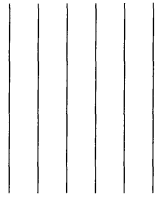


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TUNING UP

What Does It Take to Become Musical?

Are musicians born or made?

All my life I wanted to become musical, but I always assumed that I never had a chance. My ears are dodgy, my fingers too clumsy. I have no natural sense of rhythm and a lousy sense of pitch. I have always loved music but could never sing, let alone play an instrument; in school I came to believe that I was destined to be a spectator, rather than a participant, no matter how hard I tried.

As I grew older, I figured my chances only diminished. Our lives, once we finish school, tend to focus on execution rather than enrichment. Whether we are breadwinners or caretakers, our success is measured by outcomes. The work it takes to achieve those outcomes, we are meant to understand, is something that should happen quickly and behind closed doors. If the conventional wisdom is right, by the time we are adults it's too late to learn anything new. Children may be able to learn anything, but if you wanted to learn French, you should have started when you were six.



GUITAR ZERO

Until recently, science supported this theory. Virtually everybody in developmental psychology was a firm believer in “critical periods” of learning. The idea is that there are particular time windows in which complex skills can be learned; if you don’t learn them by the time the window shuts, you never will. Case closed.

But the evidence for critical periods is surprisingly weak. Consider, for example, the often-cited case of Genie, an unfortunate girl who was locked in a silent room for many years. When Genie escaped at the age of thirteen, she was exposed to language for the first time, and she was never able to become fluent. Her vocabulary was good enough to get her started, but her grammar was a mess, filled with utterances like “Spot chew glove” and “Applesauce buy store.” Does this mean that Genie’s critical period for language had passed? Most people interpret her case that way, but another explanation, less often considered, is that Genie’s inability to learn language may have come in part from the emotional trauma (and perhaps malnutrition) she had suffered early on. Her case is consistent with the critical period hypothesis, but it certainly doesn’t prove it.

The more people have actually studied critical periods, the shakier the data have become. Although adults rarely achieve the same level of fluency that children do, the scientific research suggests that differences typically pertain more to accent than to grammar. Meanwhile, contrary to popular belief, there’s no magical window that slams shut the moment puberty begins. In fact, in recent years scientists have identified a number of people who have managed to learn second languages with near-native fluency, even though they only started as adults.

If critical periods aren’t quite so firm as people once believed, a world of possibility emerges for the many adults who harbor secret dreams—whether to learn a language, to become a pastry chef, or to pilot a small plane. And quests like these, no matter how quixotic they may seem, and whether they succeed in the end or not, could bring unanticipated benefits, not just for their ultimate goals but for the