

Film Sound — All Of It

In the Introduction to *Sound Theory/Sound Practice* I called for a treatment of “Cinema as Event.”¹ I suggested that we consider cinema not as text alone, nor even as text plus reception, but as a three-dimensional *event* occupying space and time within a multi-dimensional culture. While that exhortation has attracted a certain amount of attention from Tom Gunning and others, no systematic attempt to revise our critical praxis has grown out of the notion of cinema as event. This article is an attempt to put some teeth in the claim that cinema must be treated as a full-fledged event. The article is divided into four parts. I begin by suggesting that our current definition of film sound is overly narrow, inherited as it is from a text-oriented tradition. Instead of one type of sound, we should be considering at least four different categories of sound. I then provide a historical overview of legitimate theater design from the standpoint of audience sound. A third section treats theater soundscape changes over the course of film history. Finally, I consider appropriate ways to theorize film sound when it is redefined to include the entire soundscape of cinema as event.

Four Types of Film Sound

In the past, the term “film sound” has always meant the sound produced by, for, or with the film. In other words, we have regularly taken for granted that our topic is the sound that accompanies the film, the sound that is part of the text, the sound authored by the same industry that authored the film. By accepting this restricted definition of our object of study we have not only unduly limited the range of our possible conclusions, but we have inadvertently supported one of the film industry’s most important but self-serving tenets: that among all the sounds produced in and around a movie theater, only the sound produced by and for the film is fully worthy of attention. Instead of limiting our analysis to this restricted version of film sound, let us instead attend to all the sounds produced in connection with film exhibition. Only by expanding our definition of film sound can we hope ever to understand the industry’s investment in restricting our attention to its own utterances, and our interest in refusing that restriction.

Once our definition of film sound has been expanded, film sound as traditionally understood takes its place as one of four sound categories associated with film exhibition and consumption. Inside the theater, the *sound of the film* is complemented (and sometimes rivaled) not only by *audience sounds* but also by *the noise of the apparatus* that serves as vehicle for the film. The category of apparatus noise includes not only the hum of the projector, but also the sounds made by fans, air-moving systems, overloaded loudspeakers, and even ushers, squeaky seats, or noisy floors. In addition to these three types of interior sound, film exhibitors once produced a substantial level of *advertising sound* outside the theater. Thus, four different modes (and sources) of sound: textual accompaniment, apparatus, and audience sound on the inside, and advertising sound on the outside.



Fig. 1

Known during the nickelodeon period as "ballyhoo," sounds directed by exhibitors into the street were so common, and so loud, that they had to be outlawed in many cities. Inherited from the dime museum and film's fairground family history, ballyhoo included everything from a barker's patter to the beating of a big bass drum. Many early theaters simply extended the projection booth phonograph horn through the wall above the ticket booth, so that recorded music could be played directly into the street (figure 1 — Grand Theatre; Buffalo, NY (c. 1906)). An alternative approach was simply to put an automatic piano or orchestra in the entrance. Today we wouldn't think of selling our wares — either films or lectures — through these ballyhoo techniques. Outlawed, avoided, and repressed, overt advertising and open recognition of cinema's commercial status no longer defines cinema sound. Instead, in most places the direct interpellation that once characterized exterior ballyhoo has been folded into interior accompaniment. Cinema's carnival precedents are now hidden, as it were, behind film's carnal events.

During the early years of cinema, apparatus noise and audience sounds often clashed. As I have shown in a recent article,² musical accompaniment was by no means an obligatory feature of early film exhibition. Instead, the sound of babies crying or people talking regularly competed with the sound of the projector. In 1907, Barton W. Currie voiced his frustrations at the noise of so many crying babies:

Of course, they were in their mothers' or the nursegirls' arms. But they were there and you heard them. They didn't disturb the show, as there were no counter-sounds, and many of them seemed profoundly absorbed in the moving pictures.³

Just as ballyhoo's commercial discourse was soon dissimulated by an industry anxious to play up its cultural and aesthetic contributions rather than its financial revenues, so all signs of material authorship were soon suppressed by a campaign to silence the sounds of the film apparatus. Projectors were hidden in fireproof booths, fans were overhauled, floors were carpeted, seats were bolted down and oiled. By the time the film industry discovered feature films in the teens, it had already done away with virtually all audible evidence of its material investments and its commercial existence.

The demise of apparatus noise and advertising sound is of course not an ineluctable natural phenomenon. On the contrary, the silencing of all sounds not produced as a complement to the image helps us to recognize the stakes involved in the cinema industry's eventual reduction of all theater sounds to the one type that we now think of as film sound. Nowhere is the industry's purpose clearer than in the systematic silencing of the audience. In no other case is it quite as easy to recognize the ideological dimension of our own habitual reduction of film sound to accompaniment sound alone. But the relationship between spectacle and spectator has a long history; in order to understand the broader importance of film sound configurations, it is necessary to understand the changing role of the audience in the overall conception of theatrical space and activity.

Four Modes of Theatrical Organization

Renaissance, neoclassical, romantic, and modern theaters display interesting differences, along with a clearly identifiable progression. The Renaissance application of perspective principles to theater set design went hand-in-hand with a new organization of spectatorial space. Based on the one-point system of perspective, theatrical sets clearly privileged the spectator location corresponding to the set's perspectival center (figure 2 — Set from *La Caduta delle Amazzoni*; Rome, Italy (1690)). From that spot alone would the set design appear fully coherent and logical. Furthermore, sets were sometimes designed with receding corridors that assured privileged vision and knowledge to the persons sitting at their point of intersection (figure 3 — Teatro Olimpico; Vicenza, Italy (1584)). Special attention was thus paid to the single spectatorial location that could guarantee full knowledge and understanding. That privileged spot would of course be reserved for the local prince — patron and sponsor of the theatrical event. With the prince sitting at the focal point, the stage set's perspective was anchored,

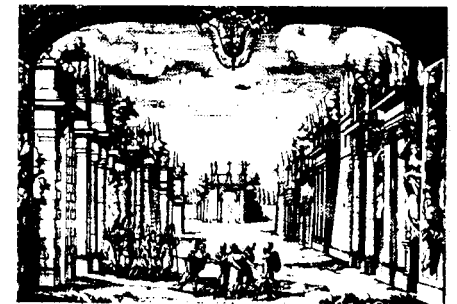


Fig. 2

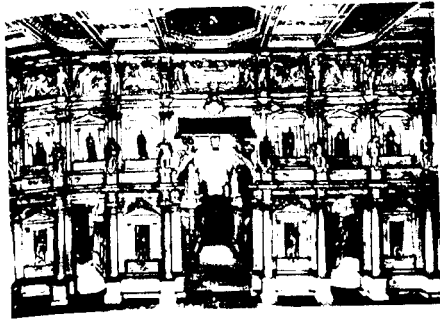


Fig. 3

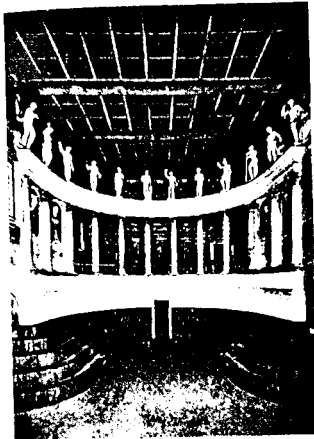


Fig. 4

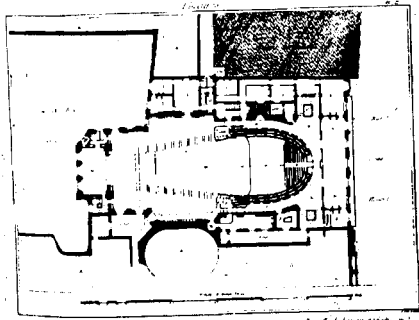


Fig. 5

and as it were justified, by the prince's presence and location. As Stephen Orgel puts it, "what the rest of the spectators watched was not a play but the queen at a play." Or when James I succeeded Elizabeth, "The king must not merely see the play, he must be seen to see it."⁴

Increasingly, theaters were thus built around two poles: on one end the stage, opposite it the raised and ornate royal box. While few boxes dominate their theaters as completely as at Sabbioneta (figure 4 — Teatro Scamozzi; Sabbioneta, Italy (1590)), virtually all such spaces are large enough to accommodate multiple individuals and movable chairs — the commodities of conversation, as the French used to say under the Old Regime. Considered from the standpoint of sound, the Renaissance theater established a clear opposition between stage dialogue and royal conversation. Audience noise was not only permitted, but in a sense required, since the prince's word was necessary to set the drama in motion, while verbal interchanges among the royal visitors constituted an essential part of the evening's entertainment.

Neoclassical theaters intensified this arrangement in two important ways. Seventeenth- and eighteenth-century stages were often deeper than the theater's seating area, creating substantial viewing difficulties for spectators located in the side boxes, thus enhancing the prestige of the panoptical royal box (figure 5 — Ground plan of the Palais Royal Theatre; Paris, France (from Diderot and d'Alembert's *Encyclopédie*, 1772)). This fusion of temporal and aesthetic power was often symbolically expressed by sumptuous ornamentation. Indeed, so much prestige was attached to the royal box and its activities, that all the other boxes were arranged to make it just

as easy to follow drama in the royal box as to view the action on the stage. The resulting horseshoe shape gave spectators a full view of all other boxes, in most cases much better than their view of the stage (figure 6 — Boxes of the Teatro San Carlo; Naples, Italy (1768); figure 7 — Royal box of the Teatro San Carlo; Naples, Italy (1768)). The greatest prestige was of course associated with boxes located within earshot of the royal conversation. In a hierarchical world where value was based on the closeness of one's family connections to the sovereign, it is hardly surprising to find that allocation of theatrical space followed a similar logic. Alternately, noble spectators would actually be allowed to sit on the stage itself, thereby overtly recognizing their own role as spectacle for the lesser nobility.⁵

Theater sound as well was impacted by the horseshoe theater. With lines of sight to the stage far less important than direct access to the boxes of prominent families, the theater was constantly abuzz with talk about the social realities that it existed to display and maintain. Whereas the Renaissance theater was set in motion by the prince and literally reflected the prince's position through perspectival markings, the neoclassical theater was justified by and reflective of the nobility and its social structure. In a very real sense, seventeenth- and eighteenth-century theaters existed in order to set audience dialogue in motion, just as Renaissance theaters served to demonstrate the princely patron's godlike ability to conjure up theatrical representations simply by speaking a single creative word.

With the romantic period came a new set of problems and a new source of spectator sound. Though many nineteenth-century theaters, like New York's Metropolitan Opera (figure 8 — Metropolitan Opera; New York, NY (from the *Daily Graphic*,

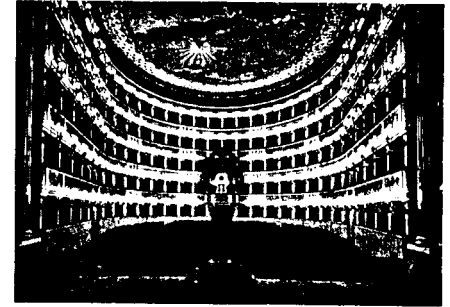


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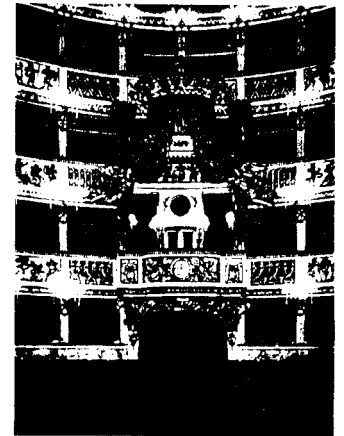


Fig. 7

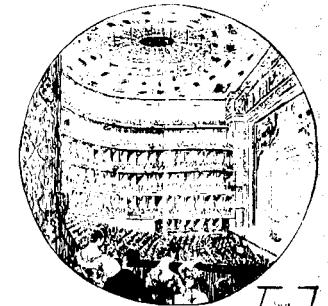


Fig. 8

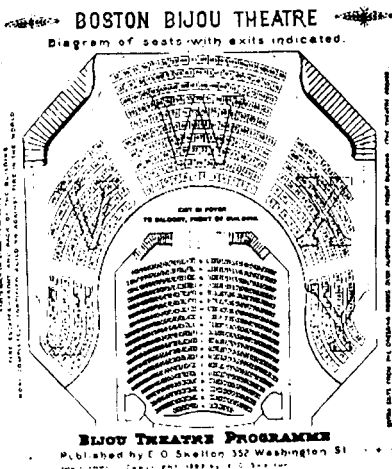


Fig. 9

performance rather than through permanent ownership of a family box. Emulating the seating plan of Wagner's 1876 Bayreuth Festspielhaus, theaters like the Boston Bijou (figure 9 — Seating diagram of the Boston Bijou Theater; Boston, MA (1883)) modified the familiar horseshoe arrangement, with individual numbered seats in the orchestra (and, in this case, a balcony as well), all turned directly toward a far shallower and thus fully visible stage.

In the past, prestige had been attached to the boxes located closest to the prince; translated into ticket prices, prestige would now be defined by closeness to the stage, that is by assurance of the ability to see and hear the stage spectacle adequately. Whereas the old system facilitated the grouping of already acquainted spectators — families and their guests in the boxes, the lower classes in floor-level standing room areas — the new system put strangers next to each other. While pricing structure guaranteed that the classes would not be radically mixed, numbered tickets and rows of individual seats regularly positioned patrons next to unknowns. The silencing effect of this system's anonymity can hardly be considered a coincidence. A major purpose of nineteenth-century theater designers was to concentrate attention on the stage, at the expense of conversation and other audience sounds.

The importance of stage activity was further enhanced over the course of the last century by the rise of virtuoso musicians and theatrical stars, from Paganini to Paderewski and from Franz Liszt and Anton Rubinstein to Jenny Lind, Sarah Bernhardt, and Lillie Langtry. Here we witness a major transition in power, in spatial valuation, and in their sonic consequences. The Renaissance situation located all power with the patron, the prince, the worldly potentate. With the rise of the virtuoso, however, the

1883)), retained multiple levels of conversation-encouraging boxes, three trends conspired to undermine aristocratic control of theatrical space and sound. In the past the floor of the theater had been allocated to the lower classes, often as standing room. The unruliness of this crowd became so problematic during the age of revolutions that individual fixed seating was regularly installed, turning the "pit" into the "parterre," "parquet," or what we now call the "orchestra." During the same period, the triumph of capitalism led to reevaluation of theatrical seating. Henceforth, space would be allocated according to spectators' ability to pay for a single

situation was virtually reversed. The presence of royalty must now be explained by the presence of star performers, rather than vice versa. Power now emanates from the stage, rather than from the royal box. Previous configurations allowed continuous conversational activity among socially privileged and clearly differentiated spectators: with stars and virtuosos the only appropriate audible reaction is applause, a uniform recognition of performer power and spectator homogeneity in the face of genius and stardom, the new sources of significant differentiation. It is no wonder that, as James H. Johnson has shown in his fascinating *Listening in Paris: A Cultural History*,⁶ the noisy activities of Old Regime audiences were transformed in the post-revolutionary era to a new reverence, a new desire for careful listening, and thus to a new silence.

In this country, however, audiences were slow to adopt new standards of silent spectatorship. At the turn of the nineteenth century, audience activity was so important that newspapers often reviewed the audience as well as the performers. As late as 1853, a New Orleans judge ruled that the purchase of a ticket conferred a legal right to hiss and stamp in the theater. A decade later, the American composer Louis Moreau Gottschalk complained of "animated conversation all the time I was playing." Even the upper classes got into the act. At the Metropolitan Opera, a society leader might break the monotony of a lengthy program by distributing the contents of a picnic hamper to her guests. Active audiences remained the order of the day, whether in the concert hall, the theater, or the museum. The highest level of the theater, the home of the so-called "gallery gods," was an especially spirited source of spectator activity, including not only applause, but stamping, hissing, roaring, whistling, and verbal commentary as well. As evidenced by the 1849 Astor Place Opera House riot in New York City, mid-century American audiences believed it was their sovereign right as theatergoers to retailor the program to suit their tastes. The relationship between actors and spectators at that time still included a strong measure of give and take.

In reaction, the final quarter of the nineteenth century witnessed a stern disciplining of audience conduct, carefully delineated in recent books by Lawrence Levine and John F. Kasson.⁷ During the 1870s, New York Philharmonic president George Templeton Strong initiated a campaign against audience unruliness. Even before he became the first conductor of the Chicago Symphony Orchestra, Theodore Thomas gained a reputation for admonishing audiences. Once, during a Central Park concert, he was annoyed by a front row wag who, try as he might, proved unable to light his cigar. After multiple interruptions, Thomas stopped the orchestra, turned around, and ironized: "Go on, sir! Don't mind us! We can all wait until you light your cigar." While conducting Mendelssohn's *Midsummer Night's Dream*, Thomas gave the signal for a long drum roll during which he stared down a couple that had been chatting; only when their conversation ceased did he give the signal for the orchestra to resume. In this century, Arturo Toscanini would rap with his baton until whispering stopped at the Metropolitan Opera. Pierre Monteux would tap on the podium to quiet the Boston Symphony

Orchestra audience. Leopold Stokowski actually lectured Philadelphia Orchestra audience members about their various faults. When an unhappy audience erupted in hisses during a performance of Schoenberg, Stokowski stridently demanded his right to freedom of expression. Applause alone remained as an acceptable audience activity. But even applause was not acceptable at all times. Stokowski led the charge against the nineteenth-century practice of treating arias or movements of symphonies as individual units that could be responded to separately. Indeed, he actually asked for a referendum on abolishing applause from the concert hall entirely. In the world of popular theater, a similar audience control movement was initiated by Tony Pastor and continued by F. F. Proctor and B. F. Keith.⁸

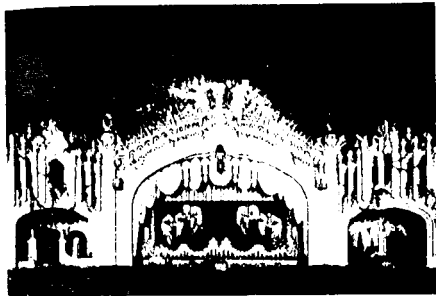


Fig. 10

the seats would commonly be fixed and arranged according to a modified radial pattern, with seats angled toward the stage. This fan-shaped arrangement reached its peak with the picture palaces of the nineteen-twenties (figure 10 — Paradise Theatre; Chicago, IL (1928)).

Note that the democratizing impulse apparently embodied in the visual design of twentieth-century theaters hardly seems devoted to the cultivation of free speech. Though sight lines are enhanced, the audience's freedom of expression is actually diminished. Spectators are no longer gathered into small groups, as they were in private boxes. Seating is no longer mobile, as it always was in the box system. Spectators are no longer turned toward each other, as they were in horseshoe theaters. Audience members can no longer see each other, as they could in the antebellum period, since house lights are now regularly lowered during the performance, thus concentrating attention on the performers.⁹ Everything is done to assure a quiet house, one whose carefully separated temporary inhabitants will make noise only in appropriate response to the stage or screen.

Silencing the Film Audience

Today we take it for granted that the film medium was created as a commercial device designed to permit projection of images to paying audiences. We readily assume

Ironically, while arbiters of taste were actively squelching audience freedom, theater design continued an anti-aristocratic democratizing trend, not only in so-called legitimate theaters, but also in spaces designed for film viewing. All seats would henceforth be aimed in the same direction, all eyes and all ears directed toward the same spectacle. In nickelodeons, all rows were typically parallel. In purpose-built film theaters,

that films are in an important way the direct heirs of nineteenth-century realist novels. Yet the early history of cinema belies these common assumptions. As Tom Gunning has recently demonstrated,¹⁰ the Lumière brothers originally conceived their cinematograph for an amateur market, as a proto-camcorder destined to take pictures of "baby" and "a game of cards with the neighbors" or "the train you arrived on last summer" and "our friends at the factory." In other words, one version of cinema began as an extension of face-to-face folk activity, just as radio began as a walkie-talkie-like point-to-point medium, carrying personal messages from ship to shore, or between individuals known to each other. Before they became a mass entertainment medium, moving pictures constituted an illustrated extension of the letter and a storable version of face-to-face contact. Initially conceived as memories of real experiences, films were designed to be shown to friends of the figures on the screen. As such, they were clearly designed to elicit verbal reactions; rather than an end in themselves, they were part of a discursive scenario, a dialogue in which the audience plays one role, an interaction inviting spectators to speak as well as to hear.

In the exhibition practice of American traveling exhibitors, Lumière's original vision was partly realized. In 1904, for example, each of the four Vitagraph touring companies had an advance cameraman who would film townspeople ten days before the main company arrived. "You can see pictures of your very own town, your very own fire department, and what is more, you can see yourself," the ads proclaimed.¹¹ No Renaissance prince ever had it better! Just as one-point perspective projected the prince's apparent vision directly onto the stage set, Vitagraph's advance man made sure that the upcoming film exhibition would confirm the upstate shop owner's sense of his own identity. Of course the film alone is only the beginning of the experience — films like these are meant to elicit recognition on the part of the crowd. Verbal confirmation is required to give these images full community saliency.

Much attention has been paid to the spectacular, declarative, discursive nature of the so-called "cinema of attractions," but we need to recall that Benveniste's *discours* is a two-way affair: to the *je* of the cinema of attractions corresponds the *tu* of audience response. For film audiences of the first decade, virtually every film constituted an extension of this reflective technique. Films of familiar events offered opportunities for spectators to express recognition. Filmed news mirrored the spectator's world, thus engaging the audience and eliciting verbal reaction. Even Passion Plays and early narratives systematically depended more heavily on familiarity than on the narrative's self-contained logic. But purely discursive filmmaking would soon be abandoned as the industry's primary practice, in favor of a new type of narrative filmmaking, inviting viewers to identify with characters rather than to react on the basis of their own specificity. This shift would herald many changes in the industry, not the least of which involved audience activity.

When cinema first came on the scene, American popular theater enjoyed an active tradition of interaction between performers and the audience. In beer gardens, minstrel

shows, Chautauquas, amusement parks, circus sideshows, Wild West shows, burlesque, and vaudeville, audiences were expected to laugh, to sing, to speak, to comment, even to argue. Early film audiences followed directly in this tradition. Babies cried, mothers talked, men conversed. From uptown to the Bowery, spectators translated the intertitles, explained the action, and discussed its meaning. As W. Stephen Bush put it in 1909,

Take any dramatic or historic picture: in fact, almost any picture . . . Stand among the audience and what do you observe? As the story progresses, and even at its very beginning, those gifted with a little imagination and the power of speech will begin to comment, to talk more or less excitedly and try to explain and tell their friends or neighbors. This current of mental electricity will run up and down, wild, irregular, uncontrollable.¹²

Not yet gentrified, nickelodeons were marked by discursive sound practices that recalled the interactive modes of earlier popular theater. All over America, audiences sang illustrated songs, often adding their own irreverent lyrics. Narrators addressed the audience directly, pianists invited spectators to join in the chorus, performers recorded by early sync-sound systems looked the camera — and thus each audience member — straight in the eye.

In 1915, at the very end of the nickelodeon era, Vachel Lindsay could still imagine the possibility of what he called “Conversational Theatre.” In his treatise on *The Art of the Moving Picture*, Lindsay urged exhibitors to distribute cards encouraging patrons “to discuss the picture with the friend who accompanies you to this place.”¹³ Though Lindsay’s “Conversational Theatre” never materialized, the very idea serves to remind us of what cinema might have been. During the Russian Revolution, agit-trains used films as a catalyst for political discussion and activity. Establishing an often imitated third-cinema practice, Fernando Solanas and Octavio Getino interrupted their 1968

Hour of the Furnaces to elicit viewer discussion and debate. When we limit our notion of film sound to sound emitted by the film industry, we tacitly acknowledge the failure of — or our lack of interest in — this collaborative and audience-involving conception of filmmaking and exhibition. For all of the recent attention to the gentrification and feminization of nickelodeon audiences, it is about time we recognized that the silent film era’s main transformation was the silencing — and thus the disenfranchisement — of the audience. Ironically, it was at the very height of the movement to democratize the visual aspects of theater space that a concerted effort was made to silence the audience, thereby de-democratizing the theater soundscape.

Interestingly, the process of squelching audience sound involves a double disguise, a careful concealment of film music’s source as well as its logic. In nickelodeon theaters, the



Fig. 11

piano and sound effects were usually fully visible. When the pianist was replaced by an automatic instrument, like Wurlitzer’s PianOrchestra (figure 11 — Rudolph Wurlitzer Co. advertisement (*Moving Picture World*, January 22, 1910, p. 107)), the photoplayer was located front and center, right beneath the screen. In this early period, not only did the source of film sound remain fully visible, but the choice of film music clearly remained in local hands — to the point where patrons could even influence the pianist’s selection or the choice of piano rolls. By the mid-teens, however, music selection was increasingly dependent on cue sheets distributed with each film by the producing company.

As music authorship left local hands, so the film orchestra, fully visible at stage height during the overture, receded into the pit during the film. At the height of the silent film period, both the organ and the orchestra, and sometimes even the piano, had separate lifts, making it easy to hide the source of the music. When Hollywood converted to sound, this dissimulation became even easier. Though loud speakers were at first split between the now empty orchestra pit and the stage (figure 12 — Cross-section of a 1927 theater equipped with Vitaphone “A” Equipment (H. M. Wilcox, “Data for Projectionists on Operation of Vitaphone,” *Exhibitors’ Herald*, May 9, 1927, p. 12)), they were eventually firmly established behind the screen (figure 13 — Western Electric advertisement showing a cross-section of a 1929 Vitaphone-equipped theater (*Saturday Evening Post*, July 13, 1929, p. 111)), offering an invisible and as it were unauthored sound source.

The physical concealment of sound sources is matched by an even more powerful implicit attribution of film sound authorship to the film itself. Before 1910, film music was often chosen from the hit parade of current popular songs, often matched to the film by title or lyrics.¹⁴ During the early teens, however, film producers systematically campaigned to abandon popular music in favor of wordless light classical compositions matched to the film by rhythm, harmony, and emotive connotations.¹⁵ As critics like *The Film Index*’s Clyde Martin and *The Moving Picture World*’s Clarence E. Sinn recognized, popular songs depended on audience knowledge and tended to induce singalongs and rowdy behavior, whereas purely instrumental music could be counted on to carry

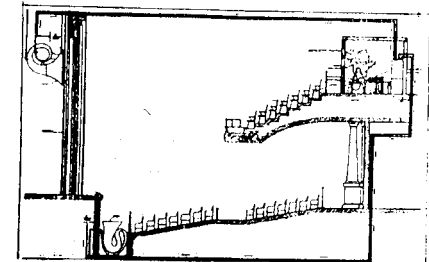


Fig. 12

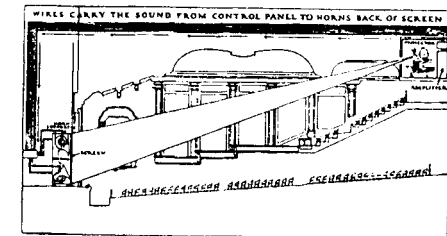


Fig. 13

its meaning even to spectators who might never have heard the music before. With popular music it was hard to keep the audience from singing or humming along, but there was no danger of the audience joining in the chorus of a song without words. Whereas popular song accompaniment regularly led to musical puns and other anomalies clearly authored by the house pianist, the emotional effect of light classical music seemed to grow directly out of the film's narrative situations themselves.

By folding the audience into the diegesis, the film's story line, the new accompaniment standard simultaneously achieved several important goals. First, it carefully reduced real spectator individuality, substituting instead a temporary fictional homogeneity based on the audience's common immersion in the film and its emotions. Second, it transformed each spectator from recognized (audible) interlocutor in an overtly discursive situation to (invisible) voyeur and (silent) *écouteur* of a distanced history. Third, by effacing cinema sound's direct address to the audience, it removed overt interpellation's invitation to respond. The early teens campaign to standardize film sound thus accomplished far more than simply replacing American popular songs by European light classics. By folding the audience into the diegesis, the film industry succeeded in eclipsing spectator individuality, fostering audience silence, and thus inducing spectators to play a key role in the rise of Hollywood hegemony, which requires film viewers to abandon their own free will their right to free speech.

The conversion to sound only reinforced this tendency. Ironically borrowing its initial microphones from the telephone and from Bell Laboratories' celebrated public address system, sound cinema made it virtually impossible for members of the audience to accede to the microphone. Sound cinema's increasing amplification made audiences increasingly ineffectual. Once, it had been literally possible for stage performers to engage in dialogue with audience members; now, dialogue between shadows would be amplified over a hidden loud speaker. Once, Al Jolson would strut out on his runway, looking every spectator in the eye, breathing *discours* in his every public word; now, sitting and listening to his private moments with his screen mother, we would be transformed into voyeurs and *écouteurs* of a private *histoire*. Once, cinema was touted as a promising element in a democratic public sphere; now noisy patrons are shown the door. As the stated policy of the Washington, D.C. American Multi-Cinema puts it: "Two shushes and you're history."¹⁶ Once, you could count on the right of free speech even in a movie theater; now, a bulletproof vest would provide more appropriate protection. Just ask Seattle moviegoer Kelvin Kirkpatrick, recently gunned down by a fellow spectator who took exception to his comments about *Analyze This* (Harold Ramis, 1999).

What we commonly refer to as film sound is thus much more than a virtually continuous mixture of dialogue, sound effects, and music, reproduced at a nearly constant total level. It is also the tendentious result of a long historical process, hiding

film authorship, concealing film's commercial nature, dissimulating sponsorship, abandoning ballyhoo advertising, covering apparatus noise, and silencing the audience. Only when film sound is seen in this broader context can we recognize the extent to which it has become the repository of the many sounds that it has displaced. What we call film sound works so well because it surreptitiously folds multiple functions into what is apparently a single sound track.

Sound Economy

Thus far I have called for awareness of a broader spectrum of sounds than is commonly treated by film scholars, recalled the longterm historical importance of audience sound, and analyzed the suppression of audience sound as one example of the form an expanded definition of film sound might take. Lest the silencing of audiences delineated by that example be misunderstood as a justification for an increasingly narrow definition of sound, however, I will in this final section suggest two additional types of analysis to which an enlarged definition of film sound might reasonably lead.

In the exhibition situation sounds never exist independently; they are always part of a single soundscape varying in scope according to the architecture and location of the theater. Within this context sounds are by definition physically interdependent: advertising, apparatus, audience, and accompaniment sounds all share the same sound space and thus quite literally interfere with each other. This interaction is what I will term sound's *local economy*. Heavily dependent on the necessity of physically sharing a single soundscape, the local economy of exhibition sound is by no means limited to physical considerations, however. Because each sound domain is part of multiple systems and plays several roles in exhibition strategy, the varying relationships among theatrical sounds involve a delicate and shifting balance between competing and colluding sound investments.

Our purpose has long been limited to understanding the sounds that accompany the image. But we cannot accomplish that goal, I suggest, without analyzing the entire film exhibition soundscape. In particular, we must attend to the complex economy relating and separating multiple sound sources and their purposes. Sharing physical space, exhibition sounds are caught up in a single force field (what the French call a *rapport de forces*); in order to understand the sound of cinema events, we must therefore attend to the tension between sounds as well as the stresses within any individual sound source.

Just as social interchange depends on evolving standards of turn-taking and other conventions of successful conversation, so cinema is marked by changing modes of exchange between screen and audience. Though Kasson and Levine correctly describe audiences' overall trajectory from active to passive, a more accurate understanding of

exhibition sound requires careful analysis of the shifting methods used to authorize and control audience sound. To cue applause, live performers regularly use intonation and body language. When adopted by cinema, the same strategies proved inadequate because the fixed film sound track was incapable of assessing and answering audience activity. Whether on Cameraphone in 1907 (Vesta Victoria singing "Waiting at the Church"), Phonofilm in 1922 (De Wolf Hopper reciting "Casey at the Bat"), or Vitaphone in 1926 (Henry Hadley conducting the Overture to *Tannhäuser*), early performance films often conclude with a bow to the camera; that is, they take for granted the performer's traditional theatrical ability to guide audience response. In subsequent films, however, cinema performers abandoned direct address and bows to the audience. Instead, the star system and a Wagnerian approach to accompaniment sound established an entirely new relationship with the audience.

In the same way, the advent of sound cinema profoundly affected the timing of comic dialogue. The rhythms of a live comic and a cinema comedian are different precisely because the former can react to audience sound in real time while the latter must predict and control audience laughter in advance. This is of course why television developed the laugh track — not only to incite audiences to laughter, but also to channel audience response in a fashion that avoids stepping on subsequent jokes.

The relationship between advertising and accompaniment sounds involves similar interaction. Typically neglected by historians of silent film sound as exterior to the theater and not truly constituting film accompaniment, ballyhoo music played on the street nevertheless performs an important role in the development of standard silent film accompaniment practices. *Film Index* critic Clyde Martin says he was actually dismissed as an accompanist from the best St. Louis theater because his playing couldn't be heard on the street. "That is the fault with the average exhibitor today," says Martin, "he doesn't want a piano player, he wants a Bally-Hoo."¹⁷ This connection between advertising and accompaniment sound is confirmed by Martin's *Moving Picture World* colleague, Clarence E. Sinn. "When music was first introduced in the picture theater," he points out, "they 'whooped 'er up' until the music could be heard out on the street."¹⁸ According to Sinn, drums were introduced into film accompaniment only in order to increase the volume enough so that the sound could be heard out front. The history of silent film sound cannot be written independently of the continuing interaction among the various sound sources constituting the overall cinema event.

Similarly, the history of the cinema apparatus cannot be isolated from other film sounds. For example, the early teens introduction of a second projector spawned a sea change in exhibition practices. Abandoning alternation between films and audience-involving song slides, theaters adopted alternation between the reels of feature films, thus engendering major changes in audience participation modes. In the late twenties, the introduction of synchronized sound led to the radical reduction of all other sounds,

a process partially reversed by current theme park moving picture shows that use sound and movement to elicit carefully targeted and timed audience responses.

Cinema sound cannot be adequately understood one sound system at a time; we must also attend to the complex interactions of cinema sound's local economy. Yet however substantially such attention will enlarge the range of current scholarship, still more is required. We must also consider what I will call the *general economy* of cinema (and media) sound. Sounds produced in and around the theater cannot be fully understood by reference to their local economy, that is through sounds that are co-present with the film image; they must also be studied with reference to the temporally or geographically displaced sounds that they provoke, permit, or parallel.

Analyzing the musical's "operational" role in *The American Film Musical*, I made the case that the musical genre is generated by a culture designed to replicate theater and film music in the home.¹⁹ It is not possible to understand the musical, I claimed, without charting piano sales or without studying the role of sheet music in American entertainment. In other words, what we habitually term the "text" of the musical is insufficient to comprehension of the genre. In addition to the text we must also consider not only the event of the text's production (what I have here termed sound's "local economy"), but also the broader extensions of that event into the culture at large (or "general economy"). Just as illustrated songs call on audience members to sing out as an *in praesentia* part of the show, so musicals implicitly invite audience members to sing later on as an *in absentia* part of the show. Though the relationship between stage sound and audience sound may be more obvious in the former situation, the connection between exhibition sound and its cultural follow-up is no less important in the latter case. Knowing which distribution modes (sheet music, cylinder, disc, cassette, CD, video) permitted songs to survive their films is essential to understanding the films themselves (a fact that remains just as true of today's compilation sound tracks as it once was of classical musicals). Indeed, analysis of sound circulation patterns is a particularly important manner of discovering how a culture uses its texts.

Attention to sound's general economy quickly foregrounds the different purposes that films may serve in different contexts. While some audiences have succeeded in resisting the middle-class ideal of silent absorption (e.g., prewar Yiddish audiences, some African American spectators, and most midnight movie masses), many others have sought to retain their freedom of expression not through immediate *in situ* reaction but by scheduled, deferred responses. From cine-clubs to college cinema classes and from the Anthology Film Archives to experimental film festivals or museum retrospectives, silent spectatorship is often followed by discussion conceived as part and parcel of the overall film-viewing event. To be sure, these discussions rarely interrupt the film, but the fact that they don't begin until the film has disappeared from the screen does not keep them from entering fully into the film experience. The meaning of

experimental films, and many others — that is, their place in culture — cannot be grasped without reference to the general economy of which they are a part.

The need for attention to questions of general economy is perhaps even more urgent in the case of other media. The nineteenth- and early-twentieth-century creation of a modern public sphere, with its curious combination of capitalism and democracy, was heavily dependent on the ability of the new mass-produced and broadly distributed media to provide the public with common experiences, common emotions, and common topics for the day's conversation. At first blush, the trajectory of these media (cheap newspapers, dime novels, records, cinema, radio, television) seems to stress a simple silencing and dispersal of spectators. Serial novels were first consumed and discussed in reading parlors, but later assimilated to the culture's general pattern of individual consumption. Films initially received a raucous reception in interactive theaters, but later developed quiet audiences. Radio was originally designed to engage the immediate interaction of families and other social groupings, but now depends on the solipsism of car radios and the Walkman. Community viewing characterized early television, but today's America has a TV in every room.

Instead of seeing these developments solely in terms of audience discipline and fragmentation, however, I suggest that we recognize the mass media's increasing tendency to accept, appropriate, and eventually target deferred and displaced reaction. That is, if early in their history diverse media attract active audiences eager to interact immediately and on the spot (thus replicating the reception patterns of live events), they subsequently encourage and depend on audience dialogue occurring later, often in a different location. In order to understand the Monday Night Movie, Monday Night Football, or Monday night talkshows, we must adopt methods that recognize Tuesday's talk as part and parcel of Monday night television's general economy.²⁰

I look in the future for studies that will take into account a broader range of sounds. As our understanding of film sound grows in depth, so must it develop an expanded extent. If we wish to understand the auditory world, it is not enough to concentrate on image AND sound — the gospel that we have been preaching for lo these many years. Unless we are willing to address questions of local economy and deal with problems of general economy, we will never succeed in comprehending film sound — all of it.

Notes

1: "General Introduction: Cinema as Event" in Rick Altman, *Sound Theory/Sound Practice* (New York: Routledge, 1992), pp. 1-14.

2: Rick Altman, "The Silence of the Silents," *Musical Quarterly* Vol. 80, No. 4 (1996): pp. 648-718.

3: Barton W. Currie, "The Nickel Madness," *Harper's Weekly* (August 24, 1907): p. 1246.

4: Stephen Orgel, *The Illusion of Power: Political Theater in the English Renaissance* (Berkeley: University of California Press, 1975), pp. 9, 16. On the general topic of theater architecture, Marvin Carlson's *Places of Performance: The Semiotics of Theatre Architecture* (Ithaca: Cornell University Press, 1989) provides a useful overview stressing continental practice. For British theaters and audiences, see Orgel (who dates perspective sets from 1605), especially pp. 1-37; James J. Lynch, *Box, Pit, and Gallery: Stage and Society in Johnson's London* (Berkeley: University of California Press, 1953), especially pp. 199-207; and Harry William Pedicord, *The Theatrical Public in the Time of Garrick* (Carbondale: Southern Illinois University Press, 1954), especially pp. 44-63.

5: On the topic of on-stage spectators, see Lynch, *Box, Pit, and Gallery*, p. 203; John Lough, *Paris Theatre Audiences in the Seventeenth and Eighteenth Centuries* (London: Oxford University Press), especially pp. 104ff, 115-117, 228-229; and Jay L. Caplan, "Clearing the Stage" in *A New History of French Literature*, ed. Denis Hollier (Cambridge: Harvard University Press, 1989), pp. 471-476.

6: James H. Johnson, *Listening in Paris: A Cultural History* (Berkeley: University of California Press, 1995).

7: Lawrence W. Levine, *Highbrow/Lowbrow: The Emergence of Cultural Hierarchy in America* (Cambridge: Harvard University Press, 1988), and John F. Kasson, *Rudeness and Civility: Manners in Nineteenth-Century America* (New York: Hill and Wang, 1990). The examples in this and the preceding paragraph are taken from Levine, p. 179ff, and Kasson, p. 215 ff.

8: As my colleague Corey Creekmur has pointed out to me, the various versions of *Show Boat*, and particularly James Whale's 1936 film, offer an interesting representation of the various stages in the history of audience domestication. I have profited enormously from his astute comments on an earlier version of this essay.

9: On the lowering of lights, see Orgel, *The Illusion of Power*, pp. 17-18; Kasson, *Rudeness and Civility*, pp. 219 and 244; and Levine, *Highbrow/Lowbrow*, p. 190. The practice of darkening theaters during performances became common in the final quarter of the nineteenth century, well before the advent of cinema.

10: "New Thresholds of Vision: Instantaneous Photography, and the Early Cinema of Lumière." In *Impossible Presence: The Image Encounter*. Ed. Terry Smith, Power Institute Series 2 (1998).

11: Quoted by Charles Musser in *The Emergence of Cinema: The American Screen to 1907* (New York: Scribner's), p. 405.

12: W. Stephen Bush, "The Human Voice as a Factor in the Moving Picture Show," *Moving Picture World* Vol. 4, No. 4 (January 23, 1909), pp. 446-47; quoted in Noël Burch, *Life to Those Shadows* (Berkeley: University of California Press, 1990), pp. 239-240.

13: Vachel Lindsay, *The Art of the Moving Picture* (New York: Liveright, 1970; orig. 1915), p. 225.

14: On the use of popular songs for film accompaniment, see Altman, "The Silence of the Silents" (see note 2), and "The Living Nickelodeon," in *The Sounds of Early Cinema*, eds. Richard Abel, Rick Altman, and Martin Marks (Bloomington: Indiana University Press, forthcoming).

15: On the post-1910 campaign to standardize accompaniment, see Rick Altman, "Naissance de la réception classique: la campagne pour standardiser le son," *Cinémathèque* 6 (1994): pp. 98-111.

16: Quoted by Douglas Gomery in *Shared Pleasures: A History of Movie Presentation in the United States* (Madison: University of Wisconsin Press, 1992), p. 117.

17: Clyde Martin, "Playing the Pictures," *Film Index* (October 22, 1910), p. 13.

18: Clarence E. Sinn, "Music for the Picture," *Moving Picture World* (December 20, 1913), p. 1396.

19: Rick Altman, *The American Film Musical* (Bloomington: Indiana University Press, 1987), p. 344ff.

20: One model for an expanded analysis of television sound is provided by my article on "Television Sound," which demonstrates how TV sound regulates the relationship between what Raymond Williams calls "television flow" and what I have dubbed "household flow." See "Television/Sound," in *Studies in Entertainment: Critical Approaches to Mass Culture*, ed. Tania Modleski (Bloomington: Indiana University Press, 1986), pp. 39-54.