## History of film

**History** 



Plays and dances had elements common to films- scripts, sets, lighting, costumes, production, direction, actors, audiences, storyboards, and scores. They preceded film by thousands of years. Much terminology later used in film theory and criticism applied, such as mise en scene. Moving visual images and sounds were not recorded for replaying as in film. The camera obscura was pioneered by Alhazen in his Book of Optics (1021),[2][3][4] and was later perfected near the year 1600 by Giambattista della Porta.

Light is inverted through a small hole or lens from outside, and projected onto a surface or screen, creating a projected moving image, indistinguishable from a projected high quality film to an audience, but it is not preserved in a recording. In 1739 and 1748, David Hume published Treatise of Human Nature and An Enquiry concerning Human Understanding, arguing for the associations and causes of ideas with visual images, in some sense forerunners to the language of film.

Moving images were produced on revolving drums and disks in the 1830s with independent invention by Simon von Stampfer (Stroboscope) in Austria, Joseph Plateau (Phenakistoscope) in Belgium and William Horner (zoetrope) in Britain. In 1877, under the sponsorship of Leland Stanford, Eadweard Muybridge successfully photographed a horse named "Sallie Gardner" in fast motion using a series of 24 stereoscopic cameras. The experiment took place on June 11 at the Palo Alto farm in California with the press present. The purpose of the exercise was to determine whether a running horse ever had all four legs lifted off the ground at once.

The cameras were arranged along a track parallel to the horse's, and each of the camera shutters was controlled by a trip wire which was triggered by the horse's hooves. They were 21 inches apart to cover the 20 feet taken by the horse stride, taking pictures at one thousandth of a second. [5] Roundhay Garden Scene 1888, the first known celluloid film recorded. The second experimental film, Roundhay Garden Scene, filmed by Louis Le Prince on October 14, 1888 in Roundhay, Leeds, West Yorkshire, England, UK is now known as the earliest surviving motion picture. On June 21, 1889, William Friese-Greene was issued patent no. 0131 for his 'chronophotographic' camera. It was apparently capable of taking up to ten photographs per second using perforated celluloid film. A report on the camera was published in the British Photographic News on February 28, 1890. On 18 March, Friese-Greene sent a clipping of the story to Thomas Edison, whose laboratory had been developing a motion picture system known as the Kinetoscope. The report was reprinted in Scientific American on April 19. [6] Friese-Greene gave a public demonstration in 1890 but the low frame rate combined with the device's apparent unreliability failed to make an impression.

As a result of the work of Etienne-Jules Marey and Eadweard Muybridge, many researchers in the late 19th century realized that films as they are known today were a practical possibility, but the first to design a fully successful apparatus was W. K. L. Dickson, working under the direction of Thomas Alva Edison. His fully developed camera, called the Kinetograph, was patented in 1891 and took a series of instantaneous photographs on standard Eastman Kodak photographic emulsion coated on to a transparent celluloid strip 35 mm wide.

The results of this work were first shown in public in 1893, using the viewing apparatus also designed by Dickson, and called the Kinetoscope. This was contained within a large box, and only permitted the images to be viewed by one person at a time looking into it through a peephole, after starting the machine by inserting a coin. It was not a commercial success in this form, and left the way free for the Lumiere brothers, Louis and Auguste, to perfect their apparatus, the Cinematographe.

This was the first successful projector, as well as being the apparatus that took and printed the film beforehand. With their Cinematographe they gave the first show of projected pictures to an audience in Paris in December 1895. [7] After this date, the Edison company developed its own form of projector, as did various other inventors. Some of these used different film widths and projection speeds, but after a few years the 35-mm wide Edison film, and the 16-frames-per-second projection speed of the Lumiere Cinematographe became standard.

The other important American competitor was the American Mutoscope & Biograph Company, which used a new camera designed by Dickson after he left the Edison company. [8] At the Chicago 1893 World's Columbian Exposition, Muybridge gave a series of lectures on the Science of Animal Locomotion in the Zoopraxographical Hall, built specially for that purpose in the "Midway Plaisance" arm of the exposition. He used his zoopraxiscope to show his moving pictures to a paying public, making the Hall the very first commercial movie theater. [5]

William Kennedy Laurie Dickson, chief engineer with the Edison Laboratories, is credited with the invention of a practicable form of a celluloid strip containing a sequence of images, the basis of a method of photographing and projecting moving images. [citation needed] Celluloid blocks were thinly sliced, then removed with heated pressure plates. After this, they were coated with a photosensitive gelatin emulsion. [citation needed] In 1893 at the Chicago World's Fair, Thomas Edison introduced to the public two pioneering inventions based on this innovation; the Kinetograph - the first practical moving picture camera - and the Kinetoscope.

The latter was a cabinet in which a continuous loop of Dickson's celluloid film (powered by an electric motor) was back lit by an incandescent lamp and seen through a magnifying lens. The spectator viewed the image through an eye piece. Kinetoscope parlours were supplied with fifty-foot film snippets photographed by Dickson, in Edison's "Black Maria" studio (pronounced like "ma-RYE-ah"). These sequences recorded mundane events (such as Fred Ott's Sneeze, 1894) as well as entertainment acts like acrobats, musichall performers and boxing demonstrations.

Kinetoscope parlors soon spread successfully to Europe. Edison, however, never attempted to patent these instruments on the other side of the Atlantic, since they relied so greatly on previous experiments and innovations from Britain and Europe. This enabled the development of imitations, such as the camera devised by British electrician and scientific instrument maker Robert W. Paul and his partner Birt Acres. Paul had the idea of displaying moving pictures for group audiences, rather than just to

individual viewers, and invented a film projector, giving his first public showing in 1895.

At about the same time, in France, Auguste and Louis Lumiere invented the cinematograph, a portable, three-in-one device: camera, printer, and projector. In late 1895 in Paris, father Antoine Lumiere began exhibitions of projected films before the paying public, beginning the general conversion of the medium to projection (Cook, 1990). They quickly became Europe's main producers with their actualites like Workers Leaving the Lumiere Factory and comic vignettes like The Sprinkler Sprinkled (both 1895). Even Edison, initially dismissive of projection, joined the trend with the Vitascope within less than six months.

The first public motion-picture film presentation in Europe, though, belongs to Max and Emil Skladanowsky of Berlin, who projected with their apparatus "Bioscop", a flickerfree duplex construction, November 1 through 31, 1895. That same year in May, in the USA, Eugene Augustin Lauste devised his Eidoloscope for the Lathamfamily. But the first public screening of film ever is due to Jean Aime "Acme" Le Roy, a French photographer. On February 5, 1894, his 40th birthday, he presented his "Marvellous Cinematograph" to a group of around twenty show business men in New York City.

The movies of the time were seen mostly via temporary storefront spaces and traveling exhibitors or as acts in vaudeville programs. A film could be under a minute long and would usually present a single scene, authentic or staged, of everyday life, a public event, a sporting event or slapstick. There was little to no cinematic technique: no editing and usually no camera

movement, and flat, stagey compositions. But the novelty of realistically moving photographs was enough for a motion picture industry to mushroom before the end of the century, in countries around the world. edit] The silent era In the silent era of film, marrying the image with synchronous sound was not possible for inventors and producers, since no practical method was devised until 1923. Thus, for the first thirty years of their history, movies were silent, although accompanied by live musicians and sometimes sound effects and even commentary spoken by the showman or projectionist. Illustrated songs were a notable exception to this trend that began in 1894 in vaudeville houses and persisted as late as the late 1930s in movie theaters. 9] In this early precursor to the music video, live performance or sound recordings were paired with hand-colored glass slides projected through stereopticons and similar devices. In this way, song narrative was illustrated through a series of slides whose changes were simultaneous with the narrative development. The main purpose of illustrated songs was to encourage sheet music sales, and they were highly successful with sales reaching into the millions for a single song. Later, with the birth of film, illustrated songs were used as filler material preceding films and during reel changes. [10]

In most countries the need for spoken accompaniment quickly faded, with dialogue and narration presented in intertitles, but in Japanese cinema it remained popular throughout the silent era. [edit] Film history from 1895 to 1906 The first eleven years of motion pictures show the cinema moving from a novelty to an established large-scale entertainment industry. The films themselves represent a movement from films consisting of one shot,

completely made by one person with a few assistants, towards films several minutes long consisting of several shots, which were made by large companies in something like industrial conditions. edit] Film business up to 1906 The first commercial exhibition of film took place on April 14, 1894 at the first Kinetoscope parlor ever built. However, it was clear that Edison originally intended to create a sound film system, which would not gain worldwide recognition until the release of The Jazz Singer in 1927. In 1896 it became clear that moremoneywas to be made by showing motion picture films with a projector to a large audience than exhibiting them in Edison's Kinetoscope peep-show machines.

The Edison company took up a projector developed by Armat and Jenkins, the "Phantoscope", which was renamed the Vitascope, and it joined various projecting machines made by other people to show the 480 mm. width films being made by the Edison company and others in France and the UK. However, the most successful motion picture company in the United States, with the largest production until 1900, was the American Mutoscope company. This was initially set up to exploit peep-show type movies using designs made by W. K. L. Dickson after he left the Edison company in 1895.

His equipment used 70 mm. wide film, and each frame was printed separately onto paper sheets for insertion into their viewing machine, called the Mutoscope. The image sheets stood out from the periphery of a rotating drum, and flipped into view in succession. Besides the Mutoscope, they also made a projector called the Biograph, which could project a continuous positive film print made from the same negatives. There were numerous

other smaller producers in the United States, and some of them established a long-term presence in the new century.

American Vitagraph, one of these minor producers, built studios in Brooklyn, and expanded its operations in 1905. From 1896 there was continuous litigation in the United States over the patents covering the basic mechanisms that made motion pictures possible. In France, the Lumiere company sent cameramen all round the world from 1896 onwards to shoot films, which were exhibited locally by the cameramen, and then sent back to the company factory in Lyon to make prints for sale to whoever wanted them.

There were nearly a thousand of these films made up to 1901, nearly all of them actualities. By 1898 Georges Melies was the largest producer of fiction films in France, and from this point onwards his output was almost entirely films featuring trick effects, which were very successful in all markets. The special popularity of his longer films, which were several minutes long from 1899 onwards (while most other films were still only a minute long), led other makers to start producing longer films.

From 1900 Charles Pathe began film production under the Pathe-Freres brand, with Ferdinand Zecca hired to actually make the films. By 1905, Pathe was the largest film company in the world, a position it retained until World War I. Leon Gaumont began film production in 1896, with his production supervised by Alice Guy. In the UK, Robert W. Paul, James Williamson and G. A. Smith and the other lesser producers were joined by Cecil Hepworth in 1899, and in a few years he was turning out 100 films a year, with his

company becoming the largest on the British scene. edit] Film exhibition Initially films were mostly shown as a novelty in special venues, but the main methods of exhibition quickly became either as an item on the programmes of variety theatres, or by traveling showman in tent theatres, which they took around the fairs in country towns. It became the practice for the producing companies to sell prints outright to the exhibitors, at so much per foot, regardless of the subject. Typical prices initially were 15 cents a foot in the United States, and one shilling a foot in Britain.

Hand-coloured films, which were being produced of the most popular subjects before 1900, cost 2 to 3 times as much per foot. There were a few producers, such as the American Mutoscope and Biograph Company, which did not sell their films, but exploited them solely with their own exhibition units. The first successful permanent theatre showing nothing but films was "The Nickelodeon", which was opened in Pittsburgh in 1905. By this date there were finally enough films several minutes long available to fill a programme running for at least half an hour, and which could be changed weekly when the local audience became bored with it.

Other exhibitors in the United States quickly followed suit, and within a couple of years there were thousands of these nickelodeons in operation. The American situation led to a worldwide boom in the production and exhibition of films from 1906 onwards. [edit] Film technique Georges Melies (left) painting a backdrop in his studioThe first movie cameras were fastened directly to the head of their tripod or other support, with only the crudest kind of levelling devices provided, in the manner of the still-camera tripod heads of the period.

The earliest movie cameras were thus effectively fixed during the course of the shot, and hence the first camera movements were the result of mounting a camera on a moving vehicle. The first known of these was a film shot by a Lumiere cameraman from the back platform of a train leaving Jerusalem in 1896, and by 1898 there were a number of films shot from moving trains. Although listed under the general heading of "panoramas" in the sales catalogues of the time, those films shot straight forward from in front of a railway engine were usually specifically referred to as "phantom rides".

In 1897, Robert W. Paul had the first real rotating camera head made to put on a tripod, so that he could follow the passing processions of Queen Victoria's Diamond Jubilee in one uninterrupted shot. This device had the camera mounted on a vertical axis that could be rotated by a worm gear driven by turning a crank handle, and Paul put it on general sale the next year. Shots taken using such a "panning" head were also referred to as 'panoramas' in the film catalogues of the first decade of the cinema.

The standard pattern for early film studios was provided by the studio which Georges Melies had built in May 1891. This had a glass roof and three glass walls constructed after the model of large studios for still photography, and it was fitted with thin cotton cloths that could be stretched below the roof to diffuse the direct ray of the sun on sunny days. The soft overall light without real shadows that this arrangement produced, and which also exists naturally on lightly overcast days, was to become the basis for film lighting in film studios for the next decade. [edit] Filmic effects

Unique among all the one minute long films made by the Edison company, which recorded parts of the acts of variety performers for their Kinetoscope viewing machines, was The Execution of Mary, Queen of Scots. This showed a person dressed as the queen placing her head on the execution block in front of a small group of bystanders in Elizabethan dress. The executioner brings his axe down, and the queen's severed head drops onto the ground. This trick was worked by stopping the camera and replacing the actor with a dummy, then restarting the camera before the axe falls.

The two pieces of film were then trimmed and cemented together so that the action appeared continuous when the film was shown. This film was among those exported to Europe with the first Kinetoscope machines in 1895, and was seen by Georges Melies, who was putting on magic shows in his Theatre Robert-Houdin in Paris at the time. He took up film-making in 1896, and after making imitations of other films from Edison, Lumiere, and Robert Paul, he made Escamotage d'un dame chez Robert-Houdin (The Vanishing Lady).

This film shows a woman being made to vanish by using the same stop motion technique as the earlier Edison film. After this, Georges Melies made many single shot films using this trick over the next couple of years. The other basic set of techniques for trick cinematography involves double exposure of the film in the camera, which was first done by G. A. Smith in July 1898 in the UK. His The Corsican Brothers was described in the catalogue of the Warwick Trading Company, which took up the distribution of Smith's films in 1900, thus:

A scene inset inside a circular vignette showing a "dream vision" in Santa Claus (1899)" One of the twin brothers returns home from shooting in the Corsican mountains, and is visited by the ghost of the other twin. By extremely careful photography the ghost appears \*quite transparent\*. After indicating that he has been killed by a sword-thrust, and appealing for vengeance, he disappears. A 'vision' then appears showing the fatal duel in thesnow. To the Corsican's amazement, the duel and death of his brother are vividly depicted in the vision, and finally, overcome by his feelings, he alls to the floor just as his mother enters the room. "The ghost effect was simply done by draping the set in black velvet after the main action had been shot, and then re-exposing the negative with the actor playing the ghost going through the actions at the appropriate point. Likewise, the vision, which appeared within a circular vignette or matte, was similarly superimposed over a black area in the backdrop to the scene, rather than over a part of the set with detail in it, so that nothing appeared through the image, which seemed quite solid.

Smith used this technique again a year later in Santa Claus. Georges Melies first used superimposition on a dark background in la Caverne maudite (The Cave of the Demons) made a couple of months later in 1898, and then elaborated it further with multiple superimpositions in the one shot in l'Homme de tetes (The Troublesome Heads). He then did it with further variations in numerous subsequent films. [edit] Other special techniques The other special effect technique that G. A.

Smith initiated was reverse motion and the quality of self-motivating images.

He did this by repeating the action a second time, while filming it with an https://assignbuster.com/history-of-film/

inverted camera, and then joining the tail of the second negative to that of the first. The first films made using this device were Tipsy, Topsy, Turvy and The Awkward Sign Painter. The Awkward Sign Painter showed a sign painter lettering a sign, and in the reverse printing of the same footage appended to the standard print, the painting on the sign vanished under the painter's brush.

The earliest surviving example of this technique is Smith's The House That Jack Built, made before September 1901. Here, a small boy is shown knocking down a castle just constructed by a little girl out of children's building blocks. Then a title appears, saying "Reversed", and the action is repeated in reverse, so that the castle re-erects itself under his blows. Cecil Hepworth took this technique further, by printing the negative of the forwards motion backwards frame by frame, so producing a print in which the original action was exactly reversed.

To do this he built a special printer in which the negative running through a projector was projected into the gate of a camera through a special lens giving a same-size image. This arrangement came to be called a "projection printer", and eventually an "optical printer". With it Hepworth made The Bathers in 1900, in which bathers who have undressed and jumped into the water appear to spring backwards out of it, and have their clothes magically fly back onto their bodies. The use of different camera speeds also appeared around 1900.

To make Robert Paul's On a RunawayMotor Carthrough Piccadilly Circus (1899), the camera was turned very slowly, so that when the film was

projected at the usual 16 frames per second, the scenery appeared to be passing at great speed. Cecil Hepworth used the opposite effect in The Indian Chief and the Seidlitz Powder (1901), in which a naive Red Indian eats a lot of the fizzy stomach medicine, causing his stomach to expand vastly. He leaps around in a way that is made balloon-like by cranking the camera much faster than 16 frames per second. This gives what we would call a "slow motion" effect. [edit] Animation

The most important development in this area of special techniques occurred, arguably, in 1899, with the production of the short film Matches: An Appeal, a thirty-second long stop-motion animated piece intended to encourage the audience to send matches to British troops fighting the Boer War. The relative sophistication of this piece was not followed up for some time, with subsequent works in animation being limited to short, two or three frame effects, such as appeared in Edwin Porter's 1902 short "Fun in a Bakery Shop", where a lump of dough was made to smile over the course of a three-frame sequence.

Works rivaling the British short in length did not appear until 1905, when Edwin Porter made How Jones Lost His Roll, and The Whole Dam Family and the Dam Dog. Both of these films had intertitles which were formed by the letters moving into place from a random scattering to form the words of the titles. This was done by exposing the film one frame at a time, and moving the letters a little bit towards their final position between each exposure. This is what has come to be called "single frame animation" or "object animation", and it needs a slightly adapted amera that exposes only one frame for each turn of the crank handle, rather than the usual eight frames https://assignbuster.com/history-of-film/

per turn. In 1906, Albert Edward Smith and James Stuart Blackton at Vitagraph took the next step, and in their Humorous Phases of Funny Faces, what appear to be cartoon drawings of people move from one pose to another. This is done for most of the length of this film by moving jointed cut-outs of the figures frame by frame between the exposures, just as Porter moved his letters.

However, there is a very short section of the film where things are made to appear to move by altering the drawings themselves from frame to frame, which is how standard animated cartoons have since been made up to today. [edit] Narrative film construction The way forward to making films made up of more than one shot was led by films of the life of Jesus Christ. The first of these was made in France in 1897, and it was followed in the same year by a film of the Passion play staged yearly in the Czech town of Horitz.

This was filmed by Americans for exhibition outside the German-speaking world and was presented in special venues, not as a continuous film, but with the separate scenes interspersed with lantern slides, a lecture, and live choral numbers, to increase the running time of the spectacle to about 90 minutes. Films of acted reproductions of scenes from the Greco-Turkish war were made by Georges Melies in 1897, and although sold separately, these were no doubt shown in continuous sequence by exhibitors. In 1898 a few films of similar kind were made, but still none had continuous action moving from one shot into the next.

The multi-shot films that Georges Melies made in 1899 were much longer than those made by anybody else, but l'Affaire Dreyfus (The Dreyfus Case)

and Cendrillon (Cinderella) still contained no action moving from one shot to the next one. Also, from Cendrillon onwards, Melies made a dissolve between every shot in his films, which reduced any appearance of action continuity even further. To understand what is going on in both these films, the audience had to know their stories beforehand, or be told them by a presenter. [edit] Film continuity

Real film continuity, which means showing action moving from one shot into another joined to it, can be dated to Robert W. Paul's Come Along, Do!, made in 1898. In the first shot of this film, an old couple outside an art exhibition follow other people inside through the door. The second shot showed what they do inside. The two scenes making up Come Along Do! The further development of action continuity in multi-shot films continued in 1899. In the latter part of that year, George Albert Smith, working in Brighton, made The Kiss in the Tunnel.

This started with a shot from a "phantom ride" at the point at which the train goes into a tunnel, and continued with the action on a set representing the interior of a railway carriage, where a man steals a kiss from a woman, and then cuts back to the phantom ride shot when the train comes out of the tunnel. A month later, the Bamforth company in Yorkshire made a restaged version of this film under the same title, and in this case they filmed shots of a train entering and leaving a tunnel from beside the tracks, which they joined before and after their version of the kiss inside the train compartment.

In 1900, continuity of action across successive shots was definitively established by George Albert Smith and James Williamson, who also worked

in Brighton. In that year Smith made Seen Through the Telescope, in which the main shot shows street scene with a young man tying the shoelace and then caressing the foot of his girlfriend, while an old man observes this through a telescope. There is then a cut to close shot of the hands on the girl's foot shown inside a black circular mask, and then a cut back to the continuation of the original scene.

The first two shots of Seen Through the Telescope (1900), with the telescope POV simulated by the circular mask. Even more remarkable is James Williamson's Attack on a China Mission Station, made around the same time in 1900. The first shot shows the gate to the mission station from the outside being attacked and broken open by Chinese Boxer rebels, then there is a cut to the garden of the mission station where the missionary and his family are seated.

The Boxers rush in and after exchanging fire with the missionary, kill him, and pursue his family into the house. His wife appears on the balcony waving for help, which immediately comes with an armed party of British sailors appearing through the gate to the mission station, this time seen from the inside. They fire at the Boxers, and advance out of the frame into the next shot, which is taken from the opposite direction looking towards the house. This constitutes the first "reverse angle" cut in film history.

The scene continues with the sailors rescuing the remaining members of the missionary's family. G. A. Smith further developed the ideas of breaking a scene shot in one place into a series of shots taken from different camera positions over the next couple of years, starting with The Little Doctors of

1901. In this film a little girl is administering pretend medicine to a kitten, and Smith cuts in to a big Close Up of the kitten as she does so, and then cuts back to the main shot.

In this case the inserted close up is not shown as a Point of View shot in a circular mask. He summed up his work in Mary Jane's Mishap of 1903, with repeated cuts in to a close shot of a housemaid fooling around, along with superimpositions and other devices, before abandoning film-making to invent the Kinemacolor system of colour cinematography. James Williamson concentrated on making films taking action from one place shown in one shot to the next shown in another shot in films like Stop Thief! and Fire! made in 1901, and many others. [edit] Film continuity developed Other film-makers then took up all these ideas, which form the basis of film construction, or "film language", or "film grammar", as we know it. The best known of these film-makers was Edwin S. Porter, who started making films for the Edison Company in 1901. When he began making longer films in 1902, he put a dissolve between every shot, just as Georges Melies was already doing, and he frequently had the same action repeated across the dissolves.

In other words, Edwin Porter did not develop the basics of film construction. The Pathe company in France also made imitations and variations of Smith and Williamson's films from 1902 onwards using cuts between the shots, which helped to standardize the basics of film construction. In 1903 there was a substantial increase in the number of film several minutes long, as a result of the great popularity of Georges Melies' le Voyage dans la lune (A

Trip to the Moon), which came out in early 1902, though such films were still a very minor part of production.

Most of them were what came to be called "chase films". These were inspired by James Williamson's Stop Thief! of 1901, which showed a tramp stealing a leg of mutton from a butcher's boy in the first shot, then being chased through the second shot by the butcher's boy and assorted dogs, and finally being caught by the dogs in the third shot. Several British films made in the first half of 1903 extended the chase method of film construction.

These included An Elopement a la Mode and The Pickpocket: A Chase
Through London, made by Alf Collins for the British branch of the French
Gaumont company, Daring Daylight Burglary, made by the Sheffield
Photographic Company, and Desperate Poaching Affray, made by the Haggar
family, whose main business was exhibiting films made by others in their
traveling tent theatre. All of these films, and indeed others of like nature
were shown in the United States, and some them were certainly seen by
Edwin Porter, before he made The Great Train Robbery towards the end of
the year.

The time continuity in The Great Train Robbery is actually more confusing than that in the films it was modeled on, but nevertheless it was a greater success than them worldwide, because of its Wild Westviolence. From 1900, the Pathe company films also frequently copied and varied the ideas of the British film-makers, without making any major innovations in narrative film construction, but eventually the sheer volume of their production led to their

film-makers giving a further precision and polish to the details of film continuity. [edit] Film history from 1906 to 1914

Poster for a Biograph Studios release from 1913. [edit] The film business By 1907 there were about 4, 000 small "nickelodeon" cinemas in the United States. The films were shown with the accompaniment of music provided by a pianist, though there could be more musicians. There were also a very few larger cinemas in some of the biggest cities. Initially, the majority of films in the programmes were Pathe films, but this changed fairly quickly as the American companies cranked up production. The programme was made up of just a few films, and the show lasted around 30 minutes.

The reel of film, of maximum length 1, 000 feet (300 m), which usually contained one individual film, became the standard unit of film production and exhibition in this period. The programme was changed twice or more a week, but went up to five changes of programme a week after a couple of years. In general, cinemas were set up in the established entertainment districts of the cities. In other countries of the Western world the film exhibition situation was similar. With the change to "nickelodeon" exhibition there was also a change, led by Pathe in 1907, from selling films outright to renting them through film exchanges.

An early film, depicting a re-enactment of the Battle of Chemulpo Bay (Film produced in 1904 by Edison Studios)The litigation over patents between all the major American film-making companies had continued, and at the end of 1908 they decided to pool their patents and form a trust to use them to control the American film business. The companies concerned were Pathe,

Edison, Biograph, Vitagraph, Lubin, Selig, Essanay, Kalem, and the Kleine Optical Company, a major importer of European films.

The George Eastman company, the only manufacturer of film stock in the United States, was also part of the combine, which was called the Motion Picture Patents Company (MPPC), and Eastman Kodak agreed to only supply the members with film stock. License fees for distributing and projecting films were extracted from all distributors and exhibitors. The producing companies that were part of the trust were allocated production quotas (two reels, i. e. films, a week for the biggest ones, one reel a week for the smaller), which were supposed to be enough to fill the programmes of the licensed exhibitors.

Vitagraph and Edison already had multiple production units, and so had no difficulty meeting their quota, but in 1908 Biograph lost their one working director. They offered the job of making their films to D. W. Griffith, an unimportant actor and playwright, who took up the job, and found he had a gift for it. Alone he made all the Biograph films from 1908 to 1910. This amounted to 30 minutes of screen time a week. But the market was bigger than the Motion Picture Patents Company members could supply. Although 6, 000 exhibitors signed with the MPPC, about 2, 000 others did not.

A minority of the exchanges (i. e. distributors) stayed outside the MPPC, and in 1909 these independent exchanges immediately began to fund new film producing companies. By 1911 there were enough independent and foreign films available to programme all the shows of the independent exhibitors, and in 1912 the independents had nearly half of the market. The MPPC had

effectively been defeated in its plan to control the whole United States market, and the government anti-trust action, which only now started against the MPPC, was not really necessary to defeat it. [edit] Multi-reel films

It was around 1910 that the actors in American films, who up to this point had been anonymous, began to receive screen credit, and the way to the creation of film stars was opened. The appearance of films longer than one reel also helped this process. Such films were extremely rare, and almost entirely restricted to film versions of the life of Christ, which had reached three reels in length in the first few years of cinema. They were always shown as a special event in special venues, and supported by live commentary and music. A unique addition to this style of presentation was The Story of the Kelly Gang, made in Australia in 1906.

This was a four-reel version of thecareerof this famous (in Australia) outlaw, and was incomprehensible without explanation. More multi-reel films were made in Europe than in the United States after 1906, because the MPPC insisted on working on the basis of one-reel films up until 1912. However, before this, some MPPC members got around this restriction by occasionally making longer stories in separate parts, and releasing them in successive weeks, starting with Vitagraph's The Life of Moses in five parts (and five reels) at the end 1909.

In other countries this film was shown straight through as one picture, and it inspired the creation of other multi-reel films in Europe. Pathe-Freres set up a new subsidiary company in the United States called Eclectic in 1913, and in 1914 this began production of features at the Pathe plant in New Jersey. The

French Eclair company was already making films in the United States, and their production of features increased with the transfer of more film-makers when the French industry was shut down at the beginning of World War I.

Up to 1913, most American film production was still carried out around New York, but because of the monopoly of Thomas Edison's film patents, many filmmakers had moved to Southern California, hoping to escape the litany of lawsuits that the Edison Company had been bringing to protect its monopoly. Once there in Southern California, the film industry grew continuously. The move to filming in California had begun when Selig, one of the MPPC companies, sent a production unit there in 1909. Other companies, both independents and members of the MPPC, then sent units to work there in the summer to take advantage of the sunshine and scenery.

The latter was important for the production of Westerns, which now formed a major American film genre. The first cowboy star was G. M. Anderson ("Broncho Billy"), directing his own Western dramas for Essanay, but in 1911 Tom Mix brought the kind of costumes and stunt action used in live Wild West shows to Selig film productions, and became the biggest cowboy star for the next two decades. Most of the major companies made films in all the genres, but some had a special interest in certain kinds of films.

Once Selig had taken up production in California, they used the (fairly) wild animals from the zoo that Colonel Selig had set up there in a series of exotic adventures, with the actors being menaced or saved by the animals.

Essanay specialized in Westerns featuring "Broncho Billy" Anderson, and Kalem sent Sidney Olcott off with a film crew and a troupe of actors to

various places in America and abroad to make film stories in the actual places they were supposed to have happened. Kalem also pioneered the female action heroine from 1912, with Ruth Roland playing starring roles in their Westerns.

Minor curiosities were some of the films of Solax directed by Herbert Blache and his wife Alice Guy. They left American branch of the Gaumont company in 1912 to set up their own independent company. The distinguishing feature of some of their films was a deliberate attempt to use resolutely theatrical-type light comedy playing that was directed towards the audience. This went against the trend towards filmic restraint already visible in what were called "polite" comedies from other film companies. In France, Pathe retained its dominant position, followed still by Gaumont, and then other new companies that appeared to cater to the film boom.

A film company with a different approach was Film d'Art. This was set up at the beginning of 1908 to make films of a serious artistic nature. Their declared programme was to make films using only the best dramatists, artists and actors. The first of these was l'Assassinat du Duc de Guise (The Assassination of the Duc de Guise), a historical subject set in the court of Henri III. This film used leading actors from the Comedie Francaise, and had a special accompanying score written by Camille Saint-Saens.

The other French majors followed suit, and this wave gave rise to the English-language description of films with artistic pretensions aimed at a sophisticated audience as " art films". By 1910, the French film companies were starting to make films as long as two, or even three reels, though most

were still one reel long. This trend was followed in Italy, Denmark, and Sweden. Although the British industry continued to expand after its brilliant beginning, the new companies that replaced the first innovative film-makers proved unable to preserve their drive and originality.