

Why music is “our umbilical cord to Mother Nature”

A reprint of a program hosted by [Jonathan Bastian](#) June 12, 2021 KCRW on the program “Life Examined.”

“Sounds and rhythms are such an intrinsic part of our lives, it’s hard to imagine a world without music. Music has been used to communicate and to coordinate with others for thousands of years, but humans weren’t the first source of song. Birds, whales, and even bats are frequently defined by their use of musical patterns to attract mates, deter rivals, or to define who they are.

From lullabies to hip-hop, we all have an affinity for music and benefit from the ways it enriches our lives. Liverpool University Professor of Music Michael Spitzer traces our relationship to music in his latest book [The Musical Human: A History of Life on Earth](#) and describes music as our ‘umbilical cord’ to Mother Nature.

KCRW’s Jonathan Bastian talks with Spitzer about music’s lasting impact on our lives, how notation made music the preserve of the elite, and how today’s technology can return music back to all of us.”

KCRW: Where does the story of music begin?

Michael Spitzer: “My book is an origin story and a history of the world. The very simple answer to where music begins is in animals, because birds sing and whales sing. And we evolved along the ape line. And somewhere between 8 million years ago, the date of the missing link between non-human primates and us,

and about 40,000 years ago, we began to evolve. That’s when we discovered the first bone flutes, which is a sign of musical technology. Animal vocalization evolved into human song.”

Would the sounds we hear in nature today be what we heard those thousands of years ago as well?

“I think so. Birds and whales wouldn’t have evolved that much. And we know through technology, such as spectra graphs, which allow us to analyze the acoustic structure of bird songs and humpback whale songs, they’re very similar to what we call music. Birds and whales essentially improvise on templates and patterns in a similar way to jazz musicians. They are creative. They have what biologists call ‘vocal learning.’ They’re able to not just receive or inherit the songs that their parents taught them, but they can create new songs. Not many animals can do that. But birds can do it. Whales can do it. Bats can do it. And we can do it.”



What were the first sounds that humans made and used?

“We have to be careful. We have a word called ‘music,’ and outside the West, across the world, cultures don’t use a single word to define all the very complex things that what we call ‘music’ does. Somewhere along the line, music crystallizes out of many different things, essentially, a kind of organized sound. If you look at how vervet monkeys use their calls of vocalization,

they use an alarm call to signal different kinds of predator. So a different call would alert their colleagues that there's a snake, or there's a leopard, or there's an eagle. These sounds are functions, they do something. They're not exactly a language, because there's no syntax, they can't combine different calls to make a more complex call, as we use language to. But what song does is it plays with sound and uproots these sounds from having any function. So gradually primates and hominids, which are our ancestors, start to take vocalizations and enjoy them for pleasure. And this happens once the larynx, our vocal organ, starts to descend and enables our ancestors to make a far richer variety of sound, in fact, more sound than they have need for. There's an excess of sound. . . . So music as an art form means that we enjoy sound for sound's sake, it doesn't have an obvious or a direct function. And that happens when . . . the variety of sound exceeds the function of sound.

Now, the second step happens when you start to create tools like flutes to make a sound. Why is that so important? Well, the first bone flutes 40,000 years ago were so revolutionary because with a tool, you abstract notes from the voice. The voice is the most natural organ to produce sound. A flute is not. A flute is a piece of technology.

And what's extraordinary about a bone flute is that homosapiens managed to combine two distinct parts of the human brain, the part which is responsible for making tools or technology, and the part which compresses the emotion, or music. And arguably Neanderthals, who came before us, couldn't do that. They couldn't cross between these two parts of the brain. And what defines the plasticity of the human brain is the ability to make these connections between technology and song. A flute is a tool which makes song.”

As humans evolved, music evolved at the same time, with aspects of our biology and brain plasticity changing. It's a parallel story in many ways, isn't it?

“It is, but we haven't lost these parts of our brain. Our brain is a palimpsest or a multi-layered sandwich. We still have the brainstem. And we still have the reptile brain, and we have the amygdala, or the mammal brain. On top of that, we have the neocortex.

What's remarkable about music is that it engages all four layers of the brain. So when you hear a shock or a loud bang—think of Haydn's ‘Surprise’ symphony with a loud bang—that trips the startle reflex, and it engages the most fundamental and primitive part of the brain, the brainstem. This is what simple organisms flinch to. They flinch to sound. The reptile brain in our brain, it enjoys pleasure or displeasure. The mammalian amygdala experiences emotions. And the top most layer, the neocortex, the most complex, responds to patterns, or to musical logic.

Now, the same kind of music can engage all four layers of sound. So in a way, when you're listening to music, you're time traveling. It's an umbilical cord back to Mother Nature. It takes us back, and we're speaking in a way to when we were mammals, when we were fish, when we were just simple organisms. And only music can do that. No other art form can engage different levels or parameters of evolution the same way that music can.”

You write that the origins of early music are ones that are shared with a community, with a family, with friends. Talk more about that.

“You can go even further than that and say that music is the most important thing we ever did, because it's music which fostered human society. It stretched social relationships. . . . The role of music is to touch a group of people, metaphorically. And once that's in place, it can use music to coordinate work. You can work in rhythm with each other. And through sharing sound, you can share feelings and a state of mind, what linguists call a ‘theory of mind.’ You can sense what somebody's thinking by the way they sound, the way they communicate with you. And this is why human society evolved, arguably through sharing sound with each other.”

Why is rhythm so important to humans?

“We aren't the only species to feel rhythm. Insects do it. Katydid or bush crickets can pulse in regular time in mass choruses. Interestingly, birds can't do it. . . . Apes have no rhythm. They can't sing either. But humans, with a great synthesizer, can bring all these things together.

Rhythm is organization. And when I say that music didn't crystallize until quite recently, an aspect of what we call 'music' was the rhythm of life. The routines which organize life. You have habits, comings and goings. For the first hominids, about 4 million years ago, it was so important to start walking upright because the regularity of footfalls forges links between the brain and muscular exertion, and indeed, sound. And not just that, but also a sense of time, because once you have a pattern of footfall, you can predict what will happen next. And that sets in place a very important ingredient of human music, and why our music is haunted by the rhythm of walking. So you could argue that rhythm is all encompassing, because life is all about routine and regularity."

How did music evolve to correlate with chemical reactions in our brains and bodies?

"Music releases endorphins, like oxytocin and dopamine. It reduces cortisol, which creates stress. Music is so complex because it brings together so many different things inside our brains and bodies. . . . It relaxes you because it tunes your brain and your body. Music triggers memory, it induces feelings, regulates your breathing, hence the link with mindfulness and the rhythm of breathing, the rhythm of the heart rate.

Once you start to dance, the rhythm of your body has so-called peripheral feedback effects, where the motions of your hands and your legs feed back into the brain. It's doing so many things. I don't think that literature does that. Painting doesn't do that. You can't dance to a painting, you can't dance in mathematics. So in harmonizing all these different elements in music, that's what creates good mental and physical health, and why music makes you feel better."

When did we first begin to see traces of musical notation, and how did this change what music was before?

"The story begins about 1,000 years ago with a monk in Italy called Guido of Arezzo, and he invented what we call staff notation, putting five lines on the page and plotting dots to create a score. And in a sense, it's like a book—he turns music into a literate culture. . . . It is incredibly useful because it helps the church to

regulate Christianity. So if you want to know what the monks are singing at the far corners of the Empire, you don't have to send soldiers out there, because you can guarantee that they literally sing from the same hymn sheet as the monks in Rome.

The problem is that you're turning music into an object. And music isn't an object. Music is an activity, like dancing, or running, or speaking, and it's artificial to think that music can be imprisoned on the page, like pinning a butterfly to a wall. And that commits the West into a very strange relationship to music, where music is on the page. And what musicians do is mechanically reproduce it by performing it. And that drives a wedge between the music and the performer.

You don't get that distinction in many parts of the world, which are based on creative improvisation. If we turn to India, to Hindustani or Carnatic traditions, they don't, as a rule, think of the music as something you notate as a piece or work as an object. And music is a creative act of improvisation. It's different every time you perform it, you don't freeze it. So we have this cannon or museum of symphonies or sonatas by Mozart, and Beethoven, and Bach. And they're eternal, they're frozen. And music becomes rather artificial. It's all about heritage. And it saps the vitality out of our tradition. I'm not talking, of course, about jazz, or folk, or many of these surviving oral traditions in the West. I'm talking about the split between the oral and so-called 'classical' traditions."

In that tradition, music can become, in some cases, elitist, like the idea of going to the concert hall, here there's the separation between the performer and the listener. It's not an integrative or communal act anymore.

"It's not, and given that music is unique, is innate—babies are born musical, nearly everybody's musical—it's bizarre that in the West, we have these things called musicians, or musical geniuses. So paradoxically, I think the future lies in taking music away from musicians, and giving it back to people."

Are there other ways that you think that music needs to be taken out of the prison that it's in and restored to what feels like a more organic process?

“It's hard not to talk about the COVID pandemic crisis. Often what happens in crises is that they accelerate cultural change. Technology has often stepped in to do that. And we've seen digital stages like Tik Tok or YouTube as forums for everybody to share music. It's no longer necessarily in the hands of musicians, because anybody can do a parody on YouTube. So that's one possibility that, in a strange way, technology takes us back a million years to how music used to be.

And that's a very optimistic development, but you don't need technology. In Britain, we had this weekly ritual last year, where every Thursday evening, millions of people clapped on their doorstep for the National Health Service in solidarity for the doctors and nurses. And this act of communal clapping, was music, actually, as it used to be. It was also self medicating, because the activity of playing together, sharing music on a very fundamental level made you feel better. So the irony was whilst you were clapping for the health service, you also self medicate by doing that.”

It's interesting how electronic music is democratizing music in some ways. It's making it accessible. Teenagers in their basements, on their laptops, create incredible music and collaborate with people across the world. In many ways, it's very freeing.

“It is. We're a single planet, and the story which began with homo Sapiens taking the first steps out of Africa ends where musical music is circling the whole globe. If you look at the downloads for 'Gangnam Style,' several billion people have watched it on YouTube. That's incredible. And it's very exciting to have watched live streamed concerts happening during lockdown, and also people singing together using the latest technology. It's also hard to synchronize simultaneous performances. But it's happening now. And it brings people together.”

Michael Spitzer

From Wikipedia, the free encyclopedia

Michael Spitzer is a British musicologist and academic. He was born in 1966 in Nigeria. He was raised in Israel and, in 1973, emigrated to the UK. He was a refugee of the Yom Kippur War. He completed his undergraduate studies at Merton College, Oxford, and his doctorate at the University of Southampton (awarded in 1993).

He taught at Durham University, where he was appointed to a readership in 2005; he then moved to the University of Liverpool after the 2009–10 academic year and remains a professor of music there as of 2018. He is a past president and chair of the Society for Music Analysis editorial board.

According to his university profile, he is a specialist in Beethoven "with interests in aesthetics and critical theory, cognitive metaphor, and music and affect."

He inaugurated the International Conferences on Music and Emotion series at Durham in 2009. He co-organized the International Conference on the Analysis of Popular Music (Liverpool, 2013). His publications explore the intersections between music theory, philosophy, and psychology.

CORRECTION: The article "OIO ANNOUNCES 2024 OPERA SEASON" in the December 2023 *Noteworthy* originally appeared in the October 2023 OIO *Good News Letter*. It was reprinted with permission from the editor.

THANKS to Michelle d'Arcy for the illustration on page 1.

Austin Music Club Program
January 17th, 2024

SONG AND MELODY

Program Leader: **Suzy Gallagher**
Song Leader: **Katharine Shields**
Accompanist: **Brian Grothues**



Four Lieder from Shakespeare, Op.31 by Erich W. Korngold (1897-1957)
"As You Like It:" *Desdemona's Song*, *Under the Greenwood Tree*,
Blow, Blow Thou Winter Wind, *When the Birds Do Sing*
Performed by **Elise Ragland**, soprano, and **Angelica Lopez**, pianist

Etude, Op.15, No.9 by Sergei Bortkiewicz (1877-1952)
Rondes des Fantomes (the Ghost's Dance) from 12 Etudes d'Execution Transcendante Op.11
by Sergey Lyapunov (1859-1924)
Performed by **Grace Huang**, pianist

Sonata in A major for Flute and Piano (original, violin) by César Franck (1822-1890)
Performed by **Sheryl Goodnight**, flutist, and **Stephen Burnaman**, guest pianist

Nocturne in E major, Op. 62, No.2 by Frederic Chopin (1810-1849)
Performed by **Melanie Richards**, pianist

Three Lieder:
Heidenröslein, *D.257*
Frühlingsglaube, *D.686*
Die Forelle, *D.550*
By Franz Schubert (1797-1828)
Performed by **Deborah Scott Hammons**, soprano, and **Brian Grothues**, pianist

The Year Ella Wheeler Wilcox

What can be said in New Year rhymes,
That's not been said a thousand times?
The new years come, the old years go,
We know we dream, we dream we know.
We rise up laughing with the light,
We lie down weeping with the night.
We hug the world until it stings,
We curse it then and sigh for wings.
We live, we love, we woo, we wed,
We wreath our prides, we sheet our dead.
We laugh, we weep, we hope, we fear,
And that's the burden of a year.

From [A Poem for Every Winter Day](#)

This poem is in the public domain.



President's Musings

Angela Smith

"And now let us welcome the new year full of things that have never been."

I love these words from the wise poet Ranier Maria Rilke. I post them on my Facebook page at the beginning of every year, and it's the message on every New Year's card I send.

These words are especially appropriate for Music Club Austin. Last year we celebrated our past with wonderful Centennial events marking 100 years of making music history in Central Texas. This year we look forward to forging new paths and partnerships in advancing our vision and mission.

Already, we've taken steps to move Music Club Austin into the future by discussions regarding collaborative partnerships with those organizations who come closest to identifying with our own mission and vision. As an organization that's survived and met challenges for 100 years, we have demonstrated our strength, viability, and resilience. Now as we look ahead, we can grow even stronger by building collaborative relationships to share resources, talent, and new ideas.

We'll seek finding more and better ways of incorporating and integrating technology into our programs to increase their accessibility. We have so much wonderful talent in our club, and the wider exposure we can give that talent, the better it is for all of us. Our YouTube channel is a big step in that direction.

We'll look for ways to expand our programming, such as more interviews with our performing artists and educational opportunities to advance our work and advocacy for the major role music plays in each of our lives.

We want each of you to value your membership, to share ownership in building our club's future, so please share any ideas you have on how we might make being part of Music Club Austin even better. We welcome your input.

When one considers the daily news of a world that seems to be unraveling, it's not surprising that some find the future a little scary. The natural tendency is to run away and hide.

But that sort of thinking leads to bunker mentality. Trying to hide until things settle down would be a terrible mistake. Rather, we should realize we do have some control, because the future doesn't just happen, it is created. I once read a quote: "The future never really arrives. Rather, it is always in the state of arriving." That means each of us has a responsibility to think about the future constructively. Acknowledging this way of thinking is both empowering and intimidating because it gives us more agency but confronts us with new challenges and risks.

As I shared with you when I took on the responsibility to be your president during this biennium, I relish change and have never liked the words, "But we've always done it this way." I am proud that we are an organization with a membership who are kindred spirits in that thinking.

I look forward to each of you sharing your own vision of what you would like Music Club Austin to be in the future. Let's embrace it for all its possibility.

Happy New Year! Here's to new beginnings and a year full of things that have never been.

Editors: Marie White, Marcia Edwards, Joy Gooden

Upcoming Events

Arts On Alexander <https://www.artsonalexander.org/events> Holbrook Organ Series - Donald Meineke: Friday, January 19th. Also hosting La Follia Austin, Bach - Loser in Leipzig: Friday, January 26th and Saturday, January 27th.

Austin Chamber Music Center <https://austinchambermusic.org/concert-season/> The Space Between the Notes - The healing and sustaining power of music: Friday, January 19th. and Saturday 20th. Friday's show will be intimate at KMFA and Saturday's will be at First Unitarian Church.

Austin Classical Guitar <https://austinclassicalguitar.org/events/> Austin Classical Guitar Youth Orchestra - Open Mic Fundraiser: Friday, January 26th.

Austin Jazz Society <https://austinjazzsociety.org> Ephraim Owens Quartet: Sunday, January 7th.

Austin Opera <https://my.austinopera.org/> Cruzar la Cara de la Luna (To Cross the Face of the Moon) - the first ever Mariachi Opera: Thursday, February 1st - Sunday, February 4th.

Austin Symphony <https://my.austinsymphony.org/events?view=list> "Good Things Come in Threes" - The Ahn Trio perform Grieg, Beethoven, and Dvorak: Friday, January 12th and Saturday 13th. Also, ASO About Town - performed throughout the Austin area: Thursday, January 18th.

Balcones Community Orchestra <https://www.bcorchestra.org/> Celebrating 25 years! The orchestra and also Jessica Mathaes - Violin: Sunday, January 21st.

Beethoven <https://www.beethoven.com/upcomingshows> To Invoke History at Saengerrunde Hall - Invoke Quartet: Friday, February 2nd and Sunday, February 3rd.

Central Texas Philharmonic <https://www.centraltexasphilharmonic.org/> A Night at the Opera: Sunday, January 28th.

Gilbert & Sullivan <https://www.gilbertsullivan.org/> A Gilbert & Sullivan - Christmas Carol: Sunday, January 7th.

Inversion Ensemble <https://www.inversionatx.org/upcoming-events> Inversion Nova presents Zoology - Singing about the animal kingdom: Sunday, January 28th.

KMFA <https://www.kmfa.org/events> Many area events listed on their website. World Music Encounters - Ibrahim Aminou and Seed Africa: Sunday, January 7th.

The Long Center <https://thelongcenter.org/upcoming-calendar/> Midori - Violin: Saturday, January 20th.

The Metropolitan Opera On stage: <https://www.metopera.org/season/2023-24-season/> On Demand: <https://www.metopera.org/season/on-demand/>

Salon Concerts <https://www.salonconcerts.org/> January Concert - Sunday, January 14th and Monday, January 15th.

UT Butler School of Music <https://music.utexas.edu/events> Rick Rowley - piano: Sunday, January 21st. MIRO Quartet & Friends: Friday, January 26th. PLUS, a full schedule of concerts and many of them are FREE.

