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Crickets in the Concert Hall: A History of Animals in Western Music

Emily Doolittle

Abstract

Animal song appears in human music from a wide variety of time periods and cultures, but the way it is used varies enormously. In cultures where people interact intensively with the natural world, music is often used to communicate with non-human animals, whether for practical, spiritual, playful or other purposes. Music often serves to bridge the gap between humans and non-humans. In urban cultures, including those which nurtured the development of Western classical music, animal songs are more often used either symbolically or as sources of raw sound material to be transformed into "music" by the human composer. Communication with animals is seldom the goal, and animals are kept strictly as "other." However, recent discoveries of shared attributes between humans and other species – (sign) language use in chimpanzees and self-awareness in dolphins, for example – have been accompanied by a new willingness on the part of composers to accord animal songs intrinsic value. A number of recent composers have written pieces in which animal songs are given equal footing with their own music. Yet direct interaction with animals remains rare in the modern urban context: we are now willing to recognize the aesthetic work of animal songs, but not to engage in musical exchange with the animals themselves.

Key words: zoomusicology; anthropology; animal songs; bird songs; herding songs; work songs.

I. Introduction

For as long as history, myth, or memory can tell us, human music has been linked with the songs of animals. Hunters and shamans of many traditional cultures incorporate ritual imitations of animal sounds into their songs; mechanical instruments for recreating birdsong date back several thousand years; canaries (the domesticated descendants of *Serinus canaria*) and bullfinches (*Pyrrhula pyrrhula*) are prized for their ability to learn human songs; human performers improvise with animal songs both live and recorded; and composers such as Jannequin, Biber, and Messiaen are known for their borrowings of bird and other animal songs. The role that animal songs play in music has varied considerably from culture to culture and time to time, however, and especially in the world of Western art music, composers and performers have been quite divided in the value that they accord to the songs of non-human animals.^[1]

Many cultures readily acknowledge a deep connection between human music and animal song, believing that humans learned music from the animals, or that humans and animals can communicate through the use of each other's voices. Of course we have no way of knowing what humans' earliest songs sounded like, since they were unnotated and unrecorded, but it is believed that many of them involved imitations of animal sounds. Evidence for this lies not only in oral and written records, but in the persistence of such songs in currently existing nature-oriented cultures, both in the west and elsewhere, which have been good at preserving their traditional lifestyle and their older cultural traditions.

II. Connecting: Animal Songs in Rural and Traditional Cultures

One of the most obvious ways for human musicians to connect with the songs of animals is through simple imitation, and imitative songs and instrumental pieces are indeed present in many cultures. Such music is often practical in intent, in essence an attempt to communicate with an animal in its own language. These pieces might serve to attract animals for hunting, to communicate with domestic animals, or to frighten off dangerous animals. Herding cultures often have a particularly rich variety of imitative communication songs. The peoples of Mongolia, for example, who have a long and continuous history of herding such animals as sheep, cows, goats, horses, camels, and yaks, imitate and communicate with animals through a variety of means, including song, whistling, overtone singing, and playing instruments. They sing syllables derived from the sounds of ewes, goats, and cows respectively, to prevent mothers from rejecting their young, and mare-like syllables to encourage mares to give milk. They use voices and instruments to imitate such animals as mountain goats and wolves in hunting as well (Pegg 2001, 235-236). The people of neighbouring cultures, such as the Tuvans, have a similarly wide variety of imitative communication songs. Though this kind of repertoire is particularly rich and well-preserved in Inner Asian herding cultures, it can (or could before industrialization) be heard around the world. Traditional Norwegian herders sing imitative songs to communicate with their goats.^[2] Swedish herders play pieces to their cows on three- or four-holed instruments made of cow or ram horns, and on birch-bark bugles up to two meters long, both of which have a timbre not unlike the lowing of cattle (Lundberg 2005). The Basotho cattle herders of Lesotho play a variety of pieces to control the actions of their cattle on the *lesiba*, a unique wind-blown stringed instrument which can be used to produce a rough, animalian sound. They recognize that cows respond to birdsongs as well as to the more cow-like sounds, however, and can also produce bird imitations on the *lesiba* (Adams and Coplan 2007). Armenian shepherds, too, play bird-like songs on the high-pitched whistle, the *shvi*, to call to their sheep (Gioia 2006, 70).

In the most directly communicative examples, the song typically imitates the animal sound as closely as possible, not necessarily in the sense of direct, immediate repetition, but in the use of timbres and gestures that fit in with the types of sounds and song-structures made by the animal. Of course people shape their imitative songs to have the desired communicative effect on animals, but in the most imitative cases there will be little or no added “musicalization” by the human singer. The timbre, contour, pitch, or form will be more those of the animal with which the people are communicating than those of the non-animal human music of the culture. The Norwegian goat-communication songs, for example, sound more like grunting than like any kind of melodic Norwegian music.

In other cases, however, songs seek to connect with the animal through magical, ritual, or spiritual means, rather than through the surface sound attributes of the song, and the way in which animal sounds are used is accordingly more varied. These songs might be meant to ensure a bountiful hunt, to communicate thanks to the spirits of the animals hunted, or to bring health to domesticated animals. This kind of repertoire is particularly rich among the First Nations of North America. Songs to insure a successful hunt include those of the southwestern Papago (Densmore 1929, 210-211), and the medicine man’s “Song to secure buffalo in time of famine” of the Teton Sioux (Densmore 1918, 444-445). The Northern Haida, whose nation lies in the area now called British Columbia and Alaska, have a repertoire of “bear songs” which must be sung after a bear is killed. To omit doing so would “seriously offend the Bear People, for whom the natives had the greatest respect” (Murdock, cited in Enrico and Stuart 1996, 51).

The peoples of Inner Asia also have a large repertoire of magical animal communication songs. The Mongolians, for example, have a strong belief in the necessity of maintaining good relationships with animal spirits. They perform praise songs to charm the spirits into giving game (Pegg 2001, 242), and a variety of essential rituals and songs after an animal is killed (Pegg 2001, 247-248). Tuvans, too, use imitations of animal song to appeal to animal spirits. Though shamans are particularly adept at summoning animal spirits, it was traditionally believed that almost every Tuvan had the power to call some kind of spirit. Different spirits

raven imitations to curse an enemy; wolf or eagle owl imitations to frighten an enemy; and magpie imitations to uncover a lie (Levin 2006, 126).

In some magical and ritual songs, animal imitation is readily apparent. In others it is primarily symbolic: though the song might have its roots in actual animal imitation, few animal sounds are recognizable to those who don't know the song's source. The Tuvans, in fact, rather than having one word for "music," have a several words that distinguish between the degrees of pure imitation and musicalization in a sung or played work. "*Ang-meng mal-magan öttineri*," for example, refers to purely imitative sung pieces – some of them undistinguishable from their natural sources to the untrained ear. Animals imitated include a variety of wild and domestic birds, horses, camels, snakes, bulls, and wild boars. "*Xöömei*" refers to throat-singing, initially developed as an aestheticized form of imitation of natural sounds. *Xöömei* blends seamlessly with the sounds of the natural environment, but is immediately recognizable as human in origin (Levin 1999).

Magical songs may be used to communicate with the spirit world, as well as with humans and animals. In Scottish Gaelic folklore, the redshank (*Tringa totanus*), a wading bird that spends most of its time between the high- and low-tide marks, serves as an intermediary between the worlds of the living and the dead. Their call is rendered "pi-li-li-liu" in Gaelic, and a song based on this call is sung to people as they are dying to help them make the passage between the two worlds. The Pilililiu song uses imitative redshank syllables and rhythms, but the pitch contours are primarily human.^[3] Thus, to those familiar with the song, it sounds obviously derived from the redshank's call, but those unfamiliar with the redshank folklore might need to be shown the connections.

Often imitative songs are involved in shamanistic rituals – through the use of the animal's voice the shaman may be transformed into the animal imitated. This type of use of animal sound of course ventures into the realm of the religious rather than the purely musical, and as such is beyond the scope of this paper, but would make fascinating further study.

There are many non-imitative magical songs as well. Polish milk-maids, for example, traditionally sang non-imitative magical songs while milking to increase the quality and quantity of milk their cows would produce (Gioia 2006, 71).^[4] Seminole hunters from Florida traditionally sang special, ritual songs the night before a big hunt to attract animals (Densmore 1956, 176).

Imitative songs and music are not always created with communicative or magical intent. In many cases they may simply be a reflection of or means of engaging with the sonic landscape. Inuit throat singers perform songs that imitate the sounds of sled dogs and geese indoors for their own amusement, where contact with the animals in question isn't even possible. Indigenous Bolivians sing songs that consist of a great number of birdsong imitations, joined together over a simple musical ostinato, also for their own pleasure.^[5] An Alan Lomax recording from the 1950s documents Annie Johnston from the Isle of Barra (Scotland) singing in imitation of a collection of local birds, including grouse, black-backed and ordinary crows, rooks, chickens, puffins, razorbills, various thrushes, and seagulls.^[6] The songs use nonsense syllables to imitate the birdcalls, and also tell little stories about what the birds might be doing. In similar spirit (though without the accompanying stories) are a series of wax cylinder recordings and later records, made beginning in 1906 and continuing until the 1930s, of American Charles Crawford Gorst whistling local birdcalls.

One can imagine that imitations of animal songs may not only have been present in the earliest human music, but may even have been its origin. A possible route from animal imitation to musical song might have been:

direct imitation for practical purposes

ritualized imitation for symbolic or magical purposes

symbolic imitation

abstract music

A number of cultures in fact specify that their music comes from animals. Curtis Sachs writes of the belief of the Luiseño people of California, for example, that their music came from frogs, eagles, ravens, and lions (Sachs 1962, 34).^[7] The Tuvans, too, say that “Our music all began from imitating the sounds of animals” (Mongush Kenin-Lopsan, cited in Levin 2006, 125). The early Chinese attributed the origin of music to animal songs and rhythms but believed that these raw sounds had to be transformed by human sages to become actual music (Sterckx 2000, 8). The Suyá people of Brazil also believe that their music comes from animals (as well as plants and other tribes), but bears little sonic resemblance to bird and animal songs as we would hear them in nature. Rather, only a small number of specialists can hear the true music sung by different species of animals who, in a sense are treated as other, non-human tribes, with their own cultures and customs. The specialists learn this music, and teach it to the rest of the Suyá people (Seeger 1987, 60-62).

Somewhat closer to the cultures that were primarily responsible for the development of Western art music, Judeo-Christian mythology also links music and animals, suggesting that music and cattle herding developed hand in hand (Gioia 2006, 47). The sons of Lamech and Adah, Jabal and Jubal, were the “ancestor of those who live in tents and tend livestock” and “the ancestor of those who play the lyre and pipe” respectively.^[8] Later Christian mythology ascribes to an animal the development of a specific kind of music – Gregorian chant is supposed to have been brought to St. Gregory by a dove, albeit a dove acting as a messenger from God, not a dove acting on its own behalf.

Music doesn't have to be imitative to elicit responses from animals. Many cultures possess songs for communicating with animals which do not directly imitate them, but rather which contain sounds thought to be pleasing to the animal (or repellent, depending on what is to be communicated!) A Greek myth at least 3,000 years old is that of Orpheus, who was able to soothe wild animals by playing his lyre. Ancient Chinese literature, too, reports human music having an effect on animals. The lute player Hu Ba, for example, is supposed to have been able to get fish to come out of their pond to listen to him, and the zither playing of Bo Ya caused horses to forget feeding to listen to him (Sterckx 2000, 23).

Some of these non-imitative songs, too, are still in use. Like the imitative songs, they are also often found in herding cultures which, because of their isolation, may manage to retain ancient types of music-making that have disappeared in more cosmopolitan areas. In isolated pockets of north and central Sweden, for example, traditional “summer farming” methods are still occasionally employed, as part of which young women take the cows to the mountains for several months each summer. There they sing a type of song, believed to be prehistoric in origin, called “*lockrop*,” which involves a specialized singing technique in which the vocal cords are squeezed to produce a high, falsetto sound capable of travelling 4 or 5 kilometres across the mountaintops. Though the songs are melodic and ornamented, thus sounding distinctly musical, they also contain information that calls and directs the cows home in the evening (Lundberg 2005). Norwegian summer farmers have a repertoire of songs called “*lokk*” which they sing to cows and sheep. (These are distinct from the imitative goat songs previously mentioned.) Similar in function to the Swedish *lockrop*, these songs do not employ falsetto, but rather alternate between high and low passages. The use of both ends of the vocal range allow the sound to be heard in a wider variety of conditions and locations, and also prevent the singer's voice from tiring (Murstad 2007, personal communication). Camel drivers of the Middle-east and North East Africa, too, use songs to direct their animals. Among the few kinds of music known to pre-date Islam in these areas, the camel-driving repertoire includes songs to drive camels to grazing lands, songs to load them, songs to bring them back to the corral, and songs for getting them to drink (Gioia 2006, 70).

Instrumental communicative pieces are also plentiful. Instruments are often used for their calming effect: Kuria cattle herders from East Africa play flute to their cows because “playing flute makes them [the cattle] feel better” (Gioia 2006, 69), and Andean shepherds play flute to

(“horse-head fiddle”) to calm restless horses and camels (Pegg 2001, 238). Instrumental music may also be used to frighten animals. The above-mentioned Swedish herders, for example, used music to ward off bears and wolves. Horns with no finger holes, which had never touched the ground, were considered best for that purpose. Instrumental music is useful in hunting as well: Chinese hunters, among others, traditionally used drums to scare animals from hiding places (Sterckx 2000, 15).

Instrumental music may sometimes be proscribed on the basis of how it might affect animals. The Swedish summer farmers, for example, traditionally avoided melodic music when bears were around, as they were thought to be attracted by tunes (Lundberg 2005). Bhutanese musicians avoid playing flutes (*lim*) and mouth-harps (*kong-tha*) during the winter so as not to wake dormant insects and small animals, which might be drawn outside, and die of cold (Nuttall 2007).

Communicative songs and pieces need not be directly utilitarian. The cultures of the British Isles, for example, have a rich and complex history of folklore surrounding the seals that are so plentiful along the coastline, and there continue to exist several songs in Scottish Gaelic for attracting seals. People of the British Isles did eat seals in some areas, and fishermen competed with them for fish, so these songs may sometimes have been used to attract seals to kill them, but people singing to seals out of curiosity or in search for companionship seems to occupy a much larger place in the cultural imagination. A great many first person accounts tell of musical communication with seals. In his chronicle of seal-lore, *The People of the Sea: Celtic Tales of Seal-Folk*, Scottish writer and journalist David Thomson tells of Irish poet Sean òg Murphy singing a song to a seal that “pleased the seal so much that she fell ‘dead asleep on the top of the water,’” and allowed herself to be washed ashore (Thomson 1954/1996, 215-216). Marjory Kennedy-Fraser, who collected a great number of traditional songs from Scotland, particularly from the Hebrides, in the late nineteenth and early twentieth centuries tells of her own musical experiences with seals: “. . . with the most carrying tone I could summon, [I] sang the first phrase of the song [“Sealwoman’s Sea-Joy”]. Instantly the response began at the southern end of the reef, and a perfect fusillade of single answering tones came from seal after seal, travelling rapidly northward, until at the further end of the reef it ceased.” One seal sang a phrase melodically in keeping with the song Kennedy-Fraser had sung, leading her to speculate on whether the seals might have thought she was one of them, and on whether humans might have borrowed musical material for the song from seals, or whether seals might have incorporated bits of human music into their own songs.^[9] Musical communication with seals is not only a thing of the past. Gaelic singer Claire Hewitt, for example, reports having enticed seals to come ashore with her singing,^[10] and in my own travels in Scotland I have also experienced seals howling in response to my own songs.

This is of course not a comprehensive overview of the use of animal songs in music from around the world: it is just the barest beginning of an attempt to show that wherever you look, you can find the intimate intertwining of animal and human music. I have attempted to divide the above examples into a small handful of categories – imitative and non-imitative; communicative and non-communicative; practical, magical, or for simple enjoyment – which recur across cultures, but of course other ways of joining the musics of human and non-human species exist too, which aren’t so widespread, but which are characteristic of a particular culture or a small number of cultures. The Saami, the indigenous reindeer-herding people of northern Europe, for example, sing “*joik*” (or “*yoik*”) to commemorate loved people, animals, places, and events. Joik typically describe physical and personality traits of the subject, as a way of bring them into presence. Saami poet and artist Nils-Aslak Valkeapää writes “A *yoik* is not merely a description; it attempts to capture its subject in its entirety. It is not **about** something, it **is** that something (Valkeapää 1998).” Though other people are the most common joiking subject, animals, both as a class and as individuals, are also prominent. Reindeer are particularly popular, but other surrounding animals such as ptarmigan, wood grouse, wolves, wolverines, lynx, and bears appear too.

A number of cultures engage captive animals in music making. Birds are often chosen as pets on the basis of their song. Canaries are currently popular, and in the past starlings and European goldfinches were popular in France. Bullfinches were particularly popular in

human tunes, and people often teach them to sing folk songs, which the bullfinches may in turn pass on to their own young. More unusually, and demonstrating a greater respect for the inherent musicality of birds (if not for their physical liberty), Afghan musicians will take caged birds to concerts with them, believing that humans and birds both benefit from the presence of each other's music (Baily 1988, 66).

Animal-imitation and animal-communication repertoire is of course not static. New songs are continuously created, and songs may change or fall out of use. And imitation of animal sounds or musical communication with animals does not only occur as part of long-standing tradition. Any culture that takes place primarily or substantially outdoors is likely to develop such songs. A recent example comes from the Canadian composer R. Murray Schafer's experimental collaborative project *And Wolf Shall Inherit the Moon*. Participants in *The Wolf Project*, as it is familiarly known, have been camping in the wilderness in Ontario every August for almost 20 years, working together to create what is in essence a (temporary, performed) culture based on music, theatre, ritual, and connection with the environment. Songs that have been written by members of the Wolf Project include those imitating the sounds of loons, mosquitoes and crows. Though many of these songs are intended primarily for the humans in the project to enjoy, as a means of acknowledging, connecting with, and appreciating the sounds of the surrounding natural environment, some of the music is intended to and does elicit a response from animals. Schafer's *Aubade* for solo voice, for example, is not directly imitative of loon calls, but includes loon-inspired intervals and contours. When performed over a loon-inhabited lake it often induces the loons to approach and call. The *Chant for Hunted Animals*, also sung at the Wolf Project, might fall more into the category of ritual or magical songs. In part inspired by songs of some of the local First Nations (and in part composed by Schafer), it contains no direct imitations of animal songs, but the falling melody of the second part of the chant is reminiscent of a wolf's howl, and is intended (as the name implies) to express sympathy for and connection with suffering and wounded animals.

Though the above-mentioned types of songs – those which involve imitations of animal calls for practical purposes, those which communicate with animals through magical or spiritual means, those which reflect the presence of animals in the surrounding landscape, and those which use human kinds of music to communicate with animals – vary substantially in intent and means, they have in common that they all serve to narrow the gap between humans and other animals. Through these musics, we can become like other species. At least for brief moment, we can enter their sound world sufficiently for meaningful exchange.

I have been drawing on examples from very diverse cultures, which always makes me feel little uneasy, since there's no way I could be an expert in all of these musics, but I find it essential here to show that the connection between animals and music is not limited to one part of the world, one time, or one type of society. Though the search for “musical universals” has always been problematic, the presence of animal sounds in music is as good a near universal as we are ever likely to find.^[11] I've leaned particularly heavily on examples from cultures in Europe, not only because that is the music with which I've had the most personal experience, but also because “classical music,” or Western art music – which is the main focus of this paper – developed in Europe. I believe it is important to point out that the ways in which animal songs are used in music depends not on the region of the world, nor on the ethnicity of the people who create the music, but rather on the type of relationship with nature that they choose to cultivate.

If I have been lumping together here the earliest music, the music of non-urban, non-industrial cultures, the music which preceded Western art music, music from surviving oral cultures, and the music of modern cultures which are seeking to re-establish contact with the natural world, it is not because I think that these very different kinds of cultures are all the same as each other. Modern rural or tribal cultures are as much the product of history, development, and choices made by people in the culture as modern industrial cultures: they are not “primitive,” and not the same as cultures of the past. Western art music (or any comparable music system) is not the unavoidable future of rural music, just a development in one of many possible directions. “Art music” is likewise not a corruption of a purer, more innocent, or more natural rural music. Un-notated musics are not awaiting the development of notation. Modern cultures that are re-establishing a connection with the natural world do not have the same depth of historical

connection with the natural world as long-standing rural cultures (though of course the people in them bring to them their own rich collection of cultural experiences.) Rather, I've discussed all these cultures together because I believe that the common experience of living in close contact with the natural world may lead to similar kinds music making, including similarities in the way animal songs may be incorporated into music.

III. Separating: Animal Songs in Western Art Music

Cultures that continue to interact intensively with the natural world (or, like *The Wolf Project*, which seek to re-establish connection with nature) tend to retain animal-imitation and animal-communication songs and pieces in their repertoire. The contexts which nurtured the development of art music in Western Europe in the middle ages, however, tended to draw people away from the natural world and away from direct contact with animals. The church, in which the groundwork for the eventual development of Western art music was laid, the court, in which it came to maturity, and the concert hall, in which “classical” music was made available to people outside of the nobility, are all primarily indoors. Churches, castles, and concert halls are typically situated in, if not urban areas, at least in concentrated communal settings where, for most, contact with other humans would be far more frequent than contact with animals.

Though most people remained (and still remain) dependent on animals for food and clothing, and on animal products for the production of various household and cosmetic supplies, direct, one to one contact with animals would have become less frequent for all except those whose work was farming or caring for animals. These people would in turn have tended to be responsible for larger numbers of animals, so the contact they might have with any individual animal would have been diluted. The relationship would more likely be between the individual person and animals as a class, rather than between an individual person and an individual animal, so the person would be less likely to relate to the distinct personality and idiosyncrasies of each animal.^[12] Furthermore, their contact would primarily have been with domesticated animals, so they would have had less chance to observe the behavioural complexities of animals in the wild. Hunting, especially for the upper classes, who initially were most involved with the development of classical music, more often occurred in ritualistic group settings, replete with horses, hounds, and hunting horns, than in the more intimate context of a contest between a single hunter and a single animal, again making it unlikely that the hunters would have significant interaction with the hunted animal as an individual.

Those creating and enjoying Western art music were thus less and less frequently in close contact with animals. The gradual replacement of pre-Christian European pagan cultures and religions, which tended to be closely intertwined with the natural world, with Christianity, and its insistence that humans, who have souls, should have “dominion” over un-souled animals, further served to separate humans from other species. The infiltration of tribal thought systems with Greek and Roman philosophy, which likewise tended to suggest that humans were inherently more worthy than non-human animals, reinforced the idea of animals as “other.” The shift from a primarily oral musical culture to one dependent on notation would also have contributed to the separation of human music from the other sounds in the environment, as the focus of musicians would have shifted from listening to sounds around them to the abstraction of notes on paper. Animal sounds remained in Western art music, but the way they were used changed substantially.

The earliest notated Western pieces about animals – those from the twelfth and thirteenth centuries – seldom include imitations of animal songs, though they may subtly allude to the character of the animal in question. By the late fourteenth century, however, animal imitations were more frequently occurring in written music. Medieval and renaissance composers with animal-imitation pieces in their oeuvre included Jean Vaillant (late fourteenth century), Josquin des Prez (1440-1521), Clement Jannequin (1485-1558), and Pierre Passereau (1503-1553). These composers most often wove sanitized, beautified versions of animal songs into their musical textures. Imitations tended to be very stylized, often to the point of bearing little

song -- say, a descending minor or major third for a cuckoo – might be used in a melody that otherwise sounded entirely human.

Where animal imitations do lead to musical textures that differ substantially from non-animal related music, it is often in inspiring percussive, rhythmic passages, with nonsense syllables used to approximate at the attacks and timbres of the animal's song. Vaillant's *Par Mantes Foy*, for example, contains an extended polyphonic passage of lively, percussive nonsense syllables, very roughly evoking the sound of a small chorus of birds. In this piece there appears to be no exact imitation – just an approximation of the character of birdsong. Only the fact that the song refers to cuckoos and nightingales by name identifies these as their songs. Josquin uses stylized cricket imitations similarly, 100 years later, to create a brief, rhythmic hocketing passage in *El Grillo*. Jannequin's imitations of birdsong in *Le Chant des Oiseaux* too, provide extended, slightly cacophonous percussive passages, reminiscent of a flock of birds. These passages never stray from accepted renaissance contrapuntal practices, however and any more exact imitation of bird intervals is quickly subsumed into expected harmonic and melodic patterns. The cuckoo imitations, for example, do contain the expected minor and major third descent pattern, but these are interchanged with other less cuckoo-like intervals, placing them in a distinctly human melodic and harmonic context.

In both medieval and renaissance music, it was often the idea of the animal, as symbolized by the representative musical fragment, rather than the musical attributes of the animal song itself, that was of primary importance. The cuckoo, notorious for laying eggs in the nests of other species of birds and ousting the young of the host family, often represents unfaithfulness, for example, while the nightingale, with its beautiful, “pure,” song, and no such parasitical egg-laying practises, may represent fidelity. The animal's song serves primarily as a pointer to the animal as a symbol, rather than as something musically essential. *Par Mantes Foy* demonstrates the symbolic as well as the musical use of birdsongs. The words tell of a jealous, disruptive cuckoo trying to ruin the beautiful song of a loyal nightingale. “Many times I have enjoyed / the sweet tune of the nightingale, / but the cuckoo never wants to sing in tune with it / but for envy wants to sing against her, / “cuckoo, cuckoo, cuckoo” all his life, / for he really wants to bring discord to her song.”^[13]

In some cases the animal imitations are used for humorous effect, both symbolic and sonic. Pierre Passereau's *Il est belle et bon*, for example, uses imitations of chicken calls both for their funny sound and as a representation of a “henpecked” husband who has been trained to do all the house work, including feeding the chickens. The cricket imitations in *El Grillo*, too, are light and humorous. Here the cricket symbolizes a lover who is faithful, in contrast to “other birds,” who fly away when it gets too hot!

By the seventeenth century, the use of animal songs as literary symbols had diminished, and imitations of animal songs were occurring most frequently in a humorous context. Instrumental rather than vocal works had taken over as the primary vehicle for animal imitations. Heinrich Biber (1644-1704) and Georg Philipp Telemann (1681-1767) both used comically crude imitations of animal sounds as a contrast to their own more refined music. In *Sonata Representativa* (1669), for example, Biber dedicates a movement each to imitations of nightingales, cuckoos, frogs, hens and roosters, quails and cats. *Nachtigal* (“Nightingale”) begins with a prolonged, light, trilling violin cadenza, stylized and musicalized, but clearly based on the nightingale's song. Descending thirds permeate both the melody and the accompaniment of *Cucu* (“Cuckoo”). *Fresch* (“Frog”) uses dissonant croaking sounds and ungainly, lurching rhythms before resolving into a more musically standard adagio, which segues into *Die Henn und Der Hahn* (“The hen and the cock”). The hen is represented with clucking sounds, and the cock with strident crowing. A non-animal presto leads into the monotone rhythmic motive of *Die Wachtel* (“The Quail”). *Die Katz* (“The Cat”) employs grotesque caterwauling glissandi, before the piece is finished with a musketeer's march and a non-imitative Allemande. The seventh movement of Telemann's *Alster Overture*, *Die concertierenden Frösche und Krähen* (“Concertizing frogs and crows”) imitates the eponymous animals in a similarly noisy, crude fashion.

Antonio Vivaldi's (1678-1741) bird imitations are more often programmatic or colouristic than

No. 2 in G minor, Op. 8, RV, “*Summer*”, both part of *The Four Seasons*, are used to help evoke the seasons in which the songs might be heard, providing brief, colourful intrusions into an otherwise fairly standard musical form. The highly stylized bird imitations that lend the Concerto in A major, RV 335, *The Cuckoo*, its name give the piece a twittering, ornamental quality, but are so unlike a real birdsong that this piece is sometimes mistakenly called *Il Rosignuolo* (“The Nightingale”), a bird whose song would never be confused for the cuckoo’s in real life.

Baroque music tended to be fairly codified in terms of permissible forms, harmonies, and melodic constructions. The excuse of imitating animal sounds in part seemed to be a way of allowing normally unacceptable, noisy sounds a brief appearance in music. Of course animals were not the only source of humorous, noisy, intrusions: baroque compositions are full of extra-musical sounds from such sources as battles and tempests. In baroque music, animal songs are typically given no more autonomy than the sounds that come from inanimate sources. What is important is their noisiness, not their origin in another living species. They may add considerable colour to baroque music, but seldom disrupt the expected musical forms. Animal sounds may take over extended passages of music, as in *Sonata Representativa*, or even entire movements, as in the *Alster Overture*, but they are typically placed between more standard musical passages or movements, which bear structural responsibility for the work.

Animal imitations occur less often in classical era than they do either earlier or later. A notable exception is Mozart’s *A Musical Joke*, K. 522 (1787), believed to have been written in imitation of and as a memorial to his recently deceased pet starling. Animal behaviourists Meredith West and Andrew King have provided extensive evidence linking *A Musical Joke* with starling song in their article “Mozart’s Starling” (1990). The work is filled with dissonances, “wrong” chords, awkward phrases, abrupt endings, jumbled melodies, and ungainly proportions – all “mistakes” in a human musical context, but characteristic of the starling’s style. Whereas renaissance imitations typically affected only the surface of the music and baroque imitations are often placed outside the basic structure of the piece, *A Musical Joke* is influenced by birdsong at a much deeper level, employing not only starling motives, but also an entire starling-based structure and syntax. Only its disguise as a crude parody of bad human musicians allowed it a place in the classical music repertoire.

More typical of classical era animal imitations are Haydn’s imitations of the quail call in his minuet for flute *Der Wachtelschlag* (“The Quail”), H. 19/8. Here, the simple, rhythmic quail call serves as a musical motive in an otherwise entirely conventional movement. It does not penetrate beyond the very surface of the music.

Animal imitations regained prominence in nineteenth- and early twentieth-century programmatic music, as evocations of natural and pastoral settings were common. An early example are the quail, cuckoo, and nightingale calls, identified as such in the score, which occur in the second movement of Beethoven’s Symphony No. 6 in F Major, *The Pastoral* (1808), a proto-Romantic programmatic work depicting a day in the countryside. These are stylized imitations, recognizable as a representation of their issuing animal, but sufficiently smoothed and altered to sound unexceptionably like human music too. Their function is to assist the narrative, rather than to introduce birds as creators of music.

Imitations of animal songs in later Romantic programmatic music abound. Here are a few of many possible examples: The fourth of the six symphonic poems which make up Bedrich Smetana’s (1824-1884) *Má Vlast, Zveskych lunu a haju* (“From Bohemian Woods and Fields,” 1879) makes use of stylized evocations of birdsong in the woodwinds. Frederick Delius (1862-1934) employs bird imitations similarly in the fourth movement of *North Country Sketches*, “The March of Spring: Woodlands, Meadows, and Silent Moors” (1914), which depicts the Yorkshire countryside. Chirpy woodwind passages recur throughout the piece. In Ralph Vaughn Williams’ (1872-1958) *The Lark Ascending* (1914), the solo violin very approximately imitates the light trills of the lark’s song, while the woodwinds suggest the presence of other birds. In none of these pieces is there any sort of transcription of birdsong – rather, trills ornaments and timbres of woodwinds are used as musical symbols to point the listener in the direction of birds. The bird imitations are not the focus of any of these pieces, but

The bird imitations in *Carnival of the Animals* (1886) by Camille Saint-Saëns (1835–1921) are slightly more accurate, perhaps because their humour enables them to resist musical conventions. The second movement, *Poules et Coqs* ("Hens and Roosters") contains instrumental clucking sounds. A clarinet cuckoo stubbornly sounds the same descending major third throughout the ninth movement *Le Coucou au fond des bois* ("The Cuckoo in the Depths of the Woods"), making use of the somewhat burlesque character of the piece to resist joining the steady harmonic progression of the underlying pianos.

The advent of recording technology enabled the appearance of more exact representations of animal songs in music. Ottorino Respighi (1879-1936) was the first as to use a recording of a real bird, a nightingale, in his tone poem *Pini di Roma* ("Pines of Rome," 1924). His use is little different than that of romantic era composers, however. The birdsongs merely provide colour and fit into the programmatic world his piece, but they do not alter the human structure of his music.

Olivier Messiaen (1908-1992) is perhaps the best-known twentieth century composer to use birdsongs in his music. His bird-inspired works include the movement *L'abîme d'oiseaux* ("Abyss of birds") from *Quartet for the End of Time* (1941), *Le merle noir* ("Blackbird," 1952), *Le Réveil des Oiseaux* ("Dawn chorus," 1953), *Oiseaux Exotiques* ("Exotic birds," 1956), *Catalogue d'oiseaux*, ("Bird catalogue," 1958), *La fauvette des jardins* ("Garden warbler," 1970), and *Petites esquisses d'oiseaux* ("Small sketches of birds," 1985). A devout Catholic, Messiaen believed birds to be the first and best musicians, and considered birdsongs the purest form of praise to God. Idealized, mystical birdsongs are used frequently in his music as a way of praising God and of celebrating the beauty of God's creation. Messiaen's bird imitations go far beyond the simply programmatic. They permeate the melodies, harmonies, timbres, and forms – indeed the entire language of his bird-inspired compositions is informed by the birdsongs they contain. The importance given to birdsongs is radically different from that of most previous animal-inspired composers in that birdsongs are the substance of his work, not merely the surface. Yet in one important way his use of them is similar to that of his predecessors. The songs are important for what they represent, not as the creative output of an individual, earthly bird. They are the voice of God on earth, not simply birds speaking for themselves.

This diversity of uses of animal sounds by Western composers over the past 700 years is intriguing. It ranges from taking over the animal songs and turning them into something acceptably musical; to using them as symbols for aspects of human nature; to imitating animal sounds more exactly, but keeping them at a safe distance by humour or exoticisation; to relegating animal sounds to programmatic passages; to giving the animal sound an elevated, spiritual significance. What these uses have in common is that though the animal song is considered a worthwhile springboard for the human musical imagination, it is never treated as something worthy of listening to in and of itself, as an animal's song. It is beautified, caricatured, used as a symbol, or spiritualized – but it is never presented as something equivalent – different, but of the same kind as the human music that surrounds it. Though animal song is often referred to as "music," the way it is treated in human composition belies the idea that composers thought of it as music in any but the most superficial sense. The types of songs and pieces described earlier in this essay – those which seek to narrow the gap between the human and the animal – seldom occurred in the mainstream of Western art music of this period.

IV. Reconnecting: Animal Songs in Recent Compositions

In the past half-century or so, however, a variety of scientific, social, and philosophical trends have combined to change the way animals are regarded in the West, which in turn has altered the way animal songs are treated in Western music. Among these changes would be the lessening influence of the Judeo-Christian world-view, as secular public institutions replace

writers as philosopher Peter Singer, animal-scientist Temple Grandin, and primatologist Jane Goodall; recent discoveries of the extent to which animals may use tools and language; recognition of self-awareness, cognition, emotion, and personalities in some species; and increased awareness of our interconnection with the natural world, in face of an impending ecological crisis. Whereas it was previously possible for Westerners to regard animals as completely “other” than humans, we are now increasingly inclined to emphasize similarities between animals and ourselves.

One of the first to explore extensively the relationship between animal and human song is the French composer François-Bernard Mâche (b. 1935). As a scholar, Mâche writes of the deeper, unconscious structural similarities between animal songs and human music. He compares the structure of Stravinsky's *Le Sacre du printemps* (1913) with that of the song of the Blyth's reed warbler (*Acrocephalus dumetorum*). Both Stravinsky and the Blyth's reed warbler, Mâche observes, have the tendency of “juggling with three sound objects of which one (A) is more frequently [used] than the others, reiterated several times in succession” (Mâche 1983/1992, 117). Mâche suggests that musical structures such as Stravinsky's, which seemed radically new to listeners at the time, are in fact no less “natural” than the flowing melodic structures which have more traditionally been considered musical in the West – only that they are related to a different natural model. Mâche believed that Stravinsky was influenced by having composed *le Sacre* in Ustilug (Ukraine), by the Bug River, where many aquatic warblers with songs as described above would have lived (Mâche 1983/1992, 121). Mâche believes that music of all kinds is influenced by the songs of animals – *Le Sacre* is just one of many possible examples. Following the example of the American philosopher and ornithologist Charles Hartshorne (1897-2000), he goes so far as to state that “there is not a single musical procedure which does not have its equivalent or its prototype in one or the other of the innumerable signals of animals” (Mâche 1983/1992, 115).

Mâche was so convinced of the central importance of animal songs in music that he fathered a new field of research, “zoomusicology,” of which his *Music, Myth, and Nature* (1983) is the first book. Drawing on ornithological and zoological as well as musical observations, Mâche examines certain animal songs as a kind of music. Zoomusicology has been furthered by a number of scholars, most prominently the Finnish/Italian Dario Martinelli, whose seminal work *How Musical is a Whale?* (Martinelli 2002) brings to the field a semiotic approach, as well as knowledge from such disciplines as ethology and animal behaviour. Though Mâche was primarily concerned with the use of animal songs in human music, zoomusicologists as a whole tend to be more concerned with how an animal's song functions in the animal's life than with how it may be perceived or used by humans. As Martinelli points out, zoomusicology is in some ways most akin to ethnomusicology, but examining the musics of other species rather than of other cultures.^[14]

Beyond his zoomusicological explorations of animal songs, however, Mâche also uses animal structures in his own compositions, often giving the animal music makers equal status with himself in creating the piece. In *Sopiana* (1980) for flute, piano, and tape, for example, he seeks to eliminate the distinction between animal and human music by having the flute and piano play meticulous transcriptions of the birdsongs alongside the recordings of the birdsongs themselves. The birds are chosen for the musical qualities of their song (rather than, say, their symbolic value or their ability to evoke a particular locality.) As such, the birds include a Malaysian shama (Southeast Asia), an icterine warbler (central and Western Europe), and a marsh warbler (Europe and Western Asia), species that could never occur together in any context other than the musical.

Though most of the other current composers inspired by animal songs are not explicitly zoomusicologists, they are composing in the same intellectual climate that nourished the development of zoomusicology. The idea of taking animal songs seriously as music is now acceptable, and many new compositions reflect this. Without attempting to cover all recent pieces which use animal songs in a way which is reflective of the zoomusicological principle that some animal songs may in themselves be music, and don't require human intervention to render them such – there are far too many, and new such pieces are being written every day – I will give a brief overview of a small handful of current zoomusicologically inspired composers.

and of some of the various ways animal songs may be reflected in their music.

One of the better-known animal-inspired pieces is *Cantus Arcticus, concerto for birds and orchestra* (1972) by Finnish composer Einojuhani Rautavaara (b. 1928), which uses recordings of birds from the Arctic Circle and the marshlands of Liminika playing alongside the orchestra. The first movement, *Suo* (“The Bog”) opens with solo flutes, which are joined by other wind instruments and the recorded sounds of bog birds in spring. The second movement, *Melankolia*, uses a recording of a shorelark, brought down two octaves as the basis for a melancholy melody in the strings. In *Joutsenet Muuttavat* (“Swans Migrating”), the third movement, aleatoric instrumental textures join in with the sounds of migrating swans. The recordings here are not used merely for colour as in, say, *Pini di Roma*: they provide the underlying structure for the piece, and the orchestra is invited to participate. Though there are places where the orchestra comes to the fore, elsewhere it is very definitely subsumed into the colours and textures of the birdsongs.

R. Murray Schafer's *Dawn Birds*, written as part of his outdoor music-theatre work *The Princess of the Stars*, consists of a collection of bird-like motives, played in a quasi-aleatoric way by an unspecified small group of wind instruments who spatially surround the audience. Though the motives are recognizably human in their diatonicism and use of idiomatic woodwind writing, they are distinctly animal in the way they overlap, and in their periods of harmonic non-development. *Dawn Birds* recreates the experience of hearing birdsong in the woods or, in the case of outdoor performance, joins in with the birdsong, which is already there – and typically stimulates an increase in the birdsong.

Summoning Dawn (1995) by Scottish/Dutch composer and bird recorder Magnus Robb (b. 1968) is based on the song of the Himalayan rubythroat (*Erithacus pectoralis*). In composing this piece, Robb slowed a recording he had made of the Himalayan rubythroat to quarter-speed, bringing it to a range and tempo fairly compatible with that of the human voice. He then transcribed this slowed version of the recording for soprano Linda Hirst, taking into account not only pitch but also timbres and attacks, which the singer reproduces with a variety of nonsense syllables and unusual vocal techniques. A testimony to the piece's faithfulness to the Himalayan rubythroat's song is that when the human-sung version is sped up four times, it sounds much like the bird's original. Other birdsong-based compositions by Robb include *The Ancient Language of Birds* (1994), which uses the calls of ravens (*Corvus corax*), black and red kites (*Milvus migrans* and *milvus*), and lammergeyers (*Gypaetus barbatus*) in the evocation of Siberian shamanic rituals, and *Sprosser* (1998), based on songs of the thrush nightingale (*Luscinia luscinia*). About his bird-inspired compositions, Robb writes, “composing with bird songs has always been, in part, a way of appreciating them more deeply. By slowing them down, deciphering rhythms, etc., I discover amazing features, such as the striking regularity of rhythm, even with syncopations, triplets and changes of metre, in the Thrush Nightingale.” For Robb, use of birdsongs goes far beyond simple interest or appreciation: they are an integral part of his musicianship. “Bird songs have also helped to liberate me from conventions and clichés, and to replenish my musical language, something that birds often do with the help of other birds' songs.”^[15]

British composer and baroque flutist Stephen Preston has been influenced by learning about the way indigenous peoples, such as the Koyukans of Alaska and the Kaluli of New Guinea make music in the context of the sounds of the natural world to develop his own unique, improvisatory, birdsong-based musical practise which he calls “ecosonics.” About the development of ecosonics, Preston writes, “I really wanted my music to be shaped directly by birdsong, not filtered through my own Western musical culture – or any other.” Preston spent many hours listening to birdsong, both from his native England and from around the world. He then “began working with the baroque flute and the idea of the instrument (any instrument) as (metaphorically) possessing the potential of a syrinx before the bird has begun to learn its song – i.e. as a simple sound producing object with a potential limited only by its acoustic possibilities, in conjunction with the player.” He developed a system of playing flute that involves moving only one finger at a time and is based on “‘finger rows’ derived from binary arithmetic patterns.” By allowing physical finger patterns, rather than notes, to serve as building blocks for musical phrases, Preston is able to free himself from the influence of his

Western-trained ear in his choice of pitches and sounds. More interested in the rhythms, forms, structures, phrasing, use of sound, and role in social communication of birdsong than in the melodies themselves, Preston typically models his works on various bird forms, such as duetting and antiphonal exchange. He does not copy birdsong directly, believing that “if people want birdsong then they should listen to birds, not human beings doing a circus act or pretending to something that leads us neither to a closer understanding of birdsong nor music.” Nor does he believe that his music can be directly communicative with birds. “Neither do I try to play to birds or believe we can communicate with them – I have to say I think this is a piece of nonsense in the case of urban Westerners.” Rather, he uses birdsong as a springboard for the creation of a musical language that is entirely his own.^[16]

Quebec composer Michel Gonneville has used both bird and whale songs in his music. In *Oiseaux Migrateurs* (1997), written for outdoor performance at the *Fondation René-Derouin* (Val-David, Quebec), Gonneville superimposes recordings of Quebec birds on a pre-recorded four-channel track for soprano and microtonal organ.^[17] The overall musical structure of the soprano and organ part is one of gradually increasing tension and activity, leading towards a climax. Gonneville parallels this with the gradual addition of recordings of the songs of different migratory bird species according to their spring arrival pattern. In outdoor performances, birds typically join in with the recordings of their species. In *HoMa* (2007), Gonneville combines the melodic material of the Gregorian chant *Veni Creator* with the rhythmic impulse of a various birdsongs (among them the American robin, the red-eyed vireo, and several species of owl) to symbolize the spiritual connection between indigenous Canadians and the land. This hybrid human/bird music is contrasted with a contrapuntal, obsessive and rhetorical organ part that represents the more urban, anthropocentric spirituality of the colonizing Europeans. *Le cheminement de la baleine* (1998), for ondes Martenot, clarinet, and large ensemble, tells the story of a bird in love with a whale. Though the clarinet line, which symbolizes the bird, is not drawn from birdsong, the ondes Martenot line represents and is written in the musical language of the humpback whale. Gonneville familiarized himself with humpback whale song by transcribing and studying a seven-minute passage from a recording. In the ondes Martenot line he incorporates some of its articulations, glissandi, melodic patterning, and tendency towards cyclical recurrence of motives, without ever engaging in direct imitation. Though Gonneville’s use of animal song is very different in these three pieces – unaltered recordings of birdsongs in *Oiseaux Migrateurs*, hybridized human/bird music in *HoMa*, and music in the language of but not copied from whale song in *Le cheminement* – in all three cases the animal songs represent a sort of meeting point between the human intellectual world and the natural world.

Animal songs are prominent in purely electroacoustic music as well as in that which includes instruments. Japanese/American composer Kyoko Kobayashi (b. 1979) has written several electroacoustic pieces incorporating animal sounds. In *Musicbox I-IV* (2003), Kobayashi enables animal sounds and musicboxes to “talk” with each other by creating a “set of self-contained environments where these sounds coexist.”^[18] *Animals* (2003) is made up of twelve two-minute movements composed from the sounds of the camel, cobra, dolphin, elephant, gibbon, grasshopper, hyena, leopard, polar bear, raven, whale and zebra respectively. About *Animals* she has written, “When I listen to animal sounds, detached from their physical presence, I find something quite ‘human’ about them. We are more familiar with the way animals look than the way they sound. As earthly beings (feathery, slimy, underwater, cannibalistic etc.), it is easy to focus on how they differ from us. By working with disembodied animal voices, I wanted to free those beings from stereotypes that we have come to associate with them.”^[19] Kobayashi does not believe that these animal sounds are necessarily musical in the human sense, but nonetheless finds them an intriguing sound world in which to spend time. Perhaps because Kobayashi does not think animal sounds must be “music” to be musically interesting, *Animals* uses sounds not only from those animals typically considered musical, such as whales and gibbons, but also from those much more often considered noisy, such as cobras and hyenas, and those seldom considered in terms of sound, such as camels and zebras.

The genre of “soundscape” composition, pioneered in the 1970’s by Schafer, Barry Truax, Hildegard Westerkamp, and others who participated in “The World Soundscape Project,”

sounds as a way into hearing the animal and natural as music. Currently active soundscape composers include, in addition to those mentioned, Claude Schryer, David Dunn, and Annea Lockwood. Typically they are from the “new world” – Canada, the United States, Australia, New Zealand – or from sparsely populated parts of the old world, such as Finland and Sweden, where sounds of the natural world are more a part of daily life than in more densely peopled countries. Soundscape composition is influenced by the Cageian aesthetic that anything can be heard as music, and thus does not necessarily contribute to the idea that animal sounds may also be music in the traditional, more limited sense. However, it does much to promote the idea of animal sounds as something worth listening to, on equal footing with human music.

The album *bird songs* (2000) by composer Kiyoshi Mizutani, a former member of the Japanese noise band Merzbow in many ways resembles soundscape music in that he mixes natural sounds and closely related electronic sounds. The pieces are more focused on bird songs and less on inanimate sounds of the surrounding environment than is typical of soundscape composition. Several of the pieces on the recording – *toratsugumi* (“White’s ground thrush,” 1999) and *aokigahara* (1999), for example – are essentially unaltered field recordings, with birds as a focus against a background of primarily natural environmental sounds. In some pieces, such as *binzui* (“Indian tree pipit,” 1999) the intermingling of electronic sounds with birdsong plays an important role, though the bird is clearly the musical leader. The relationship between birdsong and electronics in these pieces is very different than that in pieces such as Kobayashi’s *Animals*. Kobayashi uses animal sounds as building blocks in the creation of what is essentially an electronic exploration of the animal’s sound world. Mizutani, on the other hand, creates electronic sounds that will fit smoothly into the sound world of the recorded birds.

Soundscape composition overlaps considerably with the work of nature recordists such as Bernie Krause. Krause records various natural environments, and though he does not manipulate the sounds, he does “frame” them, choosing which recordings will be presented to a human audience. His work differs from that of a more traditional animal recorder in that he records entire sonic environments – “biophonies” – rather than focusing on individual species. On rare occasions recordings that initially come from the scientific world of animal recording may cross over into the world of music. The LP *Songs of the Humpback Whale*, released by cetologist Roger Payne in 1970 and widely acclaimed by musicians of all kinds is probably the best-known example of such a work.

On the extreme edge of human music involving animal songs are works such as *Animal Music/Tiermusik*, recordings of the sled dog team of Jeremy Roht of West Dawson, Yukon-Territory, by Austrian writer, artist, and cyberneticist Oswald Wiener and Helmut Schoener. In order to allow these “singer dogs” to sing without being influenced by human presence, Wiener and Schoener set up an “Automatic Dog Music” recorder in the woods. From these recordings Wiener and Schoener selected, but did not edit, dog songs for the CD. In his liner notes to *Animal Music/Tiermusik* Wiener writes, “The peculiar enjoyability of this music, which – in contrast to much contemporary human music – stands the test of repeated listening, forces one to the conclusion that, to the dogs at least, an abstract aesthetic experience is the ‘figure’ of their play” (2001). It’s a little hard to know to what extent the recorders take these dog songs at face value as music and to what extent this recording is a postmodern comment on music – but of course one can ask the same question about many compositions, not just those involving animal songs. I do find the dog recordings surprisingly appealing to listen to, so it is not inconceivable to me that the recorders consider this an entirely serious, irony-free musical enterprise. Like the soundscape composers, Wiener and Schoener are framing and presenting sounds from the animal world. Unlike the soundscape composers, and perhaps more in keeping with zoomusicological spirit, they are presenting the dogs as creators of music in a fairly traditional sense, rather than as participants in an unauthored natural soundscape, which can only be music in the Cageian sense that anything listened to as music is music.

The recording *The Thai Elephant Orchestra* provides another example of animals creating sounds which are presented unaltered to people as music. In this case, the elephants, living in a conservation centre in Thailand, are not making natural elephant sounds, but rather are playing on specially constructed musical instruments. Though elephants are not known to be a musical species in the wild, the music they make with these instruments is remarkably attractive and

music-like. I once played this recording for a room full of composers without telling them what it was. Some said it reminded them of a particular composer or style, or that perhaps they had heard it before. Most liked it, and none thought that it wasn't music. Of course it wasn't the elephants who built the instruments or decided to present their "music" to a human audience. These ideas were the brainchild of composer David Soldier and elephant conservationist Richard Lair, so in a sense they are the "authors" of the works on this CD. But, like in the recording of "Automatic Dog Music," though humans may be responsible for the conception of the work, animals are the sole creators of its sonic aspects. What listeners hear and may (or may not) consider music is the animal sounds, not the ideas behind them.

V. Conclusion

This list of composers inspired by animal songs is by no means complete – it merely serves to begin to give an idea of the diversity of ways that composers who are willing to give animals a certain degree of authorship in music may integrate animal songs with their own. While each of these composers has a unique way of relating to animal song, taken as a whole these relationships differ substantially from those played out in earlier Western art music. In Western art music until the latter part of the twentieth century, animal songs were kept as "other": composers for the most part believed that animal songs needed human intervention to turn them into music. Animal songs could provide human composers with surface-level motives or colour or with a handy vocabulary of symbols, but not with deeper-level musical structure. On their own, animal songs might be regarded as crude, comic parodies of music, or as earthly manifestations of the voice of God, but not as intrinsically worthwhile aesthetic sounds from individuals of other species. Recent changes in scientific and philosophical thinking about the relationship between humans and other animals, however, ushered in a new willingness to accord the animal voice inherent value. Human composers may of course still interact with animal song -- manipulating it, mixing it with non-animal music, using human musical techniques to explore it more deeply, or figuring out the best ways to present it to a human audience -- but these are only ways of making the animals song more accessible to humans. Whereas earlier composers believed such interventions were necessary to render animal songs musical, many now believe that the music is already there in the animal's song, with or without any interpretation by a human composer.

Thus, we have the return of the kind of music that serves as a bridge between humans and other species – the kind of music that until now occurred before and alongside, but not primarily within, the realm of Western art music. Like musicians in more traditional and rural cultures, many contemporary composers now give animals voice in their music, seeking to bring together rather than separate the worlds of the human and the animal. Yet the context is now very different. Earlier songs served to bring humans into the animal world. The human musician typically used an animal's voice to communicate or connect with the animal, or used music specifically chosen for the way it would affect the animal. The music was usually made in close proximity to the animals that inspired it, and the response of the animal was often an integral part of the music. Recent pieces are more likely to bring animals into a human context. We can now hear the inherent musicality of an animal's song in the most refined concert hall setting, alongside the most esteemed of human composers, but we remain unlikely to bring our music into the environment in which the animal songs we use would naturally take pace. (Outdoor works such as Schafer's and Gonneville's are of course an exception.) Animal music may be made to fit in with our music, but our music is seldom made to fit in with theirs. In a sense, the old music helped humans to become closer to animals. The new music attempts to make animals more like humans. The animals themselves, of course, are largely unaware that we have elevated the status of their songs. Though we have invited their animal voices into the concert hall, their animal bodies remain outside the door.

In closing, I'd like to point out that although our welcoming of animal songs into the concert hall may be noticed only by our species, the exchange of musical material between animals and humans does not go only one way. Animals, particularly birds, but also whales, seals, and

they think about it, of course, we don't know!

Notas

- [1] “Western art music” has many possible definitions, but for the purposes of this investigation I will use it fairly broadly to mean the notated music of Europe, and later of countries with significant European influence, spanning the past 700 years or so -- what many imprecisely call “classical” music. Art music is typically intended primarily for aesthetic enjoyment, rather than for functional purposes such as dance, or religion, though of course there is much overlap.
- [2] Anne Murstad (University of Bergen), conversation with the author, June 10, 2007.
- [3] Personal communication with Gaelic singer Claire Hewitt (Pitlochry, Scotland), June 28, 2007, and Gaelic folklorist Stuart Harris-Logan (Isle of Barra/Glasgow, Scotland), June 30, 2007.
- [4] Gioia, p. 71. Polish milkmaids and Mongolian mare-milkers are of course not unique in thinking that certain types of music can increase milk production. A variety of recent studies and anecdotal reports have claimed to show that Mozart (especially the *Concerto for Flute and Harp* in D Major, apparently) increases the quantity and quality of milk produced in modern dairies. I am highly skeptical of any studies that ascribe Mozart any unique powers – to increase milk, to increase tests scores, to make babies happier, to keep teenagers from loitering in parking lots, or whatever. Cows, babies, and test-takers may well like Mozart, but if so, I am quite sure there are other composers and types of music they would enjoy as well. So I report this not in support of the idea that Mozart has any more magical power than any other composer, or that Western art music has more power than any other kind of music, but because I find it interesting that even in this age which prides itself on science and rationalism, belief in music as a magical force still exists, though now this belief must be couched in the respectability of pseudo-“scientific” studies.
- [5] Examples of these songs were given to me by ornithologist Aidan MacCormick (St. Andrew’s University, Scotland).
- [6] Annie Johnston recorded by Alan Lomax in 1951, reprinted on *Celtic Mouth Music*, 1997. I had the good fortune of hearing Stuart Harris-Logan sing some of these same songs for me. His grandmother was friends with Annie Johnston, and they shared some of their repertoire.
- [7] I’m assuming this must be mountain lions, since the other kind aren’t so plentiful in California.
- [8] Genesis 4: 20-21 (NRSV).
- [9] Marjory Kennedy-Fraser in *From the Hebrides*, cited in Thomson, pp. 221-222. The idea of seals imitating human song is not as far-fetched as it might seem. Seals are among the few mammals to employ vocal - learning, and have been known to imitate human speech.
- [10] Claire Hewitt, conversation with the author, July 28, 2007.
- [11] By this I mean, following Bruno Nettl’s definition of a “near universal” that though not all music is inspired by animals, most cultures have at least some music which contains animal songs.
- [12] For further discussion of our tendency to regard animals as a class rather than as individuals, see Martinelli 2002, pp. 53-67.
- [13] Translation from CD *Bestiarium* (La Reverdie 1996), p. 83. Original “*Par mantes foyes avoye recoillie / du rosignol la douce melodie / Mais ne s’I veult le cucu accorder / ains veult chanter contre ly par envie / cucu tout sa vie car il veult bien / a son chant descouder.*”
- [14] This field is sometimes referred to as biomusicology or biomusic, though these terms can also be used to refer to the neurobiology or evolutionary history of human music. A conference in biomusic was held at the National Academy of sciences in Washington in 2000. Participants in this conference included cetologist Roger Payne, pianist Patricia Gray, and sound recorder Bernie Krause.
- [15] Magnus Robb, e-mail correspondence with the author, July 17, 2007.
- [16] Stephen Preston, e-mail correspondence with the author, July 27, 2007.
- [17] The organ part of *Oiseaux Migrateurs* made its first appearance as the last section of Gonneville’s 1991 work for dance, *Îles*.
- [18] Kyoko Kobayashi, e-mail correspondence with the author, June 25, 2007.



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