



MP3: The Meaning of a Format. By Jonathan Sterne. Durham, NC: Duke University Press, 2012. 342 pp. ISBN 9780822352877 (pbk).

In the decade-long wake that followed Napster's demise, a multitude of essays and theses were written that told one of two similar stories concerning the MP3. First, thanks to the MP3, musicians and listeners can now bypass the music industry. Freed from the nefarious tactics of the music industry, the production and consumption of music has been democratized, contributing to a more authentic musical culture. The second story is that the MP3 is a legal battleground between the interests of capitalism and the normative claims of activists who argue that information wants and needs to be free. These similar discourses, intellectual property on the one hand and techno-utopianism on the other, have had a great influence on how people think about the MP3.

The problem is that these stories are no longer relevant. Laws against downloading MP3s have not stopped people from downloading, and so we have a situation where lawmakers and legal scholars argue over intellectual property while millions of people ignore both sides and just keep downloading music for free. Similarly, the authentic musical culture that the MP3 was supposed to usher in has yet to arrive. Sure, musicians and listeners have created new and interesting forms of connectivity, but has it made musical culture better? The culture industry persists, and the golden age of music dreamt of by critics of the music industry seems as distant today as it was 20 years ago.

Given this state of affairs, Jonathan Sterne's latest book is a welcome reprieve from a decade of exhausting, and exhausted, approaches to the MP3. For Sterne, the story of the MP3 is a story of compression. The MP3 works because it compresses digital sound into a file that is significantly smaller than its original, making it easy to store (on computers and iPods) and exchange (over file-sharing networks). Compression works by removing redundant sounds: a heavily layered song such as "Here Come the Warm Jets" by Brian Eno or "Wouldn't It Be Nice" by the Beach Boys contains layer upon layer of sound. The MP3 removes layers that are not necessary for the listening experience. Perceptual coding complements compression by removing even more data, in this case pitches, frequencies, and sounds that the human ear cannot hear. The result is a digital sound file that can be anywhere from 10% to 15% of its original size. Sterne uses this perspective to point out a historical trajectory hinted at in his earlier works: the history of media progress is not just a history of representation and fidelity—it can also be considered a history of compression, of making media smaller, easier to use, and easier to transport.

The significance of Sterne's book, and his work in general, is his contribution to the field of sound studies. In this regard, *MP3: The Meaning of a Format* makes two important contributions. First, there is the technical history of the MP3. Sterne demonstrates his technical expertise by tracing the history of sound compression throughout the twentieth century. But this is not a history simply cribbed from engineering textbooks. One of Sterne's greatest attributes as a writer is his ability to tell the history of

audio engineering through compelling case studies. In this book, cat telephones, painless dentistry, and Suzanne Vega are important elements of a narrative that makes the complex technical history of the MP3 both accessible and memorable.

The second contribution Sterne makes is theoretical. Through his study of the MP3, Sterne proposes that media theory be reconsidered as format theory. This is media theory at the micro-level, a media theory designed not for one medium, such as television or radio, but a media theory intended to explain the numerous formats that fill our media: JPEGs, PDFs, DOCs, and, of course, MP3s. In this sense, Sterne updates McLuhan for the twenty-first century: the format, not the medium, is the message. If, as media theorists argue, we need to prioritize form over content, then Sterne's refinement is an important contribution to the future of media theory. Importantly, this refinement forces media theory away from its roots in literary theory and reorients it toward the technical apparatus itself. Whereas McLuhan and Kittler were literary scholars, format theory is media theory written by an engineer or computer scientist.

If there is one criticism to be made of this book, it concerns Sterne's zest for archiving contemporary digital musical culture. Looking ahead to the next configuration of recorded music, Sterne laments the inevitable losses that occur when one medium is supplanted by another medium. To explain this, Sterne uses the example of the mash-up. There is no archive dedicated to preserving this musical form and, as formats shift, we can expect that these songs will disappear. "Thus, an important popular cultural formation of the current decade will remain largely undocumented" (p. 229). Important? I would argue that mash-ups are ephemeral pop-culture nonsense, a musical style whose only redeeming quality is novelty. However, as Sterne points out, my attitude results from other media formats that prioritize attentive listening and contemplation. In a musical culture characterized by a media format designed for distracted listening, musical novelty takes on greater importance.

Of course, following the tenets of media theory, Sterne's book is not intended to comment on the content being mediated by the MP3; it is meant to explore the particular form that mediates the content. One of the difficulties in reviewing Sterne's work is his thorough scholarship and compelling prose, so the only real criticism I could find was a rare expression of musical taste. In an era of academic specialization, it is a real treat to read the work of someone who can weave together philosophy, cultural studies, media history, and audio engineering into a book that will change how people think about the significance of the MP3.

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