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COLOR AND COLORIZATION

Early Experiments

Experiments with color began with the very earliest development of motion pictures. Melies---the magician---used an assembly line to hand color portions of his prints at the turn of 20th century.

G.A. Smith's Kinemacolor was the first effective color process, documenting the 1911 crowning of George V as Emperor of India at Dehli Durbar. D.W. Griffith's *Birth of a Nation* (1915) and Abel Gance's *Napoleon* (1927) both tinted scenes---coloring the film stock

before the image was printed on it-- to heighten dramatic effect. By the 20s 80% of American films were tinted or partially tinted.

Technicolor

The most important technology was Technicolor, created through the efforts of Herbert T. Kalmus. The first version of the Technicolor process was successfully demonstrated in 1915. More commercially successful Technicolor's two-color process was used selectively in *Ben Hur* (1925) and *Phantom of the Opera* (1926). The process was no inexpensive, costing us to 30% more than a black and white production. The classic three-color dye transfer process premiered in a feature in 1935 with the release of *Becky Sharp* and was used until the release of the last technicolor film in 1974 *The Godfather II*.

Through the 40s Technicolor films were available only in selected theaters---a marketing strategy later emulated by Cinerama for their widescreen releases. (See Widescreen.) Capitalizing on the spectacle and high production values associated with Technicolor, these films were predominately historical sagas and lavish musicals. Until the 1950 consent decree signed in response to an antitrust suit, Technicolor enjoyed a virtual monopoly in the production of color films. In order to shoot in Technicolor producers were required to use only Technicolor cameras and operators and to employ a Technicolor consultant usually Natalie Kalmus, wife of the company's founder.

Subsequently, less expensive and less durable processes e.g. the 1952 introduction of Eastmancolor gradually eroded Technicolor's market share, eventually replacing Technicolor all together. Since 1976 96% of all American films have been produced in color.

Colorization

Color in both film and television is today a given. Marketing surveys have shown that 85% of tv viewers will only watch color programs. As a result, owners of libraries of classic black and white films have developed a technological solution to the perceived demands of the market for color films. Colorization ---the computerized process of transforming black and white films---- first became popular in the mid-1980's. The process of colorization, although tedious is essentially straightforward. The colorist or "art designer" using master shots from each scene of the film instructs a computer to assign specific colors to each visual element---the couch, a hat, flowers in a vase, the actress's complexion, etc. The software tracks the imagery from frame-to-frame and automatically colors the films as directed. The cost of the process is approximately \$160-270,000 per feature film. But the return to rights owners is potentially substantial.

But the addition of color to black and white classic films is not solely an economic issue. Opponents of colorization---including prominent directors like Woody Allen, George Lucas, Steven Spielberg and Martin Scorsese----cast the issue as a violation of artists' rights, rather than a strictly a question of property rights.

Understanding Color

The effect of color in filmmaking is paradoxical. Color mimics our normal vision, and ought to give a heightened sense of realism to motion pictures. But even today's color film stocks are only a relatively crude approximation of the range color perceptions registered by human vision.

The historical primacy of black and white, and the absence of color in early newsreels has often tended to make black and white footage seem more credible than color. In fact, color has been used expressionistically throughout the history of film. Color describes moods and heightens emotions. It is often used symbolically ----to identify characters and/or states of mind. It's

perhaps not an overstatement to assert that color, like so many technical innovations, is more about spectacle than about realism. Color is one more tool with which filmmakers construct their visions before our eyes.