

Digital Analogies: Techniques of Sonic Play

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Abstract

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Editor's Note: Welcome to *Sounding Out!*'s fall forum titled **"Sound and Play,"** where we ask how sound studies, as a discipline, can help us to think through several canonical perspectives on play. While Johan Huizinga had once argued that play is the primeval foundation from which all culture has sprung, it is important to ask where sound fits into this construction of culture; does it too have the potential to liberate or re-entrench our social worlds? Here, Roger Moseley challenges us to rethink the philosophical discourses of both sound and play and locates the moments in which they intersect and interface. From games of *Telephone* to *Guitar Hero*, Moseley considers the ways in which sonic play can help us understand the phantasmic binaries of the analog and digital. **—AT**

Throughout the distinguished intellectual lineage of play (where it is touched on by notable philosophers such as Plato, Montaigne, Kant, Schiller, Gadamer, Derrida, and Baudrillard), little attention has been paid to the parallels that can be drawn between sound and play as both media and phenomena. The very name of today's most prominent cultural and technological locus of play, the video game, overtly privileges the eye at the expense of the ear. As recent research and creative work by such figures as [Aaron Oldenburg](#), [Aaron Trammell](#), [George Karalis](#), and [Enongo Lumumba-Kasongo](#) indicates, a surge of interest in [audio games](#), as well as video games that emphasize the importance of sound while eschewing or minimizing visual stimuli, is acting as a salutary corrective to this oculocentrism. In what follows, I suggest that bringing sonic and musical techniques to bear on this history might afford new insights into play and its myriad configurations. Conceiving of play sonically entails thinking of sound playfully. This intersectional logic can, I argue, unpick binarisms that enforce problematic distinctions and constrict thought. To demonstrate this, I conclude by deploying the concept of play to redefine the relationship between the digital and the analog—and vice versa.

How can play be defined in a manner that encompasses its farrago of meanings and associations? For video game designers and theorists Katie Salen and Eric Zimmerman, the answer is deceptively simple: play is "free motion within a more rigid structure" ([Rules of Play](#), 304). To illustrate the flexibility of this definition, Salen and Zimmerman allude to the phenomenon of light playing upon the ocean waves. They leave unexamined, however, the intimacy and richness of the relationship between play and sound. From a scientific perspective, the patterned oscillation of which a sequence of sound waves is constituted consists of free motion within the limits set forth by the laws of physics. When disciplined and deployed as a cultural technique—take the play of musical instruments for example—sonic play is humanized and rendered transitive. But, we might also suggest that instruments play people, citing the sensation of automation with which fingers flash over fretboard or keyboard. Moving further away from

anthropocentrism, we can observe how sonic technologies render play intransitive once more. From the barrel organ to the iPod, sound plays without human aid when mechanically reproduced. This way of framing reproduction invokes and extends [Roger Caillois's](#) playful category of mimicry, which can be construed as faithful imitation, deceptive fakery, or even a Baudrillardian attempt to simulate a phenomenon that never existed.

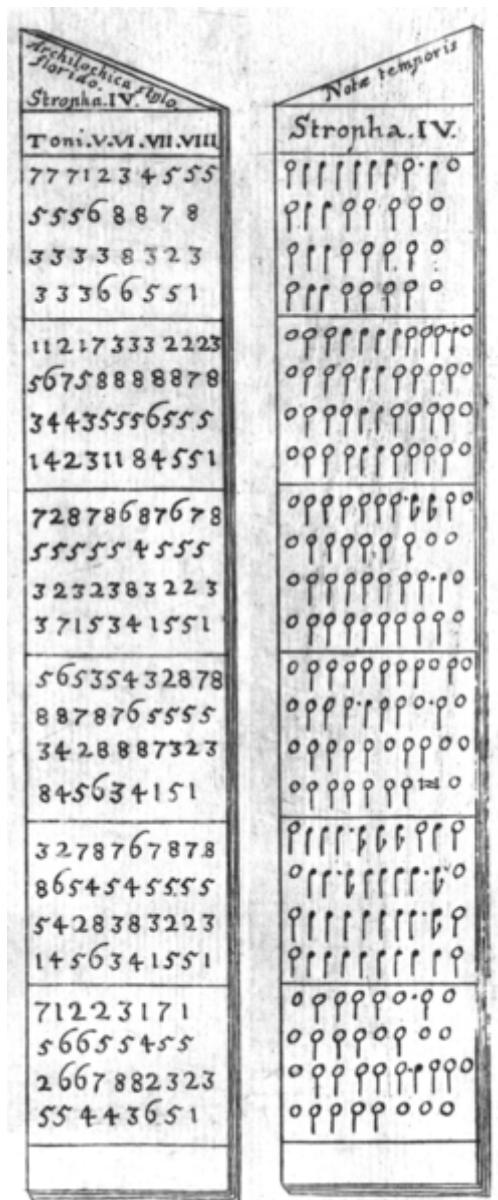


<https://youtu.be/C3SWVa-Wulg>

In order to pay due attention to both the technologies through which sonic play is mediated as well as the cultural techniques imbue it with significance, I suggest that we supplement Salen and Zimmerman's definition by thinking of freedom, motion, and structure in both digital and analogical terms. To an extent, the adoption of this modish epistemological framework acknowledges that conceptions of play are always constrained by their prevailing intellectual context. More importantly, however, I contend that technologies of sonic generation and representation from the seventeenth to the nineteenth centuries can be understood to play with the categories of the digital and the analog *avant la lettre (ou le chiffre)*. The two categories are not mutually exclusive and to treat them as such would be to subjugate the granularity of the analog to the binary logic of the digital. Rather, they co-exist as modes between which sounds and players freely oscillate.

The origins of digital sonic play lie within the human body. As [Johan Huizinga](#) put it, "the link between play and instrumental skill is to be sought in the nimble and orderly movements of the fingers." In the course of musical performance, human digits perform innumerable calculations. At its crudest level, musical performance from a score can be construed as a sort of algorithmic play through which mimetic fidelity is evaluated (and wrong notes relentlessly tallied). This ludic logic is at its most visible in rhythm-action video games such as *Guitar Hero* in which the score is no longer a text but rather a quantitative analysis. The iconography of these games usually indexes a set of digital technologies used primarily for the recording, editing, and playback of music. On the one hand, this relationship can be traced back to Leibniz's exposition of *ars combinatoria* and his "invention" of binary; on the other, it is realized by the [hydraulic organ](#) and [composing machine](#) devised and programmed by the Jesuit polymath Athanasius Kircher, both of which are

depicted in his *Musurgia universalis* (1650). In media-archaeological terms, the combination of Leibniz's concepts and Kircher's mechanisms gave rise to the hardware and software of Joseph Marie Jacquard's revolutionary [loom](#), Charles Babbage's prototypical [Analytical Engine](#), the [player piano](#), the [IBM punch card](#), and the [MIDI sequencer](#) before resurfacing in *Guitar Hero*, a piece of software that, in purely algorithmic terms, enlists the player's digits to verify checksums.



An example of Kircher and Schott's *Organum*, an early example of the digitization of music.

Such digital grids may constitute the field and the rules of sonic play, but they must be supplemented by analog elements if play is to flourish. As detailed in C. P. E. Bach's [Versuch über die wahre Art das Clavier zu spielen](#) (1753/62), the clavichord and its descendants distinguished themselves from the harpsichord and the organ by endowing the keyboard with an infinite sensitivity to touch, thereby enabling a mimetic spectrum of emotional flow with unprecedented

verisimilitude. Analogicity also provides another perspective on Caillois's concept of mimicry, according to which one object or activity playfully stands in for another via imitation, deception, or make-believe. Additionally, the curves of Ernst Chladni's [figures](#), which materialized sound as sand, exemplify this sonic and mimetic trajectory as they rely on both Hermann von Helmholtz's pioneering [work](#) on acoustics and the complex history of phonography to the development of analog synthesis.

In terms of sonic play, digital and analog elements can be chiastically recombined and reconfigured. A sonic communication game such as *Telephone* relies on the human propensity for analogy and its corrupting influence on the integrity of information transfer, playfully inverting the conditions and functions of the “real” telephone (which was engineered to compress informational content digitally without jeopardizing meaning). In much electronic dance music, the digital latticework, simultaneously visualized and rendered audible by the sequencer's grid, constitutes a field of play overlaid with vocals, sweeps, and other analog elements that, in turn, have been captured via digital sampling. As a kind of meta-game, a mash-up plays with sonic elements whose relations can be parsed in the digital terms of Leibnizian recombinatorial play, but equally important are the unintended associations and analogies which inevitably emerge. And while games such as *Guitar Hero* foreground digital techniques of sonic reproduction, they simultaneously foster diverse forms of analogical play involving the player's manipulation of the sonic (and social) behavior of her on-screen avatar—and vice versa.



Playing telephone. Image borrowed from diamondmanga @Wikimedia.

There is no doubt that the status of sound and its mediation through and as play have too often gone unacknowledged. As well as seeking to rectify this state of affairs by stressing the importance of sound in relation to the playful operations of other media, we might also dwell on the distinguishing features that set it apart: sound and the techniques that shape it are unique in the ways they simultaneously trace and are traced by the materials, technologies, and metaphors of play.

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Roger Moseley is an Assistant Professor in the Department of Music at Cornell University. His most recent research brings a media-archaeological perspective to bear on musical performance and improvisation. He is particularly interested in how the concept of play informs sonic practices and cultural techniques. Active as a collaborative pianist on both modern and historical instruments, he has recently published essays on digital games in the contexts of musical and visual culture. His current book project is entitled Digital Analogies: Interfaces and Techniques of Musical Play.

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