我们为什么热爱音乐

Music: Why do We Love it

中国教育学会外语教学专业委员会推荐

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我们为什么热爱音乐

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谁是你最喜欢的歌手？你此刻对这个问题的回答，可能与六个月以后的回答不同。如果你和别的孩子一样，在中学时期会开始形成自己独特的音乐品味。这些令你着迷的乐声很可能在30年后——听起来觉得很遥远吧——还会记忆犹新。

尽情享受你此刻钟爱的音乐吧。随着时间的推移，你的欣赏口味也许会走出目前的金曲榜。但是，即使在很多年以后，今天你最喜爱的这些激荡的旋律、令人发烧的节奏及个性张扬的歌词，都会久久萦绕在你的脑海，让你回想起灿漫的少年时代。

音乐为什么会有如此的魅力？这不是一个简单的问题。神经科学家和生物音乐学家们一直在寻找答案。

带上耳机，放张心爱的碟片，读读这些启迪性的文字吧。

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Why We Love

我们为什么喜爱音乐

Ever bob your head to the music blasting from a car radio? Ever turn your pencil into a drumstick? Ever walk down a street alone, whistling or humming to some imaginary tune playing over and over again in your head? Ever wonder why you love listening to music? Or why your body sways to it? Just why do musical sounds please us?

No matter how far back in history we look, we

你曾经随着汽车收音机里震耳的音乐摇摆过头吗？你曾经将铅笔当作过鼓槌吗？你曾独自一人走在大街上，跟着你脑海里一遍遍播放的想象中的曲子，吹着口哨或是低声哼哼过吗？你曾纳闷你为什么喜欢听音乐吗？或者为什么你的身体会随着音乐摇摆吗？为什么音乐会让我们快乐呢？

无论我们已知的历史能追溯到多远，我们都能发现创造和欣赏音乐的人类。瑞典研究人

Music

by Stephen James O'Meara

find human beings making and listening to music. It's quite possible, says Swedish researcher Bjorn Merkur (Institute for Biomusicology, Mid-Sweden University), that music originated with our prehuman male ancestors. The reason? To attract a mate. Since a single male vocalizing in a forest would not have been heard at a great distance, groups of males may have begun vocalizing in unison. Males "singing" in a chorus had a greater potential for attracting females. In this sense, music might be considered the most primitive form of a love letter.

That music "speaks" to us is no surprise. The 19th-century poet Henry Wadsworth Longfellow called music "the universal language of [hu]mankind." Others have called it the "language of the soul." In the movie *Close Encounters of the Third Kind*, Steven Spielberg imagines humans and aliens communicating through music. Indeed, in 1998, Don A. Hodges (Institute for Music Research, San Antonio, TX) and his colleagues found that an area in the right half of the brain known to interpret written musical notes and passages of notes corresponds in location to the left half of the brain known to interpret written letters and words. The findings showed that the structure of music and people's use of it are similar in key respects to language structure and use.

A new study in 2001 supports the claim that music and language are associated, but argues that the region responsible for processing sound – both words and music – is a quarter-size structure on the left, more verbal, side of the brain.

Either way, like the ability to smile, our ability to understand

员培恩·麦克尔（中瑞大学生物音乐学学院）说：音乐极有可能起源于我们人类的男性祖先。理由是什么？为了吸引配偶。由于一个男子在森林里远距离呼喊是无法听见的，于是成群结队的男子开始齐声放歌。男人们的合唱对吸引女性来说具有极大的诱惑力。从这种意义上说，音乐可以看作是情书的最原始形式。

音乐能与我们“对话”并不奇怪。19世纪（美国）诗人亨利·华兹华斯·朗费罗把音乐叫作“全人类的通用语言”，还有一些人称之为“心灵的语言”。在电影《第三类亲密接触》中，斯蒂芬·斯皮尔伯格曾设想人类和外星人通过音乐交流。的确，1998年，唐·A·哈兹（得克萨斯圣安东尼奥大学音乐研究院）和他的同行们发现，人的右半脑内有一个众所周知的区域，能够理解书面音符和音段，这和左半脑内理解书面文字的区域是相通的。这个发现表明，音符的结构和

the complex language of music seems to be hereditary. Today, even the youngest children respond to music with movement or a smile. Toddlers can sing songs – although they most likely will be out of tune. As adults, it doesn't matter if we can't play a single note on the simplest

人们对它们的运用在主要方面都和语言的结构及运用相类似。

音乐和语言是休戚相关的。2001年的一项新的研究结果支持了这一说法，但同时又认为，处理语言与音乐的区域在左半脑中占1/4，这个半脑偏重于负责语言功能。

SOUND TECHNOLOGY

by Stephen James O'Meara

We've got it made. We live in a virtual "world of music." Want to listen to your favorite band? Just pick up your portable CD player, put the headphones on, and press "Play." You can hear the music you like anywhere, at any time.

It wasn't always like that. Not so long ago, recorded music was unheard of. If you wanted to hear music, you had to attend a live concert, go to church, or listen to your neighbor sing. There was no Musak softly playing in restaurants and elevators, no rap blasting from passing vehicles, and no rhythms pounding through the walls of teenagers' bedrooms. The silence lifted slightly in 1877, when Thomas Edison invented a way to record and play back music on metal cylinders. He called his invention the phonograph, and it wasn't too long before musicians could record and sell their music.

Three years later, Alexander Graham Bell devised and patented several means for transmitting and recording sound. But early recording devices were not something you carried around in your pocket. Take, for instance, the Dynamophone! In 1906, Thaddeus Cahill invented this music-producing machine that weighed over 200 tons. It was designed to transmit sound over New York's telephone wires. The machine created such chaos that it ended up being dumped in the Atlantic Ocean.

我们做到了。我们生活在一个虚拟的“音乐世界”里。想听你最迷恋的乐队吗？拿上你的CD随身听，戴上耳机，按下“播放”，你就能随时随地欣赏你最喜欢的音乐的。

然而，并不是从一开始就有这些东西的。即便不久以前，人们还没有听说过音乐录制。你若想听音乐，就只好去现场音乐会、教堂或者去听你的邻居唱歌。餐馆与电梯里没有柔和的穆萨克音乐，过路的汽车里没有震天响的说唱乐，更不会透过年轻人卧室的墙壁传来一阵阵节奏强烈的流行歌曲。这种寂静在1877年有了些许改观，那时托马斯·爱迪生发明了一种办法——在金属圆片上录制和播放音乐。他将他的发明称作留声机，之后不久，音乐家就能灌制和出售他们自己的音乐了。

三年后，亚历山大·格瑞厄姆·贝尔设计了几种传输与录音的工具，并申请了专利。可是早年的录音设备并非你今天口袋里携带的东西，例如，电机手风琴。1906年，泰德斯·凯贺发明了这个重达200吨的音乐播放器，可以通过纽约的电话网络传输声音。然而这台机器制造了太多的混乱，以致后来被扔进了大西洋。

直到1910年，广播电台第一次播音以后，音乐才真正开始普及。在电台发展的初期（20年代末到40年代中期），音乐并不像

instrument or sing on key; we are all born with an innate sense of music.

TUNELESS WONDERS

Our brain is amazing. It can organize streams of uncountable musical sounds – all the instruments

无论是哪一种功能，如微笑，如理解复杂的音乐语言，都是遗传的。今天，甚至是最年幼的孩子都会用活动或微笑来对音乐作出反应。蹒跚学步的孩子也会唱歌，尽管他们很可能唱跑了调。作为成年人来说，我们能否在最简单的乐器上弹出一个音符或按着音符唱歌并

音响科技

Music really didn't reach the masses until after the first radio broadcast in 1910. In the early days of radio (the late 1920s through the mid-1940s), music was not the dominant product of radio as it is today. Music filled slightly better than half of air time. The choice of what music to play rested solely in the hands of the radio programmers. Audience participation was virtually nonexistent. Records on vinyl changed all that.

The first electrically recorded records went on sale in 1925. Jukeboxes filled taverns and restaurants by 1933, and ***high fidelity*** sound became a household word in 1934. The average number of songs broadcast each evening in 1941 was more than 350.

Technology expanded the production and sale of recorded music, moving from vinyl records to 8-track tapes and cassettes, and on to the compact disc. Add video, MTV, the computer, CD burners, and MP3. . .and the rest is history. Today, the music industry and the Internet expose fans to diverse cultural sounds from all over the planet.

High fidelity
The electronic reproduction of sound, particularly from broadcast or recorded sources, with minimal distortion; often referred to as hi-fi

今天这样是电台的主打节目，它仅仅是在节目开始的时候放一小会儿。选择什么样的音乐纯粹取决于节目播送人，听众的参与实际上是不存在的。黑胶唱片改变了这一切。

第一张电录的唱片是在1925年出售的；到了1933年，自动电唱机充斥着酒馆和饭店；1934年，高保真音乐变成了一个家喻户晓的词；1941年，电台播放的歌曲平均每晚超过350首。

技术扩展了唱片的制造与销售，从黑胶唱片到8声道磁带与盒式磁带，再到CD光盘，加上录像、MTV、电脑和MP3，以及更多的一切都已成为历史。如今，音乐产业和互联网将歌迷们浸泡在来自全球各个角落的不同的音乐文化之中。

of an orchestra or voices of a chorus, or of both performing simultaneously – without us knowing it. Neurobiologist Norman M. Weinberger (University of California, Irvine) likens it to how nerves in our muscles transmit messages to the brain. Our bodies contain thousands of muscles, which continually send information to the brain, which then tells them how much to stretch or contract. If we tried to handle all of this information consciously at one time, we couldn't. Still, the system works "automatically." It's the same with hearing musical sounds – the organizing happens on a subconscious level and we hear "music."

German neuroscientist Stefan Koelsch and his coworkers at the Max Planck Institute of Cognitive Neuroscience tried an experiment in 2000. They gathered people who had absolutely no musical education or training and had them listen to a sequence of chords that occasionally contained one chord out of key – off pitch. (A chord in music is three or more notes sounded simultaneously.) The scientists simultaneously recorded the participants' brains' electrical responses to hearing the chords.

The result? The test subjects' brains "automatically and unconsciously" knew which chords "fit" a sequence and which ones didn't. They expected the chords to fall within a certain key, even though they had no formal training in music. When a sequence of chords all belonged to the same key, their brains showed no special responses. But when one of the chords did not fit the key, their brains produced a particular response that was akin to saying, "Ugh – this chord doesn't fit."

It's possible that this sophisticated brain "knowledge" is hard-wired and does not require experience. Weinberger calls the German experiment astounding, "because the brain tells us that it is calculating complex musical relationships, setting up musical expectations, and detecting violations of these expectations, even if the

不重要。因为我们生来就有乐感。

不协调的奇迹

我们的大脑着实令人惊奇。在我们还没有意识到的时候，大脑就把无数的乐声串了起来。这些声音可能来自一个乐队所有的乐器，或是合唱团的歌声，抑或是两者的组合。神经学家诺曼·M·伯格（加利福尼亚大学欧文分校）将这种现象和肌肉向大脑传递信息的方式相类比。我们身上有几千块肌肉，它们持续不断地给大脑传输信息，然后大脑通知它们舒展和收缩的幅度。我们想要有意识地同时处理这些信息是不可能的，尽管如此，大脑这个系统仍旧会自动运转，这与我们听音乐一样——大脑下意识地将各种音乐的声音调和在一起，于是我们听到了音乐。

2000年，德国神经学家斯特凡·克尔施和同事们做了一个实验，地点在马克思·普朗兰克认知神经学学院。他们把一些完全没有受过音乐教育或训练的人召集来，让他们听一组和弦。和弦里时不时地蹦出一个与基调不符的和音——音高下降（音乐里的和弦是指三个或三个以上的音符同时弹奏）。科学家同时记录下了受试者听取和弦时大脑电波的反应。

结果是什么呢？受试者的大脑“自动地或下意识地”知道哪一个音属于那一组，哪一个不是。尽管他们没有接受过任何正式的音乐训练，他们也会期待和声在同一个基调中下降。当一组和弦同属于一个基调时，他们的大脑不会有特别的迹象，然而若有一个音与基调不合，大脑就会作出一种异样的反应，相当于说：“唷，这个音不太协调。”

复杂的大脑功能是固有的，而且不需要经验，这极有可能。韦恩伯格称这个

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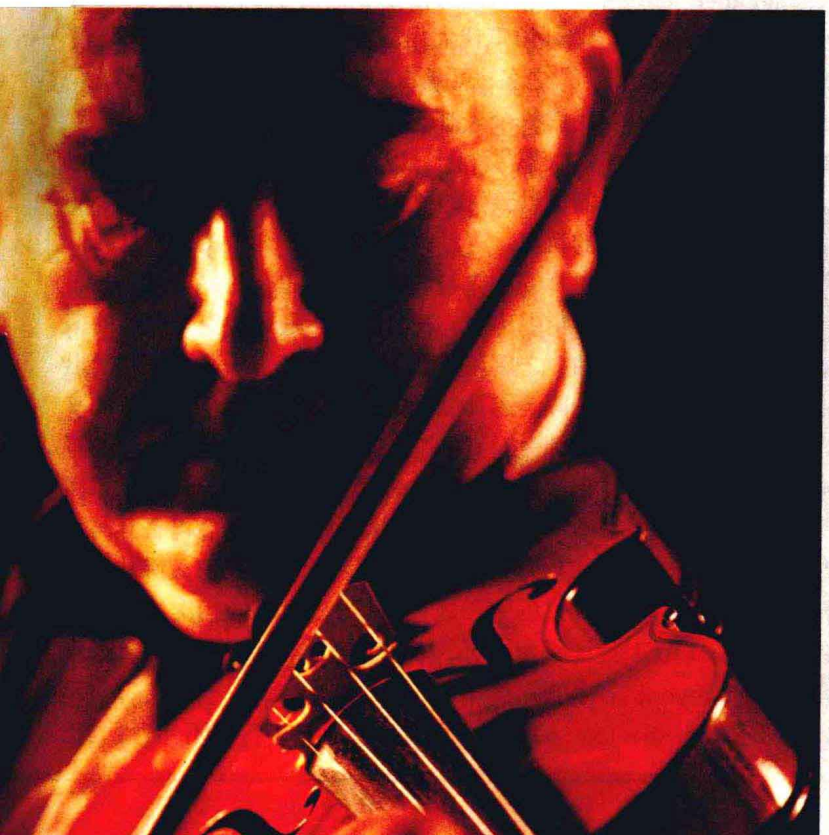
brain's owner isn't aware that this is going on inside his or her head." These findings imply that the normal human brain is a musical brain – music is part of normal human nature and physiology.

We cannot help but enjoy good music – "good" here means music that is in key – as much as we cannot help feeling warm and happy when we get a hug from a parent or friend. Such feelings are a part of the fabric of our being. But not all music is "good," and some hugs – as in wrestling – are crushing embraces. Our minds know the difference.

ANTICIPATION

Music seems to produce certain emotional states that all people share. All emotions are either positive or negative. Positive emotions occur when an experience exceeds expectation: You expect a "C" in science and you get an "A"! Negative emotions arise when an experience falls short of expectation: You expect a skateboard for your birthday and get a pair of socks instead. Our emotions bob



实验是惊人的："大脑告诉我们它在演算复杂的音乐关系，并形成一个音乐预期，然后查找这些预期的破坏者——不协调的音符，即便是本人也没有意识到他或她的大脑内发生了什么。"这些发现意味着正常的人类大脑是音乐的大脑——也就是说乐感是普通人的天性或生理系统的一部分。

我们情不自禁地欣赏好音乐——这里的"好"意味着与音调和谐的音乐——就如同我们父母或朋友拥抱我们时，我们会不由自主地感到温暖和快乐，这种感觉是构成我们人类的一部分。不过并非所有的音乐都"好"，有些拥抱——如摔交时——就是让人粉身碎骨的拥抱。我们大脑知道这种区别。

预期

音乐似乎能够激起某些人类共同的情绪。这些情绪或者是积极的，或者是消极的。当一种感觉超过了预期，比如你原来认为你的科学课成绩会得C，结果却得了A，那么积极的情绪就产生了。而当一种感受没有达到预期，比如你期望得到一块滑板作为生日礼物，却只收到了一双袜子，于是你就会滋生消极情绪。我们的情绪上下波动，如同页面上的音符。

就像现代研究结果认同的那样，如果说情绪是对意外体验的某种反应的话，那么音乐就论证了这种说法。实际上，期待是音乐欣赏的基础，就如我们在德国实验室看到

up and down like notes on a page.

If emotions are indeed a reaction to unexpected experiences, as modern research supports, then music validates the theory. In fact, expectancies are at the root of music appreciation. As we saw in the German experiment, our brains create

的那样，我们的大脑产生某种期待，检查随后而来的音乐，并确定后面的曲调是否是它满意的期待。如果是，我们就能享受到音乐的乐趣；如果不是，我们就会对这首乐曲退缩排斥。

假如我们天生就会欣赏“好”音乐——与基调吻合的，与我们先天的、固有的期待相吻

The Rite of Spring...RIOT!

by Stephen James O'Meara

《春之祭》的骚乱

Every generation has its own sound. And every generation has been ridiculed for its choice of sound – from ragtime to rap. It's nothing new. For instance, when waltz music first appeared, older generations thought it scandalous, because it caused men and women to hold on to one another, and women's petticoats to ruffle. Swing music, which resulted in the tremendous popularity of big bands during the 1930s and 1940s, was once called "barbaric." But what about classical music? Everyone approves of that, right?

Well, in 1913, Igor Stravinsky's *The Rite of Spring* blasted music into a wholly new orbit. The ballet score was revolutionary. It all but decapitated melody and harmony, creating a sound that was convulsive and irregular. After a haunting introduction, the score begins with the string section relentlessly slashing out a series of thunderous chords. "I was guided by no system," Stravinsky said. "I wrote what I heard." (Some composers "hear" an entire symphony or score for a ballet in their head and then write down the music!) And what Stravinsky heard was like nothing anyone else had ever heard before – which was immedi-

每一代人都有他们自己的音乐，每一代人都会因为自己痴迷的音乐而被嘲笑——从拉格泰姆音乐到说唱乐，这没什么稀罕的。比如当年华尔兹舞曲首次面世时，老一辈人就对它很反感，因为它让男人女人抱成一团，还弄皱了女人的裙子。摇摆乐，也就是使30年代到40年代大乐队盛行的音乐，曾被冠以“粗野”之名。可是古典音乐又是怎样的情况呢？我们每个人都觉得它不错，对吗？

不尽然吧。1913年，伊格·史特拉文斯基的惊世骇俗的《春之祭》将音乐带进一个全新的轨道。这首芭蕾舞曲是革命性的，它打破了悦耳的旋律与和声，创造出一种痉挛的、非同寻常的声音。表演的开始是一段空灵飘渺的序曲，之后和弦部分骤然加速，乐队无情地奏出一阵阵震耳欲聋的和弦。“我不受任何规律的支配，”史特拉文斯基说，“我只是将我听到的写出来。”（有些作曲家会在脑海里一遍遍地“倾听”交响曲或芭蕾舞曲，完了以后再将其写下来）。而史特拉文斯基听到的是任何人都从未听到过的——这在5月29日巴黎的初次演出上立即得到印证。人们称它是本世纪音乐史上最声名狼藉的事件。

刚开始的两分钟显然进行得不错，可当巴

expectancies and monitor incoming sounds to determine if they satisfy them; if they do, we enjoy the music. When music doesn't meet our expectations, we cringe.

If we all innately appreciate "good" music – music that is in key, that meets our innate, hard-wired expectations (which also includes some harmony,

合的音乐（也包括某些和声、旋律金属
奏）。那么当你妈妈听到你播放节
调与烈、吐词清晰的软饼干乐队的CD时，为什么她会大喊："关上那讨厌的音乐！"尽管"重金属摇滚/说唱乐"有节奏，而且它的曲调与歌唱都与基调相符，也达

ately apparent at the ballet's premiere on May 29, in Paris. It was called the most notorious event in the musical history of the century.

The first two minutes of the introduction apparently went well. Trouble began when the bassoon, a usually low-pitched woodwind, entered. Its tones were much higher in range than anyone had ever heard the instrument played before. In fact, the instrument was virtually unrecognizable as a bassoon. The renowned composer Camille Saint-Saëns walked out of the theater, complaining loudly of the woodwind's misuse.

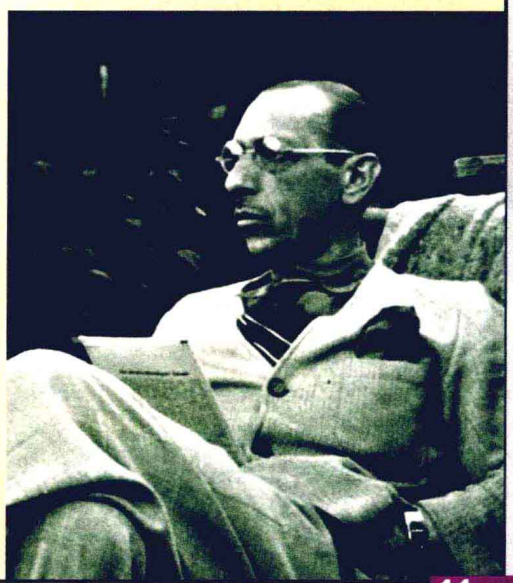
Chaos ensued when the strings began their thunderous rhythm. According to one eyewitness, the audience raged uncontrollably over what it felt was a blasphemous effort to destroy music, and began throwing things, yelling, and even fighting. They created such a riot that the police were called in. Backstage, Stravinsky fumed.

Afterward, the composer and his closest friends wept at the debacle. But imagine the huge crowds the next night, when all wanted to see and hear what had turned classical music upside down. Today, *The Rite of Spring* is regarded as one of the 20th century's classical masterpieces. Walt Disney even used it in his 1940 movie, *Fantasia*.

松管这种常见的低音部的木管乐器加入以后，麻烦就开始了。它的声音被提高到了前所未有的高度，实际上，这件乐器已经听不出来是巴松管。（法国）著名作曲家卡米耶·圣桑走出剧院，大声抱怨他们用错了木管乐器。

当弦乐器开始了它们震耳欲聋的弹奏时，人群一片混乱。据一位目击者说，听众们认为这是对音乐的亵渎和摧残，他们感到怒不可遏，开始扔东西，尖叫，甚至拳脚相加。观众的骚乱召来了警察。在后台，史特拉文斯基气得七窍生烟。

之后，这位作曲家和他的好友为这场混乱黯然落泪。但是我们想想第二个夜晚的人山人海吧，所有人都想来亲眼目睹亲耳聆听这部颠覆了传统音乐的作品。今天，人们把《春之祭》看作是20世纪的古典杰作之一。怀特·迪斯尼甚至为他1940年的电影《幻想曲》配上了这首名曲。



melody, and rhythm) – then why does your mother shout, "Turn off that ghastly noise!" when she hears you playing a Limp Bizkit CD with its thumping rhythm and explicit lyrics? Although "hard rock/hip-hop fusion" has a rhythm, and its musicians play and sing in key as well as meet other musical requirements, their sound is not part of your mother's "preferred" musical vocabulary, and their lyrics – well, they are another kind of vocabulary that also fuels music's emotional impact.

Each generation has its own sound, a musical voice that differs from the voice of the previous generation, one that produces a specific emotional state for a generation of listeners. *Your* preferred music is most likely outside your mom's range of harmonic normalcy – her "learned" reference system for what comprises "normal, pleasing music." It's merely a matter of preference. But that's okay, because, in time, she might learn to appreciate "your" music, adding it to her growing lexicon of experiences. (And you might learn to appreciate *her* music too, albeit classical, jazz, or soft rock.) That's how music has evolved, as we have evolved, over the years.

AUDITORY CANDY

To get closer to an understanding of why we love music – and any scientist would admit we may never fully understand – we must ask ourselves why we feel pleasure at all. In a way, enjoying music is like enjoying a delicious candy bar. Just as each bite into a sweet, creamy chocolate bar is a "reward" – because it sends a rush of chemical pleasure to the brain – each chord we hear that satisfies our expectation is also a reward that can send shivers up our spine.

In fact, the bodily response to hearing our preferred music and eating our preferred chocolate bar is similar. Eating chocolate causes the release of natural endorphins – our "feel good" brain chemical or mood elevator. Likewise, when we really "get into" listening to music, our pupils dilate, our endorphin level rises, and our bodies

到了音乐上的其他要求，但是它不属于你妈妈“喜爱”的音乐范畴，而且它们的歌词——那简直是另一种语言，对情绪有着强大冲击力。

每一代人都有他们自己的，有别于上一代人的音乐。这种音乐能够赋予同一代的听众一种特别的情感。你钟情的音乐很可能不在你妈妈喜欢的和谐而平常的音乐之列——即她所知道的通常的、愉悦的音乐。这只不过是个人趣味问题。但是没关系，因为有一天她也许会学着去欣赏你的音乐，并将它们吸纳到她不断增加的体验词汇中（而且你也会学着去喜爱她的音乐：古典音乐、爵士或者慢摇滚）。这就是音乐如何进化的，正如我们人类一年年地不断进化一样。

可以听的糖果

为了让我们更透彻地理解我们为什么热爱音乐——尽管任何一个科学家都会承认，我们也许永远无法完全了解——我们得问问自己为什么会感到愉快。从某种意义上说，欣赏音乐就像享受一块美味的糖果，咬在甜蜜的奶油巧克力上的每一口都是一个“奖赏”，因为它导致一种愉悦的化学物质直冲大脑。我们听到的每一声满足我们期待的和弦也是一种“奖赏”，这种奖赏常常让我们激动得脊梁颤抖。

实际上，我们欣赏钟爱的音乐和品尝喜欢的巧克力所引起的生理上的反应是相似的。吃巧克力能够引起脑内肽的释放——一种让我们感觉“良好”的大脑化学元素和情绪调节剂。同样，当我们全神贯注地聆听音乐时，我们的瞳孔是放大的，我们大脑的吗啡水平提高了，我们的身体洋溢着愉悦的感觉。音

swell with pleasure. Music can heal – it can relax us and reduce feelings of physical and emotional pain. It can also incite anger and send our minds into outer space.

But music doesn't just engage the brain . . . it engages the whole body! Sound can trigger physical sensations. Apparently, when we hear good music, we use our muscles to mimic the rhythms, and we do so on both a large and a small scale. On the small scale, we tap our fingers and feet, or bob our heads. On the large scale, we bounce up and down, swing our hips, and turn our arms into a fluid representation of a pulsing beat. (Some people say they "feel" throughout their bodies the movements of a Mozart symphony!) Helen Keller "listened" to a symphony by holding a radio and feeling the vibrations.

I bet you've seen and heard the group 'N Sync perform. The members of this aptly named pop group sing and dance together as one harmonious "chord" – they've definitely got the sound and the rhythm. They touch our emotions and make us feel good – as if we want to get up and dance ourselves. 'N Sync seems to embody so many of the reasons why we love music. But why ask why, anyway? Music is to the ears like a beautiful sunset is to the eyes. To be enjoyed!

乐有疗伤作用——让我们放松；减少肉体和情感上的痛苦；它也能煽起愤怒，让我们情绪失控。

但是音乐不仅仅左右大脑的工作……它还参与到全身之中！声音能够引起我们的生理感觉。显然，当我们听到好听的音乐时，我们的肌肉会模仿其节奏或大幅度地跳动，或做一些小动作。做小动作时，我们会敲敲手指，跺跺脚，或者晃晃我们的脑袋；大幅度的动作是指我们跳上跳下，摆动腰肢，或者踩着节拍挥舞我们的肩膀（有人说他们全身都能“感受”到莫扎特交响曲的旋律）。海伦·凯勒手持录音机，通过感觉声音的振动来“倾听”一首交响乐。

我敢打赌，你一定看过或听说过“超级男孩”演唱小组的表演。这个乐队命名得恰到好处，成员们又蹦又跳，载歌载舞，好像一个和谐的“和弦”——他们无疑谙熟音乐和节奏，他们让我们感动，让我们感觉好极了——仿佛我们也想跟着跳起来。“超级男孩”似乎验证了我们热爱音乐的许多原因。但说到底，为什么要问为什么呢？音乐对耳朵来说就如同美丽的日出对于眼睛一样美好，是供我们享受的!!

How Old Is Music?

by Barbara Eaglesham

音乐有多古老?

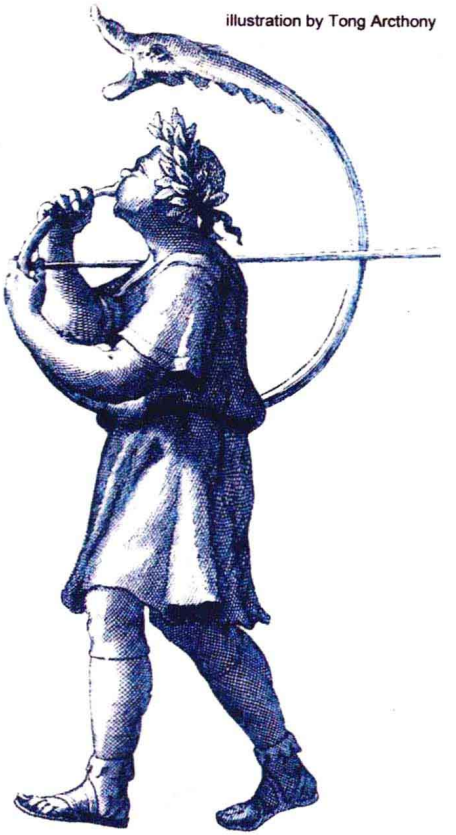


illustration by Tong Arcthony

Rock, jazz, polka, mariachi, reggae, waltz, tribal drumming – music – it's been with us at least since Neanderthal man carved flutes out of bone, and may even be older than the human race. There hasn't been a human culture that has lived without it. Every generation, every country, has its own music. Even animals make musical sounds. Have you ever stopped to think about where music came from, or why we make it?

Linguist Steven Pinker at the Massachusetts Institute of Technology thinks that music is merely a buy-one-get-one-free bargain that accompanies language. However, many scientists who study the biological foundations of music, or *biomusicology*,

从摇滚、爵士到波尔卡、马利亚奇(墨西哥流浪乐队的音乐——译者注)、瑞格、华尔兹,到土著部落的鼓乐,音乐至少从尼安德特人刻制骨笛时就伴随我们了。也许,音乐比人类还要古老。没有一种人类的文化可以没有音乐而存在。每一代人,每一个国家都有其自己的音乐,甚至连动物都能发出类似音乐的声音。你是否静下来思索过:音乐从何而来,或者我们为什么要创作音乐?

麻省理工学院的语言学家斯蒂芬·宾克认为,音乐只不过是伴随语言而来的买一送一的赠品。然而,有许多研究音乐的生物学基础——生物音乐学——的科学家们却对此持不同意见。

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