

THE PHONOGRAPH MOVIES

by

David L. Parker and Burton J. Shapiro

Although it is popularly believed that the sound film dates from The Jazz Singer (1927), W.K.L. Dickson set up his fully-synchronized motion picture and sound "greeting" to Edison in 1889. This Kinetophone was revived for the Chicago World Exposition in 1895--the year of the first public exhibition of paid movie performances in Europe--and the Kinetophone was offered for sale to the public two years later. Two hundred and fifty machines were sold to peepshows at the cost of three hundred dollars each, though it is unclear what software went with the equipment. A page from an 1894 Edison film catalogue, reprinted in Terry Raymsaye's A Million and One Nights, lists 53 subjects, predominantly circus and carnival performers (including Annie Oakley), with the following note at the end: "We can furnish specially selected musical records for use on the Kinetophone for nearly all of the films in the foregoing list. Price, each \$1.50". Films with accompanying sound cylinders were on sale in 1894. Thus, 22 years before film-and-disc shorts excited audiences and led to the production of The Jazz Singer, synchronized motion picture and sound films were available.

Parts of this story are recounted in Harry M. Geduld's The Talkies: From Edison to Jolson¹ (Indiana University Press, 1975). Much of the book deals with the "phonograph movies" and their several short bursts of activity from 1896 to 1930. What follows is a brief account supplementing Geduld's history with material from many other sources.

In 1896, in France, Pathé Freres began to use the Berliner discs (which had been invented in 1887) in experimentation with synchronization of motion pictures and recordings; in the same year in Germany, Oskar Messter began similar work, and by 1903 had

solved the main problem of exact synchronization. Reportedly, Messter's Synchrondiscs measured two feet across and were one-quarter inch thick. They were cut using the "hill and dale" system.

The Paris Exposition of 1900 brought forth one demonstration of sound movies as spectacular as any ever presented, the Phono-Cinéma-Théâtre. For a franc one could see and hear on film the greatest stars of music hall, opera, and legitimate theatre. Footit and Chocolat from the Moulin Rouge could be seen, as could Sarah Bernhardt in the dual scene from Hamlet. Jean Coquelin, the great French actor (who had appeared successfully as the pastrycook-poet in Edmond Rostand's Cyrano de Bergerac) played in a scene from that work and in another from Molière's first great popular success, Les Précieuses Ridicules (1659), a satire on contemporary affectations. Réjane, the famous French actress, could be seen in one of her most memorable parts, as Madame Sans-Gêne in the play of the same name, and in a scene from Ma Cousine (which Le Figaro found "played with such spirit that the spectator believes himself transported to the vaudeville theatre").

Vocal artists included Cossira of the Paris Opéra in an aria from Guonod's Romeo and Juliet; Polin singing "La Boiteuse du Regiment"; and baritone Victor Maurel, the creator of the role of Falstaff in Verdi's opera, in excerpts from that work and from Mozart's Don Giovanni. The clever, eccentric dancer and comic of the London music hall known as Little Tich (Harry Relph) appeared. Dancers included Mme. Félicia Mallet in "an arresting presentation" of a ballet in three tableaux, The Prodigal Son; Cléo de Mérode, famous beauty of la belle époque of the Paris Opéra, in a Javanese dance; Rosita Mauri, the great étoile of her time, in part of the famous ballet La Karrigane (which had been choreographed for her by Louis Marante); and Mauri's successor at the Paris Opéra, Italian ballerina Carlotta Zambelli, who proved to be an elegant and precise technician in parts of Le Cid and Sylvia. The rest of the bill included a popular singer, Milly Mayer, and the American vaudeville performers Mason and Forbes. Later, when the program

was given at the London Hippodrome, several acts were added: music hall performer Vesta Tilly, the "London Idol", singing "The Midnight Sun"; the music hall comic with the fine tenor voice, Alec Hurley, in one of the most famous of his breezy coster songs, "The Lambeth Cake Walk"; an American comedienne named Lil Hawthorne, singing "Killy Malone"; and the American Comedy Four "introducing" a song that dates back to about 1715, "Sally in Our Alley".

Meanwhile, Messter, working with the Auxetophone-- a phonograph with an air valve device to amplify sound-- was easing the problem of having to put chairs directly in front of the phonograph for acceptable sound volume to reach the audience. By 1904 he had produced more than 100 sound film subjects, including several by the internationally famous dancer Saharet and including six American selections (among which was a tune popular at the time, "Whistling Bowery Boy"). Half a dozen films made up Messter's show at the 1904 St. Louis Louisiana Purchase Exposition; these could be seen for a quarter in a 250-seat theatre. An average of 500 tickets were sold daily during the run.

Messter had demonstrated another in his line of sound film developments, the Kosmograph, at the Apollo Theatre in Berlin as early as August 30, 1903. By 1913, 500 theatres, principally in Europe, had installed his synchronized sound projector equipment, the Biophon, which he sold under a license. By that year, Messter had made a total of 1500 sound films, averaging 220 feet each. The sound films, which flourished in Germany around 1908-1909, included folksongs, parodies, opera, and comedy routines. Messter's sound film productions showed Robert Steidl, the music hall comic, in a comic narration to On the Cycle Track (1903); J. Giampietro, star of the Metropol Theater with an international reputation, in Don Juan Gets Married (actually produced by Alfred Duskes, later Messter's partner); the incomparable cabaret singer Otto Reutter, whose sweet-natured songs contained bitter criticism of the world; internationally famous Metropol actor Joseph Josephi; and the legendary dancer Anna Pavlova.

In 1914-1915 Messter copyrighted, in the United States, films of arias which may have been made much earlier: coloratura soprano Mary Runge singing Titania's aria from Mignon; baritone Emil Lieban in Tonio's Lament and the prologue from Il Pagliacci; selections from Barber of Seville, Tales of Hoffman; and the Swedish dramatic soprano Sigrid Arnoldson in one of her best roles, as Marguerite in an aria from Faust (which she had performed at the Metropolitan in New York).

In the United States the market for synchronized sound films was sporadic and inconsistent. In 1907 Carl Laemmle, later head of Universal Pictures, attempted to popularize sound films, and presented Jules Greenbaum's Synchroscope for the summer of 1908 at the Majestic Theater in Evansville, Indiana. The program, according to Geduld's history, included a sound film of Enrico Caruso. The product proved to be too costly, however, and the playing time of the recordings, never more than ten minutes, too short.

In the same year, 1907-1908, the Selig Polyscope film company advertised talking films in the motion picture trade periodicals, but the subject matter was not revealed. The March 9, 1907 edition of Motion Picture World commented on sound film in a news item-- "the chronomegaphone is the scientific name given to a new apparatus invented by M. Leon Gaumont of Paris..." --and in an editorial-- "the combination of the phonograph and the cinematograph has at last become a thoroughly practical success... [It can] instantly seize and afterwards reproduce at will living scenes, enabling interesting and useful records to be preserved of a period, an industry, or an art... records are made first of the words or the music, then the two apparatus are united, and while the subject re-enacts the scene, accompanying it by his own voice, the cinematograph records the actions. Sometimes also the two apparatus record simultaneously the actions and the sounds, but it is naturally necessary to have very skilful [sic] operators to operate thus at some distance from the subjects [the horn of the recording phonograph couldn't be allowed in the field of view of the camera]...no

doubt this recent industry, which is being perfected from day to day, promises success and a development similar to photography. Its role of usefulness will, no doubt, become as important as its role of pleasure, and no doubt we shall soon see new applications in this direction."

Arthur Kingston, who had worked with the Pathé manufacturer Matelot et Gentilhomme, described the process of synchronization of film with disc in an interview for Kevin Brownlow's The Parade's Gone By. The discs, he said, were recorded first; later, the artists mimed to them perfectly. In addition, Kingston described a type of electrical recording used as a means to thwart claims of Gaumont and other competitors, and to allow the direct recording of a performer while the act was being photographed.

Even with the advances indicated by Kingston, certain limitations remained. The phonograph gave mediocre quality and inadequate intensity of sound. Line voltage variations or poorly spliced film moving through the projector could cause variations in speed which led to variations in pitch.

The talking film was a novelty attraction. No company seemed willing to pour the money deemed necessary into the needed research and development, and the onset of World War I would end experimentation, for the most part, for the duration.

By 1913, Edison, still working with cylinders, had improved his product to the point that he offered demonstrations to large audiences. In January of that year, he assembled a group at the Orange County Club and presented a complete show demonstrating his progress. According to an eyewitness, the program included a man giving the history of the invention, breaking plates, and blowing horns and whistles; a girl playing "Annie Laurie" on a violin; a woman singing "The Last Rose of Summer"; a scene of Robert Planquette's 1877 comic opera, Chimes of Normandy; Dick Turpin, a politician; the "Miserere" duet from Verdi's Il Trovatore; a minstrel show in blackface; and "The Star-Spangled Banner".

After a later, similar demonstration, a reporter from The Outlook wrote, "[T]he value of the [K]inetophone is too obvious to be discussed."

The Edison show toured the country and came to rest for several months at the Keith Colonial Theatre in New York. In order to keep synchronization, a series of levers and pulleys was used, over which the projectionist exerted some control. If many frames of the film were damaged, resplicing for synchronization was necessary and expensive. (Projectionists generally were not happy about all the extra equipment they were required to handle.) Although Edison's experiments were reasonably successful, he was alone in improving the cylinder, which the rest of the recording industry, except for Columbia, had given up along with the vertical-cut (hil and dale) method. A fire in the Edison laboratory ended the Kinetophone venture in 1914.

The Selig Polyscope company offered for rent a substantial film and disc catalogue of John Cort's Talking and Singing Pictures in 1913. In February of 1914 they bid for the greatest audience appeal by contracting with the world-famous Scot comedian and composer Harry Lauder, a great seller of discs, to appear in a series of sound films of songs he introduced (and which he would record again in a series of Fox-Case sound films in the 1920's): "Roamin' in the Gloamin'", "Just a Wee Doch and Doris", "Stop Your Ticklin', Jock", "The Wedding of Sandy McNab", and "I Love a Lassie".

Sir Harry is seen dancing in the woods singing "Rob Roy McIntosh", and dancing by a river bank during "Same as His Father Was before Him". The films run from 220 feet for "A Wedding for Lauchie McGraw" to 264 feet for "We Parted on the Shore". Prints of 12 of them, including "She's Ma Daisy", "She's the Lass for Me" and "Killiecrankie", were acquired for the Library of Congress by the American Film Institute.

Until 1914, Edison alone acquired theatres for presentation of entire programs of synchronized sound films. Elsewhere, these films were relegated to peep shows and carnival tents, and as intermission material

in houses of live vaudeville performances. Yet, cylinders had become outdated and Edison's first attempts with discs employed the old vertical cut method. When, in 1929, Edison did produce an excellent, laterally-cut disc with relatively low noise, it was too late; he could not overcome the effects of the RCA-Victor merger nor of the Western Electric-Tri-Ergon sound-on-film advances. He was forced to discontinue his efforts with synchronized sound film entirely. The history of talking pictures might have been different if Edison had abandoned the cylinder when other companies did, and if he had worked earlier on lateral-cut vinyl discs.

Messter also reacted to competition. He had abandoned short talking films before the consistent, continuing success of longer and longer films. (Messter produced his first "long film", a silent with the German star, Henny Porten, about 1910).

Webb's Electrical Pictures was previewed in New York's Fulton Theatre in the Spring of 1914. A Variety reporter of the period compared George R. Webb's imperfect system with Edison's sound film. Webb's Electrical Pictures worked with one governor for both projector and phonograph. A live theatre orchestra was used to help the lacklustre program. The first half consisted of a vaudeville-minstrel show, during which Van Eps performed "Cupid's Arrow" on his banjo; Howard Kopp played his xylophone; John Hendricks sang "Rocked in the Cradle of the Deep"; and Nat Wills joked and performed "The Old Oaken Bucket". "Old Time Minstrels", with 21 minstrels (and little sound quality) was led by Carroll Johnson, who then sang "Whistling Jim". The "Dublin Rag" was performed, and Billy Burke (the hit of the show) did a contemporary hit song about a motorist, "He'd Have to Get Under, Get Out and Get Under". The ensemble finished with "Slippery Slide Trombone". The second half of the program was a performance of Guonod's Faust, which critics felt merited some praise, although it was reported as having been carried by the orchestra. (There is no indication as to the identity of the singers).

Webb put on another private preview at the Cohan and Harris Theatre in January 1917. Added was "An Afternoon in Ireland", with songs by George MacFarlane. To recordings made by Caruso (who attended) of arias from Rigoletto and Il Pagliacci, an actor "lip-synched" on the screen. Met baritone Giuseppe Campanari, one of whose most successful roles was that of Escamillo, was seen and heard performing the "Toreador" song in what was reported at the time as a full act from Carmen. Costarring were Marie Conesa, Salvatore Giordano, and the renowned Léon Rothier.

During World War I, research was limited to wireless telegraphy and the developing concept of sound photographed directly on the moving strip of motion picture film. During the 1920's, the vast majority of work on synchronization of disc and film was carried on by Western Electric and later, by their Bell Laboratories. Electrical recording had been developed, as had the extension of Lee DeForest's audion tube into sound amplification applications.

By 1925, developments with discs at Western Electric resulted in a perfectly synchronized disc and film combination which played for approximately ten minutes. Improvements were made in lowering surface noise, and in a new pick-up which increased the range of response. Selsyn motors were found to be ideal for the constancy needed for synchronization. The only element remaining to be developed was an improved speaker which could push the proper amount of bass with a maximum of efficiency. The speaker, moving-coil type, was ready by Vitaphone's first public demonstration in 1926. (With the use of a condenser transmitter instead of a pick-up, these same developments served to doom the disc-film by 1930).

In early 1925, Western Electric gave a demonstration of this sound on disc method, now called Vitaphone, to one of the few people in the movie industry who had not seen it, Sam Warner. Warner Bros. had had financial difficulties, yet Vitaphone seemed to be worth the debt it would entail. Warner Bros. decided to obtain the system.

At that time, no studios were soundproofed, nor were the properties of the microphone known. Technicians soon learned to hang drapes to keep out unwanted noises, to muffle the sound of the camera, and to install non-exploding electric lights. Eventually, soundtracks could be made with a minimum of distraction.

The first Warner subjects made with Vitaphone were short films. For the premiere program of August 6, 1926, Warner Bros. presented a film-disc, perfectly synchronized recording of Will Hays, who congratulated all involved in the new process. The Tannhäuser Overture was performed by the New York Philharmonic conducted by American composer Henry Hadley. It was followed by violinist Mischa Elman playing Dvořák's Humoresque; and by a movement from Beethoven's "Kreutzer" Sonata executed by violinist Efrem Zimbalist and pianist Harold Bauer. Alone, Bauer performed a Chopin polonaise. Marion Talley recreated her Met debut role of Gilda and sang "Caro nome" from Rigoletto; Giovanni Martinelli rendered an impressive "Vesti la giubba". The presentation ended, fittingly enough, with Anna Case, the recording star of Edison cylinders and discs (who had had a short additional career as a silent film lead) singing "La Fiesta" in an elaborate set, backed by the Metropolitan Opera Chorus and the dancing Cansinos. (Was the youngest girl dancing with the Cansinos to grow up to become Rita Hayworth?) After an intermission, the silent feature film Don Juan with John Barrymore was accompanied by a recorded musical score with occasional sound effects.

It would be more than a year after this premiere before dialogue and singing would be heard in a feature-length film and more than 21 months before the first all-talking feature film. During that time, silent features, synchronized with recorded musical scores and sound effects, would be supported by accompanying programs of short sound films.

At this point in the mid-twenties, it was customary for the large movie palaces in the major cities to present hour-long prologues to their silent films. These prologues consisted of live entertainers and house

orchestras. The first application of the Vitaphone seems to have been to supply "canned" prologues to those theatres which could not afford to hire live talent.

The second sound program to be released by Warners supported the remake of the World War I comedy The Better 'ole, with comedian Syd Chaplin. A thematically related sound short was also part of the program. This was Behind the Lines, in which Elsie Janis, "the Sweetheart of the Allied Expeditionary Force", danced on a motor lorry and sang such songs as the 1917 hit "When Yankee Doodle Learns to Parley-Vous Français" and "The Good Old War", backed by a man's chorus from the 107th Regiment.

On that same second sound program were films of two performers closely identified with The Jazz Singer-- George Jessel, who had had the title role on Broadway, and Al Jolson, whose appearance in this short could have served as a screen test for his performance in the historic feature film with singing and talking. Jessel gave a well-received comedy monologue and sang Irving Berlin's "At Peace with the World and You". Jolson sang his current hit, "When the Red, Red Robin Comes Bob, Bob, Bobbin' Along", as well as "Rock-a-Bye Your Baby with a Dixie Melody", and "April Showers".

The third Vitaphone sound short program opened in February 1927, again in support of a John Barrymore vehicle scored with sound effects and orchestration (a deviously retitled adaptation of the novel Manon Lescaut called When a Man Loves). There was a routine by the most renowned of the two-man singing vaudeville acts, Van & Schenck, and excerpts from Rigoletto--a tenor aria by Charles Hackett of the Chicago Civic Opera, and the Act III quartet by baritone Guiseppe de Luca, mezzo-soprano Jeanne Gordon, and Martinelli and Talley of the Metropolitan.

The fourth Vitaphone program was released in May 1927. Again a Syd Chaplin feature was supported with a Jessel short. A month later came the Barney Oldfield feature The First Auto, coupled with a vaudeville

sketch by a team that had been working together since 1877, Weber & Fields, and a turn by radio's first successful comedy team, Jones and Hare (named "The Happiness Boys" by their sponsor, the Happiness Candy Company).

By June 1928 the popularity of sound films had caused the market to be flooded with part-talking feature films, such as Lionel Barrymore's The Lion and the Mouse. Sound shorts billed with it ranged from the Arnheim Ambassador Hotel Orchestra through the Arkansas Travelers, with Red Nichols and Miff Mole, to the dependable Martinelli in an aria from La Juive.

Warner's second all-talking film (Lights of New York was their first) was The Terror with Edward Everet Horton. It appeared in August 1928, and played with lower-billed classical shorts: Rosa Raisa (just one year after she had created the title role in the premiere of Puccini's Turandot under the baton of Toscanini) filmed the Act IV duet from Il Trovatore with her husband, baritone Giacomo Rimini (as well as lighter numbers such as Martini's "Plaisir d'amour". On the same program was one of eight films made for Vitaphone by violinist Albert Spalding, whose photographed repertory ranged from Sarasate's "Romanze Andaluza", through Schumann's "Traumerei", Kreisler's "Liebeslied", and Chopin's Waltz No. 11, to Spalding's own composition, "Alabama".

In the fall of 1928, the seemingly endless stream of Vitaphone was ranging wider in content. Fred Allen and Clifton Webb had appeared in a sketch, The Silent Alarm, and Lionel Atwill was on view, acting Deburau's message to his son from Sacha Guitry's poetic tragic-comedy of the 1920-1921 Broadway season, Deburau.

The Brooklyn studio of Warner Brothers was on a 24-hour production schedule to keep up with the demand. After the evening performance, a remarkable range of celebrities of radio, cabaret, concert, opera, and legitimate stage hurried over to perform the seven-to ten-minute "turns" (not often of material which they were using currently on the Palace stage, but more likely of material they were no longer using

before the public or were in the process of testing before presenting it to live audiences. By May 1929, there were 600 such shorts "in the can".

Warner's reported that 1,700 theatres were renting their sound shorts. Advertisements for Vitaphone placed, side by side, likenesses of the Red Seal and Masterworks recording artists, new to cinema, with those of silent stars now appearing in talking playlets and recitations, and with an occasional celebrity from outside show business. These included tenor Beniamino Gigli; baritone Pasquale Amato of the Met, La Scala and His Master's Voice; Cantor Josef Rosenblatt (who also appeared in The Jazz Singer); pugilists James G. Corbett, Georges Carpentier, and the current heavyweight champion, Max Schmelling; and Rin Tin Tin and his trainer.

The sound film musical repertoire could lean toward recital encore repertoire, as when Madame Frances Alda mixed "Ave Maria" from Othello with "The Last Rose of Summer", and her associate at the Met, the great dramatic soprano Madame Ernestine Schumann-Heink moved from Schubert lieder ("Der Erlkoenig"), through "Danny Boy", to "By the Waters of the Minnetonka". Later this matching of the greatest voices with the most trivial music resulted in a film of the great Wagnerian bass Emmanuel List singing "(Many Brave Hearts Are) Asleep in the Deep", the standby of the minstrel basso profundo.

Many performers came from Broadway musical comedy and revue: witty Canadian comedienne Beatrice Lillie; debonair British song and dance man Jack Buchanan; the darling of the Yiddish theatre, Molly Picon. Ann Pennington, "queen of the shimmy" a veteran of many Ziegfeld Follies and George White Scandals, and the dancer who had introduced "The Black Bottom", starred in the first two-reel Vitaphone in Technicolor, Hello Baby (1930). Others included such perennials of the passing shows and follies and scandals of the twenties as the Three Brox Sisters and the Howard brothers. Miller & Lyles, the stars of Broadway's first black revue and a string of successors like Runnin' Wild made three Vitaphone sketches in 1929.

Yet to be classified as to type is a Vitaphone by The Hoot Gibson Trio. And it is hard to find out much about the Five Locust Sisters. (They only appeared every 17 years?) Joe E. Lewis, "Night Club Favorite" and comics Bert Lahr, Jack Benny, Joe E. Brown, and Jack Haley were featured, as were the teams of Burns & Allen and Blossom Seeley & Benny Fields. "The Songbird of the South" turned out to be Kate Smith.

From the concert stage came the pioneer Victor classical recording of the Fionzaley Quarter, who had appeared on Red Seal records in 1924 and were billed by Warner's as "the world's foremost string ensemble". They were filmed playing a Mozart minuet, a Borodin nocturne, and a Mendelssohn canzonetta. What composer Jerome Kern once called "the string quartet of dance bands", Joe Reisman's Central Park Casino Orchestra, was but one of the bands in Vitaphone shorts in the twenties. Another was Phil Spitalny's Park Sheraton Orchestra. Others were the Gigolos of Xavier Cugat; the Californians of Horace Heidt; the Pennsylvanians of Fred Waring; the Connecticut Yankees of Rudy Vallee; and the A&P Gypsies of Harry Horlick. (In fact, just about everybody but Boyd Senter and his Senterpedes).

One of the more unexpected Vitaphones was an original folk-opera by black composer James P. Johnson--Yamerkraw (1930). A rare print in the Library of Congress features Al Hopkins and the Original Hillbillies.

By 1930 it was all over. After having produced more than 800 Vitaphone shorts with the sound-on-disc movie system, Warner's scrapped it for the sound-on-film which has become the standard format. Some of the shorts have deteriorated because their emulsions are coated on a base with an average lifespan of less than 50 years. Some of the sound tracks, recorded on 16" phonograph records, have become separated from the picture negatives and are lost.

In the past few years the American Film Institute has been successful in locating discs for sound-on-disc films, and a member of their staff, with the help of the National Archives, has successfully resynchronized

The Voice from the Screen (1926), a film produced to explain the Vitaphone process. It is to be hoped that the same can be done with other early sound-on-disc films. About 50 of them have been located and offered for such a project to date.

Many of the negatives, held in the United Artists Collection at the Library of Congress, are being transferred onto long-life safety film. In the future, researchers in theatre and music and American popular culture may have access to a unique body of work which supplements phonographic records with accompanying visual records.

That cute toddler in three or four of the Vitaphone kiddie films may be proved to be, as rumour has it, she who grew up to be Judy Garland. The archival holdings of sound laboratories may yield records in paper and on discs to help complete the story of the period when great names lent lustre to shorts.

¹Geduld has tried to be specific about both the history of disc-film synchronization as well as about the sound-on-film methods. Though the book is interesting, and mostly readable, it suffers from over-kill in some areas while it neglects others. Geduld describes, with thoroughness, the many inventions that led to Vitaphone, Movietone, and Photophone. He begins with Edison, works through European and American advances, and goes on to the remarkably rapid progress made during the 1920's. Despite the massive amount of material he includes, Geduld skims over Oskar Messter in one page, neglects the John Cort Talking Pictures, and does include extremely long, gratuitous synopses of Don Juan and Lights of New York (which is not exactly a feature, certainly not a short, perhaps a long).

Geduld makes some careless errors also. He states that "silent speed" is 16 frames-per-second (fps), although most silents were meant to be shown at anywhere from 12 to 24 fps. During the discussion of Alexander Black's famous slide shows, Geduld states

that "the slides were projected at the rate of four per minute (too slow to achieve the persistence of vision)...." This is a model of understatement since four slides per second is still not fast enough to give the illusion of motion. Later, Geduld says, "In 1924, RCA, Victor, and Columbia, the major phonograph recording companies...", anticipating RCA's merger with Victor by six years.

Still, the book can prove valuable as a conscientious effort to provide a generally informative history of a much-neglected subject. For the lay-person, it avoids discussion of the technical matters (e.g., Geduld succeeds in generally ignoring the invaluable and detailed accounts in the Society of Motion Picture and Television Engineer's Journal and Scientific American), though the complexities of various advancements is a rapid inducement to sleep. The complete history of the invention of the sound film has yet to be written, but Geduld's The Birth of the Talkies does mark an ambitious beginning.

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