

P A R T V I

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AUDIOVISUALITY IN
DAILY LIFE
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CHAPTER 34

SOUND AND VISION: THE AUDIO/VISUAL ECONOMY OF MUSICAL PERFORMANCE

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A current debate in computer music touches on a fundamental question about the audiovisual economy of musical performance. Audiences at musical performances using traditional instruments are assumed to understand the underlying cause-and-effect relationships between what they see and what they hear (e.g., if I see a musician press a key on a piano or even reach inside it, I understand the sound that follows to be the result of the action I witnessed). By contrast, audiences of music that uses relatively unfamiliar digital devices such as various MIDI interfaces or laptop computers as instruments cannot be assumed to understand the relationships between the performers' actions and the resulting sounds (unless, of course, they are fully conversant with the particular technologies and techniques in use). As Caleb Stuart points out, "With the laptop, there is no [cause-and-effect] connection. From the point of view of the audience, the computer is an inanimate object; it sits there while the performer acts surreptitiously behind the screen. . . . The audience in general does not know exactly what it is that the performer is doing and most do not know how the sound is produced or with what."¹ (See figure 34.1.)

This masked production of sound challenges the understanding of the relationship between musician and audience that I call the "traditionalist" view. W. Andrew Schloss outlines aspects of this position: "[T]his relationship is based on many factors, most significantly on trust, and also on the audience *understanding* what the performer is doing on stage."² Those engaged in the debate about computer music agree that new musical

¹ Caleb Stuart, "The Object of Performance: Aural Performativity in Contemporary Laptop Music," *Contemporary Music Review* 22 (2003): 61.

² W. Andrew Schloss, "Using Contemporary Technology in Live Performance: The Dilemma of the Performer," *Journal of New Music Research* 32 (2003): 239. Emphasis in original.



FIGURE 34.1: Patrick K.-H. and Oleg Makarov, live-acousmatic performance, LoveLiveElectronic Festival, November 27, 2009. Camera: Ivan Savchenko, “OK-films” studio. Source: <http://www.youtube.com/watch?v=VIVFmIoMpt4>.

technologies challenge the traditional relationship of audience to performance, but view this challenge differently. Schloss, who represents the traditionalist side, insists to computer musicians that “[a] visual component is essential to the audience, such that there is a visual display of input parameters/gestures” that clarifies the nature of causality in the performance.³ Stuart, on the other hand, argues that “[t]he performativity of the music is to be found in the act of listening and the performance of the audience in relationship to the sound they hear. There is no need then for us to see a performer physically interacting with an instrument to engage in this aural performativity: we need only listen and engage in the act of listening.”⁴

Although this debate is driven by the accelerating incursion of digital technologies into the live performance of music, the underlying issues are not new. The current debate is a chapter in the ongoing argument over what Pierre Schaeffer, who was central to the development of *musique concrète* beginning in the 1940s, called “acousmatic sound,” defined by Jonathan Sterne as “sounds that one hears without seeing their source.”⁵ The idea that the aural and visual dimensions of musical performance are distinguishable “tracks,” and the question of how the relationship between these tracks should be understood and configured in performance, has come up in many different contexts at least since recording technology made it possible to experience sound apart from vision.⁶ The

³ Schloss, “Using Contemporary Technology,” 242.

⁴ Stuart, “Object of Performance,” 64.

⁵ Sterne summarizes the discussion about this concept and its implications briefly in *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, N.C.: Duke University Press, 2003), 20–22.

⁶ See Dave Laing, “A Voice Without a Face: Popular Music and the Phonograph in the 1890s,” *Popular Music* 10 (1991): 1–9.

understanding of this relationship, which dominated twentieth-century thinking and continues to exert a powerful influence, falls in line with the well-documented Western privileging of the sense of sight.⁷

The traditionalist view acknowledges the importance of “the visual communication of musically relevant information” and generally limits this category to the gestures and facial expressions musicians make while performing.⁸ For Schloss, musical performance entails a display of the musician’s effort on the audience’s behalf, which betokens both an expenditure of physical energy and an ethical commitment “to what one is doing.”⁹ Stan Godlovitch, who provides a more detailed traditionalist model of musical performance, includes in a list of conditions that have to be met for an event to be considered a musical performance that the event is “the immediate output of some musical instrument” (which does not include computers), involves “the exercise of skilled activity,” and is “the outcome of appropriately creditworthy physical skill.”¹⁰ Both Schloss and Godlovitch locate the essential aspects of musical performance in things that are not directly apprehensible from sound alone. Godlovitch refutes the idea that listeners who close their eyes at concerts experience “all that is musically significant,” because “musical sound alone is not sufficient for performance.”¹¹ One cannot *hear* the musician’s effort or skill; one must be able to *see* the “bulging veins in the neck of the trumpeter blasting a high C” to fully appreciate her effort.¹² And one cannot be certain that the musician’s sound is a direct product of his skill unless one witnesses him in the act of producing the sound. It is worth noting that musical audiences, for the most part, probably do not have a very fine-grained sense of instrumental causality. As Michael Schutz observes about wind instruments, “changing pitches requires complex interactions between embouchure and fingertips that are far from transparent to audiences.”¹³ Therefore, the traditionalists’ emphasis on visible causality in musical performance is best understood as ideological. In most cases the musical audience does not really understand exactly how the sound is produced, but wants to believe it does nevertheless.

From the traditionalist perspective, anything that inhibits the audience’s ability to perceive the musician as the skilled causal agent of the performance, including

⁷ The literature on the oculo-centrism of Western culture is vast. One classic study of both oculo-centrism and its critiques is Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth Century French Thought* (Berkeley; Los Angeles; London: The University of California Press, 1994).

⁸ Michael Schutz, “Seeing Music? What Musicians Need to Know about Vision,” *Empirical Musicology Review* 3 (2008): 86, at <http://hdl.handle.net/1811/34098> (accessed November 15, 2012). Although I have borrowed the phrase “musically relevant information” from Schutz, I do not consider him a representative of the traditionalist position.

⁹ Schloss, “Using Contemporary Technology,” 240.

¹⁰ Stan Godlovitch, *Musical Performance: A Philosophical Study* (London; New York: Routledge, 1998), 49. Godlovitch explicitly excludes computers from the realm of musical instruments on page 101.

¹¹ Godlovitch, *Musical Performance*, 14–15.

¹² Schloss, “Using Contemporary Technology,” 240.

¹³ Schutz, “Seeing Music?” 101. Theodore Gracyk makes a related point when critiquing Godlovitch in “Listening to Music: Performances and Recordings,” *The Journal of Aesthetics and Art Criticism* 55 (1997): 145.

sound recording, distracting spectacle, or the use of digital technologies that obscure cause-and-effect relations, threatens the integrity of musical performance.¹⁴ Godlovitch, for example, argues that “whatever we hear on a recording is not itself sufficient to ground judgments of the player’s real role and true merit,” because the listener cannot know from the recording itself precisely how it was produced.¹⁵ Even if one believes a performance on a sound recording to reveal virtuosity or hears things that seem to suggest effort and commitment on the musician’s part (e.g., pianist Glenn Gould’s famous vocal interjections or guitarist Alvin Lee’s yelps and exclamations on Ten Years After’s recording of “Boogie On”), one would have to have witnessed the performance directly to be able to conclude that the recorded sounds mean what they seem to mean.

When a new technology or media form, including radio, sound recording, music video, and the use of computers in performance, threatens to render this visual verification moot, traditionalists become anxious. Musical traditionalists share this anxiety with theorists of acousmatics, who, as Sterne points out, “assume that face-to-face communication and bodily presence are the yardsticks by which to measure all communicative activity” and fear that certain technologies and performance practices decontextualize “sound from its ‘proper’ interpersonal context.”¹⁶

In *Liveness: Performance in a Mediatized Culture*, I hypothesize that the category of “liveness” was first used to distinguish some performances from others (the *Oxford English Dictionary* dates the earliest usage of this kind to 1934) in response to such anxiety, brought on at that time by the dominance of radio. Early sound recording technologies did not problematize the distinction between live and recorded sound: if you put a record on your gramophone and listened to it, you knew exactly what you were doing, and there was no possibility of confusing the activity of listening to a record with that of attending a concert. But radio is a blind medium that makes it impossible to verify the source of the sounds being heard. The resolution of this crisis was to create the labels “live” and “recorded” with which to discursively distinguish live broadcasts from recorded material, thus allowing radio listeners to know whether they were hearing the immediate results of musicians’ skilled activity or a recording.¹⁷

More recent manifestations of this anxiety include Godlovitch’s concern that digital technologies will eventually displace “real” musical instruments and skills; Schloss’s worry that the illegibility of cause-and-effect relations in musical performances involving interfaces with which most listeners are unfamiliar will alienate the audience; and the fear expressed by Thompson, Graham, and Russo that a range of phenomena, including the imagery of music video, spectacular pop music performance, and air

¹⁴ For rhetorical purposes, I am treating the traditionalist view as if it were monolithic. It is not, of course. People who espouse traditionalist values certainly may subscribe in various degrees to the orthodoxy I am positing.

¹⁵ Godlovitch, *Musical Performance*, 26.

¹⁶ Sterne, *Audible Past*, 20–21.

¹⁷ Philip Auslander, *Liveness: Performance in a Mediatized Culture*, 2nd ed. (London: Routledge, 2008), 59–60.

guitar, will replace or draw the audience's attention away from "musically relevant" visual information.¹⁸

A growing body of research on musical perception and cognition in experimental psychology lends some support to the traditionalist view and its concerns. Studies of hearing suggest that sound perception is multimodal, in that both our visual and auditory senses contribute to it, and that the human brain seeks always to construct causal links between a heard sound and a visible source.¹⁹ Experimental studies of musical performance show that its visual dimensions decisively influence what we hear.²⁰ However, the *values* attached to the two sensory modalities associated with musical experience—hearing and seeing—and hierarchical relationships between them are not produced by human biology, but rather are cultural in origin.

Although all musical perception is multimodal, it is only in some cultural contexts that audiences demand that the relationship between modalities be structured to reveal the musician's effort and confirm her agency. Although such transparency is imperative to traditionalists, it seems quite clear that the majority of the audiences for the Black Eyed Peas or Lady Gaga, for example, are not in the least bit concerned that their uses of digital technology to produce both instrumental and vocal sounds in performance do not readily allow for identifiable cause-and-effect connections between musical sound and the means used to produce it. Godlovitch explicitly bases his model for musical performance on the classical recitalist, and though Schloss does not identify the genre of music with which he is primarily concerned, his career as a percussionist and computer musician bridges jazz, rock, Latin music, and contemporary composition.²¹ It is just as plausible that audiences of classical music and contemporary composition with traditional values would want to see and understand how the music they are hearing is produced as it is that audiences of pop and dance music that employs digital technology do not necessarily share those values.

On the other hand, musicians and their audiences in these latter contexts do not necessarily reject traditionalist values, either. The desire to maintain the transparent relationship between musician and audience is not limited to art music; it is also central to the ideologies of most forms of rock, jazz, blues, country, folk, and other genres of popular music. In work based on ethnographic study of Berlin club DJs, Mark J. Butler observes:

[T]o the extent that they are expected to convey liveness in performance, musicians must also communicate connections between physical gestures and resultant sounds to their audiences. This is especially important in an electronic dance music context,

¹⁸ William Forde Thompson, Phil Graham, and Frank A. Russo, "Seeing Musical Performance: Visual Influences on Perception and Experience," *Semiotica* 156 (2005): 221–224.

¹⁹ Schutz, "Seeing Music?" 85.

²⁰ For an overview of this work, see Schutz, "Seeing Music?" For a more detailed account of several experiments, see Thompson, Graham, and Russo, "Seeing Musical Performance."

²¹ University of Victoria School of Music, "W. Andrew Schloss," at <http://finearts.uvic.ca/music/faculty/Bios/aschloss.shtml> (accessed June 27, 2010).

in which many of the musician's interactions with interfaces may be invisible, and the unfamiliarity of the instruments renders their performance techniques gesturally opaque to most audience members.²²

The DJs therefore strive for “legibility” in their uses of technology. In *Liveness* I discuss the way rock's ideology of authenticity entails the audience accepting that the musicians before them, whether on stage or on record, are the agents responsible for making the sounds they are hearing (paralleling Godlovitch's analysis of classical music). Any doubt on this score (e.g., over the use of recorded material in concert [e.g., lip-synching] or session players in the studio) can discredit the music in question as authentic rock. But the authenticity of the sound cannot be verified in and for itself—audiences can effect such verification only by observing the musicians and drawing conclusions from the perceptible relationship between their actions and the sounds produced.²³

Nevertheless, even performers operating within genre contexts in which traditional values generally hold sway sometimes challenge them by manipulating the relationship between the auditory and visual aspects of musical performance in ways that go against the traditional (or traditionalist) grain. The remainder of this chapter examines one such performance practice: the use of light shows in both psychedelic rock and classical music concerts.

LIQUID LIGHT

One very direct challenge to traditionalist beliefs was the practice by a number of prominent psychedelic rock bands of the 1960s, including the Doors and Jefferson Airplane, of performing portions of their concerts in darkness, thus replicating one way people listened to records and implying that musical sound is self-sufficient and requires no visual verification.²⁴ Jefferson Airplane considered the point important enough to include the track “Turn Out the Lights” on the album *Bless Its Pointed Little Head*, a live recording made at the Fillmore East and Fillmore West in 1968. On it, members of the group can be heard imploring stage management to dim the stage lighting; their pleas become an improvised instrumental number with a corny country feel. But careful listening reveals that the group does not see performing in the dark as an end in itself. Rather, they are concerned that their audience be able to see the accompanying light show.²⁵

²² Mark J. Butler, “Playing with Something That Runs: Technology, Improvisation, and Composition in Electronic-Music Performance” (unpublished manuscript, n.d.).

²³ Auslander, *Liveness*, 91.

²⁴ Philip Auslander, *Performing Glam Rock: Gender and Theatricality in Popular Music* (Ann Arbor: University of Michigan Press, 2006), 18.

²⁵ Jefferson Airplane, “Turn Out the Lights,” *Bless Its Pointed Little Head* (RCA Records 4133-2-R, CD).

Light shows were staples of rock concerts during the psychedelic era. The Airplane engaged the services of San Francisco–based Glenn McKay; his Headlights, who had performed frequently at the Fillmore Auditorium, later known as the Fillmore West, became their exclusive light show group from 1967 through 1972.²⁶ The Fillmore East in New York City had a troupe of resident light artists under the direction of Joshua White, known collectively as the Joshua Light Show.²⁷ Clearly the Airplane wanted their audience to get the benefit of their arrangement with Headlights, but their demand for darkness also had other implications.

As a performance to which two sets of artists contribute in different media, the rock concert with light show can be analyzed as an instance of musical multimedia (IMM), for which Nicholas Cook has provided a theoretical framework. Cook distinguishes types of multimedia events according to the character of the relationships among the media. These can be of three types: conformance, complementation, and contest. *Conformance* describes situations in which other media are consistent with the music (and vice versa); *complementation*, those cases in which music and other media complete one another to form a whole expression; and *contest*, those situations in which music and other media are in conflict or competition with one another.²⁸ As Cook wisely suggests, these are not best treated as discrete categories: “A more sensitive application will distinguish between the different roles played by different media within any IMM and will categorize the relative preponderance of conformance, complementation, and contest.”²⁹

Concerts with psychedelic light shows were complex and multifaceted instances of musical multimedia. Descriptions often indicate that the movements of lights, shapes, colors, and images “were based on the underlying rhythm of the music” and established a “direct

²⁶ Jeff Tamarkin, *Got A Revolution: The Turbulent Flight of Jefferson Airplane* (New York: Atria Books, 2003), 146.

²⁷ See Gregory Zinman, “The Joshua Light Show: Concrete Practices and Ephemeral Effects,” *American Art* 22 (2008): 17–21; and Edwin Pouncey, “Laboratories of Light: Psychedelic Light Shows” and “I Never Stopped Loving the Light: Joshua White and the Joshua Light Show” in *Summer of Love: Psychedelic Art, Social Crisis and Counterculture in the 1960s*, ed. Christoph Grunenberg and Jonathan Harris (Liverpool: Liverpool University Press and Tate Liverpool, 2005), 155–162 and 163–178. For accounts that place the Joshua Light Show and related phenomena into cultural context, see Chrissie Iles, “Liquid Dreams” in *Summer of Love: Art of the Psychedelic Era*, ed. Christoph Grunenberg (Liverpool: Tate Liverpool, 2005), 67–83; and Christoph Grunenberg, “The Politics of Ecstasy: Art for the Mind and Body,” in *Summer of Love: Art of the Psychedelic Era*, ed. Christoph Grunenberg (Liverpool: Tate Liverpool, 2005), especially 21–35.

²⁸ In “Music Video and Synaesthetic Possibility,” Kay Dickinson critiques analyses that treat audiovisual formats “as a parade with one leader [rather than] a thoroughfare with two-way traffic,” in *Medium Cool*, ed. Roger Beebe and Jason Middleton (Durham: Duke University Press, 2007), 15. It is worth noting in this context that whereas Cook’s notion of multimedia does depend on clear distinctions among media and the senses to which they appeal, only the category of conformance entails “leader” and “follower” media. Contest is a condition of tension among the media making up an IMM rather than the dominance of one by another, and complementation does not imply any hierarchical relationship among media.

²⁹ Nicholas Cook, *Analysing Musical Multimedia* (Oxford; New York: Oxford University Press, 2001), 106.

link between the visual and aural effect.”³⁰ On this basis, the concerts could be described as instances of conformance, where the lights conformed to the music’s rhythmic or thematic structure. David Snyder, however, who performed as Revelation Lights, insisted that he did not want the audience to think that the lights followed the music, but rather that the lights and the music constituted simultaneous interpretations of the composition.³¹ Thus understood, the concert with light show could be an instance of what Cook describes as “triadic conformance”: music and other media are in mutual conformance with a third entity (in this case the musical composition).³²

It is also often suggested that psychedelic rock and light shows sought to enhance or simulate the experience of an acid trip. McKay states, “Even if you weren’t tripping, [the light show] gave you another trip.”³³ On “Turn Out the Lights,” a member of Jefferson Airplane jokingly threatens the stage crew to “send Owsley to get you” if the lights are not turned down, a reference to Owsley Stanley, the preeminent provider of LSD in San Francisco at the time. Sheila Whiteley describes the London psychedelic music scene: “[L]ong, improvisatory passages and electronically produced sound effects resonated with stroboscopic lighting to bring about a feeling of freedom analogous to the effect of acid: the ‘piling up of new sensations,’ the associations with changed perspectives and color.”³⁴ In this connection, the concerts could be considered instances of complementation, in which music replicated or stimulated the aural portion of the synesthetic LSD experience while light shows provided the hallucinatory visual dimension of the same experience. Performances in visual and aural media combined in the psychedelic rock concert to deliver a full replication of an LSD trip that neither could produce on its own.³⁵

Psychedelic light shows can be understood as instances of complementation even apart from the context of psychedelic drug experience, however. Headlights’ relationship with the Jefferson Airplane was unusual (at least in the United States).³⁶ Light artists

³⁰ Sheila Whiteley, *The Space Between the Notes: Rock and the Counter-Culture* (London; New York: Routledge, 1992), 28–29.

³¹ “Virgil Fox Heavy Organ,” at <http://www.youtube.com/watch?v=gIPCx3Te-BA> (accessed June 26, 2010).

³² Cook, *Analyzing Musical Multimedia*, 101.

³³ Quoted in Jesse Hamlin, “Painting Live with Light and Music,” *San Francisco Chronicle*, January 31, 1999, at http://articles.sfgate.com/1999-01-31/entertainment/17677751_1_mckay-s-work-paintings-mckay-s-head-lights (accessed June 24, 2010).

³⁴ Whiteley, *Space Between the Notes*, 33.

³⁵ It is worth noting in the present context that Whiteley takes up the question of whether Pink Floyd’s trippy “Astronomy Domine” was psychedelic in itself or depended on the presence of the light show to create a psychedelic effect. After weighing the evidence, Whiteley concludes that the song is psychedelic in purely musical terms. Whiteley, *Space Between the Notes*, 31–33.

³⁶ Barry Miles indicates that “the psychedelic light show developed differently in Britain than in the States. In America, the light-show teams operated independently, as if they were groups themselves, and would be hired to provide a show for all the groups playing that evening, whereas in Britain any band wanting a light show tended to develop their own.” *Hippie* (New York: Sterling Publishing, 2004), 170. Although this is not entirely the case, because there clearly were British light shows that worked independently for multiple bands (see Iles, “Liquid Dreams,” 79), this tendency may partly account for why Sheila Whiteley, writing on the London psychedelic scene, states that the light shows followed the rhythm of the music, while Joshua White, speaking of his work in New York, says that the light shows were “arrhythmic” (both are quoted in the main text).



FIGURE 34.2: Jefferson Airplane performing “Wooden Ships” at the Fillmore East, New York City, November 28, 1970. Source: http://www.wolfgangsvault.com/jefferson-airplane/video/wooden-ships_2146595451.html.

usually worked for the venue rather than the musicians. As the resident light show at the Fillmore East, the Joshua Light Show was employed by Bill Graham, the impresario behind the Fillmores East and West, not by the bands with whom they worked, and they provided light shows for all the artists Graham booked into the hall (except for those who refused to work with them). These light shows were not collaborations between the light artists and the musicians (although the light artists would cooperate with specific requests from the musicians), and they did not necessarily rehearse together. White emphasizes the live, improvisational, and “manual” (as opposed to automated) aspects of the lights shows and suggests that for the most part there was little effort to achieve close synchronization between the music and the lights. He describes the light show as “arrhythmic[,] and therefore it was the audience and the musicians which gave it a rhythm.”³⁷ The assumption underlying these concerts was that musicians and light artists shared a sensibility, a sense of their countercultural context, and an awareness of what their audience wanted. They all worked toward a common goal, but not through any formal alignment of sound and vision. (See figure 34.2.)

Although Cook presents his schema for musical multimedia as a quasi-objective, structuralist vocabulary for identifying relationships among the elements constituting a given IMM, I argue that the choice (or emphasis) of one of his categories over another reflects the ideology, bias, or interests of the analyst more than the inherent properties of the IMM. As the examples I have cited suggest, it seems likely that the musicians

³⁷ Quoted in Pouncey, “I Never Stopped,” 175.

and light artists involved in producing psychedelic concerts and their audiences would have considered the relationship between music and light show to entail conformance or complementation, or both. They probably perceived the lights as following or illustrating the music or the music and lights as paralleling one another (either of which is an instance of conformance), or, because the counterculture of which psychedelic rock concerts were a part emphasized synesthetic experience, they may have understood the aural and visual media to be working together to create a total event, whether the event was understood as a simulation of an LSD trip or as a celebration of countercultural aesthetics.

From the traditionalist perspective I have described here, however, the psychedelic rock show can be understood only in a quite different way: as an instance of *contest* between the aural and visual elements of the concert. This characterization derives not from the relationship between these elements, but from the nature of the visual elements themselves. A traditionalist presumably would have no objection to a performance in which the visual and musical elements conformed to one another or complemented one another; in either case, they would be working together to communicate musical information, as long as the visuals in question were “musically relevant.” In psychedelic light shows, however, musicians’ performing bodies were interwoven with moving images, colors, and patterns, some abstract and some representational, in ways that obscured their gestures and facial expressions.

For the sake of historical accuracy, it is important to distinguish the early light shows in San Francisco from slightly later East Coast practices. In mid-1960s San Francisco, where musical performances by psychedelic rock bands were staged as dances rather than concerts, the light shows provided immersive visual environments that suffused musicians and audience alike. Later East Coast light shows, especially at the Fillmore East, relied more on rear projection on screens that appeared behind the musicians and obscured them less.³⁸ In the former case, the light show erased the musicians’ gestures and facial expressions; in the latter, the light show provided distracting, spectacular competition for the musicians. The effect of distraction was intentional. Joshua White attributes his opportunity to create light shows at the Fillmore East to Bill Graham’s decision “that the audience needed to have something to look at besides a bunch of musicians in street clothes tuning up.”³⁹ In both cases, even if the visual effects followed the rhythm or structure of the music and thus conveyed musical information to the audience, the light show also inevitably impeded the

³⁸ Joshua White ascribes the origins of the East Coast light show to a weeklong event in Toronto in 1967 for which Bill Graham wished to re-create the San Francisco scene. The venue, however, was a traditional proscenium theater rather than an open ballroom like the Fillmore Auditorium. Graham approached White and his company about devising a way to re-create the ballroom atmosphere in a conventional theatrical space, which White accomplished through the use of rear projection on the stage and atmospheric lighting in the auditorium. Although White did not provide the actual light shows for this event, he became immersed in their imagery through his involvement. Ultimately it was from the adaptation of the techniques and imagery of the San Francisco light show to a theater space primarily through the use of rear projection that the East Coast light show was born. See Pouncey, “I Never Stopped,” 167–169 and Del Signore, “Joshua White, the Joshua Light Show.”

³⁹ Quoted in Del Signore, “Joshua White, the Joshua Light Show.”

audience's ability to see or focus on the very things valorized in the traditionalists' model of musical performance: the musicians' physical actions in producing the sound. Audiences were thus deprived of what traditionalists believe they need to perceive the musicians' effort and skill and to verify the authenticity of their performance. The light show was guilty of the same crime of which traditionalists sometimes accuse music videos: "substituting the gestures of a performer with other visual content necessarily changes perceptual and affective co-regulation, distorting and diluting the communication between performers and listeners through a literal distancing of the performer from his or her audience."⁴⁰

Although I am framing the rock concert with psychedelic light show as a performance practice that challenged the traditionalist view of musical performance and the values inherent in it, it is difficult to determine with certainty whether psychedelic rock bands like Jefferson Airplane understood their own use of light shows as a statement of defiance against such a view or were simply adhering to the performance conventions of their genre, social milieu, and historical moment. There is evidence of some tension surrounding the recourse to visual spectacle within psychedelic rock. Chuck Beale, lead guitarist for the Canadian band The Paupers, was quoted as saying, "We are trying to create a total environment with sound alone . . . Sound is enough. We don't use lights or any gimmicks. When we record we don't double track or use any other instruments. What the four of us can do is the sound we make. That's all."⁴¹ This remark was probably directed at the Airplane, whom The Paupers reportedly outplayed when they shared a bill at the Café Au Go Go in New York City in 1967. It suggests that the community of psychedelic rock musicians was not monolithic, that there were factions, including a traditionalist faction that dismissed "musically irrelevant" visuals alongside recording studio trickery in favor of focusing on the musicians, the sound, and their unvarnished skill in creating it.

During the psychedelic era, from the mid-1960s through the early 1970s, light shows were not restricted to rock concerts: both the Joshua Light Show and Headlights worked with classical musicians as well. The organist Virgil Fox, a Bach specialist, began a series of what he called "Heavy Organ" concerts with a performance at the Fillmore East in 1970; the show also featured Joe's Lights, an offshoot of the Joshua Light Show. In 1971 Fox toured the Heavy Organ with Pablo Lights and performed with them at Winterland in San Francisco. In 1972 he teamed up with Revelation Lights. Posters for Fox's concerts gave the light shows equal billing, in the manner of contemporaneous posters for rock concerts; Fox also brought David Snyder, the "lumierist" (as he called himself) behind Revelation Lights, out on stage for a bow at the end of the concert. Fox made several live Heavy Organ recordings during this period, including *Bach Live at Fillmore East* (1971) and *Bach Live in San Francisco* (1972), recorded at Winterland. Whereas the sleeves of many of Fox's earlier albums (he began recording in 1941) had the staid look associated

⁴⁰ Thompson, Graham, and Russo, "Seeing Musical Performance," 222.

⁴¹ Quoted in Michael Lydon, *Flashbacks: Eyewitness Accounts of the Rock Revolution 1964–1974* (New York; London: Routledge, 2003), 26.

with classical music, the sleeves for the *Bach Live* albums looked like they were designed for rock albums and partook of the visual styles associated with the counterculture. The cover for the album recorded at Winterland even listed Pablo Light Show as part of its title.⁴²

Whatever the precise motivations of the psychedelic rockers who chose to intertwine their music and bodies with powerful visual effects, it is clear that Fox's reconfiguring of the classical organ recital as a rock concert, including his use of light shows and his embrace of countercultural visual style, was a gesture of rebellion against the performance conventions of a musical genre in which traditionalist values held sway. Addressing an audience, he declared himself to be "in open warfare with a gang of creeps who call themselves purists."⁴³ He regularly used the language of drug experience to describe his concerts, calling them "trips." During a Boston Pops concert in 1974 that was broadcast on PBS, he held up his experiences at the Fillmore East and Winterland as models of what a concert should be, saying, "This is the kind of a trip where there is bright sunlight, magnificent uplift, true inspiration." He encouraged the Pops audience to clap along with Bach and dance in the aisles, as had the "kids" at the Fillmore East and Winterland, and the audience obliged.⁴⁴

Although Fox's insertion of rock showmanship into the performance of classical music is an example of a musician intentionally using the visual dimensions of performance to challenge both traditionalist tenets regarding what counts in musical performance and the cultural position of classical music, it is somewhat ironic that Fox was an organist, because historically organists had always been at a disadvantage in meeting traditionalist criteria for performance. D. C. Somervell describes the organist's predicament (with tongue firmly in cheek) in an essay of 1943 entitled "The Visual Element in Music": "Here . . . there is nothing to see. The organist is hidden away in the organ-loft and even if you could see him you would not get much idea of what he was doing. The great stacks of organ pipes stand as impassive as ever. There is a grand impersonality about organ performance."⁴⁵ Somervell's description suggests that since organists are generally invisible and their playing does not reveal clear cause-and-effect relationships between visible effort and auditory output anyway, they cannot provide the kind of performance described by Schloss and Godlovitch.

Fox's solution was to perform on a Rodgers electronic touring organ (called "Black Beauty" and at two tons, the "heavy organ" of the concerts' collective title) that was specially designed and built for him. This technology enabled him to perform in halls like

⁴² The information in this paragraph derives from several sections of The Virgil Fox Legacy Web site, including "Biography," "Chronology," "Discography," and "Virgil Fox Promotional Materials," at <http://www.virgilfoxlegacy.com> (accessed June 26, 2010).

⁴³ "Virgil Fox Heavy Organ," at <http://www.youtube.com>.

⁴⁴ "Virgil Fox Legacy |Bach| Gigue Fugue|Virgil Fox Legacy |Bach| Gigue Fugue|Virgil Fox Legacy |Bach| Gigue Fugue," at <http://www.youtube.com>, [<http://www.youtube.com/watch?v=ogRBCAdC7wI&feature=related>] (accessed June 26, 2010).

⁴⁵ D. C. Somervell, "The Visual Element in Music," *Music & Letters* 24 (1943): 47.

the Fillmore East or Winterland, which did not have built-in pipe organs, and to place his instrument downstage at an approximately 55-degree angle to the edge of the stage so that his hands were as clearly visible as possible as he worked the keys and stops. This, coupled with his flashy attire (a 1974 article in *Time Magazine* draws attention to the “overblown poppies bloom[ing] in Oriental splendor in the organist’s iridescent paisley jacket” and “his rhinestone-decorated black suede shoes”) and special effects, such as his disappearing “in a puff of smoke” at the concert’s end, places Fox alongside Liberace (with whom he once shared billing on a television program), Jerry Lee Lewis, Keith Emerson, Elton John, and Lady Gaga, among others, in the lineage of flamboyant keyboard artists, a category usually restricted to those performing in rock and pop.⁴⁶ Embracing the conventions of rock performance, Fox brought the organist out of the loft and into the spotlight, an act that in itself aligned performance on that instrument more closely with traditionalist values. However, his use of psychedelic visual effects to challenge what he saw as overly rigid conventions of interpretation and performance decisively distanced his Heavy Organ performances from traditionalist values.

CONCLUSION

It is clear that technological change is the backdrop for the audiovisual economy of musical performance described here. Technologically driven developments that have challenged traditionalist values, which emphasize the importance of maintaining clear cause-and-effect relationships between the visual and auditory aspects of musical performance, include sound recording, radio broadcasting, and the use of computers and digital instruments in live performance, as well as such recent cultural forms as music video and air guitar. On balance, the evidence suggests that traditionalist anxiety about these developments is misplaced. However much the aesthetics of current popular music performance seem to be dominated by pure visual spectacle, the traditionalist belief that we require visual verification of musical sound maintains its ideological grip. As new ways of making music arise, their practitioners more often than not find ways to assimilate them to traditionalist values. This is evident on one side of the debate about computer music with which I began. As a further elaboration of that example, consider an e-mail invitation I received on January 9, 2010, to an evening of live-coded music at the Anatomy Museum, King’s College, London. The invitation explains, “Live coders expose and rewire the innards of software while it generates improvised music and/or visuals” (live coding is also called “on-the-fly programming”).⁴⁷ The invitation goes on to assure us, “All code manipulation is projected for your pleasure,” making it clear that

⁴⁶ “Music: Heavy Organ,” *Time Magazine*, January 7, 1974, at <http://www.time.com/time/magazine/article/0,9171,910977-1,00.html> (accessed June 30, 2010).

⁴⁷ Princeton University Computer Science, “On-the-fly Programming: Using Code as an Expressive Musical Instrument,” at <http://on-the-fly.cs.princeton.edu/> (accessed June 30, 2010).

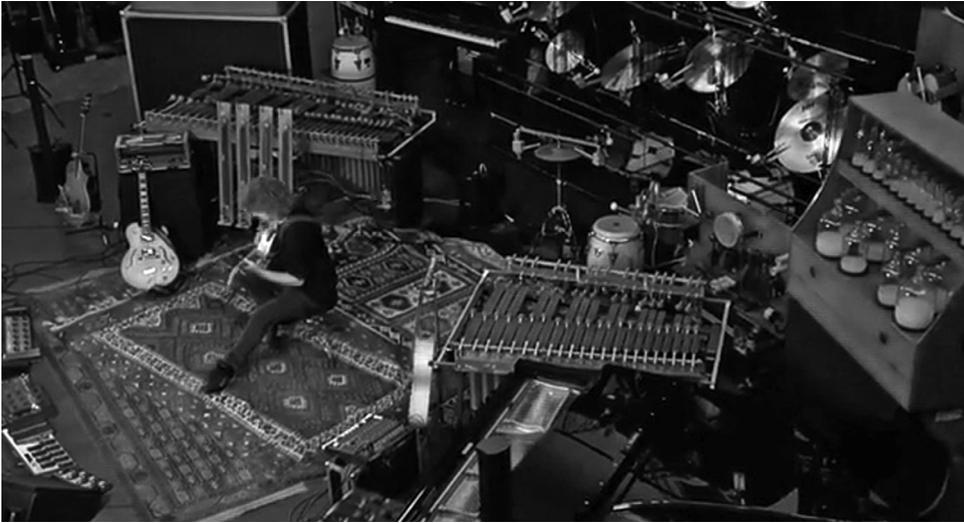


FIGURE 34.3: Pat Metheny and The Orchestrion. “Pat Metheny—The Orchestrion EPK.” Source: <http://www.youtube.com/watch?v=9VymAn8QJNQ>.

even in this rarefied, technologically advanced musical context, the traditional assumptions hold sway: the audience must be *shown* how the sound is made in whatever way possible.

Much the same issue arose recently about jazz guitarist Pat Metheny’s performances with the orchestrion, an elaborate array of robotic musical instruments, primarily stringed and percussion, that he developed, controlled by a computer and MIDI interface, which accompanies his guitar playing. (Metheny is the only “human” performer onstage at these concerts; see figure 34.3.)⁴⁸ Ben Ratliff’s review of Metheny’s 2010 orchestrion concert at Town Hall in New York City interestingly traces the way the concert appeared to be structured to clarify what was going on for an audience steeped in traditionalism. Ratliff begins by noting that Metheny played solo guitar at first, something his audience was used to and in which the visual cause-and-effect relationships between what he was doing and the sounds produced were clear. Suggesting that the audience would have “riot[ed]” had Metheny not provided it with some understanding of what was going on, Ratliff notes that he moved into a section of the concert in which “it seems that the specificity of your attack on the guitar—whether and how you strum a chord or pick a note—determines the texture of the orchestral sounds that result from it. How it all works remains unclear, but the audience understands it better It’s quite possible that a listener is thinking, for the first time that evening, ‘I could do that.’”⁴⁸ Ratliff’s description implies that to make his performance using unfamiliar music

⁴⁸ Ben Ratliff, “If Not 76 Trombones, Everything Else a One-Man Band Can Handle,” *New York Times*, May 23, 2010, at <http://www.nytimes.com/2010/05/24/arts/music/24metheny.html> (accessed June 30, 2010).

palatable to a traditionalist audience, Metheny followed Schloss's suggestion, quoted previously, that he provide "a visual display of input parameters/gestures" to clarify the relationship between gesture and sound and allow the audience to believe it understood what was going on.

Although there is no reason to suppose that traditionalist values will be dethroned in musical performance any time soon, consideration of the historically uneven relationship between sound and vision in musical performance shows that the "audiovisual" is not to be understood in this context as seamlessly unified, but as syncretic, and probably better rendered as "audio-visual" or "audio/visual." In the cultural contexts of rock, classical, jazz, and computer music to which I have referred here, the audiovisual is always divided into two tracks, which are treated as discrete and can be placed in various relationships to one another. These relationships are configured as power relationships, in which one track is thought to dominate and set the context for the other. The traditionalist position, which remains dominant, entails a complex relationship between these tracks. On the one hand, the sound is thought to be the more important track, because the goal of the performance is precisely to play the music. On the other hand, sound alone is incapable of providing the audience with all of the information it needs to assess the musician's skill and effort; it is thus dependent on the visual track for verification. In that sense, the true locus of power is in the visual track, and it is this track that the musicians I discussed here who sought to challenge traditionalist values and performance conventions manipulated by using lighting effects, including darkness and psychedelic light shows, that both obscured their own actions as they produced musical sound and allowed spectacular visual effects to dominate their performances.

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