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October 31, 2011

Why Do Chicks Like Music? Why Does Any One?

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Why Do Chicks Like Music? Why Does Any One?

Barry Manilow explained?

Posted Oct 31, 2011

I like music and I like chicks. In fact, I like chicks so much that I wrote my doctoral dissertation on them. (Among other things, I discovered that White Leghorn chicks are more apt to feign death than Rhode Island Red or Game Fowl chicks.) When my research was over, we gave away most of the chicks but we kept some of them around as pets on the little farm we lived on. I have a lot of respect for chickens, but I never imagined they were musical aficionados. That was before I came across an article titled "Chicks Like Consonant Music" by two Italian scientists who are studying the musical preferences of poultry.

Why Music?

Their research touches on a fascinating question - why does music exist at all? Music is found in every human culture, and some scientists argue that music evolved in humans to serve an evolutionary function (see this article). Women, for example, might be attracted to musicians. (Read Keith Richards' autobiography to see how music can dramatically increase your reproductive opportunities.) Others have suggested that music is evolutionarily advantageous because it enhances group cohesion.

A Tuesday night at Guadalupe's. I'm on guitar.

There are, of course, naysayers. Harvard's Steven Pinker, who is an adaptationist when it comes to traits like language and fear of snakes, believes that music is biologically useless. Pinker calls music "auditory cheesecake" He is not saying that music is unimportant in our lives. It is. Why else would I have spent every Tuesday night for the last twelve years banging out Appalachian fiddle tunes with a ragtag string band at Guadalupe Café, a local pub and eatery? That's over a thousand hours I could have spent writing articles for scholarly journals, grading student papers, or working on this blog. Music can bring people up, bring people down, or bring people together. It can be a joy to listen to and great fun to play. But that does not make it an adaptation. Mozart could still be ear candy, the Stones, a cheap thrill.

Music Appreciation in Animals

Humans, however, are not the only animals to enjoy a melodic hook. In the spring, I wake up every morning to the songs of birds outside my bedroom window. Mammals also sing. Check out the musical talents of this gibbon, this mouse and this whale. Further, as evidenced by this must see video clip of Snowball, the boogying cockatoo, animals even like to dance to a catchy tune (in this case, unfortunately, by the Backstreet Boys). Researchers have also found that sparrows, monkeys, and two-month old human infants (see this article.) much prefer music that is consonant (e.g., harmonic, pleasant to the ear, Barry Manilow-ish) rather than dissonant

(atonal, harsh, Sex Pistol-ly). The question then arises, is this preference for "easy listening" learned or instinctive?

Enter the Chicks.

It would be impossible to untangle the question of whether human preferences for consonant over dissonant sounds is the result of nature or nurture. That's because human fetuses hear music in the womb (see this article), and prenatal exposure could predispose us to enjoy pleasant musical sounds. Indeed, in utero exposure to music enhances brain development in rats while exposure to discordant noise retards rodent brain development (see this article).

Newborn chicks, on the other hand, are the perfect lab animal to investigate the role of genes and environment on musical preferences. The reason is that you can eliminate the effects of prenatal sounds (other than their own peeps) by incubating chicken eggs in sound-proof environments. Keep in mind that there is no reason to suspect that a chicken's brain would be hardwired to prefer a cheerful Chopin etude over Stravinsky's "brutally dissonant" Rite of Spring. It is true that chicks peep, hens cluck, and roosters crow. But unlike the exquisitely melodious wrens and warblers, chickens do not sing.

In a simple experiment, the researchers tested the hypothesis that chicks have an instinctive preference for melodic as opposed to atonal melodies. Chicks were hatched from eggs that were kept in a sound proof incubator. On the day they hatched, each chick was tested for its musical preferences in a choice situation in which a consonant and dissonant version of the same melody were simultaneously played through speakers attached to iPods on opposite sides of a central chamber.

When they were first placed in the central chamber, the chicks froze - the normal response of chicks when put in a strange situation. However, within a couple of minutes, they began to explore their new environment. Did they show a musical preference? Yes. The animals gravitated toward the speaker playing the pretty music and avoided the side with the dissonant Sex-Pistol-ly chords, even though the tunes were identical in terms of pitch, rhythm, and tempo.

Chicks and Music

I have spent a lot of time around chickens, but I would not have predicted these findings. After all, why should newborn animals belonging to a species that does not sing instinctively share an aspect of human musical preferences? The authors hypothesize that an inborn preference for consonant sounds may attract chicks to animate objects so that they are more likely to become attached to their moms rather than an inanimate object.

I don't find this explanation particularly convincing, but I admit that I don't have a better alternative. (If you do, let me know in the Comment section at the bottom of this post.)

Whatever the reason, chicks dig music. And so do I (though I prefer Lucinda Williams to Barry Manilow or the Sex Pistols.)