A Very Short History of Cinema

Cinematography is the illusion of movement by the rapid projection of many still photographic pictures on a screen. A product of 19th century scientific endeavour, it has become an industry employing thousands of people and a medium of mass entertainment and communication.

No one person invented cinema. However, in 1893 the Edison company successfully demonstrated the Kinetoscope, which enabled one person at a time to view moving pictures. The first to present projected, moving photographic pictures to a paying audience were the Lumière brothers in 1895.

At first, films were very short, sometimes only a few minutes. They were shown at fairgrounds, music halls or anywhere a screen could be set up and a room darkened. Subjects included views of foreign lands, short comedies and events considered newsworthy. The films were accompanied by lecturers, music and a lot of audience participation - although they did not have synchronized dialogue they were not 'silent' as they are sometimes described.

By 1914, several national film industries were established. Europe, Russia and Scandinavia were as important as America. Films got longer and story telling, or narrative, became the dominant form. As more people paid to see movies, the industry that grew around them was prepared to invest more money in their production, distribution and exhibition - large studios were established and special theatres built. The First World War retarded the film industry in Europe, and the American industry grew in relative importance.

The first thirty years of cinema were characterized by the growth and consolidation of an industrial base, the establishment of the narrative form and refinement of technology.

Colour was first added to black-and-white movies through tinting and stencilling. By 1906, the principles of colour separation were used to produce "full colour" moving images. Early processes were cumbersome and expensive and colour was not widely used until the introduction of the three-colour Technicolor process in 1932.

The first attempts to add synchronized sound to projected pictures used phonographic cylinders or discs. The first feature-length movie incorporating synchronized dialogue, The Jazz Singer (USA/1927), used the Vitaphone system which employed a separate disk to replay the sound. This system proved unreliable and was soon replaced by an optical, variable density sound track along the edge of the film.

By the early 1930s, nearly all feature-length movies were presented with synchronized sound and by the mid-1930s many were in full colour too. The advent of sound secured the dominant role of the American industry, and gave rise to the so-called 'Golden Age of Hollywood'.

Thomas Edison had used 35mm film in the Kinetoscope, and in 1909 this was adopted as the industry standard. The picture had a height-to-width relationship, known as the aspect ratio, of 3:4 or 1:1.33. Although there were many experiments with other formats there were no major changes until the 1950s.

The introduction of television in America prompted a number of technical experiments designed tomaintain public interest in cinema. In 1952, the Cinerama process, using three projectors and a wide, deeply curved screen was premiered. It created a sense of greater involvement and proved extremely popular. However, it was technically cumbersome and widescreen cinema was not extensively used until the introduction of CinemaScope in 1953 and Todd-AO in 1955, which both used single projectors. CinemaScope had optically squeezed images on 35mm film which were expanded laterally by the projector lens; Todd-AO used film 70mm wide. By the end of the 1950s, the shape of the cinema screen had effectively changed, with aspect ratios of either 1:2.35 or 1:1.66 becoming standard.

Stereo sound, which had been experimented with in the 1930s, also became part of the new widescreen experience. While the industry had some success in fighting the competition of television, it never regained the position and influence it once held.

Although America still appears to be the most influential film industry the reality is more complex. Many films are produced internationally - either made in various countries or financed by multi-national companies. Today, most people see films on television (whether broadcast or on video), and very few films are made without money from the television and electronics industries.

Cinematography is still essentially a 19th century technology. Today, the most important technical changes concern the interface between film and digital imaging. Non-optical or computer-generated images are now common components of films shown in cinemas, and in many cases the audience is unaware of this.

Large-format cinematography has seen something of a revival in recent years and the use of 70mm for prestigious presentations in major urban areas is growing. Specialist large-screen systems using 70mm film have also been developed. The most successful of these is IMAX, which in March 1999 had 185 permanent theatres around the world.