What determines the quality of music? Is it the professionalism of the recording or the musical quality of the song itself? This has become a fundamental question in today’s digital recording age. Millions of people are able to create high quality recordings of songs on a relatively small budget, and this has been the primary cause of the Home Recording boom that has occurred in the last decade. Technology innovation has been the leading reason for this expansion. As recording technology increases, companies are able to offer better quality products for cheaper prices, allowing more home recording enthusiasts to buy better sounding equipment for cheaper. This has both helped and harmed the music industry.

There are a number of technological advantages that recording engineers now possess that were simply not available in the past. Yet, high-budget recording studios are not the only individuals benefitting from this technology. Through pitch correction, Auto-Tune, and electronic instrumentation, every musician and non-musician is able to make quality recordings on a low budget. In a world in which anyone, talented or not, can make a very powerful musical recording, how does one determine real musicians from people who just know how to push buttons and turn knobs without having traditional musical talent? With the possibilities of this technology now available to anyone, it doesn’t even seem that traditional musicianship is necessary. In this article I will discuss the potential of music creation and recording in the digital world and hopefully leave you thinking, what is real, quality music, and why?

There are many examples of technology that can be used by anyone nowadays to better musical recordings. One production tool that has become increasingly common in today’s music, so much so that it is extremely odd not to hear it being used, is pitch correction. This term appears to be synonymous with the term “Auto-Tune”, when in fact the two are quite different. The goal of Auto-Tune is to tune a singer’s voice with as little work as possible for the recording engineer. The most common way to do so is to tell a program such as Antares Auto-Tune or Waves Tune to tune every note to 100% pitch accuracy as fast as it can, resulting in unnatural sounding note changes. This creates a robotic effect and can be heard in this recording:

(Auto-Tune Example)
This was the program used to achieve this sound, Waves Tune by Waves.

On the contrary, pitch correction’s goal is to tune a singer’s voice and make it sound as natural as possible. This is done in post-production, after the entire recording process has been completed. An example of this can be heard in the recording below.

(Pitch Correct Example)

This was the program used to achieve this sound, Melodyne by Celemony.

Both examples achieve the goal of tuning a singer’s voice. The engineer’s vision will determine which method is used. His goal is to find the best way to fit the edited voice into the song. Auto-Tune is more common in songs with electronic instrumentation. Pitch correction is prevalent in songs with real instruments such as guitars and drums. Just for comparison purposes, here is the recording shown above with absolutely no editing:

(No Editing Example)

These two forms of digital assistance allow singers who may or may not be talented to create fantastic recordings; it lets them hide their actual abilities. This again raises the question; if artists can sound however they like, where does the need for talent come into the mix?

Another new technology, that has bettered the ability of non-musicians, is electronic instrumentation. Through MIDI, an electronic instrument interface, many different forms
of electronic pianos can record the audio of almost any instrument. This can be done on a home piano like this one in my dorm room:

![Electronic Piano](image)

I am able to create any kind of musical sound I want, without knowing how to play any other instrument. Though the piano can be used, I don’t even need it! As long as I have knowledge of the piano, and a basic understanding of musical timing, I am able to recreate any instrument right on my computer without ever touching the real thing. I have done this in the following recording:

**(Electronic Instrumentation Example)**

![MIDI Editing](image)

*This is a way to edit MIDI notation using Xpand2 that comes with the Digital Audio Workstation, Pro Tools.*

Once again, this technology allows any individual to create whatever kind of sound he or she wants, with very little musical ability. Also, if creating music doesn’t actually require that much musical talent per se, and instead is simply the product of technological abilities, what is the real compelling characteristic of music that people look for? Seeing as talent cannot be that much of a universal factor based on these facts.

Music is becoming an art form that does not require the same technical capabilities or discipline that other art forms do. Few painters can create a masterpiece without spending years studying and perfecting their technique. Few writers can write a bestselling book without going through years of learning about literature and writing styles while developing their own through years of practice. An individual with little musical talent or practice can create a form of musical “art” that millions will love, just by spending a few hours with a computer program. Why is this acceptable?
These computer programs are only a few of the thousands of tools people can use in the modern age of digital recording to make fantastic audio recordings. However, there is no amount of musical ability required to accomplish any of these tasks. One may assume those who use computers in this way must have some form of sonic talent to achieve such feats, right? Wrong. These programs, including Melodyne, Waves Tune, Antares Auto-Tune, Pro Tools, and hundreds more all have countless presets for one to pick from when adjusting a sound. Melodyne has a “Quantize pitch” setting so all someone has to do is drag the slider to 100% and Melodyne tunes the voice instantly to the necessary pitch. It then even informs the user of the key the song is in. A picture of this screen is shown here:

![Melodyne Pitch Correction Screen](image)

Any person utilizing programs such as Melodyne may have also heard on the Internet, “Equalization is one of the most powerful tools in your sonic toolkit,” (Soundonsound.com, 1995). For clarification, Equalization (EQ) is adjusting the individual frequency ranges within a sound. It is useful for making a recording sound more clear. All this person then has to do is add an EQ plugin to the recorded instrument or voice and choose a preset for it, for example, “Rap Vocals”. The EQ plugin then automatically adjusts its parameters and creates a well EQ’d voice.

Rap artists are a perfect example of a group capable of using this technique. Creating a beat is relatively simple as I have shown previously, and all Rap artists then have to do is Auto-Tune the voice, which is tragically easy as I have shown, add EQ to the vocals to clean them up, also easy as I have shown, and record the audio. One may argue that the writing of the rap itself also requires talent. This is true in some cases, but there are quite a few well-known artists whose true lyrical prowess is questionable. But I’m not here to attack a specific genre. Any song that focuses on the voice and not the instruments has the capability to be just as simple as the examples I’ve given above, seeing as any instrument can be created without musical talent through MIDI and the voice can be edited to sound as accurate as a professional singer without much effort. This really exposes how dreadfully simple it is to create great sounding music.

In conclusion, all of these tools can be used by anyone who is able to use a computer. So next time you listen to any song on the radio or on the Internet on a site like YouTube, just ask yourself whether or not the music not only sounds good, but is truly worthy of the word “Art”.