never happened again. That it occurred with such a fluid grace, makes me suspect that A6 understood the deep terms of our musical meeting, and then moved on to more pressing matters of his own.

Over the next few years, working alone, I discovered a simple technique to test my thesis of interaction versus simultaneity. D-C-D is a common orca phrase heard in these waters. The opening D note slides slowly down to a C and then quickly up to the final D. I discovered that playing the riff a whole tone higher opens a door of opportunity. About once in every ten tries, a whale would rise to the occasion by mirroring my alteration: E-D-E. About once in every 500 tries, a whale treated my melody as the of a pattern, responding another whole tone up: F#-E-F#.

I next discovered it was not "the orcas" playing with me, but two whales in particular that gravitated to the boat whenever we transmitted. One was a male with a slight angular notch cut toward the tip of its dorsal. The other was a female with a distinctive nick cut out of the backside of her fin. It was A6 and his mother, A2, who was affectionately called Nickola by local biologists. Nickola was generally regarded to be the most outgoing whale on the entire coast, and the subject of many stories told about her interactions with researchers. Nickola initiated contact and nurtured it. Over several years A6 developed into the most inspired soloist, inventing melodies that occasionally attained a fluid density reminiscent of a jazz solo. There were nights the two whales remained to vocalize with us long after the rest of their pod had departed the immediate area. We would hear their podmates calling with urgency, as if informing mother and son that it was time to move on.

Orcas, who inhabit every ocean, vary their vocalizations from locale to locale. The hundred-odd orcas belonging to the three pods of Puget Sound vocalize often, but sound decidedly unmusical when compared to the two hundred-odd orcas who reside up the coast off the northeast coast of Vancouver Island. The northern pods' vocals also vary from family to family. It seems no coincidence that the members of A-pod make the most musical sounds to my ears, since they are also the whales most interested in interacting with my music.

For three summers in a row, we invited Tibetan Lamas to chant their Buddhist prayers directly through our sound system and into the water. On a few occasions, the orcas related to this chanting in a manner we never experienced from other broadcasts. A2 and A6 would lag behind as their pod continued traveling up the strait. These animals would stop whistling, swim up to the boat, and float silently above the underwater speaker as if studying the sounds both above and underwater. One rainy night, Lama Tsenjur sat at our galley table cutting a strange figure in his burgundy robes, eating popcorn and chanting Om Mani Padme Hum into a microphone. The whales passed by the cove, then seemed to disappear. I stood up, opened the hatch and stepped outside to stare into the black night. "I am so sorry I frightened away the whales," murmured the Lama ending his chant. At that moment a whale blew in my face, then vocalized a single shriek so loud and so close to the hydrophone that it blew out one of our speakers.

My own musical experiments eventually drifted away from western musical forms toward the ancient ragas of India. A raga begins with a drone which remains constant throughout the composition. Very gradually — in fact to some Western ears the process can seem so gradual as to appear tedious — a melody is introduced. It is said that gaps in the melody originated to offer sonic breathing room for the birds who gathered to sing when a raga was performed outdoors. In my case, orcas replaced birds. I tuned the guitar to a modal D, playing the drone on the lower strings, and the melody on top.

One summer, our group arrived at Orcananda to witness a rare event in the orcas' year. Several pods had gathered into what is known as a superpod, to mingle and mate as a single extended family. During the next three days, forty seven whales traveled back and forth within a few miles of our camp. Their incessant vocalizing filled the waterway with sound approaching the harmonic density of a symphony. On the first night, I slipped a bottleneck over the little finger of my left hand to improvise the raga, jinjhoti, (the same song I would later perform aboard the LaMarck) in the key of D-major. Two whales arrived, dashing between the anchored boat and
the shore, breaching and frothing the water with their flukes to stir up the bioluminescent plankton. The cove lit up from within. Next afternoon, I played the same raga again. All forty-seven whales responded by circling just outside the cove. At one point, fourteen orcas spyhopped in unison in a chorus line a hundred yards from the boat. When I hit the major third, the F#, several whales responded in unison, also in F#. Musical interactions continued unabated over the next few days. When the extended family of whales finally disbanded, my playing was no longer able to engage any of them.

The question has been posed whether this music with orcas is interspecies communication or "just avant-garde music". In fact the latter embodies the former. The best examples of communication express clear harmonies and rhythms, and are therefore the most musical. Music itself communicates physical and mathematical properties, including frequency, rhythm, amplitude, and harmony. It also evokes a rich spectrum of unquantifiable concepts such as emotion and community. As a recorded medium, music demonstrates a unique capability to engage a distant listener as intensely as the onsite players. To deflect the covert criticism of the "just music" label, I have learned to hand the critic a recording of various orca sessions with the comment, "It's music, if the communication is there, you're going to hear it." To this bold statement I would add one caveat. Whatever the verdict may be, there is nothing "avant-garde" about it. Indigenous people have been talking and singing with animals since before history.