

## Introduction: Sound/History

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For once, let us begin at the beginning. Of all the basic assumptions on which cinema history is built, none is more deeply ingrained than the apparently tautological notion that cinema history is the history of *cinema*. But what is cinema? Rarely are such naïve questions asked, because the answer is so obvious. By and large, we know just what cinema is, and what it is not, so much so that it has not seemed necessary to theorize cinema's identity. Yet the media industry has shown much less assurance than critics about the nature of its products, often openly revealing hesitations about their identity.

If cinema could be defined solely from the standpoint of the image, then it might make sense to base a definition entirely on the image apparatus. Seen in this manner, cinema has for a century followed a more or less straight-line trajectory. An entirely different figure appears—zigzagging and indirect—when we take sound into account, for cinema's sound identity has undergone constant redefinition, through regular redistribution of the dividing lines among media. With the apparent retrospective illumination provided by an era of relatively stable cinema identity (from the thirties to the fifties), we easily conclude that cinema has always been clearly identified and that the media have always been neatly differentiated. When we take a *prospective* look at the early cinema industry and its products, however, we find an entirely different situation. The media that we now take to be so well differentiated from cinema are one after the other conflated with cinema, to the point where it becomes impossible to identify cinema as an independent phenomenon, separate from other media. While this process affects the image as well, it is especially evident in the domain of sound.

With 20/20 hindsight, we are typically convinced that we understand

what constitutes a medium or a technology. In fact, however, representational technologies are constantly in the process of being redefined. Today's wide-screen and multiple-channel technologies are not the same as those introduced in the fifties, which in turn differ from the wide-screen and multiple-channel approaches pioneered in the late twenties and early thirties. Yesterday, the term "film" meant one thing; today it means another. If we want to understand how cinema works, we must guard against projecting today's definition into the past. Instead, we need to learn from the past an object lesson about cinema's tenuous and volatile identity. Derived from multiple image and sound technologies, film has an admirable ability to blend in with whichever of these technologies serves a particular aesthetic or economic purpose.

We will understand these chameleonic talents better through a survey of some of the media that have played a part in cinema's self-definition, with an emphasis on the early years of film history, where the interpenetration of cinema and other media was at its height. At the conclusion of this overview, I will suggest how an understanding of cinema's problematic and fluctuating sound identity might lead to a new model of cinema history.

#### *1906: Cinema as Photography*

In spite of the familiar cliché whereby "the silents were never silent," most of the early nickelodeons treated the newfangled film medium as nothing more than moving photographs; sufficient unto themselves and requiring no musical accompaniment. An automatic piano or phonograph was almost always present, but typically used on the street to attract trade, in the manner of a carnival barker. A pianist was often on the scene as well, but he (or, more likely, she) was there to accompany the featured illustrated song. The theater operator, according to a contemporary set of instructions for running a nickelodeon program "is required to call the accompanist as the [film] performance nears the close, that the intermission music may start promptly at the close of the pictures" (Gardette, 79). Everything was accompanied, in these early days, *except* the film. For at this point in its history, film was just that, a spool of Eastman or Pathé film capable of registering moving photographs. Though in this early period sound and image were simultaneously present in the theater, they had not yet come together to produce the familiar audio/visual phenomenon we now call cinema.

#### *1907: Cinema as Illustrated Music*

It didn't take very long for filmmakers to figure out that film was just as good as song slides at illustrating familiar songs. Here we first encounter

the notion that film is not just photography, but a combination of image and sound. More and more films were shot in view of a specific accompaniment. This was the heyday of the Passion Play, with its multiple openings for church music. The operetta was soon recorded on film, with a film version of Lehar's *The Merry Widow* opening in New York nearly concurrently with the stage version (Kalem, 1907). Old favorites like "Only a Bird in a Gilded Cage" (Edison, 1909) or "The Spanish Cavalier" (Edison, 1912) offered additional opportunities for musicians, as did Fourth of July releases like "The Star-Spangled Banner" (Edison, 1911) and "The Battle Hymn of the Republic" (Vitagraph, 1911). In terms of content as well as programming, films like these were produced to take the place of the song slides with which cinema had long shared the bill, thus revealing that, in spite of its growing tendency toward narrative fiction, cinema was at this point still not entirely differentiated from the song slide tradition.

#### *1908: Cinema as Vaudeville*

For many years, the exhibition practices of vaudeville and film were closely intermingled. By adopting moving pictures as one of its acts, big-time vaudeville had turned into so-called small-time vaudeville; conversely, nickelodeon owners at pains to differentiate their programs from the other nickelodeons on the same block had begun to introduce live acts on the cinema bill. Still, in 1908, there was one way to distinguish clearly between the vaudeville and film worlds: whereas vaudeville thrived on name acts, contractually guaranteed billing, and star system salary scales, film never even so much as alluded to the names of its actors, writers, or technical personnel.

Enter Cameraphone, 1908. Now, it had long been the dream of filmmakers to add sound to the film-viewing experience. Edison had paired the phonograph with the Kinetoscope; Gaumont had attempted to sync disks to film; many others had labored to link moving images and recorded sound. When the Cameraphone Company offered its new sound-on-disk system to "Owners and Managers of Vaudeville Theatres," it revealed no interest at all in this distinguished lineage of attempts to produce sound films. For Cameraphone had no stake in realizing some inventor's pipe dream. Instead, it sought to sell a recognizable product to the well-known impresarios of the vaudeville world.

What difference does it make that Cameraphone saw its product not as sound film but as a new form of vaudeville turn? If Cameraphone had been selling films, they would have been designated as comedy, drama, adventure, chase, or perhaps musical novelty. No mention would have been made of the actors or technicians. Because of the widely divergent vaudeville tradition, however, Cameraphone covered the pages of national

publications with the names of its headliners: Eva Tanguay, James Harri-  
gan, Alice Lloyd, Blanche Ring, Vesta Victoria, and many others. Soon,  
in response to strong popular demand, Cameraphone began to diversify  
its offerings, producing dramatic subjects as well as straight vaudeville  
turns. Now, in late 1908 and early 1909, the importance of Cameraphone's  
early self-definition as canned vaudeville has its most important effect:  
fully integrated into the film exhibition world, Cameraphone carries its  
vaudeville-based star orientation with it. Strange to say, the Hollywood  
star system is not the product of turn-of-the-decade machinations of Bio-  
graph and Vitagraph, but a perfectly predictable import from vaudeville,  
vehicled by the neither-fish-nor-fowl Cameraphone, the film that thought  
it was vaudeville.

Tradition has it that early sound film systems were no more than  
inventors' oddities. Rarely has film scholarship been so wide of the mark.  
"We have no hesitation" says the editor of *Moving Picture World* on  
March 6, 1909, "in prophesying that before long hardly a moving picture  
theatre in the country will be without the talking or singing phonograph  
as part of its entertainment" (261). A week later, another editorial drives  
the point home: "The combination of the phonograph or graphophone with  
the picture machine has now advanced to such a state of perfection and  
is being promoted by so many well financed concerns, that it is destined  
to occupy an important part in the moving picture field" (*Moving Picture  
World*, March 13, 1909; 293). A year later, this assurance had not dwindle  
(though notice the subtle change in the language, confirming the now  
independent existence of sound film as a separate concept): "In our opinion  
the singing and talking moving picture is bound sooner or later to become  
a permanent feature of the moving picture theater" (*Moving Picture World*,  
May 7, 1910; 727-28). In 1909, Frank L. Dyer, Vice President of Edison  
Manufacturing and President of the Motion Picture Patents Corporation,  
confidently predicted that talking pictures would soon reach the complexity  
and success of the legitimate theater (*New York Dramatic Mirror*, May  
1, 1909; 36).

With a hundred theatres equipped with Cameraphone apparatus by the  
end of 1908, and many more serviced by the dozens of competing sound  
film systems, it seemed that sound film could hardly be far off. Such are  
the complexities of film history, however, that it would take nearly two  
decades to install a durable sound film system. The star system, however,  
was installed permanently within months after Cameraphone's decision  
to record vaudeville on film.

#### 1911: Cinema as Opera

For the first of many times, the film industry in 1911 recognized its  
ability to record the stage action of famous operas, with local orchestras

taking on the challenge of playing the accompanying score, now provided  
along with the film by the producing company. Pathé launched the mode  
with its version of *Il Trovatore*, with the Verdi music arranged by Charles  
P. Muller for a small orchestra or even for a lone pianist. When Edison  
produced *Aida* later in the year, Pathé countered with a spectacular version  
of *Faust* (earlier produced in a shortened version by Edison). As long as  
film was just photography, popular music, or vaudeville, it could hardly  
attract the carriage trade. Through repeated early teens attempts to record  
opera, classical novels, and successful plays, film successfully redefined  
itself as a very proper medium indeed. Viewed retrospectively, cinema's  
identity at this point in its history seemed foreordained by its technology;  
considered prospectively, cinema was still actively seeking to establish its  
own identity in a profitable manner, based on social and commercial  
affinities rather than solely technological ties.

#### 1916: Cinema as Cartoon

It is a clear sign of film's chameleonic tendencies that it could simultane-  
ously play host to grand opera and to lowly cartoons. Other industries are  
defined by their products: some make breakfast cereals, others make  
toothpaste. Now, on the surface of things, it might appear that the film  
industry is appropriately defined by its products: not biodegradable plastic  
bags, but films. In fact, however, we make more sense of the film industry  
by understanding it as a complex of related production strategies. Just as  
minimal wartime retooling made it possible for a can factory to make  
grenades or for a camera manufacturer to fabricate bombsights, so Holly-  
wood easily slid from silent snapshots to merry melodies and from chase  
films to newsreels. Because its production system could reproduce epics  
just as easily as interviews, the film industry found it not only possible,  
but economically desirable, to pass rapidly from opera to cartoons and  
back.

In mid-1911, Horsley began distributing the Nestor Film Company  
productions of "Mutt and Jeff Talking Pictures." Based on the familiar  
comic strip characters, these films offered an unexpected solution to the  
dialogue problem: they simply included written-in speech balloons like  
those found in the contemporary funny papers. Never what we would call  
headliners, these films nevertheless fared passingly well over the years.  
In fact, they did so well that, in 1916, a certain Charles F. Pidgin attempted  
to patent a method for producing filmed cartoons without resorting to  
animation or drawings. Pidgin's "invention" provided for each character  
to inflate, at the appropriate moment, a balloon carrying the words to be  
spoken. As Pidgin's patent application put it:

the words constituting the speech of the actors or characters are placed on balloons of oblong shape adapted to be inflated to a relatively large size and normally occupying a comparatively small space with the words entirely visible. . . . The blowing or inflation of the devices by the various characters of a photo-play will add to the realism of the picture by the words appearing to come from the mouth of the players. The balloons may be made of rubber or any other suitable material and the words or other characters, constituting the speech may be applied to or placed on the balloons in any desired manner, and a suitable valve will preferably be provided for maintaining the balloons or other inflatable device in an inflated or expanded condition.<sup>1</sup>

Unfortunately, Pidgin provided no instructions about how to manipulate multiple balloons in the actor's mouth during long conversation scenes. I am pleased to report that Pidgin's invention was approved, receiving U.S. Patent number 1,240,774 on September 18, 1917. Let it not be said that the U.S. Government ever harbored any prejudices against Pidgin English.

#### 1922: Cinema as Radio

Few will dispute the notion that radio is one thing, television a second, and film yet another. This assumption of course overlooks the extent to which television was referred to as radio throughout the twenties. It pays too little attention to the attempts of RKO Radio Pictures to capitalize on its connection with the parent Radio Corporation of America. For years, every RKO Radio Pictures advertisement played up radio iconography, as if the film were somehow received over the "ether," as early radio buffs put it. In fact the RKO logo still perpetuates this connection.

Today we look back on the radio towers in RKO's ads and smile at their naïve rhetoric. But in 1922, it was anything but rhetoric. How would you synchronize a human voice or a phonograph record to an otherwise silent film? In 1922, you might have done it in the manner invented by Harry J. Powers, Jr., for Chicago's Rothacker Film Company. Inspired by the actors-behind-the-screen approach widely used in the late first decade of the century and in the early teens, but concerned to develop a greater economy of scale, Powers looked to the synchronization opportunities offered by radio broadcasting in order to produce sound films. Today, we can confidently affirm that radio and cinema are different media, but in 1922 the borders of the media remained an open question. Radio was not born ineluctably separate from cinema; instead, they grew apart historically.

But in 1922 they had not yet definitively separated, as demonstrated by

*American Cinematographer's* contemporary description of the Rothacker process:

A motion picture is produced in the studio as usual, the scenario writer having supplied speaking lines and sound effects as though the production were to be given behind the footlights. A number of theaters are equipped with radiophone receiving instruments and projection machine synchronizing apparatus. The movie company, possibly composed of the same persons who made the original film in the studio, is assembled at the radiophone broadcasting station. Out at the theaters the overture has overtured and the audiences settle back for the evening's feature movie-speakie. Buz-z-z goes the signal at the broadcasting station and in all the theater projection booths. The master projection machine begins throwing the photoplay upon the screen at the broadcasting station and simultaneously, to a fraction of a second, the silversheets at the various theaters are illuminated with the shadow drama. And at the broadcasting station the movie actors are re-enacting the drama, speaking out their lines, word for word, just as though the many different audiences were seated down in front instead of in many different theaters many miles apart. The actors watch the film being screened by the master projector very closely lest they supply the speakies too swiftly or too slowly for the movies.<sup>2</sup>

Today, we would call this approach to synchronization a *simulcast*. The very existence of the word appears to sanction this practice, while Rothacker's 1922 experiment somehow strikes us as pitifully misguided. We laugh when the Chicago Tribune film critic, describing the sound system for the opening of *Don Juan* four years later, explains that the sound comes from "a miniature broadcasting station perched up in the projecting room" (Russell). The problem isn't restricted to Chicago, though. It resides instead in our own tendency to draw barriers around the media, to assume that cinema's identity is once and for all determined and no longer subject to history.

Just what did Vitaphone mean when it compiled its first program of film shorts? A look at the history of radio in 1925–26 makes it quite clear how Vitaphone defined "film" at this point. On January 1, 1925, an all-star cast of Victor recording stars, led by tenor John McCormack, gave a live concert over a chain of AT&T-controlled radio stations spearheaded by WEAf (affectionately known as the tollbooth of the air, because AT&T insisted on identifying radio broadcasting as "radiotelephony," in order to circumvent an agreement whereby RCA could monopolize radio while AT&T would have a free hand with telephone). With AT&T contributing the air time, the Victor artists were not paid, thus arousing the ire of the ever-vigilant Equity union. For the first half of 1925, and then again in

the beginning of 1926, this arrangement was perpetuated on a weekly basis. While Equity pressure had caused McCormack to withdraw, top talent nevertheless continued to contribute. The quality of the performers, the protestations of the union, and the resultant publicity combined to concentrate public attention on these weekly concerts.

It is thus no surprise that Warners should model their first variety film program on Victor's successful radio program, right down to their signing of John McCormack. Though McCormack eventually did not appear in the opening Vitaphone program, Warners' advance announcement of the new process leaves no doubt about their intention of recreating Victor's radio show: "At a phenomenally small cost," explained Albert Warner, "the unquestionably planned and perfected radio music program will begin a new era for moving picture patrons throughout the country" (New York Times, April 26, 1926). In 1908, Cameraphone recorded vaudeville in order to sell film. In 1926, the system has changed; now it was radio that film must emulate. But not just radio.

#### 1926: Cinema as Phonography

Histories of cinema typically treat Hollywood's conversion to sound as the culmination of a long march toward today's technology. Edison dreamed of linking the phonograph and the moving picture. DeForest invented the Audion tube and the sound-on-film recording process. Scientists at Bell Laboratories perfected the sound-on-disk process. Warner Brothers took a chance on the new system and produced *Don Juan* and *The Jazz Singer*. Case and Sponable made the sound-on-film system commercially viable. Fox used their new system for its Movietone newsreels. All the other companies followed suit. In a word, this is the standard story.

It didn't happen quite that way. While during the post-war period DeForest seems to have been driven by a desire to perfect a sound-on-film system, Bell Laboratories had more important fish to fry. With new sound apparatus in every domain (microphones, amplifiers, recording methods, loudspeakers, and much more), Bell made a frontal assault on two important and lucrative fields: public address and phonography. The appearance of the Orthophonic Victrola in 1925 brought these efforts to a successful conclusion. For the first time bringing together the benefits of electrical recording, matched impedance, and the folded speaker horn, the Orthophonic Victrola was rightly hailed as a revolution in the phonograph field. In fact, Bell licensees Victor and Brunswick were so convinced of the revolutionary nature of the new system that they made a point of selling off their entire stock of existing phonographs before marketing the

new victrola. Then, in 1926, they began an all-out media blitz in favor of the new phonograph.

When Bell, Western Electric, and Warners got into the sound film business, their actions were almost entirely unrelated to DeForest's sound-on-film experiments. On the contrary, *Don Juan*, the Vitaphone shorts, and *The Jazz Singer* were an outgrowth of the record industry. By and large unaware of the specific background of the Warner Brothers experiment, the critics of the period were nevertheless not fooled by the new medium. With the Vitaphone process, said a New York Times reviewer, "the eye as well as the ear is engaged in the business." That's right: "the eye as well as the ear." For this reviewer, the recorded sound is clearly primary, with the image added on to provide illustration. A Chicago critic was more specific: Vitaphone sounded like "a telephone plus a phonograph plus a radio" (Ashton Stevens in the Herald-Examiner, quoted in Weaver, 29).

A year later, the headlines were all garnered by *The Jazz Singer*, but the reviews remained the same. "*The Jazz Singer*, primarily, is scarcely a motion picture," says John S. Spargo of the *Exhibitor's Herald*. "It should more properly be labeled an enlarged Vitaphone record of Al Jolson in half a dozen songs" (Spargo). Bert Ennis was even more straightforward: "when it comes right down to it, what is a talking picture but a phonograph record with plenty of amplification behind it?" (Ennis, 43). MTV, move over. Music videos were hardly the first to conceive of cinema as illustrated phonography.

#### 1929: Cinema as Telephony

As developer and monopolistic exploiter of America's telephone network, AT&T had everything to gain from identifying the Vitaphone system with its familiar telephone technology. Against all logic, a 1929 advertisement campaign sought to capitalize on Vitaphone's popularity in order to solidify Western Electric's overall reputation. "It pays to go to theatres equipped by the makers of your telephone," the ad proclaims. On the left a series of drawings of microphones establishes continuity between the familiar telephone mouthpiece and the condenser microphone used in Western Electric's film sound system. On the right a similar set of drawings ties the familiar telephone receiver to Western Electric's loudspeaker horn. Every version of the ad seeks to transfer satisfaction with AT&T's telephone network to the Vitaphone system, and from there to the rest of the Western Electric realm. "This same organization which brought the telephone to its present excellence," the ad affirms, "will likewise constantly seek to improve Sound Picture apparatus still further" (*Photoplay*, September 1929; 13).

In fact, Western Electric's attempts to position Vitaphone as illustrated telephone are not entirely without logic. Throughout the twenties, Bell Labs labored hard to discover the exact properties of sound that make speech comprehensible. Originally conceived as an aid to AT&T's telephone operations, this research eventually proved instrumental in Western Electric's attempts to master theater acoustics. Stressing intelligibility over realism, Western Electric's sound system brought to film sound precisely the same narrow frequency response and dynamic range that made the telephone a communications triumph—and an aesthetic washout.

The list could go on. The important point is that film is not a unified object, nor cinema a homogeneous medium. Viewed retrospectively, cinema may appear to have a stable technologically defined identity, but considered prospectively, cinema takes on a series of disparate identities, its sound-based affinities with other media often challenging its apparent image-based unity.

Typically founded on a particular understanding of their object of study, approaches to history cannot withstand a radical redefinition of that object. It is thus no surprise that the reconsideration of cinema identity offered here should have far-ranging consequences for the writing of cinema history in general. These will be best understood through comparison to the current dominant mode of cinema history writing. As I see it, this mode of historical explanation is built on three simple principles:

- 1) The principle of *identity*. Each representational technology is identical to itself. For example, a camera obscura is always a camera obscura; that is, in order to be termed a camera obscura an apparatus must minimally perform certain functions deemed constitutive of the stable notion known as "camera obscura." In the same way, cinema is always fundamentally identical to itself. While historical changes are possible, they in no way undermine the transhistorical definition of cinema's identity.
- 2) The principle of *functional equivalence*. By performing a similar function, one technology or technique may effectively substitute for another. This principle, as extensively employed by David Bordwell in *The Classical Hollywood Cinema*, emphasizes the ability of one system successfully to carry out functions defined and initially performed by another (Bordwell, 1985, especially pp. 5, 248, 303–04).
- 3) The principle of *succession*. Characterized by metaphors of parentage, birth, and inheritance, the historical accounts constructed by practitioners of the identity and functional equivalence principles are commonly built around a notion of bequest, with each representational technology simply bequeathing its structure and function to a fundamentally similar mode of representation.

However logical these principles may appear, however traditional they may have become in the fields of philosophy, literary criticism, and political science, they fail to provide an appropriate basis for recounting the history of representational technologies. The complexities of historical interaction are better served by the following principles:

- 1) The principle of *identity redefinition*. According to a constantly varying scale of material, social, and technical needs, apparently identical systems regularly take on new functions and thus new historical roles.<sup>3</sup> In addition, as we have seen in the case of early cinema, the retrospectively defined identity of a particular system often appears fragmented when considered prospectively. With the ascendancy of sound cinema over vaudeville, for example, Cameraphone lost its chance to be defined as a type of vaudeville; instead it has been seen as a (failed) attempt to create sound cinema. But in 1908, no such conclusion could be drawn. Nor, I am suggesting, should it be drawn today. Only by recognizing the tendency of representational technologies to take on multiple identities, constantly redefined, can we understand the complexities of the historical object. For representational technologies are just as subject to the vagaries of reception as are literary and filmic texts; that is, they may be interpreted or defined in more than one way, according to diverse "use formations."<sup>4</sup>
- 2) The principle of *functional near-equivalence*. Bordwell rightly recognizes the desire of artistic and technical personnel to provide more efficient or more versatile equivalents of existing techniques and technologies. While providing improvement in one area, however, such efforts invariably cause disturbances in another, precisely because of their non-equivalence in that other area. The combination of a longing for true functional equivalents and the impossibility of creating them is one of the prime movers of history. The problems that enter through the back door of non-equivalence are just as important as the fully equivalent front door improvements. For example, the adoption of Wollaston's meniscus lens was important for reducing the exposure time of early photographs, yet while increasing available light, the new lens simultaneously introduced chromatic aberrations, causing a disparity between the focus of visible yellow light on the ground glass and recordable blue light on the plate.<sup>5</sup> All changes in representational practice conform to this model: equivalence and improvement in one area are accompanied by a zone of non-equivalence in another.

If cinema had a single identity, with a single defining principle, then it might be possible to envisage a linear history involving successive functional equivalents (or progressive developments of, say, the attempt to create a viable sound film system), but cinema's successive conflation

with other media has created multiple sets of conflicting desiderata, thus precluding true equivalents. Each attempt at producing an equivalent system stems from a desire to maximize one particular set of values; judged from the standpoint of a conflicting value structure, however, the new system always reveals a lack or excess not present in the old system.

- 3) The principle of *jurisdictional struggle*. According to the principle of identity redefinition, new representational technologies are subject to multiple definition, with the models provided by competing reality codes. Whereas the principle of succession assumes a stable situation, in which the shape of the future is assured by the political structure of the present, the approach that I am proposing here assumes a constant skirmishing over questions of investiture. Not just "who will be the next sovereign?" but "what body may decide who shall rule?" Not "what decision will be made?" but "according to what principle will the decision be made?" Not the language of hereditary monarchy but that of revolutionary freedom.

Practically speaking, the tendency of representational technologies (especially during their formative years) toward multiple definition has regularly led to quite literal jurisdictional skirmishes. The rise of the nickelodeon, for example, was heavily marked by repeated battles, on the local or state level, over the legal definition that would be attached to moving-picture shows. In the watershed year of 1908–09, for example, films were classified as a circus in Delaware and as an exhibition in Arkansas (until April, 1909, when they were reclassified as theater). *Views and Films Index* says they are "neither a book nor a drama, but . . . a photograph" (March 21, 1908; p. 6), while in the *Ben Hur* trial they are characterized by the U.S. Court of Appeals as "stage representations".

It is hardly surprising that Essanay's 1910 contest to name the new medium should conclude with an overt compromise: the *photoplay*. Why not the vaudesong, the pictobook, or the dramatone?—because of copyright decisions, the need for easily reproducible subject matter, evolving standards of narrative as an entertainment vehicle, and many other reasons too complex to evoke here. Whatever the answer given, the problem is clearly defined in terms of a territorial struggle in which existing systems battle for supremacy over a new medium. The important novelty in the approach I am suggesting here is contained not in this or that particular explanatory sentence, but in an overall argument structure that turns on jurisdictional concerns, on an ongoing struggle to define the representational technology and its products in a particular manner:

Traditional accounts of Hollywood's conversion to sound, for example, foregrounded the history of attempts to perfect sound cinema, the finances of Warner Bros., or the heroic innovations of the first sound directors. An

account more attuned to the problem of jurisdictional struggle would stress instead the multiple identities of film sound in the mid-twenties (as radio, record, public address, theater, telephone, and so on), the near-equivalences characteristic of each attempt to translate silent practice into sound, and the constant battles over who should have jurisdiction over jobs and decisions. Who should play the disks in the theater? The projectionist, a musician, an electrician, or a stagehand? Who should apply the sound insulation to studio sets? Should the needs of sound men or the desires of cinematographers have priority during a take? Somehow it seems appropriate that *Photoplay*, the very magazine that took Essanay's 1910 contest name, should run its own contest to name the talkies. Eschewing the obvious *phonoplay*, *Photoplay* instead opted for *audien*, a term so unfamiliar today as to suggest that, in 1929, Hollywood was simply not yet fully ready to define its project. The jurisdictional phase of the conversion to sound had not yet come to a close.

Legal jurisdiction, union jurisdiction, aesthetic jurisdiction—these and many more are implied by the notion of jurisdictional struggle, with the complex social investments that each of these implies.

If all we were trying to explain were the image, the identity/functional equivalence/succession model might prove acceptable. As soon as we grant a hearing to the cinema sound track, however, an entirely different decision must be rendered. Film sound's multiplicity of related technologies and connotations, the impossibility of satisfying all interested parties with any proposed functional equivalence, and the constant need to adjudicate among differing sound sources, values, and industries lead directly to a new understanding of the way in which history must be configured, as long as sound is to be part of the figure.<sup>6</sup>