



# ROCK MUSIC AND TECHNOLOGY

by Mark Katz

In a crowded dorm room, a group of students play plastic instruments while staring at a TV screen. The instruments look like toys, and for good reason: this is a video game. It could be *Guitar Hero* or *Rock Band* or any of their successors. They might be manipulating a small plastic turntable while playing *DJ Hero*; perhaps they're not using controllers at all, instead waving their limbs wildly according to onscreen instructions. How do we make sense of all this impassioned flailing? What they're doing is not exactly like playing traditional musical instruments. Their gestures are clearly connected to the music they hear, but they're activating prerecorded sounds rather than creating their own music. But if they're not true instrumentalists, they're also not mere listeners. Playing music video games might be called collaborative performance, or more simply co-performance, but whatever it's called, it's a hugely popular

phenomenon that is opening up distinctive ways of engaging with music to millions of people.

In a computer lab, a headphone-wearing student sits in front of a monitor, using a mouse to create and manipulate sounds. She may be using any of dozens of programs, whether free, cheap (Audacity, GarageBand), or more costly (Ableton, ProTools, Reason). She may be layering short prerecorded musical fragments, or loops, to create a new composition; she may be mixing a song recorded with her band, adjusting the balance and editing out mistakes; she may be remixing the latest dance club hit, changing the rhythm and tempo to put a new spin on it; or she may be concocting a mashup by combining the instrumental track of one song with the vocals of a different song. When she has finished, she's likely to share her work, whether by e-mailing it to friends, posting it to her blog, or uploading it to a social networking or video-sharing site. Within minutes, people she has never met are listening to and commenting on her work.

Sharing one's own music is not nearly as common as sharing other people's music, and since the late 1990s and the rise of Napster, file-sharing has been an enormously popular and hotly contested activity, especially on college campuses. At any given moment, there are students sitting in front of their computers, sending and receiving MP3s and other digital music files, without payment and without permission. Some have had their campus network privileges revoked, a few have been sued, but most encounter no trouble along the way. Students are often conflicted about file-sharing—they know it can be illegal, but it doesn't feel like stealing (and technically it's unauthorized copying and distribution, not theft). Illegal file-sharing isn't the only way to experience music on the Internet without

paying for it, however. More and more, students are going to video-sharing sites such as YouTube, or Internet radio and music recommendation sites like Grooveshark or Pandora, to get their fill of tunes without downloading—or paying—a thing. And of course, many are paying to download through online music stores, using Amazon, iTunes, or any of the numerous other pay sites. However the music is being acquired, this kind of activity is rapidly replacing the increasingly old-fashioned ritual of going to stores and buying physical recordings, with enormous consequences for the way we all experience and think about music.

One consequence of the move from physical recordings to sound files is that we can easily carry immense collections of music wherever we go. To walk across a typical campus is to see ear-budded students immersed in their own private soundtracks, often oblivious to their surroundings. Music was once an almost totally social activity, but now listening in solitude (even if surrounded by others) is increasingly the norm. While we may celebrate this as tremendously convenient, there are legitimate concerns about the loss of the communal aspects of music (not to mention hearing loss) arising from so much solitary listening.

A century ago, Americans debated the value of the still-young technology of sound recording. (Thomas Edison had invented the phonograph in 1877, but it hadn't come to influence musical life until the early 1900s.) Some saw great possibilities in the technology, endowing it with an almost magical ability to bring great music to the world. Others viewed it as a threat. The composer and band leader John Philip Sousa famously condemned it as a menace, declaring that no one would make music themselves when

machines could do it for them. Neither side was clearly right or wrong. The type of music-making that Sousa cared about—parlor piano recitals, town band performances, and the like—has clearly waned since his time. Yet he was wrong about the broad effect of technology on amateur musicians, for today millions of people are not only making music simply for the love of it, but they are also using the latest technology to do so. On the other hand, it is hard to sustain the argument that technology has made America a “more musical nation”—as some contended a century ago—when the Internet music videos that enjoy the most views (often running into the tens of millions) are routinely denounced as the worst modern culture has to offer.

In the end, neither a utopian nor a dystopian view of music technology is warranted. This was true in the early twentieth century and it is true in the early twenty-first century. Technology can open up unimagined musical possibilities but can also cheapen music, rendering it an easily disposable commodity. Whatever new technologies emerge, two constants remain, one sobering, the other hopeful: the scarcity of truly great talent (and music), and the deep-seated need to seek out meaningful musical experiences. Technology will neither increase the former nor diminish the latter.

*Mark Katz teaches at the University of North Carolina at Chapel Hill. He is the author of **Capturing Sound: How Technology Has Changed Music and Groove Music: The Art and Culture of the Hip-Hop DJ** and is editor of the **Journal of the Society for American Music**.*