

Animal Music

David Rothenberg, Dario Martinelli, and Martin Ullrich Exchange Their Views on the Topic

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DAVID ROTHENBERG (www.davidrothenberg.net) has written and performed on the relationship between humanity and nature for many years. He is the author of *Why Birds Sing*, on making music with birds, and of *Survival of the Beautiful*, on the evolution of beauty, and how art and science can be better intertwined, among others. His latest book on insects and music, along with a companion CD, was published this year under the title *Bug Music*. David Rothenberg is also a composer and jazz clarinetist, recording for ECM, Monotype, Terra Nova, EarthEar, and other labels, and performing often around the world.

DARIO MARTINELLI is a musicologist and semiotician. He is the Director of the International Semiotics Institute, Professor at Kaunas University of Technology, and is also affiliated to the University of Helsinki and the University of Lapland (adjunct professor). Martinelli has brought the term zoomusicology to general attention and describes it as the 'aesthetic use of sound communication among animals'. He is author of *A Critical Companion to Zoosemiotics* and *Of Birds Whales and Other Musicians*.

MARTIN ULLRICH is a music theorist, pianist and Professor for interdisciplinary musicology and human-animal studies. He is the President of the Nuremberg University of Music and chair of the Rectors' Conference of the German Universities of Music. He is founding member of the research group *Animals and Aesthetics* as well as member of various other academic animal studies research groups. He has widely written and presented on how human composers have been influenced by birdsong as well as on the individuality of animal musicians.

JU: Could you tell us a little bit about your academic background? How did you come to animal music?

DM: For me, it was the result of an attempt to combine two major interests of mine: music and nonhuman animals. At the times of my Master studies in Musicology, in Bologna University, I expressed this intention to my then supervisor, Prof. Gino Stefani (one of the historical pioneers of Musical Semiotics), and he suggested to read F.B. Mâche's book *Music, Myth, Nature*, the first one to employ the term "zoomusicology". I was impressed by it and decided to defend my Master dissertation on that very topic (focusing on the songs of the humpback whale *Megaptera Novaeangliae*). Then, as I started my PhD at Helsinki University, I thought I had to "systematize" the field a bit, being so new and little explored. The first of such attempts was my doctoral dissertation *How Musical Is a Whale? Towards a Theory of Zoomusicology* (2002). The same year I gave what I believe is the absolute first academic course on zoomusicology, and I could happily witness an increasing popularity of the field. By 2009 (year of my second monograph on the topic, *Of Birds, Whales and Other Musicians – Introduction to Zoomusicology*), I felt this process of systematization was complete, as far as I was concerned, so I could take that date as a coming of age of my background.

MU: As a musician and a musicologist trained in classical music, I have always been interested in the phenomenon of the periphery. I have done research on popular music and on digital media, and in a way the technological post-humanism for me has been a good pathway to the animal turn of human animal studies. At the same time, I have always been fond of the aesthetics of birdsong, even before I started to approach it in an academic manner.

JU: All three of you work on animal music, each of you in a totally different way. Could you please briefly sketch your (artistic) research/project/research interest at the moment.

DR: I feel like taking stock of all my activities, somehow changing my direction in what I do next. On the one hand I want to perform more, make more of an impact in the world of music, though I see that as a particularly difficult road. On the other hand, I'd like to write something more literary, more like storytelling, more like Italo Calvino and less like R. Murray Schafer.

DM: I've always felt I could give my best as a scholar by producing theoretical models: it is probably in my semiotician's DNA. I'm not much of a field scholar, I'm afraid. So, whenever I work on a topic (*any* topic, not just zoomusicology), I tend to elaborate "research templates" that other scholars can hopefully find useful in their own specific research. I see, for instance, that my own definition of zoomusicology tends to be quite often

adopted by other scholars. When something like that happens, I feel I have done my job properly.

MU: My main interest is in exploring the cultural history of animal music: how has animal music influenced human music, and vice versa? And how have human discourses dealt with the phenomenon of non-human musicians? This leads to the question of the further development of interspecies music in the future and its aesthetical and ethical challenges. What I would really like to add is some empirical research in collaboration with the cognitive sciences.

JU: Do you believe that animals have aesthetic capacities as well as aesthetic sensibility or preferences? And if so why do you think so? Could you give a short example from your expert knowledge.

DR: The evolution of bird songs certainly suggests to me, as it did to Charles Darwin, that certain species have a natural aesthetic sense that is developed over millions of years of selection. But perhaps even more impressive are the sculptures made by bowerbirds, complex artworks that have no simple practical purpose. They are not nests, but intricate constructions that are built by males only to impress females. As with human females, most of the time the birds are not impressed and just fly away. But occasionally, rarely, perhaps just enough times, mating happens and the boy gets the girl.

DM: To be honest, I am tempted to revert the question: why not? Meaning: what rational explanation there could be for *denying* that animal species (and *Homo sapiens* is one of them, as we all know) have aesthetic capacities and sensibility? If aesthetics is, as it is, a biological phenomenon, then it is just obvious that such processes have an active role in animals' cognition. Anyway, as examples, I suggest to focus on all those species where an aesthetic action is followed by an aesthetic reaction: for example, male bowerbirds *build* constructions (action) and females *choose* the most attractive (reaction); male humpback whales *develop and perform* their songs in competition with other males (action), and female *are attracted by* the most elaborated performance (reaction). And so forth.

MU: I agree with Dario and I would like to add that the real interesting questions in the field seem to be (as so often) not the “what” questions, but the “how” questions: e.g. how can we know about the aesthetic experiences of other species? I am quite convinced that many non-human animals do have them and would really like to know more about them.

JU: Are all animal species musical and which species are especially musical?

DR: No, of course most are not musical, just as most do not use language or live in complex societies. But exceptions are always the most interesting, in humans and in animals. I have sought out particularly musical species: nightingales, lyrebirds, humpback whales, seventeen-year cicadas, snowy tree crickets, and tried to make music with them, thereby extending the human limits of art.

DM: One of the parts where a lot of work is still needed is to elaborate a definition of “music” that is acceptable at general level, across all species. At the moment, it seems, we can only see the kind of music that is *more recognizable to us, human beings*, and therefore the assessment is based on that. Therefore, say, a nightingale sounds more musical than a crow, a wolf more than a hyena, etc. But, I wonder, what would happen if we found *other* relevant criteria to define music? Maybe, in that case, we should revise this humanly-oriented chart.

MU: May I add that the question of “being musical” in my eyes should be approached in a multi-dimensional way: music can be seen as a sound phenomenon, but also as a social practice or as a psychological object. Especially when non-human species are concerned, we should be prepared to use several academic disciplines and a rich variety of scholarly and scientific methods. This of course includes the kind of practice-based artistic research David does.

JU: David, do you consider yourself primary a musician, composer or philosopher?

DR: Oh, I don’t know, I’m rethinking all these boundaries. As a job I guess I earn most of my keep from being a philosophy professor, which includes teaching and writing. But I don’t think philosophers pay much attention to my writings. I don’t think the music world pays much attention to my music. But in the general public, the nonspecialist world to which most of us belong, a few people do seem interested in the books and the music. So I guess I am a writer and a musician who works at being a professor. Most of the music I play is composed by me, together with various interspecies collaborators, so I suppose I am a composer as well but that word often implies being part of a particular elite group who writes music for orchestras and chamber ensembles, and that doesn’t include me.

JU: Dario, do you consider yourself more a semiotician or a musicologist?

DM: Without wanting to sound too solomonic, I would claim both areas with equal emphasis. The main point is that musicology is mostly a “field of inquiry”, while semiotics is a “methodology”. Most of the subjects

I deal with are musicological, most of the methodological tools I employ are semiotic.

JU: Martin, do you feel more like a theorist or like a practitioner in the field of animal music?

MU: Certainly I feel more like a theorist of animal music. I admire David's practical work but I would have yet to find my own approach to making interspecies music myself.

JU: Could you please describe your methodology?

MU: In terms of popular culture you could say it is a methodological remix: what I try is to blend the traditional methods of musicology (music analysis, hermeneutics, even philology) with the new interdisciplinary approach of human-animal studies. I think it is a real challenge for orthodox musicology to be confronted with the recent critique of human exceptionalism and anthropocentrism. Concepts as heterophenomenology, bio-musicology and zoosemiotics bring a lot of innovative potential with them.

JU: Dario, could you briefly explain your concept of zoosemiotics?

DM: I define it as the study of semiosis within and across animal species. Emphasis on "semiosis", because the focus of zoosemiotics is not simply communication (which is what people normally expect to be the actual goal of semiotics), but rather, following Charles Morris, the process in which something is a sign to some organism. By consequence, zoosemiotics is interested in at least three important phenomena, of which communication is just one: (a) Signification, occurring when the receiver is the only subject taking part in the semiosis, and a true sender is missing. In other words, zoosemiotics studies here the way animals make sense out of each other, or out of their environment; (b) Representation, occurring when the sender is the only semiotic subject. In this case, zoosemiotics studies here the way animals construct sense and, often but not always, offer it to somebody else; and, finally (c) Communication, occurring when sender and receiver take both part in the semiotic phenomenon, and therefore the above-mentioned "sense" (or text) is exchanged, understood or misunderstood.

JU: David, the title of one of your books is *Why Birds Sing*. Could you very briefly explain why birds sing?

DR: Because they have to. They must. That is what they have evolved to do, it is of their very essence. Kind of like people. Some people. And some birds.

JU: Martin, one of your essays *Do Birds Sing* makes reference to David's work. What is your answer to the question in your title?

MU: Actually, the reference is a bit more complex. In the early 20th century an influential German musicologist, Erich von Hornbostel, published an essay titled *Singen die Vögel überhaupt?*. I translated the title as "Do Birds Sing?". Von Hornbostel's paper is a brilliant and paradigmatic example of musical speciesism. By the way this is especially interesting as von Hornbostel in other fields has been groundbreaking and innovative, for example when ethnomusicology is concerned. With all due respect to von Hornbostel and his predecessors and followers, I answer the question with "yes" – as David does with his explanation why they do so.

JU: Dario, in your books you make multiple references to David's work. How did his books inspire your own work?

DM: David, besides being a friend, belongs to a group of musicians who try to make sense out of what they do, and that alone is a plus to my mind. In the specific of "zoomusic", people like David (but also Hollis Taylor or Jim Nollman, to mention a couple more) always considered their artistic sensibility as the main requirement for defining a certain phenomenon as "music". In other words, their basic strategy is based on empathy. If a musician – that is, as an individual who is not *alien* to the musical phenomenon, but in fact is an *active part* of it – perceive a certain sound as music, then there is already an acceptable reason to think of that sound as "music". It seems too subjective an argument to be taken seriously in the scientific sense, and not long ago I, too, was of that opinion. However, the truth is that many are the phenomena for which empathy and subjective recognition are the main (if not the only) criteria for decodification. As a scholar, I may not think that this strategy is alone a sufficient reason for making a scientific statement, but I am increasingly persuaded of its necessity as *one important* argument. Plus, it becomes a "clue", and the "traditional" scholar may use it as a point of departure for whatever empirical demonstration s/he needs to perform.

JU: Martin, you translated one of Dario's articles on zoosemiotics into German. How do you think his theories could inspire your own work?

MU: Actually, they already have done so! I am not an expert in semiotics, but Dario's approach is an important part of the methodological toolkit everyone needs who wants to deal scholarly with animal music.

JU: David, you seem to be the most practical and most interactive of the three of you in your approach to animals. Do you think you have a

more intimate knowledge of animal minds because of this than someone who only reads about the capacities of other animals?

DR: I would never say Martin or Dario are not practical! I like to interact with these various animal species because in the interaction I can be surprised, and go beyond myself and create new things that I would not be able to discover explain before I dared to reach beyond my own limited abilities and senses. The most interactive pieces in my performances may be the most unusual and least accessible to the audience, but I believe them to be the most interesting.

JU: Martin, you are also a pianist and sometimes perform classical animal related music, for example in lecture concerts. Could you imagine playing with whales and birds as David does?

MU: Yes, I certainly can imagine that. I sometimes wonder whether it is mainly a question of logistics for me – it is just more difficult to bring a grand piano out of the concert hall than a clarinet. Actually, as I have done quite a lot of open-air concerts with the piano, I have had my private share of experiences. On these occasions I often got the impression that the birds were directly answering to the Schubert and Schumann melodies.

JU: Dario, do you also make music yourself?

DM: I do, actually. I call it my *Mr. Hyde* part. I am mostly a composer/author: I'm nowhere near to be a professional performer, even if I can put my hands on a few instruments without making people escape. I have released two albums (of very limited distribution), one of electronic/experimental type, and another one with straight pop songs (vaguely Beatlesque, if we need a reference). I am working on a third one, but I never have time to sit properly and finish it. One is even called *Do Not Feed the Artists*.

JU: Martin grounds his research on a historical and music theorist background. Are music history and music theory also important for your own research?

DR: I am not primarily a theorist but I really think there should be much more music theory applied to the study of animal sounds, and I think this could really influence the way biologists understand animal communication. This is the subject of a recent paper I wrote together with a group of scientists in the *Journal of Hearing Research* (<http://www.sciencedirect.com/science/article/pii/S0378595513002141>). We really want more serious and methodical music theorists to become part of this work, so if you, Martin, have time to help that would be great! Or, if not, please suggest

someone who would undertake the challenge, for example, of taking a nightingale song and analysing it, in itself, as if it were a piece of music. As to history, of course, I am quite interested in everything previous generations of musicians, theorists, and composers have had to say and do with regards to the sounds of the more-than-human world.

DM: Sure. My other main field of expertise, besides zoomusicology, is popular music, and there my approach is mostly of theoretical/historical type. In zoomusicology, too, there is a need for these areas. At the times of my PhD, I also made a little history of how human philosophers/musicologists/and so on, have been considering “animal sounds” in relation to “music”.

JU: Dario, you write on the aesthetics capacities of animals with a philosophical and ethological background. Do you do field work as well (listen and record animal sounds in the wild, for example)?

DM: Not really. As I said before, that is not really my “forte”. Then again, there is a very ample amount of empirical material and recordings, that a theoretician like myself can take, listen to, and to draw his conclusions. Having said that, one day I would like to do that as well, perhaps in the company of a more expert colleague.

JU: Martin, you write on animal as well as human composers/musicians. What is the difference?

MU: I see the difference as a mere construction. But as we all know, constructions are powerful, and they create reality. I think the anthropological machine runs partly on the fuel of what you could call human exceptionalism in music. So many boundaries have already fallen. Humans appreciate a great diversity of musics, without bothering about differences in gender, ethnics or classes any more. In a paradoxical way this emancipation within the human world seems to make “the other”, which is projected into nonhuman animals, ever more important. So I think informing and educating the public about nonhuman music has ethical and practical implications besides the aesthetical necessities.

JU: Dario, is your pioneering work in zoomusicology fully grasped and appreciated in your academic environment at Kaunas University?

DM: First of all, thank you for the compliment. As I said, the real pioneer was Mâche, really. It all started with him: I perhaps gave a little contribution in spreading the field. As for Kaunas University, the answer is “no”, but I do not mean it polemically. My university is very goal-oriented and strategy-based, and I knew from the start that zoomusicology was

not a priority. Things may change in the future, however. Zoomusicology was not a priority in my previous university (Helsinki) either, and then it became the first academic institution in the world to offer a course in this discipline. So, you never know, really.

JU: David, do you think the audience at your concerts is more interested in the animal content of your music or in experimental music in general.

DR: Hard to say. I think they show up at the concerts because they are interested in something different. They may end up surprised because my music is not as dissonant or assaulting as a lot of “experimental” music but I guess it depends on what experiments you are used to. When I think of experimental I think of very dissonant 12 tone music but of course that’s hundred-year-old traditional stuff by now. Living in Berlin it seems experimental can sometimes mean a huge wash of ear splitting noise, and at other times it ends up being dance music with a steady 4-4 beat but weird speeches or sound textures on top. We all conduct our own experiments inside the boundaries of many different paradigms.

JU: Martin, you teach in a very traditional academic setting at Nuremberg University of Music. How is your interest in animal music perceived there?

MU: As the university has been founded only a few years ago, it actually is a less traditional academic setting than you may imagine. As a young institution it is open to innovative research, and I have already had the opportunity to have David in Nuremberg for a workshop and a concert.

JU: Do you think that your work has ethical implications as well?

DR: I would hope that if we listen to the natural world more closely, we will not harm it so indiscriminately. If we feel that other species are also musical and also emotional, we will not treat them merely as food, nuisance, or property.

DM: Absolutely. By all means. Yes yes yes. Most discriminations, abuses, mistreatments derive from ignorance. The more we know about a subject, the more we develop respect, tolerance and sympathy. In the specific of my own research, as you probably know my *Critical Companion of Zoosemiotics* (which is possibly my best known work), has a whole section entitled *Does Zoosemiotics Have an Ethical Agenda?*, where I maintain that ethically-minded research is (a) possible, (b) in many cases welcome and (c) in fact unavoidable, in zoosemiotics too. To make the issue a bit clearer, I would counter: can a scholar in, say, gender studies *avoid* ethical implica-

tions in his/her research? It would be very difficult, because this scholar is studying a category of subjects and interactions where discrimination and abuse had a huge historical role. So, you just can't help it, and frankly I don't think that is a problem at all.

MU: As I have already said, I clearly see ethical implications in the field of animal music. Whether my own work helps to address these implications I cannot say, but at least I hope so.

JU: Do you think that the recent animal turn in the academic world can foster your own research?

DM: I think so. But, I would say, the most important part is that this academic turn is finally happening. Whether or not my research will benefit from it is not so relevant. What is relevant is that more and more people are getting interested in topics that were previously overlooked, taken for granted or totally misunderstood. Back to the ethical implications, this increase of interest can only do good for animal welfare.

MU: Very true! It is great that this turn is actually happening and that we have the chance to contribute a little bit to it.

JU: How important is the individuality of an animal musician?

DR: Some animals are more individuals than others, at least in my experience. Easier to tell one bird from another than one whale from another, and when playing with insects it seems like to play along is just to become one tiny voice inside a giant throng ...

DM: I think it is just as important as it is in the human animal. Some human has a very distinctive musical identity, some other seems to be more comfortable within a crowd. Among other animals, too, there can be dozens of "teen-idols" and one Bob Dylan, dozens of piano bar musicians and one Thelonious Monk.

MU: This is one of the questions that in my mind turns inevitably to us humans. How important is the individuality of a human musician? Our cultural history with its overestimation of individuality – with its construction of individuality, you could say – has underestimated the collective aspects of music as a social practice. Honestly I think this is one of the aspects where human and non-human animals do only differ gradually, not categorically.

JU: What animals made the most impression on you when it comes to animal music?

DR: First birds, because they are immediately so easy to find and to hear. But humpback whales are impossibly great and sublime in their huge-

ness and mystery. And, of course, insects are so much part of our world that they are easy to forget, but always there. Hard to pick just one.

DM: Humpback whales were my first love, so there is always a special place for them in my musical heart. I have a fascination for blackbirds and wolves, and I still remember one occasion, in the middle of a lake in Estonia, when I could hear so many different frog species singing, as one of the greatest musical experiences of my life.

MU: I love blackbirds. Nonetheless, my very first fascination with animal music came from gibbon song. I listened to it in a zoo when I was four years old.

JU: What comes first, language or music?

DR: For who? Me? Or in evolutionary history? I would say music ... there is much more animal communication whose performance and function is more similar to music than it is to language. That question is dealt with in detail in many of my books. Usually, I summarise it to mean that animals perform utterances with a beginning, middle and end, with precise inflection, emotion, shape and form. They perform these things over and over and over again. Musical performances can be heard thus many times and still have emotional weight, but if the sound is more like a language we tend to think if the message has gotten across, then enough is enough. Say something else. But music thrives on repetition. And one can derive meaning from it even if we don't exactly know what is said.

DM: I tend not to keep them separated. I think of music as a form of language, with its specific characteristics and potentials, but still with a great semiotic value. Music may have been the *first* form of language to ever use the acoustic channel, because – among its potentials – it has exactly that of shaping emotions in a more powerful way. If we assume that the display of emotions must have been the first communicative need, then there may be a reason to think that the first form of language had musical characteristics. But of course, I am just speculating.

MU: I am with David and Dario – even if there is a bit of speculation in it, language could be derived from music or at least from a kind of proto-music. Their interdependence is, in my eyes, one of the most fascinating research questions of today.

JU: What do you think is the function of music?

DR: To communicate what can be communicated in no other way.

DM: The same as language, or any other tool for semiosis, but of course with certain specific features, where it can be more or less effective than

these other forms. Among the more effective ones, its ability to describe and affect emotions in ways that are unsurpassed by other tools.

MU: I do not think there is only one answer to that. Cultural evolution is (like biological evolution) great in switching original functions to new ones. Music amongst great apes could have evolved as an aggressive group behavior and then been transformed into a mating strategy. Or has it been just the other way round? I think we will see a lot of interesting hypotheses and surprises concerning the functions of music in the near future.

JU: What can human musicians learn from animals?

DR: A lot.

DM: Many things, the most important of which is musically reconnecting with their own animality, something we constantly try to escape from, not only in music.

MU: Foremost, singing and listening.

JU: Is there a big difference between the reasons for a bird, a whale or a human being to sing?

DR: No.

DM: No. Capitalistic reasons aside.

MU: Even if it may seem conformist, no.

JU: Do you think that there is semantic meaning in bird song?

DR: As much as there is in human instrumental music, though we of course have more variety and more choices. But they know what is right, something we are endlessly trying to achieve.

DM: Yes, definitely. If nothing else, displaying certain feelings, emotions, cognitive states is *already* a semantic action.

MU: Yes, in the sense Dario just formulated. Nevertheless I am even more interested in the question of its aesthetic meaning.

JU: How should the field of zoomusicology be defined? Do you want to encourage specific research, or do you want to embrace many kinds of people already doing related work?

DM: I definitely like diversity in research, and as long as it is considered a resource and dealt with respectfully, science can only benefit from it. David, remember when we both participated to that special issue of *TRANS-Transcultural Music Review*? I wrote there that zoomusicologists can be anthropological, ethological, empirical and theoretical, and that all combinations among these four were possible (you were an empirical/anthropological, and I was a theoretical/ethological). I still believe that!

DR: Of course Dario, that was a great issue we worked on together. Now how can we get more musicologists and theorists to take this stuff seriously? We need to have many more people doing this kind of work. Animal music should become a *required* part of our musical education system. It should enter the canon!

MU: I think interdisciplinary work helps. I remember a dear colleague of mine in Berlin just laughing when I told her I was interested in birdsong for the first time. As a musicologist, she thought I was just joking. Soon after that she ran into a biologist who did research on nightingale song and she started to realize that there was something in birdsong that was interesting for musicology as well.

JU: How can the research of the other two be productive for your own work?

DM: I see them very complementary to my work, so there is every chance for each of us to be an additional value to each other.

MU: Exactly!

JU: Do you maybe see any possibilities to cooperate in the future?

DR: Sure. Name the time and place, I'll be there. And I've already suggested what I want Martin to do – a serious musicological phrase-by-phrase analysis of the song of the nightingale. The next *Nightingala* will be somewhere in Berlin on June 1st, 2014, at the University of the Arts. I hope you can both be there.

DM: It would be really nice.

MU: I will be there!

JU: What are your plans for the future music-wise? What are you up to in the next months?

DR: I am trying to make another ECM record, and in March I played a concert with live flying quad-copter DRONES in Arizona. I gave voice to these drones, expressing their fears and frustrations, unlike the ones we hear so much about in Pakistan and Iraq. Let them speak their own peace. I will bring language to the machines and play my own music in and amongst them (<http://terrain.org/2014/columns/a-concert-with-drones-in-phoenix>). Thanks for asking all these good and tough questions Jessica!

DM: Well, leaving aside that third record of mine (which may be like Godot), I have to say there is a lot of stuff that does not concern zoomusicology, unfortunately. I am writing a big history of popular music with Franco Fabbri (who is one of the greatest in the field. For me, to write about popular music with him is like playing football with Cruyff), and I

have this project for a monograph on the semiotic analysis of protest songs. In the field of animal studies, too, cooking have submitted two monographs, earlier in 2014: a monograph on the representation of nonhuman animals in cinema, and a non-academic book about animal rights and environmentalism. It is in form of letters to my 3-year-old son, which I use as an excuse to be as clear as possible on certain choices and why I am trying to convey him certain values. Thank you for your interview. It has been a real pleasure.

MU: I would like to publish my thoughts about the discourse on bird-song in a Western European cultural history. Musically I would like to stray once again into pop music and compose a song about Laika, the first dog in space, and her tragic fate. It was a great pleasure to have this inspiring communication. Thank you, Jessica, David and Dario.