

## 1 The 'silent' cinema

As has often been remarked, the cinema has never been silent: the so-called silent films which represented the first flowering of the medium from the 1890s to the late 1920s often used sound as a vital part of the filmic experience. Accompanying music was only one of a diverse range of sonic options available to exhibitors in the early years of cinema; yet the familiarity of the fairly elaborate musical provision characterizing the later years of silent film (c.1914–27) has tended to result in the assumption that music was both constantly used and deemed aesthetically viable well before this period. As Rick Altman has argued, however, during the early development of the moving picture (c.1895–c.1913) it was not uncommon for films to be projected with no organized sound component at all (Altman 2004, 193–201). Yet, by the start of the 1920s, film-music pioneer George Beynon could declare without fear of contradiction: 'Allowing the picture to be screened in silence is an unforgivable offense that calls for the severest censure. No picture should begin in silence under any conditions' (Beynon 1921, 76).

### Why sound?

Altman's careful research established that 'silent films were in fact sometimes silent, . . . and what's more it did not appear to bother audiences a bit' (Altman 1996, 649); but audience noise and direct audience participation were more prominent at the turn of the twentieth century than they are in today's cinema in the West, so to this extent films were never truly experienced in silence. When Andy Warhol made his almost static silent films in the 1960s he assumed the audience would supply sounds, thereby participating in the artistic event (Weis and Belton 1985, 369); and audience noise, though reduced in modern times, has remained part and parcel of the cinematic experience, most prominently in India. The desirability of masking or discouraging audience noise is one of the many possible explanations – some practical and others aesthetic – that have been advanced to account for the provision of some kind of sound element to accompany screenings of silent films.

Another reason for the provision of sound in the early years of cinema may have been to mask intrusive noise both inside and outside the projection venue, including the sound of traffic passing by and the distracting whirring

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of the projector itself. Conventional modern projectors still generate a fair degree of noise: the experimental film-maker Stan Brakhage, who attempted to make genuinely silent films in the 1950s, attested to his irritation at having neglected the fact that viewers would in effect never be able to watch his films in total silence because the sound of the projector would always be present. Mechanical quietness was used as a selling-point when some early projectors were marketed: around 1900, for example, publicity for the Optigraph noted that with rival projectors 'the noise is so great that, as a rule, it is necessary to keep a piano or other musical instrument going while the motion pictures are being shown, to prevent annoyance to the audience' (quoted in Altman 2004, 89). The issue of projector noise duly became a much-vaunted but not entirely convincing theory for the origins of film music: as film theorist Siegfried Kracauer pointed out, 'this explanation is untenable; . . . the noisy projector was soon removed from the auditorium proper [into a projection booth], whereas music stubbornly persisted' (Kracauer 1960, 133).

In those silent films that purported to represent reality, the absence of naturalistic sounds might have been considered a more serious impediment to plausibility than the absence of dialogue. Yet even when films are screened without any accompanying sound, the viewer will tend to imagine noises that correspond to the images depicted. It is difficult to watch the plate-smashing sequence in Sergei Eisenstein's silent classic *The Battleship Potemkin* (1925) or the images of spoons striking glass bottles in Dziga Vertov's *The Man with the Movie Camera* (1929) without 'hearing' the appropriate sound internally. (Vertov's sensory suggestiveness even extended to implying a smell: he directly juxtaposed images of nail-polishing and film editing, both of which use acetone.) Audiences responded appropriately to such visual stimuli from the earliest years of cinema: at an early screening of *The Great Train Robbery* (dir. Edwin S. Porter, 1903), silent images of gunshots reportedly caused spectators to put their fingers in their ears (Altman 1996, 648). MGM's trademark roaring lion was born in the silent era as a result of the studio's desire for an arresting image that would 'sound' loud. In 1929 French director René Clair, lamenting the use of gratuitous sound effects in the early sound film, declared that 'we do not need to *hear* the sound of clapping if we can *see* the clapping hands' (Weis and Belton 1985, 94). Such internalized sounds were believed by Brakhage to emanate from a 'silent sound sense' (Brakhage 1960). This phenomenon, referred to as subception or subliminal auditive perception by psychologists, was exploited by numerous makers of silent films, who peppered their products with visual simulations of sound ranging from simple knocks at the door to graphically realized explosions. Some silent films, such as Franz Hofer's *Kammermusik* (1914), placed a heavy emphasis on scenes of music-making and on the act of listening to music, which may have a powerful associative effect even if no music is heard by the audience (Abel and Altman 2001, 93,

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96–7, 102–6). Furthermore, a direct correspondence between images representing the production of music and other sounds, and the act of listening to such sounds, became after c.1909 a useful device – unique to the cinema – not only for implying the existence of diegetic space beyond the confines of the screen, but also a simple (and at the time novel) form of narrative linkage in the montage; thus some silent films came to have what have aptly been termed a 'virtual sound track' (Altman 2004, 214–16).

In real life, movement is never viewed in strict silence; indeed, without special acoustic facilities, total silence is a physical impossibility even when viewing static objects. In modern sound films, room tone (i.e. ambient sound appropriate to the location depicted on screen) is specially recorded so that it can be dubbed onto ostensibly silent scenes and thereby prevent the audience from simply assuming that the sound system has failed (Weis and Belton 1985, 395); it can also be used to replace ambient background noise lost during the process of dubbing dialogue. Actual silence on the soundtrack would be unrealistic in both cases, and unacceptable except in contexts where it is used deliberately as a means of disconcerting the viewer, as in the work of French director Jean-Luc Godard. When Alfred Hitchcock wanted to create a threatening silence in *The Birds* (1960), he preferred the use of a subliminal electronic humming noise rather than a complete absence of sound (Truffaut 1967, 225). As film theorist Béla Balázs observed, the silent film was a paradox: it could not of itself reproduce silence as an artistic effect, since silence is relative and can only be appreciated within a context of sounds (Balázs 1953, 205); thus, when a car is driven away in complete silence at the end of *The Birds*, the same vehicle having demonstrated its noisy engine in a previous scene, the effect is unsettling. In short, as French director Robert Bresson pointed out, 'the sound track invented silence' (quoted in Weis and Belton 1985, 323) – or at least gave it a value that it did not possess in the silent film.

Silence in a musical context, however, has since the earliest years been an important stock-in-trade of accompanists of silent films and film composers, who have appreciated the fact that the sudden cessation of music when the latter is expected to be continuous can have an enormous dramatic impact on an audience. The phenomenon was debated in the motion-picture trade press during the heyday of the silent film, with some commentators approving of a strategic use of silence and others advocating continuity at all costs: in 1912, *Moving Picture World* advised musicians that a maximum silence of ten seconds was a useful rule-of-thumb (Kalinak 1992, 49). Organist Dennis James related how, when his instrument malfunctioned during a live accompaniment to a modern screening of a silent Harold Lloyd comedy, one member of the audience afterwards praised him for interpolating so dramatic and unexpected a silence (McCarty 1989, 66–7). Even well after the advent of the sound film, Leonid Sabaneev anxiously warned film

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composers against recouring to abrupt silence on the grounds that the device ‘gives rise to a feeling of aesthetic perplexity’ (Sabaneev 1935, 21), though a few years earlier the trenchant critic Harry Alan Potamkin – in the context of his general lambasting of the excessive use of music in the exhibition of silent films – praised a Paris showing of Abel Gance’s *J’Accuse* (1918) for the orchestra’s ‘terrific’ silence when the war dead come to life: ‘What vaudeville “fan” does not know the effectiveness of silence during an acrobatic feat? This is the point: since music is inevitable, we can make the best use of silence by selecting the intervals carefully at which the music will be hushed’ (Potamkin 1929, 295).

In silent comedies dependent upon slapstick, and to enhance the excitement of major sound events in serious silent films, real sound effects were supplied by special machines such as the Kinematophone or Allefex, which might be located behind the screen to enhance spatial verisimilitude, or by performers using the kind of sound-generating paraphernalia still familiar in modern radio drama. In France, these sound-effects performers were known as *bruitistes*, and some commentators believed that, if handled creatively, an imaginative use of sound might correspond to the *bruit musical* developed by Italian futurist artists during the First World War (Lacombe and Porcile 1995, 24–5). Unfortunately, no such high artistic aims prevailed in movie theatres, where the mindless use of sound effects was roundly criticized by many contemporaneous critics on account of its essential crudity and often excessive volume. This habit was in part responsible for the all-too-frequent recourse to unsubtle sound effects in modern commercial cinema, in which Foley artists (named after Jack Foley, who pioneered such techniques in his work on early sound films in Hollywood during the 1940s) habitually supply artificial and over-prominent sounds for virtually all noises in a film, no matter how trivial. Many are both redundant and somewhat condescending to audience intelligence, but sound-effect production had become so slick by the advent of the talkies that its retention in the sound film was inevitable. In the work of sound-sensitive modern film-makers, however, effects may be integrated with the musical score so that they work together in the soundtrack, the latter (as has long been overlooked, even in film scholarship) now being increasingly treated as an indivisible composite greater than the sum of its parts (Altman *et al.* 2000, 341).

#### Why music?

Music may initially have been supplied at film screenings simply because it has always been an inevitable adjunct to almost all forms of popular entertainment. Early moving-picture shows in the mid-1890s were little more

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than show-booth attractions: fairgrounds, vaudeville and travelling shows have traditionally been noisy affairs, and for the latest novelty spectacle to have been presented without some kind of aural stimulation would have been inconceivable. In this regard, it is important to note that music was not necessarily performed inside an exhibition venue, nor at the same time as a film was being shown. Altman has drawn attention to the significance of music as a ballyhoo device for attracting custom before patrons had even set foot in the venue: live music might be played at the entrance, or recorded music blared out into the street through a barker phonograph horn (Altman 1996, 664, 674), and even the musicians inside the projection room might be instructed to play loudly so they could be heard in the street (Altman 2004, 131). As cinema music became more elaborate and of better quality, the live performance of musical numbers – again not necessarily related to, or played simultaneously with, the films being shown – could be as strong an attraction to customers as the moving pictures on offer.

The author of one of the first serious texts on film music stated that music had been specifically conceived as compensation for the absence of naturalistic sound (London 1936, 34). One of its early exponents, Max Winkler, opined categorically that music was added to film in order to fill the void created by the absence of dialogue: 'music must take the place of the spoken word' (quoted in Limbacher 1974, 16). But music was by no means the only medium that might be used for these purposes. Apart from sound effects, other techniques included live narration, which had been a prominent feature of magic-lantern shows and fairground moving-picture attractions when barkers had provided a simultaneous commentary on the images. Sometimes reciters (also known as 'impersonators') delivered lines in an attempt to synchronize with the lip movements of the film actors, an activity in which the comedian Leopold Fregoli specialized in the late 1890s (Prendergast 1992, 4). As late as 1908, an American venue secreted actors behind the screen and had them perform synchronized dialogue in an attempt to trick the audience into believing that the 'talker' film they were witnessing constituted a genuine technological miracle (Abel and Altman 2001, 156–66). The most celebrated live narrators were the Japanese *benshi*, who were star attractions in the silent cinema and survived well into the sound era (Dym 2003); elsewhere, however, verbal narration died out once film-makers had evolved editorial techniques sophisticated enough for the sequencing of the film's visual images to carry the necessary narrative information (Fairservice 2001, 11).

As silent cinema developed, and especially after c.1912, music came to play a crucial role in shaping and conditioning the viewer's response to moving pictures. Kathryn Kalinak has proposed that music, by its very physical presence, created a sense of three-dimensionality singularly lacking

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in the projected image: while the film was projected from the rear of the hall to the screen at the front, so music played at the front was projected backwards over the audience and ‘through a kind of transference or slippage between sound and image, the depth created by the sound is transferred to the flat surface of the image’ (Kalinak 1992, 44). The process of humanizing the silent moving image with music was regarded by some commentators, notably Theodor Adorno and Hanns Eisler, as a quasi-magical process in which the spectator’s fear of the irrationality of the ghostly medium was exorcized:

Music was introduced as a kind of antidote against the picture. The need was felt to spare the spectator the unpleasantness involved in seeing effigies of living, acting, and even speaking persons, who were at the same time silent . . . [M]usic was introduced not to supply them with the life they lacked – this became its aim only in the era of total ideological planning – but to exorcise fear or help the spectator absorb the shock.

Motion-picture music corresponds to the whistling or singing child in the dark.  
 (Adorno and Eisler 1994 [1947], 75)

This view was echoed by Kracauer, who found soundless moving pictures ‘a frightening experience’ and that film music had a beneficial effect on them: ‘Ghostly shadows, as volatile as clouds, thus become trustworthy shapes’ (Kracauer 1960, 134–5). More mundanely, the use of exciting or tear-jerking musical accompaniments of an increasingly elaborate nature became perhaps the most effective mechanism for persuading spectators willingly to suspend their disbelief. As Claudia Gorbman has pointed out, this process – as familiar in the modern sound film as it was in the silent cinema – conveniently involved an abrogation of critical faculties, rendering the viewer ‘an untroublesome viewing subject’: ‘When we shed a tear during a pregnant moment in a film melodrama . . . instead of scoffing at its excess, music often is present, a catalyst in the suspension of judgment’ (Gorbman 1987, 5–6). Thus film-makers from the early days used music as ‘their panacea for encouraging audience empathy’ (Bazelon 1975, 13). This concept was expressed as early as 1926 by Paul Romaine:

all that is required of the orchestra in the cinema is to play harmonious background music with the idea not of being heard but of creating an atmosphere to sink us into our subconscious and make us forget the rustling paper, the shuffling feet, etc. in the auditorium . . . The role of music is therefore subsidiary, helping to put us in a trance with a vague background hum.  
 (quoted in Mitry 1998, 248)

Cognitive psychologists have begun the daunting task of attempting to explain how the brain’s functions enable this to happen (Cohen 2000, 365–8).

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## The birth of film music

The origins of film music are traditionally traced to Paris in the early 1890s, where Emile Reynaud's animated *Pantomimes lumineuses* were presented in November 1892 with piano music specially composed by Gaston Paulin, and a showing of short films by the Lumière brothers in December 1895 received a piano accompaniment from Emile Maraval, and a harmonium accompaniment when their show opened in London in the following year. At the launch of Vitascope in a New York music hall in April 1896, Dr Leo Sommer's Blue Hungarian Band performed. The experimental filmmaker Georges Méliès played the piano himself for the Paris première of his *Le Voyage dans la lune* in 1902. These ventures continued the long-standing practice of accompanying other types of popular entertainment, such as magic-lantern shows, vaudeville and melodrama, with appropriate music.

Many nineteenth-century lantern shows were elaborate affairs carefully sequenced for dramatic effect, and bolstered by narration and (even in the case of some illustrated scientific lectures) appropriate musical accompaniment. 'Illustrated songs', in which popular tunes were accompanied by lantern slides while the audience sang along, were one form of entertainment that was carried over directly into early cinemas, which in the first part of the silent era continued to provide a varied bill of vaudeville-style fare; early projectors combined both motion-picture and lantern-slide technology (Altman 1996, 660–7). So popular were illustrated songs in the USA – and so essentially different from the frequently melodramatic tone of imported European films in the early days of silent movies – that Richard Abel has plausibly suggested they were responsible not only for the initial success of the nickelodeon industry (see below) but also as an early example of a distinctively American psychology that would come to be important in the later development of a national cinematic style (Abel and Altman 2001, 150–1). Illustrated songs gradually disappeared from nickelodeons in 1910–13, perhaps in response to a widespread desire for movies to be taken more seriously: this new-found aura of respectability required silent contemplation on the part of the audience, and an avoidance of popular culture.

Although it would be decades before synchronized pre-recorded sound established itself in the cinema, several leading inventors attempted to combine image and sound in this way as early as the 1890s. Thomas Edison's Kinetograph, on which work began in 1889, was developed specifically to provide a visual enhancement to music reproduced on his already successful phonograph – a reversal of the more common subordination of music to visual image that soon came to dominate mainstream cinema. Both Edison's



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Kinetograph (camera) and Kinetoscope (projector) were conceived with the aim of synchronizing image and sound, and it is now known that Edison took the credit for some technological marvels that had in fact been invented by others (Allen and Gomery 1985, 57–8); but, no matter who was responsible for it, the challenge of synchronization proved to be too ambitious for its time and the handful of Kinetophone sound films his team produced had unsynchronized accompaniments. After other devices for recording accompaniments on disc or cylinder were demonstrated at the Paris Exposition in 1900, some film-makers furthered the attempt to use pre-recorded sound; in Germany, Oskar Messter worked on his Kosmograpth disc system from 1903 onwards and began to release *Tonbilder* films in 1908 with recorded music, and films of musical numbers accompanied by ‘an incredible gramophone synchronized to the pictures and driven by compressed air’ enjoyed popularity in Sweden in 1908–9 (Lack 1997, 14–15). These experiments were less than satisfactory on account of poor synchronization, lack of amplification and the need to change sound cylinders or discs every five minutes or so. The absence of a standardized system also meant that the initiatives were not commercially viable: apart from a short-lived revamping of Edison’s Kinetophone productions in 1913–14, such ventures had already dwindled in importance around 1910.

As the craze for moving pictures spread, the nature of their musical accompaniment varied considerably according to the context in which they were shown. Mechanical instruments were popular initially, and these preserved an audible link with the fairground; even as late as 1913, three-quarters of projection venues surveyed in San Francisco still had nothing but mechanical music, and close on 90 per cent had provision for it (Altman 1996, 685). Nevertheless, live music was always common, especially in cases where touring motion-picture attractions were presented in vaudeville theatres or music halls to the accompaniment of the venues’ resident ensembles. This appears to have been the case with tours of the Vitascope and Biograph shows and similar attractions in both the USA and Europe during the later 1890s; in Paris, café-concert and music-hall entertainments also came to include motion pictures, which formed part of the bill of fare at famous venues such as the Olympia and Folies-Bergère. The German entrepreneurs Max and Emil Skladanowsky toured Scandinavia with their Bioskop show in 1896, and the incomplete set of performing parts that survives reveals the musical accompaniment to have included both specially composed cues and an extract from Glinka for use with a sequence depicting a Russian dance. Another compilation, similar in function, was prepared by Leopold Wenzel for a royal cinematographic show at Windsor Castle in 1897 (Marks 1997, 30–50). The American touring exhibitor D. W. Robertson set out with a newly purchased Edison Kinetoscope in 1897 and by 1906 was advertising



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shows with 'descriptive musical accompaniment' (Abel and Altman 2001, 125).

The success of these and other itinerant motion-picture enterprises led to a major boom in the establishment of nickelodeons in the USA, which began to appear in c.1905 and numbered some 10,000 by 1910; after their humble beginnings, these establishments catered for increasingly discerning audiences who would pay more for luxuries such as comfortable seats and music. A parallel development in France, also beginning in 1905–6, saw Charles Pathé and Léon Gaumont establish *salles de cinéma* in numerous provincial towns. It was in venues such as these that the initial showbooth-style 'cinema of attractions' became gradually supplanted by more substantial films with a strong narrative orientation, and with these came more ambitious musical accompaniment. Comments published in the trade press seem to indicate that a perceived need for incidental music was growing stronger by c.1907 and that, by c.1911, music accompanying the picture was regarded as more useful than the independent musical numbers that had been performed previously; musical provision also became increasingly standardized as a result of the systematic attempts of production companies to promote a consistent manner of film accompaniment in preference to the widely contrasting types of aural stimulation on offer at various establishments, which had formerly been regarded by the latter as competitive selling-points (Altman 1996, 677–9, 690). The production companies did this partly through the medium of live demonstrations, either given by touring representatives or by invitation to exhibitors to attend presentations at major urban venues, especially in the period 1911–14 (Altman 2004, 272–3).

### Categories of film music

At an early stage it was recognized that there were two fundamentally different types of film music. On the one hand, the music might be what modern film scholars describe as diegetic: in other words, it formed part of the film's narrative world (diegesis) and its purported source was often, though not exclusively, visible on the screen. On the other hand, the music might be nondiegetic, serving as appropriate background listening. Diegetic music-making in the visual image could easily be matched by a synchronized instrumental or vocal accompaniment – whether supplied live or on a gramophone recording – and this procedure became especially popular in c.1907–8 (Altman 1996, 682), being referred to specifically as 'cue music'. As greater attention was paid to the provision of nondiegetic music, such accompaniments drew increasingly on features of the well-established

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symbiosis between music and drama that had in the nineteenth century shaped the development of major theatrical genres such as opera, ballet and (above all) melodrama (Shapiro 1984). According to one early twentieth-century commentator, the basis of the musical component in melodrama ('which accompanies the dialogue and reflects the feeling and emotion of the spoken lines') is simplicity of construction and subservience to the words: 'It usually accompanies the most sentimental passages in the play . . . , following the hero and heroine most obstinately. But the villain too will have his little bit of *tremolo* to help him along his evil path' (O'Neill 1911, 88). Recapitulation is used 'to remind the audience of a previous situation', later a standard film-music technique; but on the whole 'both music and drama of this class have no great artistic value. The music is simply called in to bolster up the weakness of the drama. It is used to stimulate (by what I may call unfair means) the imagination of the audience, and to help the actor' (O'Neill 1911, 88).

Since many influential silent-film directors had been schooled in melodrama, the transferral of its characteristics to the silver screen was inevitable. Stagings of melodrama had utilized live organ or orchestral incidental music to enhance the audience's emotional response and to suggest character types or geographical locations, the choice of appropriate music being indicated in the scripts and aided by the existence of anthologies of specially selected musical extracts. These were all features of early film music, which directly inherited melodramatic clichés such as the use of string tremolo and delicate pizzicato for tension and furtiveness respectively, and loud stinger chords to emphasize physical action or rousing lines (Gorbman 1987, 33–5; Marks 1997, 28). These simple devices, combined with background music lulling the spectator into an uncritical state, remained useful in inferior melodramatic film drama because, as Yves Baudrier put it, 'if the music is taken away, there is a risk of losing the necessary minimum emotional warmth which must exist for us to believe (however temporarily) in the sentiments we are supposed to be feeling, attracting, through a sort of magic, the complicity of the audience' (quoted in Mitry 1998, 253).

The importance of music as a mood-enhancer in early cinema was reflected in the common practice of having live or recorded music played on film sets during shooting to inspire the actors, a procedure later occasionally used in the making of sound films by directors such as John Ford, Alfred Hitchcock (who, while shooting *The Birds*, used a drummer on set to terrify the actors in the absence of the film's sophisticated avian sound effects), Stanley Kubrick, Sergio Leone, David Lynch, Ken Russell and Peter Weir. Cecil B. DeMille, for example, used the slow movement of Dvořák's *New World Symphony* to establish the mood for his portrayal of