



COLOUR FILMS IN BRITAIN

THE EASTMANCOLOR REVOLUTION

Sarah Street, Keith M. Johnston,
Paul Frith & Carolyn Rickards

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Introduction

Keith M. Johnston and Sarah Street

This book explores the impact of Eastmancolor film stock on British cinema. While colour filmmaking today is ubiquitous, in the twentieth century its introduction was a story of intermittent trial and error, intense debate and speculation before gradual acceptance. The reasons for this were multifarious, involving the higher costs of photochemical processes such as three-strip Technicolor, as well as the persistence of taste cultures which appreciated black and white films as the norm. In the 1950s, however, the introduction of Eastmancolor's cheaper, single-strip stock that could be used in any camera revolutionized the ways in which colour films were made. In its wake many film industries converted to colour which over the next thirty years became the dominant aesthetic choice for filmmakers and audiences. The book's focus is on how British cinema, its filmmakers and other professionals adapted to one of the most important technical innovations in film history.

The Eastmancolor Revolution constitutes a fascinating case of how a game-changing new technology was experienced after decades of market domination by black and white films. Yet the change did not happen overnight, with the transition to colour constituting more of a 'long revolution' in the sense that it was not until the late 1960s that the majority of films were shot in colour. Revealing the full complexity of the rise of colour cinema in Britain revises long-held assumptions that it was purely a response to competition from television, or that its adoption was straightforward. While some studios embraced colour in the 1950s with enthusiasm, notably Hammer with its range of horror films, others such as Ealing were more cautious. We examine the full economic and aesthetic consequences of the shift towards colour films in Britain that was consolidated in the 1970s and never looked back.

Despite the success of the revolution in colour production, the long-term influence of Eastmancolor remains largely unknown, apart from Hammer's output or films notable for their striking colour motifs such as *Don't Look Now* (Nicolas Roeg, 1973), as seen in the opening sequence with the disturbing red 'spill' effect that features on the cover of this book. While *Don't Look Now* is renowned for its distinctive chromatic style, as we demonstrate, the corpus of British colour films produced between

1955 and 1985 is far more extensive and varied when analysed from the perspective of colour. Freed from having to operate within the strictures of Technicolor's colour consultancy service which had guided the use of that process in the 1940s and early 1950s, filmmakers using Eastmancolor could experiment as they wished. With this in mind, we evaluate what they achieved, working with the stock's creative and aesthetic possibilities. The 'look' of Eastmancolor was different from Technicolor in that it rendered contrast more sharply but colours were in general less vivid, although the post-1968 faster stock became capable of rendering a richer, less grainy chromatic range. With reference to many films and genres, we investigate in the following chapters how changes in stock affected aesthetic practices and approaches to narrative and genre in British colour films, highlighting their variety, chromatic range and aesthetic sensibilities. Although many of the conventions established during the Technicolor years persisted, Eastmancolor films took advantage of new technical developments such as widescreen, ever faster stocks and new generations of technicians, costume, production designers and other creatives who were keen to explore the full spectrum of chromatic expression, while colour was also used to enhance the visual impact of films set in the past and future.

As well as focusing on colour expression in mainstream film genres we consider the significant, parallel impact of Eastmancolor on artist filmmakers, documentarists, amateur filmmakers and advertisers, among others. These examples demonstrate different paths and timescales; for example, amateur film producers used Monopack colour film earlier than the mainstream, so many of the debates around the use of colour were initiated in amateur publications of the 1940s. Artist filmmakers were eager to expand the experimental qualities of colour, from hand-painting and film scratching to the use of multiple exposures and filters. Finally, we explore the gradual shift to colour film restoration from the 1980s, after decades of preserving film prints in black and white. Colour continues to be a topic of recurrent national and international debate, fuelled especially by digital capacities for colour creation, manipulation and its role in the restoration of historically significant colour films.

The British experience of Eastmancolor is particularly striking in terms of its relative neglect in assessing British cinema's historic engagement with colour filmmaking. The literature on colour films has expanded over the last fifteen or so years, including studies on silent cinema (Yumibe 2012; Street and Yumibe 2019), an historical overview (Misek 2010), critical studies (Coates 2010; Brinckmann 2014) and collections of essays on theory and archives (Dalle Vacche and Price 2006; Brown, Street and Watkins 2013; Flueckiger, Hielscher and Wietlisbach 2020). Other studies have concentrated on early Technicolor in the USA (Higgins 2007; Layton and Pierce 2015), while the most extensive existing study of colour films in Britain emphasizes the silent era and Technicolor in the 1930s and 1940s (Street 2012). The technological details of other processes have been documented and described by historians (Cornwell-Clyne 1951; Coe 1981; Haines 1993; Flueckiger, 'Timeline of Historical Film Colours': <http://zauberklang.ch/filmcolors/>). But apart from a study of the early years of Eastmancolor's technical development in the USA (Heckman 2015) there has been no thoroughgoing, book-length study of

Eastmancolor. A number of publications are available on film preservation and restoration, but again the focus tends to be on non-UK film, as featured in the *Journal of Film Preservation* and Fossati (2009).

Literature about British cinema covering the decades 1950s–80s seldom mentions colour. Harper and Porter's study of British cinema in the 1950s makes brief reference to how the early Hammer horror cycle 'largely owed its aesthetic coherence to Eastmancolor' (2003: 208), and Patch has written about Nicolas Roeg's use of colour (2010b). Harper and Smith's research on film culture in the 1970s makes some reference to the impact of Eastmancolor stock and increased quality, speed and efficiency in processing colour films in British laboratories (2012: 157). But by and large, colour aesthetics has been neglected in scholarship about post-1955 British cinema. Even those works focused on the studios and directors most associated with colour in this period make only passing reference to the use and range of colour approaches adopted (Hutchings 1993; Hutchings 2001; Sinyard 1991). A recent exception is a study of 1960s British cinema that references colour's significant impact on cinematography, production and costume design during a decade often remembered as being 'colourful' (Farmer, Mayne, Petrie and Williams 2019).

This book, and the research project on which it is based, therefore aims to redress an important gap in research about British cinema's relationship to technological developments, while informing the imperatives of much contemporary digital production to replicate past colour 'looks' and traditions, as they have been inherited from the photochemical era. We were interested in exploring the primary drivers for Britain's conversion to colour film, charting this shift by closely examining colour's application in key genres, short/instructional/amateur films, and art/experimental films. While films remain the key objects of analysis we have foregrounded the many individuals, several of whom we interviewed or accessed primary testimonies from publicly available interviews, responsible for advancing colour experimentation, design and innovative application.

Prior to 1955, Britain was known for an important, influential pre-history of colour filmmaking. Eastmancolor inherited a distinguished legacy from the many remarkable Technicolor films produced in Britain which established a reputation for being aesthetically distinctive. The 'British School of Technicolor', pioneered by cinematographers such as Jack Cardiff, Ossie Morris and Chris Challis, filmmakers such as David Lean and Powell and Pressburger, and colour consultants Natalie Kalmus and Joan Bridge, was internationally recognized as promoting colour as a positive aesthetic choice, despite its impact on increasing a film's budget. This concerned a subtle, 'painterly' approach to colour that critics often praised when compared to colour design in American films which had a reputation for being more 'gaudy'. It was this 'tasteful' approach that post-war French filmmakers admired, as seen in *Henry V* (Laurence Olivier, 1944), a film in which 'gaudiness was turned into a virtue, where colour separation was used thematically and where the brightness and saturation of Technicolor made the scenes seem lit from within as if they were indeed pages of illuminated manuscripts' (Andrew 1979). It was not the case that colour in British films was muted or indistinct; on the contrary, it

could be applied strategically, relishing the visual richness of Technicolor's chromatic range at key points. As Street has argued: 'The legacy of British colour films from the Technicolor period is their imaginative exploration of colour restraint; expressive play with colour design within genre cinema, and the production of some of the most significant short and avant-garde colour films in the first half of the twentieth century' (2012: 208).

Though British Technicolor films were distinctive, they were far from numerous: in 1948, for example, of the 705 feature films released in Britain, forty-five were in colour and of these only ten were British (Street 2012: 258). Technicolor controlled use of the process through leasing the relatively few available three-strip cameras and insisting productions use their consultancy service. Even though British technicians built up considerable colour expertise and Britain had its own laboratory for Technicolor processing, colour films were far from the norm in the mid-1950s, the starting date of this book's timeline. Although the legacy of British Technicolor films has remained a seminal one for British colour scholarship, the revolution offered by Eastmancolor invited a new, mass engagement with colour aesthetics.

We have adopted the term 'Eastmancolor Revolution' in part to differentiate that post-1954 world of British colour film production from the preceding Technicolor-dominated years. Yet that choice also allows us to underline the importance of Eastmancolor to the aesthetic and industrial shifts found in British cinema across the period 1955 to 1985. Using the term 'revolution' clearly comes with historical, ideological and political baggage that another term might neatly sidestep, but as the book demonstrates, this period is not about a particular Eastmancolor 'moment' but is best understood as a series of phases. The impact of Eastmancolor generated a revolution in understandings and uses of colour within film production, allowing British film creatives to craft specific approaches to colour that developed, yet also differed from, the legacy of the British School of Technicolor. While later chapters pick up specific aspects of that revolution, it is worth covering some of the basics here.

First, a brief note is necessary regarding the slight variations in nomenclature that was used for the stock by contemporaries. While there is a slight linguistic difference between Eastman Colour, Eastmancolour, Eastman Color and Eastmancolor (the four most common usages of the brand in British trade press and advertising), there is no physical distinction in terms of the film stock, or its application. For the purposes of clarity we have adopted Eastmancolor as the core term, although certain chapters (notably the discussion of branding in Chapter 1) use the other spellings as appropriate. Given that Eastmancolor was effectively brought into the British film industry by American company Eastman Kodak, rather than being a home-grown colour technology, we felt there was no need to insist on the process being 'Eastman Colour' simply due to a national linguistic fiat that was not adopted universally across the British industry. A guide to the various technical terms associated with the stock and related developments in colour filmmaking is provided in the book's Technical Appendix.

The long revolution of Eastmancolor in British cinema occurred in two phases: the initial phase, those years in the early-to-mid 1950s when Eastmancolor's Monopack film stock offered the first real challenge to Technicolor, followed by a longer, second phase when the stock was intermittently taken up and then used more intensively so that by the end of the 1960s colour had become the default economic and aesthetic choice for filmmakers. By 1955, when Technicolor retreated from physical film production and regrouped around the more financially lucrative area of film processing, the first phase of the revolution had occurred. It was a relatively bloodless coup, although perhaps succession is a better term: as Chapter 1 explores in more detail, any attempt to build an adversarial narrative around Eastmancolor and Technicolor is inaccurate, given their historical partnership and ongoing collaborations. Within the world of British film, the revolution for producers was stark. There was now no requirement for companies to hire Technicolor's large three-strip cameras, to pay for on-set colour consultants or to use Technicolor's patented imbibition processing. Any pre-existing 35mm film camera could use Eastman Kodak's new colour stock, and most major laboratories were able to process that film; the stock effectively democratized the range of British productions that could now use colour. As Eastmancolor became available, the number of productions filmed in colour increased and producers were keen to exploit its relative novelty value.

The second phase lasted almost fifteen years. Although Eastmancolor was the most widely available colour film stock by the mid-1950s, the number of British colour films remained low. After an initial increase in colour films caused by the introduction of Eastmancolor and the promise of cheaper colour filming, the number of productions dipped again by the end of the 1950s, with colour production then rising incrementally into the early 1960s before a more concerted push saw colour dominating mainstream film production by 1969. The reasons for this slower second phase are multiple, as explored in more detail in the book. For now, it is worth contextualizing this trend with the lower economic performance of all British films through the late 1950s and early 1960s, the closure of many British cinemas, and the continued ascendancy of Britain's strong and pre-existing social-realist mode of filmmaking (most notably in the British New Wave) that privileged a black and white film aesthetic. The desire to reduce the intensity of colour, to create a more restrained and realistic colour palette, remained a key theme during this period. As Branigan has noted, technological developments can be seen to progress from 'invention' to 'innovation' and then to 'diffusion' (1986: 132). At the same time, the temporalities within each phase can be accelerated or arrested by many complex factors, including ideological ones. A key shift in the Eastmancolor period was colour's attainment of a more stable association with realism and then becoming the dominant representational mode in the 1970s. As in previous decades, colour presented mainstream filmmakers with a dilemma: to justify its use, colour needed to some extent to be visible but many critics insisted it should not distract audiences by unnecessarily standing out. As more became known about Eastmancolor, some commentators were curious about its likely impact. From a technical perspective, British films attracted the attention of

critics such as Herb Lightman writing in the *American Cinematographer*, as well as British writers in *The Cine-Technician*, the *Kinematograph Weekly* and other publications. In 1956 cinematographer Erwin Hillier urged technicians to be 'colour conscious', paying attention to Eastmancolor's tendency to emphasize blue (1956: 11). Since relatively few directors were experienced in working with colour some were concerned that: 'Film producers have hardly matched up to the challenge created by this wider availability of stock. Too few completed films show any sort of understanding of the demands of colour, and picture composition in terms of colour is sadly lacking' (Taylor 1955: 21). As well as learning to fully exploit the technical benefits of Eastmancolor, filmmakers were nevertheless aware of the opinions of critics who often had firm ideas about colour, with long-held assumptions persisting in reviews, such as 'appropriate genres' for colour.

Colour, however, had some vocal and influential supporters: David Lean used Eastmancolor for *Summer Madness* (David Lean, 1955), *The Bridge on the River Kwai* (David Lean, 1957) and *Lawrence of Arabia* (David Lean, 1962), an aesthetic choice that underpinned the director's shift to a more epic mode of filmmaking. Across these thirty years, a new generation of cinematographers and directors crossed between media, bringing different colour sensibilities to bear. Directors such as Clive Donner, Alan Parker, Ridley Scott and Julien Temple brought visual skills learned in advertising or music video production into feature-length narratives, with colour central to the individual filmmaking approaches seen in *Nothing But the Best* (Clive Donner, 1964), *Bugsy Malone* (Alan Parker, 1976), *The Duellists* (Ridley Scott, 1977) and *Absolute Beginners* (Julien Temple, 1984). Nicolas Roeg's career trajectory from camera operator to director is intrinsically linked to colour, from his early cinematographic work with Donner, *The Masque of the Red Death* (Roger Corman, 1964), *Fahrenheit 451* (François Truffaut, 1966) and *Far From the Madding Crowd* (John Schlesinger, 1967), to his directorial work on *Performance* (Donald Cammell and Nicolas Roeg, 1970) and *Don't Look Now*.

The second phase of the Eastmancolor Revolution benefited from, and was influenced by, cultural and technological shifts in other media forms. As indicated above, this shift is often linked to the gradual introduction of colour television, with the mid-1960s rise in British colour film production synchronous with the first colour broadcasts on BBC2 in June 1967. Although that connection remains a potent one, colour television's growth across Britain was slow, leaving film as the main colour audio-visual medium until the early 1970s. A number of trends in other media contributed to the conversion to colour by the end of the 1960s. Colour played a central role in casting off the drabness associated with the immediate post-war decade by heralding in 'an age of joyful and experimental consumerism, manufacturing and advertising' (Loske 2019: 202). The decade's reputation for vivid colours was expressed in fashion, advertising, domestic design, and publishing initiatives such as the launch of colour supplements in *The Sunday Times* in 1962 and in the *Observer Magazine* and *Weekend Telegraph* in 1964 (Farmer 2019b). Colour was associated with youth, prosperity and the exercise of consumer choice, a trend that was influenced by American colour consultant Faber Birren who teamed up with

British marketing specialist Eric P. Danger in 1959 to establish a colour marketing and consultancy firm in London. Economic Colour Trends Ltd provided manufacturers with specialist, research-driven advice on the colour palettes most likely to influence contemporary consumers. Birren's ideas on colour psychology in household furnishing and women's fashion were also popularized in best-selling British magazines such as *Home*, *Woman* and *Woman's Illustrated* (Blaszczyk 2017: 217). The increasing availability of mass-produced colour paints encouraged people to easily transform their homes with vivid colours such as orange and pink, as documented in several films from the period. The quite literal explosion of colour was highly expressive of the decade's counter-cultural reputation and relaxation of sexual mores. There was, then, a fertile contemporary media culture surrounding colour, and Eastmancolor films played an important part in promoting this chromatically vibrant creative symbiosis. As media forms increasingly became saturated with colour, so too did cinema. The key turning point was the mid-1960s: whereas in the first four years three out of four feature films were black and white, 'by 1966 the proportions had been reversed' and by the end of the decade black and white 'had all but disappeared from all but the occasional arthouse film' (Farmer, Mayne, Petrie and Williams 2019: 18).

Unlike earlier work on Technicolor or other British colour systems, which feature a finite number of British colour films, one of the key challenges of this project was defining the corpus of relevant films and accessing the widest range of films across a thirty-year period. We compiled a database covering over 1,800 colour feature films produced or co-produced in Britain between 1954 and 1985, a list dominated by Eastmancolor but also necessarily including later colour processes such as Fujicolor and Metrocolor. This database drew information from a range of popular and trade press materials, including reports and data from *Kinematograph Weekly*, *The Cine-Technician*, *Today's Cinema*, *Sight and Sound*, *Screen International* and Denis Gifford's *The British Film Catalogue: The Fiction Film, 1894-1994* (1994). The database included information on different genres that were identified largely through contemporary descriptions rather than applying categories in current use, and this was influential in the choice of case studies featured in Chapters 3-8 that represent the six broad generic categories that dominated colour production: comedy/satire; social realism/contemporary drama; crime; fantasy/horror/science fiction; historical/costume; and musical/pop music/concert films. In addition, we documented processing laboratories and other technological processes, as well as identifying key practitioners including directors, cinematographers, costume and set/production designers who contributed to the development of British colour aesthetics. A parallel database traced over 1,000 short, amateur and advertising films that were also produced in Eastmancolor and other colour processes.

The early identification of those six central genres aided in the selection, viewing and analytical processes that followed, via the widest range of available media resources which included some original film prints or accessing copies via television, video, DVD, Blu-ray or the internet. We worked with the

Table 0.1 Genre distribution for colour films by year, 1954–1985 (Data sourced from *Kine weekly*)

Genre/Year	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Adventure	10	5	8	5	4	5	5	7	7	3	5	13	5	11	14
Children	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Comedy	10	15	7	6	9	9	4	9	8	8	7	9	22	17	20
Crime	1	1	2	-	1	-	1	-	1	1	-	2	2	5	3
Drama	1	-	-	-	1	-	1	-	-	3	7	4	8	14	16
Fantasy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Horror	-	-	-	-	3	3	3	3	-	1	6	4	6	9	7
Melodrama	5	7	11	11	7	5	4	10	8	2	-	-	-	-	-
Musical	1	3	4	2	1	1	1	1	2	4	5	5	2	5	2
Other	12	9	3	6	1	1	6	1	1	2	3	9	6	14	12
Sex	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	40	40	35	31	28	24	25	31	27	24	33	46	51	75	74

British Film Institute, Powerhouse and Studio Canal throughout the project, offering our knowledge about different colour productions – including films that are well known for vivid colour traits such as *The Masque of the Red Death*, *Don't Look Now* and *The Ladykillers* (Alexander Mackendrick, 1955), as well as lesser-known examples including *The Old Dark House* (William Castle, 1963) and *Charlie Bubbles* (Albert Finney, 1967). The work of such companies to increase the range of good-quality digital versions of these films remains important, but they do not necessarily have the capacity to cover all the British colour films, particularly the more overlooked titles. To gain access to many such films, we acknowledge the important role of Talking Pictures TV in opening up a range of otherwise inaccessible or difficult to access titles, from early examples of Eastmancolor such as *Our Girl Friday* (Noel Langley, 1953) through to later films including *Steaming* (Joseph Losey, 1985).

The quality of available prints across those different media can, however, be variable, underlining the precarious nature of the early Eastmancolor film stocks. We experienced a significant quality spectrum in terms of print wear and tear, as well as considerations about what versions were being made available. Throughout, our desire was to view the best colour version available to us, and to acknowledge that the lack of better colour restorations (a topic covered in more detail in Chapter 14) remains an intrinsic part of the story of the Eastmancolor Revolution.

Taking Britain as the focus has enabled us to chart the experience of how colour filmmaking became the norm in relation to that specific cinematic context. It constitutes an interesting comparator with other countries that similarly experienced revolutions in colour production from the 1960s onwards, as well as being part of an international network of co-productions and collaborations that in many

1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	Total
10	7	4	2	2	1	4	2	4	2	-	2	1	-	-	2	1	151
-	-	1	7	4	6	6	3	9	2	5	6	1	2	2	3	6	65
24	18	21	14	22	8	8	9	7	4	6	9	3	4	11	13	10	351
5	1	8	18	13	12	11	7	7	14	12	7	10	12	8	8	12	185
22	30	21	17	9	4	14	9	9	2	7	5	10	8	13	21	15	271
3	1		4	6	3	3	3	6	6	8	7	9	3	6	6	7	81
3	12	12	17	11	17	6	8	2	6	3	3	5	1	5	2	5	163
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
2	5	2	5	7	5	12	4	4	3	5	6	7	5	2	3	3	119
9	15	17	11	7	7	4	10	9	7	17	9	10	4	8	11	13	254
	-	3	11	8	8	14	15	9	10	7	5	5	1	2	1	1	100
78	89	89	106	89	71	82	70	66	56	70	59	61	40	57	70	73	1810

Table 0.2 *Genre distribution of colour films, 1954–1985 (Data sourced from Kine Weekly)*

Genre Distribution 1954–85 (%)	
Comedy	19
Drama	15
Crime	10
Horror	9
Adventure	8
Musical	7
Sex	6
Children	4
Fantasy	4
Melodrama	1
Other	14

cases transcended national boundaries and differences. As Eastmancolor, Agfacolor, Fujicolor, Gevacolor, Ferraniacolor and other stocks (for details see Technical Appendix) became cheaper, national film industries increasingly converted to colour, exhibiting a variety of aesthetic, cultural, economic and intermedial approaches to its application, and demonstrating different temporal trends in terms of uptake and exploitation. Although the invention of cheaper colour stocks expanded the potential market for colour films it was not until the late 1950s and 1960s in Europe and the USA that colour became the dominant aesthetic choice for filmmakers and audiences, a trend that more or less

continued to the present and pertains across the world. For cultural, economic and other reasons this process was delayed in other countries including India, Brazil, Iran, China, Africa and Japan; once the conversion was in motion, however, it was irreversible.

Colour films made outside Britain were reviewed and exhibited, and it was still the case, as for previous decades, that American films dominated the box office. British films constituted 23 per cent of the total number of films distributed in Britain in 1958; in 1971 the figure was 31 per cent and in 1980 it was 19 per cent (Perilli 1983: 376). As early as 1954 Tony Richardson, who went on to direct *Tom Jones* (1963), a visually sumptuous, highly distinctive colour film as noted in Chapter 7, reviewed Jean Renoir's *The Golden Coach* (French/Italian, 1952) in *Sight and Sound*, describing it as 'visually breathtaking' with colour contrasts and decoration giving 'the whole harmony an added strength and vibrancy' (1954: 199). Richardson also reviewed John Huston's experimental colour film *Moby Dick* (1956) in which cinematographer Ossie Morris achieved 'a remarkable and original exploration' of grain and bleached-out effects that proved influential for later filmmakers, particularly in the development of the 'bleach bypass' techniques described in Chapter 9 (Richardson 1956/7: 151–2). Lindsay Anderson was sent by the same magazine to review films screened at the Cannes Film Festival, and many of his reports commented on colour techniques used in American, French, Russian and Japanese films. An outstanding title that received a wealth of praise for its colour was *Jigokumon/Gate of Hell* (Kinugasa Teinosuke, 1953), a Japanese historical film shot in Eastmancolor. Critics praised its subtle use of colour and texture, low-key lighting and beautifully coloured silken costumes which made it a stand-out foreign film of the 1950s (Street 2018b). Critic Penelope Houston was intrigued by Michelangelo Antonioni's *Il deserto rosso/Red Desert* (1964), particularly when a set changed colour within a sequence to unsettle the viewer and 'to strike a series of dissonant chords or to contrast a momentary visual harmony' (1965: 80–1). As referenced in Chapter 10, Antonioni continued to experiment with colour when filming in Britain for *Blow Up* (1966). These are but a few examples of how colour caused comment, indicating that it continued to fascinate critics and audiences as more and more national cinemas left black and white filmmaking behind to enter an exciting world of colour. The British case constitutes a rich and multifaceted example of that revolution within a particular national context. Looking to the past and future, in concentrating on the British experience the book aims to achieve a greater understanding of the significance of colour within differing aesthetic sensibilities and variations within film cultures.

1

Eastmancolor and Branding

Keith M. Johnston

Take a look at the colour credits next time you visit the cinema. Eastmancolor is an indication that Kodak has scored all along the line: Eastmancolor is Eastmancolor negative film printed onto Eastmancolor positive. Technicolor? Technicolor is Kodak film except with Technicolor's dyes printed on it. If you go into hospital for an X-ray the chances are that the X-ray film is manufactured by Kodak ... Film, then, is where Kodak really makes its money.

(ADAMS 1973: 6)

The first British narrative feature film in Eastmancolor was *Our Girl Friday* (Noel Langley, 1953), released in December 1953, an unlikely standard-bearer for the revolution that was to come. The years before that release had seen a significant increase in American colour films (largely in Technicolor and Eastmancolor) being released to British cinemas: 82 colour films in 1951 (7 British), 132 in 1952 (18 British), rising to 152 in 1953 (18 British) (Anon 1957: 509). Despite that number, the absence of any mention of colour in reviews of this first British Eastmancolor film is still surprising. The film is 'a humourless comedy' (Anon 1954a: 11), 'often turgid and obvious' (Fitzgerald 1954: 14), although it may 'create a surprise when it does the rounds' given 'it is a big success with popular audiences' (Billings 1954: 12). The *Monthly Film Bulletin* and *Kinematograph Weekly* reviews do list 'EastmanColor' as the colour process, while *Picturegoer* mislabels it as 'Technicolor'. This was a mistake that contemporary audiences could also have made, given the dominance of Technicolor and because posters for the film simply advertised it as being in 'colour' rather than a specific process. It was left to the US trade paper *Variety* to note 'the Eastmancolor process gives the backgrounds a handsome and striking appearance' (Myro 1953: 6). As well as being a factual statement, *Variety's* choice to label the film as 'British-Color' might also suggest a pre-existing chromatic distinction being made about UK colour film production.

While this may seem an inauspicious start, British audiences had in fact seen a more celebrated debut for British Eastmancolor six months before the release of *Our Girl Friday*, of which they may also

have been unaware. *Elizabeth is Queen* (Howard Thomas, 1953) was one of three colour Coronation films quickly filmed, edited and released in July 1953, alongside *A Queen is Crowned* (Castleton Knight, 1953: Technicolor) and *Coronation Day* (British Movietone, 1953: Gevacolor). *Elizabeth is Queen* was promoted as WarnerColor, but it was 'photographed on Eastman colour negative and printed on Eastman colour positive' (Anon 1953c: 89). While being critical of the 'over production' of *Elizabeth is Queen* and *A Queen is Crowned*, *Monthly Film Bulletin* noted:

the colour ... has been most effectively caught ... The shining white gowns of the Maids of Honour and the simple white gown which the Queen wears ... provide a dramatic contrast to the shimmering velvets and glittering cloth of gold.

(Anon 1953a: 112)

While that review offered no specific comment on the different aesthetic qualities of the Technicolor or Eastmancolor processes, *Kinematograph Weekly* hailed the process used for *Elizabeth is Queen*: 'Eastman Color has proved to be the only integral process capable of securing adequate colour at the low light intensity' inside the Abbey (Anon 1953b: 11).



Figure 1.1 *Elizabeth is Queen* (Howard Thomas, 1953) title image featuring Warnercolor credit.

These initial 1953 examples offer early evidence of the visibility issues the Eastmancolor Monopack film stock encountered during its introduction to British film production. The exhibition market was well served by a range of colour films, and the introduction of a new colour film stock was not accompanied by a strong brand image, regularly being mistaken for a well-known competitor (Technicolor), rebranded as a different studio process (WarnerColor), or overlooked completely. If brands operate as ‘a trademark or “maker’s mark” that worked to guarantee quality or to give the potentially anonymous mass-produced commodity an identity’ (Arvidson 2005: 244), then early British Eastmancolor struggled to create such an identity. A shifting use of nomenclature did not help: the process was variously listed as Eastmancolor, Eastman Color, Eastman Colour and Eastmancolour across advertising, trade press articles, on film posters and in on-screen titles. While some of this could be linked to an inherent British dislike of the ‘color’ spelling, that clearly did not affect the dominant brand Technicolor.

This chapter will explore the early and often erratic British adoption of Eastmancolor from 1953 through to the late 1970s. In Britain, as elsewhere, Eastmancolor was hailed as a cheaper solution to colour production, and a way to break Technicolor’s production and laboratory-based monopoly on colour processing. Eastman Kodak developed a range of marketing campaigns across the decades that attempted to create and instil a brand identity around Eastmancolor, to give it a ‘significance ... in the minds of consumers’ (Arvidson 2005: 244). Exploring three specific aspects of Eastmancolor in the UK – its relationship to Technicolor, its association with other technical processes, and its industry-focused marketing campaigns – the chapter will demonstrate how its brand identity shifted across the three decades after its initial introduction in *Elizabeth is Queen* and *Our Girl Friday*.

Eastmancolor and Technicolor

It is tempting to see the 1950s relationship between Eastmancolor and Technicolor as adversarial, pitting the new Monopack colour film stock against the established three-strip colour market leader. Naturally, the truth is less dramatic. In the US, Eastman Kodak had worked closely with Technicolor through the different stages of Technicolor’s two- and three-strip development, and all Technicolor processing facilities used Eastman Kodak black and white film stock. Technicolor saw Kodak as ‘both a necessary and desirable partner ... Technicolor lacked the capacity to manufacture print stock ... [and] it could benefit from Kodak’s highly capitalized research and development programme’ (Heckman 2015: 51). In the 1930s and 1940s, as Technicolor developed its colour monopoly in film production and processing, that relationship with Kodak was crucial.

From the early 1940s the multilayer colour film stock Technicolor Monopack was used for films that were shot extensively on location, such as *Lassie Come Home* (Fred M. Wilcox, 1943) and *Scott of the Antarctic* (Charles Frend, 1948), where the bulky three-strip Technicolor camera was less practical.

From the Monopack's positive image 'three separate negatives ... can be obtained by printing through blue, red and green filters on to panchromatic duplicating stock. From such separations, matrices are made and final positive prints are produced by dye transfer as before' (Happe 1959: 6). Although described as Technicolor Monopack, it was an unbranded Eastman Kodak product, a 35mm version of Kodachrome Commercial: a stock Kodak produced, but on which Technicolor owned some of the patents. The 1934 Monopack agreement between the two companies allowed Kodak to produce multilayer 16mm Kodachrome for the amateur market (which it did successfully from 1935), while Technicolor had exclusive use of the 35mm Monopack stock.

Although not a direct development of that Monopack stock, Eastmancolor was crucially related to the companies' close relationship:

Kodak first envisaged that its new film stock technology might provide professionals with a daily print film for Technicolor ... [which] struggled to get rushes to studios ... To this end, Kodak assembled the research team that ultimately created Eastman Color. From infancy, then, Eastman Color was designed to fit into Technicolor workflows.

(Heckman 2015: 51)

A 1947 antitrust suit brought by the American Monopolies Commission concerning the 1934 Monopack agreement led Eastman Kodak, and subsequently Technicolor, to sign consent decrees renouncing that agreement (Heckman 2015: 52). It also reshaped Kodak's Eastmancolor plans from the initial 'daily print film' to a colour Monopack camera negative and print film. A financial agreement between the Associated British Picture Corporation and Technicolor in 1948 suggests that Technicolor, likely aware of Kodak's plans, was eager to produce its own 'photographic raw stock' across the lifetime of that agreement, a stock that would be 'referred to as "Technicolor multilayer negative" and "Technicolor multilayer process"' (Technicolor Ltd 1947: 1). Without Kodak's extensive research and development expertise, however, the language of that agreement seems to have been a further protection of the Technicolor brand more than a practical reality.

As Kodak was introducing Eastmancolor, an analysis of Technicolor's financial status raised two competing problems for Herbert Kalmus's company. First, cost-conscious Hollywood studios and associated companies were looking to save money on colour film production; second, that Technicolor's 'earning power is dependent in a large measure upon its three strip colour process ... [the introduction of] a cheaper colour process having similar high quality would be a serious matter to the company and its stockholders' (quoted in Anon 2000: 386). The successful introduction and expansion of Eastmancolor for film productions between 1950 and 1954 led Technicolor's response: it closed its production arm by the mid-1950s and pivoted its business model towards imbibition processing and release printing at its US and UK sites. This was not as seismic a shift in Technicolor's practices as it first appears, given the company's three-strip colour process had always used Eastman Kodak negative

stock and because laboratory processing, imbibition printing and release printing had long been a financial strength of the company. In shutting the production arm, Technicolor was able to repurpose its laboratories to work from the new Eastmancolor negative, rather than the previous three-strip camera or Monopack negative, as explained by Alan Masson who worked for many years at the Kodak Research Laboratories in Harrow:

Eastmancolor Negative ... [could provide] a single strip colour negative film, from which the yellow, cyan, and magenta separations could be made for the so-called 'IB' imbibition or dye transfer process used by Technicolor. So, they would still be releasing Technicolor prints but they had been originated on Eastmancolor Negative film.

(Masson 2017)

This model, which shares some similarities with the Monopack/Kodachrome 35mm processing developed in the 1940s, became the heart of Technicolor's revised business model. The company also offered standard (non-imbibition) film processing onto Eastmancolor print stock, but since that service was also on offer at Denham (Rank), Humphries and other British and US laboratories, it was not a unique selling point for Technicolor, and rarely highlighted in the company's publicity.

This early-to-mid 1950s period offers the first phase of the Eastmancolor Revolution, although as noted in the Introduction, this was relatively slow-paced. With Technicolor successfully repositioning itself as a provider of high-quality film processing and laboratory work, Eastmancolor became primarily associated with film production rather than full production processing. This was aggravated by Kodak's decision to let individual film studios rebrand Eastmancolor as a studio process such as 'Warnercolor ... Metrocolor ... Deluxe ... nothing more than a kind of branding exercise really ... essentially, it ... [was] Eastmancolor' (Collard 2017). There is also a compelling counterclaim that part of Kodak's decision not to brand films as Eastmancolor was based on the processing practices of some US laboratories:

When Kodak offered their negative/positive process to the studio owned labs, they gave specific instructions on how to develop, fix and wash the film. If these specifications were not followed, quality control and image stability would suffer. The labs quickly discovered that an acceptable image could be generated while cutting corners in certain areas, like washing the film after fixing. Improper washing resulted in image deterioration, since residue hypo and other chemicals left on the emulsion of both prints and negatives acted as a corrosive and made the dye couplers fade.

(Haines 1993: 54–55)

This claim is directly aimed at US laboratories such as Pathé Color and DeLuxe, with no evidence of similar practices happening at British laboratories such as Denham, Humphries or Kay. While Kodak benefited financially from either approach – Technicolor processing Eastmancolor negatives through

the IB process, or other laboratories processing onto Eastmancolor positive and release stock – claims of inconsistent colour reproduction compared to Technicolor could explain the lack of a stronger Eastmancolor brand in this decade. It was also a topic reamplified in film preservation debates of the 1970s, as discussed in more detail in Chapter 14.

The example of *Our Girl Friday*, when *Picturegoer* misattributed Technicolor as the colour process, may have been a simple mistake, but it served as an augur of things to come in terms of the different promotional approaches taken by the companies. Technicolor had always attempted to exert its control over colour film production, and the switch to processing saw the company protect and promote its trademark through legal agreements that continued to stress ‘Colour by Technicolor’ despite the move away from three-strip camera production. While there appears to have been no official pushback from Eastman Kodak on this move, likely due to their strong history and ongoing commercial work with Technicolor, the distinction did not go unnoticed by directly competing laboratories.

In November 1954 Technicolor took out full-page advertisements in the British trade press. Thanking the industry for its ‘co-operation in helping us to protect the Trade-Mark TECHNICOLOR’, the advertisement goes on to explain ‘the proper uses of Technicolor credits’:

The credit phrase ‘Colour by TECHNICOLOR’ is used for motion pictures which have been controlled from the developing of the original negative or “taking” film to the manufacture of the positive release prints by a Technicolor company.

In brief, the credit is ‘Colour by TECHNICOLOR’ if the original negative is developed, and the release prints made, by Technicolor, regardless of the type of original negative used or the method of making the release prints.

The credit phrase ‘Prints by TECHNICOLOR’ is used for motion pictures in colour which are photographed on negative or “taking” film other than that developed by Technicolor but which are, however, controlled by Technicolor through some of the stages subsequent to photography, always including manufacture of the positive release prints.

The credit is ‘Prints by TECHNICOLOR’ if the original is not developed by Technicolor, but the release prints are made by Technicolor.

(Technicolor Ltd 1954: 14)

The timing of this advertisement in British journals is telling, coming off the back of reports in the British press earlier in 1954 around a dispute between Technicolor and the American-based Pathé laboratory. Pathé claimed it was “unfair and deceptive” for the Technicolor label to be put on films printed by Technicolor but photographed in the Eastman Color process’ (Coulter 1954: 8). Pathé took its case to the US Federal Trade Commission, claiming that the practice of using Technicolor for

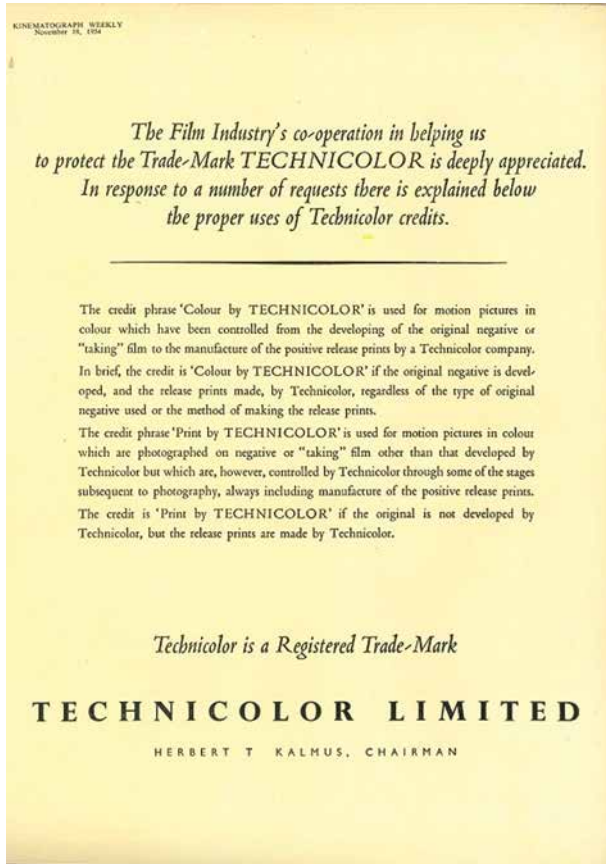


Figure 1.2 Technicolor 1954 advertisement, Kinematograph Weekly, 18 November 1954.

material filmed in Eastmancolor had 'lured customers away from those labs using the Eastman process ... because many in the industry were misled to believe that Eastman and Technicolor were one and the same process and obtainable only from Technicolor' (Anon 1954b: 8). Technicolor's response rehearsed the same arguments as in the subsequent November advert, specifying that 'Color by' and 'Print by' were 'authorised by the trade-marks laws and have long been used "to connote that prints of pictures bearing such phrases are products of Technicolor or its related companies"' (Anon 1954b: 8).

While Pathé withdrew their suit at the last minute, the crux of the debate was the nascent Eastmancolor Revolution: the stature of Technicolor's three-strip dye imbibition process, its link to Technicolor's old production practices, the recent switch to processing, and the long-term relationship between Technicolor and Eastman Kodak. The placement of British trade press advertisements five months after this American legal spat, reasserting Technicolor's trademark status, is a reaffirmation of the strength of Technicolor's brand precisely at the point where Eastmancolor was struggling to define its own brand identity. Some British films of the mid-to-late 1950s have the dual process spelled out in posters and credits. 'Photographed in Eastman Colour. Prints by Technicolor' (sometimes shortened to 'in Eastman

Colour') can be seen on posters for *It's Great to be Young* (Cyril Frankel, 1956), *Dracula* (Terence Fisher, 1958) and *Tom Thumb* (George Pal, 1958), and in the title credits for *Beau Brummell* (Curtis Bernhardt, 1954), *The Man Who Loved Redheads* (Harold French, 1955), *Dracula* and *The Mummy* (Terence Fisher, 1959). A trade advert for *Summer Madness* (David Lean, 1955) opted for 'Filmed on location in Venice, Italy, in EASTMAN COLOUR. Print by TECHNICOLOR'. Given this is not found across all posters or titles suggests that the British industry 'cooperation' stated in the November advertisement had given Technicolor the support it needed to reiterate and apply its trademark in this way. The 1959 example of *The Mummy* appears to be the last chronological example of the split accreditation: Technicolor's success here came at the expense of Eastmancolor making its own contribution visible.

This is not, however, simply an issue of accreditation. Technicolor's response to the Pathé suit, as stated in the advertisement, focuses mainly on issues around processing. 'Colour by' refers to Technicolor developing the original negative to manufacture release prints, 'regardless of the type of original negative used' (Technicolor Ltd 1954: 14). This last clause is clearly meant to cover Technicolor's processing of Eastmancolor, either through imbibition or standard printing. What



Figure 1.3 *Dracula* poster illustrating the dual mode of crediting Eastmancolor and Technicolor.

it also works to elide, however, is a series of mid-1950s British film productions that can best be described as hybrids: shot in both Eastmancolor and Technicolor, before the latter company shuttered its production arm. From trade press reports, two films stand out: *The Purple Plain* (Robert Parish, 1954) and *To Paris With Love* (Robert Hamer, 1955).

In July 1954, *Kinematograph Weekly* reported on a series of films currently in production. At Pinewood, cinematographer Geoffrey Unsworth was shooting interiors on *Simba* (Brian Desmond Hurst, 1954), using Eastmancolor. The article states that the film's location shooting 'was completed very conveniently at the same time as *The Purple Plain* was being made ... Geoff Unsworth being on both films. Geoff is now quite an expert with the Eastman stock' (Clarke 1954: 27). Promotional materials for *Simba* advertise the use of 'Eastman Colour' in the film. Posters and film credits for *The Purple Plain*, however, tell a different story, with both stating: 'Colour by Technicolor'. At first, this could seem like an extension of the debate concerning Technicolor's trademark, but there is an additional quirk. The same *Kinematograph Weekly* article discusses *To Paris With Love*:

Lighting cameraman Reg Wyer ... added that he was satisfied that the marrying of the use of Technicolor (in the studio) and Eastman Colour (on location) with a final print by Technicolor, had now reached a stage of near-perfection.

(Clarke 1954: 27)

To Paris with Love was also promoted exclusively as 'Colour by Technicolor'. Yet along with *The Purple Plain*, it represents a different production model: Eastmancolor as a location stock, with three-strip Technicolor cameras being adopted for interior work back in Britain and clearly echoing the earlier Technicolor Monopack process. What is most suggestive is Wyer's comment that this marriage 'had now reached a stage of near-perfection', indicating that these films may have been part of a larger group of British hybrid productions, albeit one largely unaccounted for at the time.

These early-to-mid 1950s machinations and branding issues speak to the ways in which Eastmancolor was elided from contemporary and subsequent discussions of film production. It also reveals the methodological complexity implicit in researching the impact of the technology in the first decades of its use in Britain. Promotional discourses around the use of Eastmancolor and Technicolor in productions can be unreliable, as can the evidence of the film's own titles, which often speak only to the legally required Technicolor trademark. Uncertainty over the precise distinction between Eastmancolor and Technicolor continued in subsequent years. In 1973, even as Technicolor was beginning to wind down its imbibition printing process, Technicolor Operations Manager S.D. Brown explained:

For the films we print on Eastmancolor positive we still ask to have a Technicolor credit included on the titles because we feel the Producer and Distributor have had the benefit of our experience and colour control throughout the entire photographic and completion stage of their picture.

(Brown 1973: 1)

Almost twenty years on from the Technicolor-Pathé dispute over what ‘counted’ as Technicolor or Eastmancolor, and despite Technicolor now regularly printing onto the Eastmancolor stock rather than through the IB process, the brand identity of Technicolor remained dominant.

The other side of this mid-1950s debate was a more positive one for Eastmancolor in British colour film production. 1954 was a bumper year for British colour film releases, up to forty-two from eighteen the year before (Anon 1957b: 509). Twenty-two of those films were Technicolor (including the hybrid *The Purple Plain*, as discussed above), two were TruColor and sixteen were Eastmancolor. Four of the Eastmancolor films were documentaries: monarchy-based releases *Royal New Zealand Journey* (Oxley Hughan, 1954), *Welcome the Queen* (AB-Pathé, 1954) and *Flight of the White Heron* (Gordon Craig, 1954), and an entry in the travelogue series *Armand and Michaela Denis Under the Southern Cross* (Armand and Michaela Denis, 1954), which was filmed in 16mm and released in 35mm Eastman Colour prints by Ealing Studios. The colour fiction feature films included *Conflict of Wings* (John Eldridge, 1954), *Knights of the Round Table* (Richard Thorpe, 1954), *The Seekers* (Ken Annakin, 1954), *Dance Little Lady* (Val Guest, 1954), *Flame of Africa* (T.V. Bulpin, 1954), *For Better, For Worse* (J. Lee Thompson, 1954), *Lease of Life* (Charles Frend, 1954), *Men of Sherwood Forest* (Val Guest, 1954), *Beau Brummell* (Curtis Bernhardt, 1954), *Make Me an Offer* (Cyril Frankel, 1954) and *Svengali* (Noel Langley, 1954). Processing for these films was dominated by Denham Laboratories and Humphries.

These first British films shot in Eastmancolor emphasize certain characteristics. They stress the stock’s ability for extensive location filming, with UK shoots in *Lease of Life* (Beverley and the East Riding of Yorkshire), *Conflict of Wings* (the Norfolk Broads), *For Better, For Worse* (London), *Men of Sherwood Forest* (Black Park, Pinewood), *Make Me an Offer* (the Home Counties), and foreign shoots for *The Seekers* (New Zealand) and *Flame of Africa* (Africa). Elsewhere, conventions from other colour productions recurred: strong use of colour in costume in the green and red outfits in *Men of Sherwood Forest*, the garish-coloured pageantry of *Knights of the Round Table*, or the silken costumes for the dance routines in *Dance Little Lady*. Two decades earlier, Technicolor’s Natalie Kalmus had recommended that colour cinematography should consider the harmonization of a ‘definitely indicated colour’ with an emotional response (Kalmus 1935: 142). Elements of this approach can also be seen in these early British Eastmancolor features. *Svengali* features a degree of expressionistic lighting techniques, most notably the green hue that falls on Trilby (Hildegard Neff) as she tends her dying father, or the use of green tones throughout *Make Me an Offer* that chromatically reiterate the obsession Charlie (Peter Finch) has with a green vase.

Through the 1950s and into the 1960s, as Eastmancolor became more commonplace within film production, those most involved in its use began to experiment more with what the stock could offer in comparison with black and white, and with pre-existing ideas of Technicolor photography. Cinematographers who worked with both film processes, and with a range of laboratories, often felt very differently about the Eastmancolor aesthetic. Paul Beeson has noted that ‘the big problem with early Eastmancolor was that you still got the best results by letting Technicolor handle it with the IB



Figure 1.4 *Men of Sherwood Forest* (Val Guest, 1954), colour in costume and location shooting.

process' (Beeson quoted in Brown et al. 2013: 96), while the younger cinematographers of the 1960s, many of whom wanted to experiment with Eastmancolor's visual look, had a different opinion:

You might shoot on Eastman Colour but if the company had a contract with the Technicolor lab it was printed a different way. It was not printed on Eastman Colour ... [and] it looked quite different from the rushes that you would have seen in the studio cinema ... I wanted the film to look the way I saw the rushes and it looked different ... the reds were definitely emphasised and it gained in contrast as far as I remember.

(Suschitzky 2018)

The look Peter Suschitzky refers to here is tied to dominant trends within 1960s British film production, not least the continued emphasis on social realism and documentary. Many cinematographers and directors saw the naturalistic elements of the Eastmancolor stock as an opportunity to develop more desaturated colours, moving towards a muted monochrome effect that reduced the striking chromatic hues of earlier Technicolor films (different approaches to desaturated colour are discussed in Chapter 9). Although this was not the only approach within

British cinema, which was equally capable of producing the colour-tinged Gothic melodrama of Hammer or the glossy sheen of the James Bond franchise, it points to the new range of chromatic options that Eastmancolor offered to creative filmmakers.

By the mid-1960s, although Eastmancolor's brand identity had never been as well defined as Technicolor, it had become the dominant colour film production stock across the British film and television industries, as they moved toward full colour production. Within the Technicolor laboratories 'the balance of the production schedule moved from being completely dye transfer to probably half Eastmancolor' (Davis quoted in Brown et al. 2013: 127), with Eastmancolor print stocks being improved across the decade and into the 1970s (see Technical Appendix). Between the 1950s and the mid-1960s, the mooted Eastmancolor vs Technicolor battle happened more in the laboratory and processing arena than in film production, where the Monopack stock quickly won out.

Technicolor remained the key challenge to Eastmancolor's UK monopoly, with few of the other colour processes making significant inroads into British production. Of the post-war expansion of Agfacolor's patents across Europe (as detailed in the Technical Appendix), the only significant entry in the project database is Group 3's *Man of Africa* (Cyril Frankel, 1956) filmed in Ferraniacolor. The American Ansco Color (later Anscochrome) was a development of Agfa but in the 1950s was slow to develop the negative-positive process that Eastmancolor would make industry standard in the UK and US: although British audiences might have seen the process in *Brigadoon* (Vincente Minnelli, 1954). The most significant challenge to Eastmancolor came later in the period, with the introduction of Fujicolor, a cheaper film stock that was used for horror and exploitation films such as *Satan's Slave* (Norman J. Warren, 1976) and *Under the Doctor* (Derek Ford, 1976), as well as lower-budget comedy *That Sinking Feeling* (Bill Forsyth, 1980). The Eastmancolor brand was not in competition solely with colour processes, however. It also had to contend with a constant stream of new and different film processes that offered other challenges.

Eastmancolor and competing cinema technologies

The introduction of Eastmancolor in the early 1950s was simply one of a range of competing and compatible technologies which attempted to increase the experiential and immersive qualities of cinema. These technologies are traditionally seen as a broad response to falling audience numbers, a shift in demographic and leisure practices, and the increasing competition offered by the domestic medium of television. Widescreen and stereoscopic 3D were not new visual technological ideas by any means, with multiple attempts to utilize them in the decades since cinema began, but they were marshalled with new purpose by film studios and exhibitors eager to rebuild a declining cinemagoing

public. The quest for new and improved visual technologies did not end in the 1950s either, with revised attempts to promote 3D recurring over the time period of this book, as well as other, arguably more niche, technologies such as Smell-O-Vision, Spectamation or Dynarama.

The following discussion is concerned with those collisions of technology in the 1950s, when Eastmancolor had to adapt to competing production processes in order to keep its brand relevant. Many of the technologies listed above were introduced by American film studios, but the focus here remains the British response to new processes, either through homegrown alternatives or the adoption of different aesthetic approaches. Every process emphasized colour as part of the package being offered: from CinemaScope to Technirama, there was an expectation (at least at first) that a wider screen was also a colourful one. This trend began with Cinerama (first introduced to British audiences in September 1954), continued through the popularization of widescreen with 20th Century Fox's CinemaScope, and was affirmed with the industry dominance of Panavision through the 1960s.

British producers and exhibitors were initially noncommittal about widescreen technologies, not least because of the increased costs and specific technical requirements: the anamorphic lenses of CinemaScope, and the initial requirement for six-track stereophonic sound. Echoing the early Eastmancolor focus on royalty, the first British CinemaScope film was *Flight of the White Heron* (British Movietone, 1954), a colour travelogue focused on the New Zealand trip of newly crowned Queen Elizabeth II. London Films experimented with CinemaScope in *Storm Over the Nile* (Zoltan Korda, 1955) as did Warwick Films with *Cockleshell Heroes* (Jose Ferrer, 1955), while Rank – which refused to convert its cinemas in line with Fox's demands for stereophonic sound – bet instead on VistaVision with titles such as *An Alligator Named Daisy* (J. Lee Thompson, 1955), *Doctor at Sea* (Ralph Thomas, 1955) and *Simon and Laura* (Muriel Box, 1955). After the initial fanfare around CinemaScope, and when Fox pulled back on the need for stereophonic conversion, Rank produced a limited number of CinemaScope films, including *North West Frontier* (Ken Annakin, 1959) and *Ferry to Hong Kong* (Lewis Gilbert, 1959).

Several companies experimented with alternative, and lesser used, systems: Ealing's only foray into colour widescreen filmmaking was *Davy* (Michael Relph, 1957), Britain's first Technirama film. Developed by Technicolor in order to compete in the widescreen world, Technirama combined elements of VistaVision (a larger negative area) with a CinemaScope-style anamorphic squeezing of the image. While *Davy* demonstrates some of the potential for Technirama, notably through the location work at the Covent Garden Opera House that shows off the rich deep colours of the imbibition process, Technirama was only adopted for a small number of British productions (Johnston 2012). Perhaps its most famous is *Zulu* (Cy Endfield, 1964), which used the 70mm version of the process, Super Technirama (or Technirama 70). Technicolor offered another colour widescreen option via its Rome laboratory. Like Technirama, Techniscope was a cheaper alternative to CinemaScope, using half-height images to double the shooting duration of each camera negative, and then converting

that anamorphically during processing. More successful than Technirama, and adopted by British horror producers Hammer and Amicus for films such as *Dracula: Prince of Darkness* (Terence Fisher, 1966) and *Dr. Who and the Daleks* (Gordon Flemyng, 1965), the process was used through the 1960s, before Panavision became the industry's widescreen standard. Further examples of Techniscope are discussed in Chapter 5.

Unlike widescreen, British stereoscopic 3D colour films are less widely known, despite the key role that British technicians and companies played in exploring its creative and technological opportunities. In 1950, Raymond Spottiswoode was commissioned by the British Film Institute to produce a series of three-dimensional films for the 1951 Festival of Britain. Spottiswoode produced four films, three in colour: two of these were animated colour films by Norman McLaren, while the third, *Distant Thames* (Brian Smith, 1951), was a live-action travelogue filmed with 'a rig of twin 3-strip Technicolor cameras ... [an] ungainly 6-strip assembly ... mounted on a barge, floating down the river' (Smith 1987: 26–7). Spottiswoode and his colleagues went on to form Stereo Techniques, a production company that worked with other drama and documentary companies to produce a series of short films between 1952 and 1955 (Johnston 2015). While many of the initial films were in black and white, Stereo Techniques moved into Eastmancolor for *Royal Review* (Robert Angell, 1953), a stereoscopic record of the Coronation and different trips taken by the Queen, including one to Scotland. Working with Stereo Techniques' new lightweight Spacemaster camera and 'the newly available Eastman Colour' (Smith 1987: 29) proved easier to use on location than the previous Technicolor rig, and the film captures the Queen's travels from pageantry on a boat trip down the River Thames to the Highland games in Scotland. The company moved further into colour production with travelogue *Summer Island* (Robert Angell, 1953), and a series of colour stereoscopic 3D advertising films, including *The Real Thing* (Ralph Thomas, 1953) for Capstan Cigarettes. Shown ahead of the British screenings of US 3D feature *Bwana Devil* (Arch Oboler, 1952), and infamous for its star Dora Bryan 'throwing' cigarettes off screen towards the audience, *The Real Thing* also displays the positive and negative elements of Stereo Techniques. For all its early financial and critical success, and creative combination of colour and 3D, the company could not scale up quickly enough to compete with the American feature films of the 1953–5 period. Suffering from the failure of 3D at the box office, Stereo Techniques withdrew from colour 3D production in 1956.

Stereo Techniques had a direct link to the resurgence of British 3D in the early 1970s. The stereoscopic colour camera the company developed and built was brought out of storage in 1972 for *The Four Dimensions of Greta* (Pete Walker, 1972). Clearly inspired by the success of *The Stewardesses* (Alf Silliman, 1969), a stereoscopic softcore pornographic colour film that broke box-office records in the United States, *Greta* combined Eastmancolor, stereoscopic sequences and 1970s sexploitation in its story of a young German woman in London. Claimed to offer 'the most frenzied display of mass nudity and sexual gymnastics yet seen on British screens', the film had 'trouble integrating the four 3D sequences (the flashbacks) into the narrative' (McGillivray 1974: 47–8). Despite using the 1950s