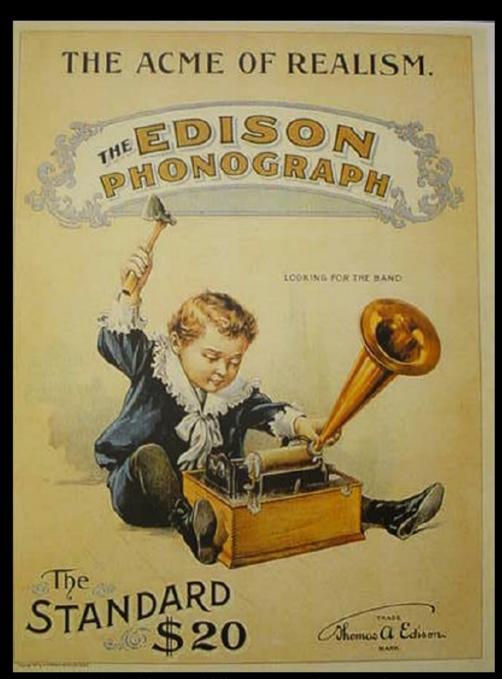
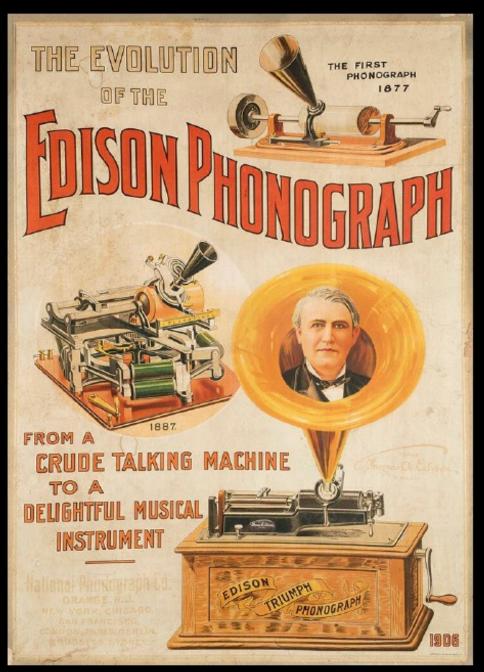
21A.505 / STS.065 Anthropology of Sound Spring 2022 MIT

6. Mar 10 HELMREICH Phonograph Records, Tape, Compact Discs, MP3s, Algorithmic Streaming What is today's conversation about? It's about some of the MEDIA, the MEDIUMS, through which sound has been recorded and how those media — phonograph records on wax, shellac, vinyl; magnetic tape, digital compact discs; digital files like MP3s or .wavs (either stored or streamed, with streaming mediated through recommendation systems) — have shaped the way people have understood and listened to recordings.

The argument is that it can make a difference — to the listening experience, to the packaging and commoditization of music, even to the environment — what those media are (what they are made of, how they are made, how they operate mechanically and technically). Another argument is that these recording media can be very symbolically potent for people's understandings of presence and time, especially since they tarry with schizophonia, the separation of sound and voice from its source, and they also make it possible to manipulate chronology itself.



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talking records of really funny comedians—and then buy generously of the January records, for in no other way can you obtain for so little money so much delightful entertainment for your family and friends.

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NATIONAL PHONOGRAPH COMPANY, 20 Lakeside Avenue, Orange, N. J.



Recording a Native American language with a phonograph. Getty Images

To Communicate With Other World

New Machine May Form the Wonderful Link
By THOMAS A. EDISON

RECENT experiments in communication with the spirit world have brought such topics sharply to the fore. Thomas A. Edison, the great scientist and inventor, believes that such intercommunication is possible but believes that the solution of the problem is not to be found in the instrumentality of a "medium," but through the instrumentality of a delicately responsive machine. Writing in the American Magazine, B. C. Forbes reports Mr. Edison's ideas:

"We don't know one millionth of one per cent. about anything! Why, we don't even know what water is. We don't know what gravitation is. We don't know what gravitation is. We don't know what enables us to keep our feet, to stand up. We don't know what electricity is. We don't know what heat is. We don't know anything about magnetism. We have a lot of hypotheses, but that is all. We are just emerging from the chimpanzee state mentally."

From our ignorance of things on this earth, Mr. Edison proceeded to talk of our utter ignorance of any other life following this one.

"A great deal is being said and written about spiritualism these days," he went on, "but the methods and apparatus commonly used and discussed are just a lot of unscientific nonsense. I don't say that all these so-called 'mediums' are simply fakers scheming to fool the public and line their own pockets. Some of them may be sincere enough. They may really have got themselves into such a state of mind that they imagine they are in communication with 'spirits'.

"I have a theory of my own which would explain scientifically the existence in us of what is termed our 'subconscious minds.' It is quite possible that those spiritualists who declare they receive communications from another world allow their subconscious minds to predominate over their ordinary, everyday minds, and permit themselves to become, in a sense, hypnotized into thinking that their imaginings are actualities, that what they imagine as occurring, while they are in this mental state, really has occurred.

"But that we receive communications from another realm of life, or that we have—as yet—any means, or method, through which we could establish this communication, is quite another thing. Certain of the methods now in use are so crude, so childish, so unscientific, that it is amazing

how so many rational human beings can take any stock in them. If we ever do succeed in establishing communication with personalities which have left this present life, it certainly won't be through any of the childish contraptions which seem so silly to the scientist.

"I have been at work for some time building an apparatus to see if it is possible for personalities which have left this earth to communicate with us," he resumed. "If this is ever accomplished it will be accomplished, not by any occult, mystifying, mysterious, or weird means, such as are employed by so-called 'mediums,' but by scientific methods. If what we call personality exists after death, and that personality is anxious to communicate with us who are still in the flesh on this earth, there are two or three kinds of apparatus which should make communication very easy. I am engaged in the construction of one such apparatus now,

"If those who have left the form of life that we have on earth cannot use, cannot move, the apparatus that I am going to give them the opportunity of moving, then the chance of there being a hereafter of the kind we think about and imagine goes down.

and I hope to be able to finish it before

very many months pass.

"On the other hand, it will, of course, cause a tremendous sensation if it is successful.

"I am working on the theory that our personality exists after what we call life leaves our present material bodies. If our personality dies, what's the use of a hereafter? What would it amount to? It wouldn't mean anything to us as individuals. If there is a hereafter which is to do us any good, we want our personality to survive, don't we?

"If our personality survives, then it is strictly logical and scientific to assume that it retains memory, intellect, and other faculties and knowledge that we acquire on this earth. Therefore, if personality exists, after what we call death, it is reasonable to conclude that those who leave this earth would like to communicate with those they have left here. Accordingly, the thing to do is to furnish the best conceivable means to make it easy for them to open up communication with us, and then see what happens.

"I am proceeding on the theory that in the very nature of things, the degree of material or physical power possessed by those in the next life must be extremely slight; and that, therefore, any instrument designed to be used to communicate with us must be super-delicate—as fine and

Edison, Thomas A. "To Communicate with Other World," American Magazine, October 16, 1920. @ American Magazine. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.

EDISON AT WORK ON MACHINE TO TALK WITH DEAD

Inventor Hopes To Perfect His Apparatus Within Few Months.

BELIEVES IDEA WILL BE SUCCESS

Methods Commonly Used Unscientific Nonsense, Wizard Says.



Shellac



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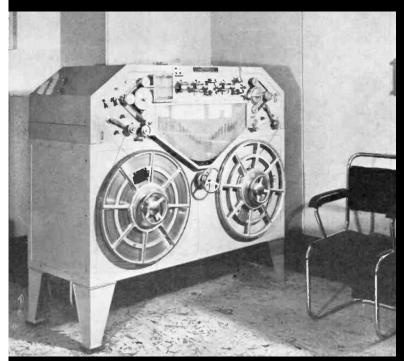
Twentieth-Century Music 14/1, 3-24 © Cambridge University Press, 2017 doi: 10.1017/S1478572217000032

Tape: Or, Rewinding the Phonographic Regime

ANDREA F. BOHLMAN AND PETER McMURRAY

Abstract

Magnetic tape follows the contours of the twentieth century in striking ways, from the overtly sonic and musical to less obvious political and social transformations. This introductory article sets the tone for this special issue, an effort to connect discrete histories of tape through a focus on its materialities. We posit the existence of a phonographic regime that coheres around a loose set of assumptions that often appear in tandem with broad claims about what 'sound recording' or even 'analogue media' are. This regime dates back to the invention of phonography but persists through many contemporary histories of sound recording. We challenge the regime by thinking with and through tape recording. One of tape's critical media operations, 'rewind', serves as a central focus for our push-back against the regime. As a button-interface, it highlights the physical engagement of humans with materialities, including the corporal labours of using technology, with iconography that digital technologies still employ. As a mechanism of respooling, it points to the industrial histories of various spooling forerunners from textiles to film reels. As we explore its cultural techniques in musical practices, we consider rewind, above all, as a temporal gesture that offers new paths backward into history.



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Bohlman, Andrea F., and Peter McMurray. "Tape: Or, Rewinding the Phonographic Regime," Twentieth-Century Music 14, no. 1 (2017): 3–24. © Cambridge University Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/fag-fair-use/.



BASF's magnetic tape and AEG's magnetophone - the sensation at the Berlin Radio Fair in 1935

REWIND

CHANGE SPEED

REVERSE

ERASE

MULTITRACK

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"There was a boy named Camille" — Exploring **Prince's Elusive Alter-Ego**



Much of the literature written about Prince's "Camille" alter-ego focuses on the character's attributed gender or lack thereof. The artist's use of pitch alteration, which at times created an androgynous-like vocal has led many to believe the persona is without an apparent gender or defined primarily as an expression of Prince's exploration of the feminine. Camille is more than a quirky alter-ego represented by pitched vocals, but a character conjured during an exciting yet turbulent period in the artist's life. Prince would use this persona as a vehicle to explore the concept of dual personalities and the internal struggles between vice and virtue, curating complex and rich mythology often overlooked when assessing the purpose of the Camille character.

"From that song was born this notion of Camille who might have been male, might have been female, it wasn't really clear - might have been kind of ghostly, might have been kind of humanoid." - Susan Rogers (Prince's engineer: 1983-1987)

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As mythology began to grow around Camille, Prince would establish an auditory identification of this new alias using studio trickery to manipulate his vocals, at times creating an androgynous effect. He would produce the 'Camille' vocals via two methods: the 'Publison Infernal Machine' (a pitch-altering device) and speeding the tape. The vocal alteration was not a new concept for Prince, as



Cava, Lucas. "There Was a Boy Named Camille'—Exploring Prince's Elusive Alter-Ego." February 24, 2021. The Violet Reality. @ The Violet Reality. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.



REWIND

CHANGE SPEED

REVERSE

ERASE

MULTITRACK

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CHANGING SPEED, REVERSING, and MULTITRACKING ALL UNDERMINE THE IDEA OF **SONIC REALISM** — that recordings are just a *mirror*



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Before digital playlists, mixtapes required careful planning and agility with a pause button. Patrick Foster



SYND 13-1-79 AYATOLLAH KHOMEINI SENDS TAPES OF TEACHINGS TO IRAN

"SYND 13-1-79 AYATOLLAH KHOMEINI SENDS TAPES OF TEACHINGS TO IRAN." YouTube.

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'KILLING MUSIC'

U.K. Industry Fights For Blank Tape Tax

· Continued from page 1

"this apparently innocuous practice could well signal the end of the music business in Britain," Among those performers who signed the ads were Debbie Harry, Elton John, Vladimir Ashkenazy, Sir Georg Solti, Cliff Richard, Gary Numan and Dame Margot Fonteyn.

The publicity drive is funded jointly by the British Phonographic Industry, the Musicians Union, the Mechanical Copyright Protection perhaps raise \$80 million or so from disco-goers?

The government disputed the consistent results of no fewer than four BPI-commissioned surveys on the extent of home taping losses without counter-argument. Apparently the BPI was to be stigmatized if it did not prove its losses, and ignored if it did.

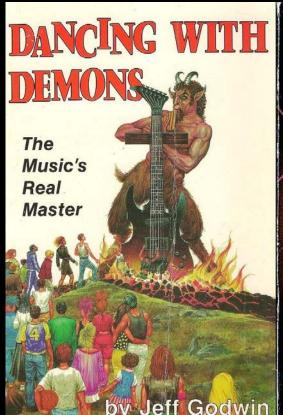
Government hopes of an effective spoiler signal were a mirage, Kuhn said. Its reluctance to see a propor-

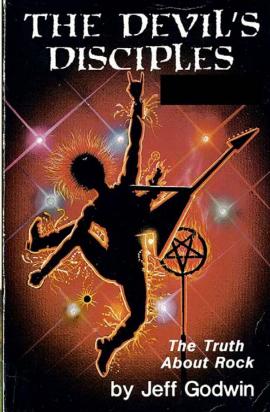
Gardiner, Bryan. "The Fight to Save America From Satan's Subliminal Rock Messages," Atlas Obscura, October 20, 2016. © Atlas Obscura. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.

The Fight to Save America From Satan's Subliminal Rock Messages

In the 1980s, many politicians were convinced there were devious, secret messages hidden inside popular records.

BY BRYAN GARDINER • OCTOBER 20, 2016 AT DAYS OF HALLOWEEN





Godwin, Jeff. Dancing with Demons. Chick Publishing, 1988. © Chick Publishing. All rights reserved. This content is excluded from our Creative Commons license. For more information, see $\frac{\text{https://ocw.mit.edu/help/faq-fair-use/.}}{\text{https://ocw.mit.edu/help/faq-fair-use/.}}$

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Protesters attend the PMRC Senate hearing in 1985. Here, Rolling Stone evaluates each of the so-called "Filthy 15" songs the committee compiled that year.

Image by Mark "Weissguy" Weiss. © Rolling Stone, LLC. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.



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NEWS & INSIGHTS / NEWS / 2021 / 12

Vinyl records' revival threatens environment and health



PVC is prized for its durability and malleability at high heat. But as University of Oslo Associate Professor Kyle Devine wrote in "Decomposed: The Political Ecology of Music" "I'the occupational hazards of oil drilling, the planetary problems of petroleum, and the political plights of petrocapitalism are known: people suffer, communities scatter, oils spill, environments suffocate, wars storm, empires soar. These are the conditions that define the production of petroleum, and they spiral into existence every time a needle glides through a groove."

"Vinyl Records' Revival Threatens Environment and Health." 2021. Environmental Working Group. @ Environmental Working Group. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.

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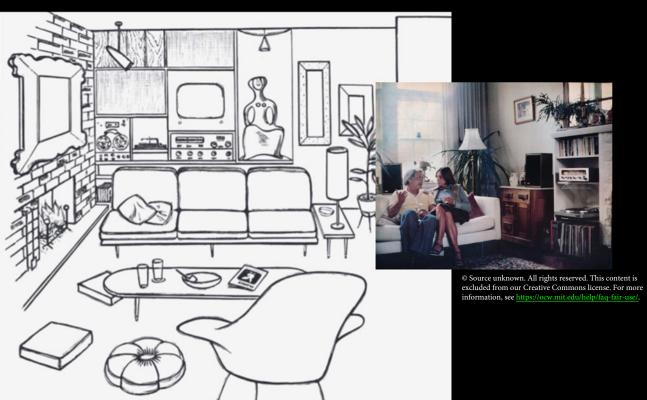




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THIS IS WHERE THE PLAYBOY LIVES. It is called a pad.

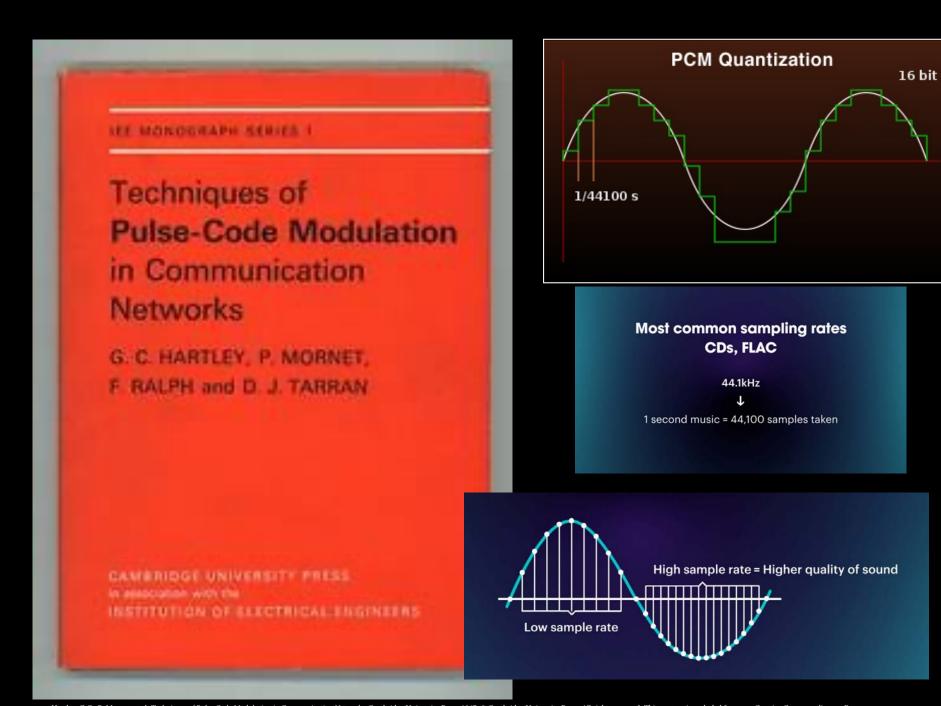
The pad is full of toys. There are seven stereo speakers in this picture.

Find them and color them loud. See the blank picture frames on the wall?

They are part of the playboy's modern art collection.

You may scribble in the blank spaces with your eyes closed.

From The Best of Playboy, Number Two. Playboy Press, 1968. © Playboy Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.



Hartley, G.C., P. Mornet, et al. Techniques of Pulse-Code Modulation in Communication Networks. Cambridge University Press, 1967. © Cambridge University Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.



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Apple's popular iPod MP3 player was introduced featuring a large hard drive and software, including a calendar at the Macworld Conference and Expo in New York on July 17, 2002.

CHIP EAST—REUTERS

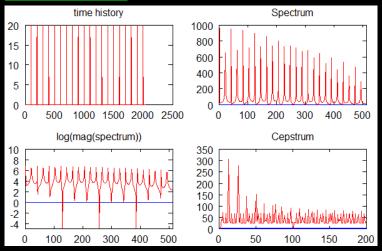
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Generating Track Representations: Content-based and Collaborative filtering

Spotify's approach to track representation is made up of two primary components:

- 1. Content-based filtering, aiming to describe the track by examining the content itself
- 2. **Collaborative filtering**, aiming to describe the track in its connection with other tracks on the platform by studying user-generated assets

Pastukhov, Dmitry. "Inside Spotify's Recommender System: A Complete Guide to Spotify Recommendation Algorithms." February 9, 2022. Music Tomorrow. @ Music Tomorrow. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/fag-fair-use/.



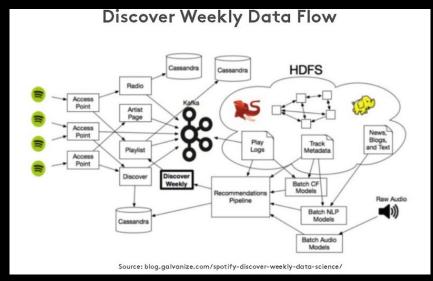
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Temporal Audio Analysis for Lil Nas X - Industry Baby (feat. Jack Harlow) (Visualization by Spotify Audio Analysis)

Educated assumption: The combination of data generated by the audio analysis methods should allow Spotify to discern the audio characteristics of the song and follow their development throughout time and between different sections of the track. Furthermore, the 12 audio features date back to 2013, when it was just a part of The Echo Nest audio analysis output (an audio intelligence company acquired by Spotify back in 2014).

Pastukhov, Dmitry. "Inside Spotify's Recommender System: A Complete Guide to Spotify Recommendation Algorithms." February 9, 2022. Music Tomorrow. © Music Tomorrow. All rights reserved. This content is excluded from our Creative Commons license. For more information, see https://ocw.mit.edu/help/faq-fair-use/.



"Ever Wonder How Spotify Discover Weekly Works? Data Science." Galvanize. @ Galvanize. All rights reserved. This content is excluded from our Creative Commons license. For more information, see $\frac{\text{https://ocw.mit.edu/help/faq-fair-use/.}}{\text{https://ocw.mit.edu/help/faq-fair-use/.}}$

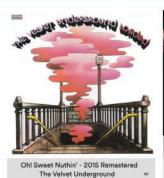
Boil the Frog

The Velvet Underground

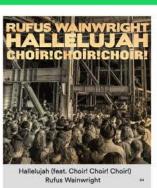
Doja Cat

Found a path from The Velvet Underground to Doja Cat in 10 tracks.

Tweet SAVE THIS PLAYLIST





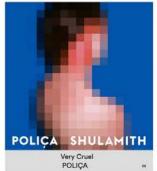
















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Liked Songs

Good night moon

Mar 22

Feb 22

Jan 22

tocover

b

On Repeat



ALBUM

Sleepify

Vulfpeck • 2014 • 10 songs, 5 min 15 sec





•••

TITLE

1 Z Vulfpec

2 Zz Vulfpeck

3 **Zzz** Vulfpeck

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