The Beatles’ use of magnetic tape manipulation represented a significant leap forward in both the art and craft of recorded music. Originally serving a more utilitarian purpose—providing sounds the musicians couldn’t produce themselves—tape manipulation also became in Beatle hands a significant means of artistic expression. Slicing, dicing and reversing sound became essential to several of their notable recordings, and formative to the band’s sound. It was also a sonic barometer of the times, reflecting changes in their audience’s consciousness, and perfectly suited for the evolving formats of music listening. By being new and relevant to their art and their audience, the Beatles’ use of tape manipulation easily meets criteria for being considered creative expression.

If likening audio techniques to those of film, as the composer Prokofiev did when taking inspiration for his studio microphone placement from the director Eisenstein’s mise-en-scène (Eisenberg 115-16), magnetic tape manipulation could be considered audio’s analog to slow motion, double exposure and the jump cut. Interestingly, some most notable uses of these sorts of film effects—in the works of Akira Kurosawa, Francois Truffaut and Sam Peckinpah—were occurring in the very decade leading up to the Beatles using their sound equivalents. As society was exploring and rejecting its prior boundaries, artists were seemingly doing the same with boundaries of their chosen media.

Les Paul certainly embodied this desire to get more out of his media. In 1949, as he recalls in *Les Paul - Chasing Sound*, the guitar wizard had barely gotten his hands on
an early reel-to-reel tape recorder before he was trying to make it do more. By modifying it with an extra recording head, Paul was able to make the first multitrack recordings, layering sound upon sound and creating one-person choruses. His desire in these experimentations was not to achieve a kooky studio trick. “I want sounds that’d never been heard on Earth. I want new sounds.” (qtd. in Les Paul). In other words, he wanted to invent.

The Beatles became as enamored with tape recorders as Les Paul did, devoting long sessions at home to creating new sounds on their recently purchased decks (Emerick and Massey 111). Paul McCartney had even “discovered that the erase head could be removed” (111), learning to modify his deck in a similar quest to Les Paul’s. These experimental inclinations also found a kindred spirit in producer George Martin, himself already versed in the art of tape speed and who also believed that “a certain amount of artifice is necessary in making a record” (Martin and Hornsby 78).

If Beatle tape tampering was inaugurated by the B-side “Rain,” then its reign immediately began expanding both the function and feeling of their recordings. John Lennon discovered his ideal vocal sound by accidentally threading a vocal tape backward, and recording the backing track with variable speed gave it a “radically different tonal quality” (Emerick and Massey 116) when played back at regular speed. The result? A tangible sleepiness that swirls over a faintly lurching melody, and a low-hanging tone like the heavy clouds over a grey day. The sonic qualities of the Beatles’ songs had begun to act out their stories.

The subsequent album Revolver opens with light jabs of tape manipulation, but closes with the knockout. “Tomorrow Never Knows” represents Lennon fully opening his
head after an LSD trip and pouring out the experience on tape (MacDonald 166). “Listen to the color of your dream,” Lennon invites us, and five McCartney tape loops provide the palette of this sonic dream, from the seagull-like keening of McCartney’s distorted laugh, to the fluttering notes of a Mellotron, to the interweaving notes of a sitar’s scale (169). Even the act of using these loops was itself rather “surreal,” employing tape decks and EMI employees spread throughout the Abbey Road facility, a Rube Goldberg scene out of “a Monty Python sketch” (Emerick and Massey 111-12).

At intervals, these loops rise and fall in the mix, creating a realistic sensory reproduction of a hallucinatory episode. In the most metaphysical sense of Eisenberg’s words, it is “the performer speak[ing] ... from somewhere inside the listener’s head” (157). In the case of “Tomorrow Never Knows,” it’s a tale that would be incomplete without the use of tape manipulation.

The Beatles were also solving practical issues by remixing and using tape clips from others, long before sampling became the essential and occasionally legally dubious core of hip-hop. Recordings borrowed from other songs would substitute for musicians who weren’t around, or sound effects that couldn’t be captured, while avoiding the practical issue of paying royalties for the clips. Emerick relates two such occasions to which he was a party. When an solo gap inadvertently left in “Yellow Submarine” was to be filled with a brass band, one for which there was no time or money to hire, a record of Sousa marches was copied to tape, which was then chopped up in segments thrown in the air and reassembled (122-23). So when “the band begins to play,” producer George Martin and team were presumably crossing fingers that the actual brass band being heard wouldn’t wind up recognizing their “performance.” Similarly, calliopes and
steam organs were lifted from a sound effect library, Osterized and randomized for the benefit of “For the Benefit of Mr. Kite” (122-23).

While the brass band sampling of “Yellow Submarine” served to lend specific instrumentation to its solo, the casual listener might be hard pressed to recognize that the solo was fabricated. The manipulated sounds used for “Mr. Kite,” however, are clearly manufactured and far more integral to creating the song’s synthesis of vaudevillain carnival and psychedelia.

The Beatle act of tape manipulation most difficult to defend against charges of studio kookiness would likely be “Revolution 9,” the penultimate track on The Beatles but probably ultimate in causing eye rolling and tonearm lifting by the album’s listeners. This extended collage of sound clips is not telling a story most people could discern, which makes appraising the sound selection and manipulation rather tough. However, if you can consider “Revolution 9” a concert of sorts, one assembled “in a professional way,” then Eisenberg would tell us it was recorded with artistic judgement (114). Dissected and laid out on a timeline, the sound clips do clearly display a pattern and choices at work (Stevens 240-41). It may not be your cup of fur, as the surrealism joke goes, but the piece creates a distinct headspace and clearly possesses artistic intent. Also, to quote McCartney regarding another sound experiment, “It went on too long” (Miles 237).

These songs show the Beatle sound evolving for the new paradigm of recorded music: it was ideal for listening and absorbing at home. “Pop music fans were changing ... preferring albums to singles, investing in hi-fi, using music as a source of personal instruction and experience” (Frith 36-37). The denser, intricately unfolding sounds of tape manipulation were better suited for this presentation. It was a change mourned in
Richard Goldstein’s *New York Times* review of *Sergeant Pepper’s Lonely Hearts Club Band*, but a change nonetheless well underway.

Although the new sounds created by tape manipulation aren’t literally realistic, they can mimic and heighten the sensory distortion we do sometimes experience. Cars don’t actually collide in slow motion, but an accident victim may later report having experienced it that way, with brief instants remembered in expansive detail. Whether this is a mere trick of memory, or the distressed brain recording at faster “tape speed” to collect more detail for later playback, would be a better subject for science. From an artistic standpoint, however, it’s the sort of subconscious and primal experience that sound can replicate to communicate a mood or sensation.

Manipulated sounds in Beatle music went beyond studio stunts because they were expressing inner human experience. They were also reflecting changes in society. “[T]he deconstruction of time by takes and its reconstruction by splicing—these are strong metaphors of modern life” (Eisenberg 158). Times were shifting, boundaries were indeed being chopped up and rejoined, and the random, backwards, scrambled pieces of the new vision were there for the listening.

In *The Creative Mind: Myths and Mechanisms*, Margaret Boden defines creativity as generating things that are “new, surprising, and valuable.” Beatle tape manipulation was certainly new to the mass listening public. It was surprising, even at times to the Beatles themselves (though more encompassing adjectives can be found for “Revolution 9”). Its value was in its expression of its creators’ mindsets, their times and the potential of a technology.
Works Cited

Beatles. "For the Benefit of Mr. Kite." *Sergeant Pepper's Lonely Hearts Club Band.*
Capitol, 1966. CD.


