

Stylised Worlds: Colour Separation Overlay in BBC Television Plays of the 1970s

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Abstract

This essay aims to understand and interrogate the use of Colour Separation Overlay (CSO) as a mode of experimental production and aesthetic innovation in television drama in the 1970s. It sets out to do this by describing, accounting for and evaluating CSO as a production technique, considering the role of key production personnel, and analysing four specific BBC productions. Deploying methodologies of archival research, practitioner interview, and close textual analysis, the essay also delivers a significant reassessment of the role of the producer and designer in the conceptualisation and realisation of small-screen dramatic fiction.

Key words: studio, drama, single play, aesthetics, experimental, CSO, blue screen, designer

The technique the BBC named Colour Separation Overlay (CSO), referred to as 'Chromakey' by ITV production companies and more commonly known as 'blue screen',¹ was described by the author of a 1976 television writers' training manual as 'the biggest technological development in television in recent years',² and remains a principle underpinning contemporary special effects practice. This article will discuss the technique and identify some key figures within the TV industry who championed its use, whilst analysing a cycle of BBC dramas made during the 1970s and early 1980s that used CSO extensively. Although many programmes made during this period used this effect in some capacity, I will examine four aesthetically innovative, CSO-based BBC single plays which demonstrate two designers' work with CSO: Eileen Diss designed the early CSO productions *Candide* (*Play of the Month*, TX: 16/02/73) and *Alice Through the Looking Glass* (TX: 25/12/73) and Stuart Walker subsequently developed a

distinctive CSO style for *Chester Mystery Plays* (*Play of the Month*, TX: 18/4/76) and *Tales From the Thousand and One Nights* (TX: 30/12/81). With this approach I aim to show how particular practitioners perceived and realised CSO as a technique within a larger production culture of this period.³ Analysing aesthetic and spatial characteristics of these productions and drawing on archival sources, as well as the designers' own accounts, this essay considers the opportunities and constraints of the CSO technique, while showing how these designers creatively exploited the literary origins and cultural milieu of source texts in their CSO designs.

The Development of CSO

CSO enabled composite images to be created by mixing two or more separate electronic camera feeds together into one picture. The technique was developed during the 1960s in the Burbank Studios of American broadcast network National Broadcasting Company (NBC), which shared its insights about the process it termed 'Chroma Key' at the 1968 BBC International Design Conference.⁴

Although different systems were developed by the BBC and ITV, all worked through the same principle of electronic colour switching. The presence of a selected hue (normally a strong blue or green), in front of Camera A, created a voltage which triggered a mix effects amplifier to electronically switch those areas of the picture for another image, captured on Camera B. Thus, if an actor performed against a plain, bright blue backdrop, Camera B could replace the background's feed. Several cameras could be used in this process to incorporate various, separately filmed elements within a single composite frame, providing increased possibilities for the representation of space and the objects and characters within it.⁵

Some image compositing techniques existed before the development of CSO, such as 'Inlay', which was based on a similar principle of electronic switching. A 'portable inlay desk' was used to combine different cameras' outputs through the use of black masks placed on a white screen, which could then be replaced with two different images in the light and dark areas. This method was being used during the 1960s, as for example in the tenth episode of *Doctor Who*, 'The Ordeal' (BBC, 25 January 1964), for the representation of a whirlpool swamp.⁶ However, CSO only became possible with the introduction of colour television technology in the late 1960s.

Although in the texts that I analyse below CSO was an aesthetic choice rather than a cost-motivated decision, the development of the technique was partly driven by the practical demands on programme-makers and the desire to alleviate expenditure on sets and locations. The BBC trialled the technique on the comedy series *The Gnomes of Dulwich* (12 May–16 June 1969), which required the actors to be scaled down to a ratio of 1:6, in order to appear dwarfed by their surroundings, thus avoiding the cost of building oversized sets.⁷ In November

1968, CSO facilities were installed and tested for *Gnomes* in Television Centre Studio TC8,⁸ and the technique attracted the attention of production staff across various departments.⁹ CSO equipment and instructions were rolled out more extensively across the Corporation during 1969,¹⁰ and demand for the facility proved to be higher than anticipated.¹¹

MacTaggart and Messina

By 1973, when James MacTaggart initiated a CSO-intensive production of Voltaire's *Candide*, there was fairly wide awareness of the technique across the BBC, but limited expertise. While *Gnomes* had used the technique to represent the real world on a different scale, MacTaggart's interest lay in its self-conscious aesthetic possibilities, and he found support for his vision in the long-standing *Play of the Month* producer Cedric Messina. Paradoxically, Messina's approach to studio productions was generally considered to be rather conventional, as he was interested in cultivating a 'decorative aesthetic' based on a showman's instinct for beautiful sets and costumes, and star casts.¹² CSO appealed to Messina as an alternative means of achieving a spectacular visual style, and he would remain a champion of the technique, later producing the two CSO productions designed by Stuart Walker discussed further below.

Whilst Messina's open-mindedness was undoubtedly an important factor in enabling such an unusual production to be made, *Candide* strongly represented the continuation of MacTaggart's emphatic experimentalism in television. MacTaggart had a proven track record in innovation and the use of non-naturalistic techniques in television, having produced a succession of formally experimental series in the 1960s. His *Storyboard* anthology of 1961 had an 'emphasis on increased pace, reduced shot lengths and multiple sets'¹³, which writer John McGrath attributed to its attempt to 'get away from...the whole pseudo-theatrical approach to television'.¹⁴

Described by John Hill as 'openly experimental', the 1963 *Teletale* strand of dramas produced by MacTaggart also put an emphasis on visual over verbal narration. Its writers, Roger Smith and Christopher Williams, claimed to '[explore] the resources of framing, camera mobility and studio space'¹⁵ with the plays' fluid style, which enabled them to 'liberate the action from the accepted necessities of naturalism'.¹⁶

Furthermore, MacTaggart had produced the famously eclectic second series of *The Wednesday Play* in 1965 that included several formally challenging dramas. For example, Dennis Potter's Nigel Barton plays used direct address and the device of adults playing children, and Ken Loach and Tony Garnett's vérité style *Up the Junction* tore up the television drama rule book, being shot almost entirely on film and using techniques of documentary voice over and modernist montage. Similar techniques had been used in another MacTaggart production, the non-naturalistic six-part serial *Diary of a Young Man* (1964) written by Troy Kennedy Martin and John McGrath, which contained still-

image montage sequences and musical scenes. The use of such devices was partly politically motivated, as its writers hoped to encourage a different form of television spectatorship, refusing the viewer any straightforward identification with the world and characters depicted in the drama and, by disrupting their expectations of dramatic narrative and conventions, provoking them into active thought about what was depicted on screen.¹⁷ As his involvement in these productions demonstrates, MacTaggart was at the centre of television's experimental vanguard in the 1960s.

CSO and Satire: *Candide*

Candide offered the kind of anti-establishment social bite that MacTaggart sought, critiquing religion, war and patriotism through its satirical account of the violence and persecution experienced by a young man, Candide, as he travels the world in search of his true love Cunégonde. Using non-naturalistic images as scenery throughout, it foregrounded its storytelling by including the text's author, the French satirist and philosopher Voltaire (played by Frank Finlay), as a narrator present on screen, observing and commenting on the action and progressing the narrative.

Designer Eileen Diss used monochrome sketches from a book on eighteenth-century French interiors¹⁸ as the background pictures or 'captions' for many scenes, creating a hand-drawn visual aesthetic. The black and white line-drawn style was extended to the play's exterior landscapes, with pale blue and grey water-colour washes used for the sky. Some scenes were rendered in bolder colours to achieve particular dramatic effects, such as the aftermath of the Lisbon earthquake, for which a glowing red flame effect was layered over the line drawings. The CSO technique meant that a drawing could be much smaller than it appeared on screen – in this production they were between A3 and A4 size – because a separate camera was closely focused on it, so that it filled the frame, while the actors were recorded from a greater distance, therefore appearing relatively smaller. The monochrome-illustrated aesthetic of the caption images reinforced the play's literary origins by creating a sense of pages from a book brought to the screen, an effect enhanced by the flat appearance of CSO composite images. The commitment to using CSO to establish a stylised illustrative or painterly aesthetic appropriate to the source text is a characteristic shared by all of the texts discussed in this essay.

Other visual devices were used in *Candide* alongside CSO, the play's eclectic mixture of techniques embracing playful hybrid form just as earlier MacTaggart productions such as *Diary of a Young Man* had. Stylised layering effects were occasionally used: for example, in a sequence when Candide's ship sinks and he is washed overboard, a transparent blue undulating water line gradually rose up from the bottom of the frame, while cut out images of fish swam past and bubbles appeared sporadically. The sequence appears to have been achieved by electronically mixing two or three separate camera feeds, their layering

together creating an appropriate semi-transparent effect. Later, the transition of Candide and his valet Cacambo into the lost world of El Dorado after they enter a tunnel was depicted using a psychedelic videographic effect, with streaks of colour receding quickly behind a medium two shot of the characters, in a sequence reminiscent of (but less sophisticated and sustained than) the 'Star Gate' sequence in the film *2001: A Space Odyssey* (1968).

In several scenes, miniature models of figures, animals and contraptions were used to humorous effect. The battle between the Bulgars and the Abars was represented with legions of toy soldiers and canons on a model of a mountainous landscape, and videographic blast effects were superimposed for canon fire. As well as providing a cheap and easy way of depicting a large-scale historical event in the studio, the use of models contributed to the play's satirising of war by representing troops as toys, arbitrarily controlled by some greater power. This message was reinforced through the presence of the omniscient author, Voltaire, standing behind the model, overseeing the action and wryly commenting on the ensuing 'heroic butchery'. Voltaire's omnipotence as author of the story was also suggested through his control of other featured mechanical contraptions, such as a miniature Heath Robinsonesque winch used to hoist Candide's treasure-laden llamas up a steep cliff out of the utopian lost world of El Dorado, and a miniature firing range with moving cut-out llamas being shot down by him, to represent their deaths on the subsequent journey. As well as providing a witty way of realising difficult scenes in the studio, the use of models and 2D cut-outs was consistent with the production's overall hand-made and hand-drawn visual aesthetic.

Learning to use CSO

In a 1962 interview with Head of BBC Design, Richard Levin, and television writer Donald Wilson, MacTaggart advocated a 'process of organic interaction and ideas (between the Designer, Director and Writer), not an assembly line where cosmetics are applied to the corpse of the script after it has died'.¹⁹ He maintained that 'With the Designer involved in this, the pictures have a chance of being essential and emotional, not arbitrary and dull'.²⁰ MacTaggart's belief in the importance of the television designer was borne out through his CSO productions, which automatically entailed a far heavier design input than a regular studio play, as every scene required at least one background caption to be conceived and created. The designer of a CSO production would be allocated to the project at an earlier stage than usual, generally six weeks before recording, working closely with the director in order to establish a consistent visual style. Caption design required a precise knowledge of the director's requirements such as the scale and position of the actors as, unlike regular sets made up of separate movable components that could be adjusted in the studio, the CSO captions were fixed images. Caption images also tended to be seen in their entirety in the full frame, rather than appearing in part, obscured behind

characters within close shots of different angles. This was due to the difficulty of achieving shot changes and camera movements within a scene while using CSO, an inherent limitation of the technique explained more fully below. Thus, the images conceived by the designer and realised by the graphic designers²¹ dominated the CSO productions discussed here, filling the screen in generally wide, static shots.

The constraints that CSO put on the available shot repertoire and on actors' movements within the frame came as a shock to MacTaggart, Eileen Diss recalls: 'Jim hadn't really thought about that before. It was a hard lesson, because they'd all been three or four weeks in rehearsal, and then found they were riveted to the spot when they were in the studio'.²² The problem was due to the fact that at least two camera feeds were being overlaid simultaneously. If a camera trained on an actor zoomed in, the camera recording the caption image would also have to zoom so that the background remained proportionate to the actor, who would otherwise appear to be growing. However, it was extremely difficult to achieve such a simultaneous camera movement effectively, as the different scales of the actor and the caption necessitated different zoom rates for each camera. Maintaining the correct size and movement ratios between cameras also made tracking shots and cuts to medium shots or close-ups difficult, against a caption that initially appeared in a wider shot. Incorrect proportions of such movements or shifts produced a disorientating effect with the actor appearing to be sliding or floating around the screen, detached from the background.

Diss has described how, during an early scene in *Candide* in which a man addresses a crowd on the street, the production team eventually negotiated a successful zooming-out shot. After attempting it with a mechanical gang zoom, by which two cameras could be synchronised, and failing because of the different scales of movement required, they then reverted to 'human sensitivity', finding 'it worked far better when the two cameramen were allowed to judge it themselves'.²³

The reliance on human co-ordination was eventually overcome in the late 1970s when a company called Evershed Power-Optics developed 'Scene-Synch', a piece of mechanical apparatus which enabled two separate cameras to be linked and calibrated to move at different rates in unison.²⁴ This system was used successfully in subsequent BBC dramas, such as *Doctor Who: Meglos* (TX: 27/9–18/10/80), *The Borgias* (TX: 14/10–16/12/81) and *Gulliver in Lilliput* (TX: 3/1–24/1/82), and, while not entirely unproblematic, enabled far greater freedom of camera movement and shot variety in CSO productions.

After the problems encountered by the production team working with CSO in the making of *Candide*, detailed storyboards containing each frame of the play were produced by the designer for subsequent BBC CSO productions and distributed amongst the crew, in recognition of the necessity of having a clear visual plan which everyone could work towards.²⁵

CSO camerawork and performance

The difficulties of zooming or cutting in closer during a CSO scene substantially affected the cameras' interaction with actors and the way that performance was structured, influencing the viewers' relationship to the characters presented. The camera maintained a noticeable distance from figures on screen in all four dramas discussed here, with the main visual language being lengthy medium shots of two or more characters. Relatively few close-ups or medium close-up shots were used, particularly in comparison with the majority of 1970s studio-recorded drama, which tended to rely heavily on close camerawork. The lack of variation in distance and depth and the need for actors to appear on the same plane against a caption – rather than inhabiting different spaces in the studio brought together through live camera mixing – resulted in a frontal and relatively static treatment of space in these texts and a lengthy average shot duration.

For example, a scene from *Alice Through The Looking Glass* featuring Alice and the Red and White Queens lasting four minutes and nineteen seconds comprised just ten shots, giving an average shot length of 23.5 seconds. Opening with a slightly 'floaty' zoom in on the characters, three shot/reverse shot sequences were intercut with three frontal images of the trio, which are longer in duration, but these point-of-view shots are only slightly angled, so all three characters remain on screen and facing the camera during the whole scene.

Although the characters' rather uninteresting static position throughout the scene, seated in a row on a bench, might appear to have been arranged for convenience of recording, this staging is faithful to Lewis Carroll's description of the scene ('... [Alice] didn't feel a bit surprised at finding the Red Queen and the White Queen sitting close to her, one on each side'),²⁶ and an illustration by John Tenniel that represents them this way.²⁷ The lack of close-up or medium close-up shots did not result in a lesser understanding of these characters, as the queens, who dominated the scene, were intentionally larger-than-life depictions, with bright costumes and painted faces, speaking in loud, bossy voices. Similarly, throughout the play a vivid impression of Alice's encounters with various fictional figures and creatures was more crucial to conveying Carroll's intended meaning than subtle access to any individual characters' inner thoughts and feelings.

The respectively satirical, fantastic, miraculous and mythical source material of each of the four CSO dramas analysed in this essay was highly suitable for CSO's distanced camerawork, legitimating theatrical or comedic exaggeration and caricature which made actors' thoughts and feelings more radically legible through excessive gestures, expressions, speech and blocking. While such a heightened mode of performance was quite unusual within 'quality' studio drama of the time, the strong non-naturalistic pictorial aesthetic of the backdrops made stylised acting and movement within the frame feel appropriate and faithful to the spirit of the source texts. Cast members played multiple

characters in three of the four CSO plays discussed (with *Alice* the exception) further confirming the non-naturalistic, theatrical approach being adopted.

An example of comic theatrical positioning of characters within a shot appeared in one of the final scenes of *Candide*, featuring the central protagonist living in poverty with various characters he has encountered during the play. During the scene, consisting of a single shot lasting two minutes and twenty seconds, Voltaire stood in the foreground narrating in front of an illustration of a wooden shack with a large window, while characters appeared through the window on screen as he described their plight. Finally the whole group were visible within the shack's window, swaying and chanting 'El Dorado' in unison (while dreaming of the utopian land) before filing out of the frame. Rather than proving a hindrance, the long static camera take contributes to the effectiveness of the characters' comically choreographed entrances and exits in this instance.

The constraints of CSO camerawork did not appear to have a negative affect on the audience's and critics' appreciation of performances. Frank Finlay won a BAFTA in 1973 for his role as Voltaire, and Ian Ogilvy, who gave a perfectly-judged performance as the innocent and unfortunate Candide, was 'singled out for special mention' by members of a BBC Audience Research Panel.²⁸ Tom Courtenay's subsequent 'brilliant' performance as Jesus in *Chester Mystery Plays* also received particular audience praise, although 'it was thought the entire cast gave a superb performance'.²⁹ Thus, the above examples demonstrate how some of the potential problematic effects of CSO productions' more limited shot repertoire were avoided through the intelligent selection of source texts and the skilful realisation of scenes.

CSO and Fantasy: *Alice Through the Looking Glass*

Whereas *Candide* used CSO to achieve an illustrated aesthetic, MacTaggart's next CSO production, *Alice Through the Looking Glass*, produced by Rosemary Hill and transmitted on Christmas Day in the same year (1973), exploited CSO's fantastic possibilities more fully, creating illusory creatures and impossible forms of movement. Lewis Carroll's text contained a wealth of appropriate material, being set in an imaginary land, and containing many conceptual and spatial conundrums and strange fictional creatures, which could be realised using the technique.

As well as Diss, who would win the BAFTA for Television Design that year, several members of *Candide*'s production team were re-employed, including Graphic Designers Bernard Blatch and Brian Pike and Lighting Supervisor Dennis Channon, all of whom formed a core of CSO-experienced staff who would later work on the plays designed by Stuart Walker. *Alice* was, in Diss' words, 'a much bolder production. We knew what we were doing this time',³⁰ and the greater ambition and competence of the production team is certainly evident on screen. As a Christmas production, *Alice* established a trend for the

use of CSO in ‘one-off’ visually spectacular plays, considered appropriate for special holiday viewing, as *The Chester Mystery Plays* was transmitted on Easter Sunday and *Tales From the Thousand and One Nights* went out just before New Year’s Eve.

John Tenniel’s original illustrations provided the basis for the production design of the captions, costumes and creatures, and as with *Candide*, illustrated (rather than photographic) landscape captions were used. This time a more vivid, green-based colour palette was employed to depict the rural world ‘through the looking glass’, and there were attempts to give the background more depth through greater use of perspective and through layering up several captions of foliage and landscape elements in some scenes.

While the drawn and painted landscapes of the production provided an aesthetically pleasing environment faithful to Tenniel’s style, the use of ‘impossible’ CSO tricks was the most visually innovative aspect of the production. The illusions fell into four main types: changes in landscape, characters’ impossible movement, tricks of scale, and the creation of fantastic characters and creatures. Often two or more of these effects were combined. An effective manipulation of the landscape occurred in an early scene in which Alice tries to get out of her garden to a hill beyond, but finds the path keeps changing direction to bring her back to the house. This effect was achieved simply through the removal and repositioning of the hedge and path on the background caption, to give the illusion of the magically changing environment.

There were many instances of ‘human’ characters, fantastic creatures and objects moving in impossible ways. Using CSO, characters could easily be depicted floating or flying by adjusting their position within the frame in relation to that of the background caption, to make them appear to be off the ground. This method was used strikingly when Alice floated down from the mantelpiece after coming through the looking glass, connoting her transportation to a magical world.

Various creatures that inhabited this land, such as a Gnat and a Rocking Horsefly (a horsefly on rockers), were depicted in flight, and made to appear much smaller than Alice, their different scale achieved through them being recorded on separate cameras. The gnat had a human face and a model for a body, each recorded separately then brought together through the overlay process. This technique was also used very effectively to give the flowers human faces, which appear to be on long stalks.

One of the most charming combinations of human and modelled elements was the depiction of Humpty Dumpty. In order to make the character egg shaped, one camera was on actor Freddie Jones’s head behind an oval-shaped hole, painted blue so that the caption would appear around it, with a further camera on a model of the bottom half of Humpty’s egg body worn by a real person. The actor’s arms and legs protruded from the model, appearing to be Humpty’s own limbs, as he sat on a wall depicted using a caption.

The feast scene towards the end of the play, just before Alice returns home, featured many magical effects, as various dishes of food conversed with her, creatures flew around the room and miniature figures appeared on the table. Another complex scene that Diss remembers causing difficulties was the sequence in the sheep's shop in which various items moved around the shelves, crossing into different compartments. Although less spectacular than the feast, in spite of meticulous pre-planning the scene caused them to overrun by a day, as it took so long to get each 'real' item in the correct position against the background caption.³¹ Indeed, both of these scenes contained visible errors, with the disorientating effect of the foreground objects inappropriately floating against the background suggesting the production team were stretched for time and could not do a re-take. *Alice Through the Looking Glass* was, nevertheless, a more technically accomplished production than *Candide* as it attempted to do so much more, and used CSO more consistently throughout.

Anti-perspectival CSO: *The Chester Mystery Plays* and *Tales From the Thousand and One Nights*

Stuart Walker's designs for the next two BBC CSO-intensive drama productions, *The Chester Mystery Plays* and *Tales From the Thousand and One Nights*, formed a significant shift in CSO aesthetics. The plays, again produced by Messina, successfully engineered a visually sophisticated yet accessible aesthetic that fulfilled his stated commitment to populist productions of literary and theatrical classics. *The Chester Mystery Plays* was a fourteenth-century popular retelling of stories from the Bible, including, amongst others, The Creation, Adam and Eve, Cain and Abel, The Birth of Christ, The Last Supper, The Crucifixion and The Resurrection. Performed regularly by trade guilds for 200 years, the plays were intended to offer religious instruction to largely uneducated medieval audiences, who were also entertained by them.

Adapted by Maurice Hussey from the original old English into a more familiar, modern dialect, the dialogue of the BBC CSO production remained in verse, although the stiffness of some of the language was alleviated by the actors speaking in northern accents, presumably to remain faithful to the play's Chester roots. A publicity feature in the *Radio Times* contained a description and diagram of the CSO technique, attempting to familiarise the audience with the production's approach and thus lessen the risk of them feeling alienated by its unusual style, especially important given the slightly distancing structure of the dialogue. An emphasis on audience accessibility was iterated in the promotional article by the play's director, Piers Haggard, who justified the CSO style by maintaining: 'You can recapture the fantasy, fairy-tale quality of the plays – but the effect is not "arty", we hope: we have tried for the graphic clarity and speed of a cartoon'.³²

Indeed, the programme seems to have made a very positive impression on some of its audience. A letter from Messina to Stuart Walker, copied to other

members of the production, offers special praise and thanks to the team, stating:

I am sure you have seen some of the splendid notices the work received in the daily press, but I felt I must tell you that in all my years of experience, both as a director and a producer, I have never had such a flood of letters from the general public saying how much they loved the work. [...] It must be a source of great encouragement to you that a work so fiendishly difficult to mount, rehearse and perform, has made such a stunning impact on the public, and indeed on all the professional people one knows.³³

Whereas in *Alice* there was an attempt to retain some depth through pictorial perspective, the images Walker designed for *Chester Mystery Plays* were overtly flattened, based on medieval art, which was created without using a central perspective. Walker explained that they used '80 paintings based on those of the period – illuminated manuscripts and frescoes' and described it as 'a gamble putting real figures into a fifteenth-century-style landscape because...the people in them appear flat. I wasn't absolutely sure it would work until I saw the first complete image on the monitor screen'.³⁴

Painted by Tom Taylor, Bernard Blatch, Brian Pike and Terrence Greer, the background images featured stronger colours than those in the previous CSO productions and, due to the prevalence of blue in the palette, bright green was used as the 'keying' colour against which the actors performed. The background captions comprised a mixture of simple abstract areas and shapes reminiscent of the patterns used in illuminated manuscripts, and more detailed yet schematic colourful representations of landscapes and houses including, for example, the Garden of Eden and Noah's ark with animals on board.

The captions remained faithful to the Medieval aesthetic in their abstractness and diagrammatic flatness and often lacked a representation of the horizon or ground. Instead a collaged aesthetic was presented, with characters overlaid onto a pictorially compartmentalised image, rather than appearing within a 3D representation of a room or landscape. As well as alluding to the source book, the Bible, this abstract approach was highly appropriate for the representation of divine spaces and phenomena. Indeed the most diagrammatic spaces appeared mostly in the Old Testament stories featuring God, and less during the more earthly stories after The Birth of Christ, which were set against more pictorial captions.

In many sequences graphic and pictorial elements were combined, such as The Creation, in which the figure of God (Michael Hordern) occupied an oval shape in the centre of a dark blue caption, with stylised images of his creations appearing on screen around him, set within small graphic circles. This caption, which functioned as a diagram of all of God's creations, was intercut with shots of more elaborate drawn illustrations of each of the items He describes. The creation of day and night was represented with a cutaway of graphic images of

embellished circles representing the sun and the moon, and other more tangible physical entities, such as trees, the sun, moon and stars, were depicted using Medieval-style illustrations which the camera panned across before returning to the aforementioned diagram.

A similar approach of arranging graphics and figures around a centralised emblematic motif was repeated throughout *The Chester Mystery Plays*. For example, The Fall of Lucifer depicted God in heaven seated on a throne with his angels positioned symmetrically around him, set within a geometric shape in the middle of a vivid blue background, from which painted straight lines spread to the edges of the screen like rays.

Such near-symmetrical motifs sometimes appeared at the end of stories: 'Noah's Deluge', a story rendered mostly against pictorial landscapes, concluded with a caption of Noah's family and the Ark on a rock at the bottom of the screen, with a rainbow graphic arching over them, and God's head within a golden sun positioned centrally at the top of the frame. The inclusion of such panels, with a more self-consciously composed emblematic aesthetic than the backgrounds used during the stories, conferred a stylistic consistency across the production.

Whereas much of the charm and magic of *Alice* resided in the use of tricks of scale and movement, these were less integral to the success of *Chester Mystery Plays*, where, although helpful to the biblical storytelling, they were situated within a much bolder visual system that overhauled perspective. Although tricks of scale and movement were used, such as angels appearing in flight, and often smaller than human figures, and the head of God appearing suddenly on screen to speak to characters, the integration of such illusions into the collaged aesthetic made them less overt, as they occurred within a decidedly two-dimensional space. For example, in a scene during The Creation, God was depicted many times larger than Adam, narrating as the small naked figure walked in front of him, both characters set against a plain coloured non-perspectival background. Adam then entered the Garden of Eden, represented as a flattened walled green area of the painted image.

Walker has described how he felt empowered by the control that CSO offered him over the rendition of space, in creating this two-dimensional effect:

We were stopping the camera from doing what it would normally do, which would be to adopt a very central perspective. Doing it this way, we were dominating the camera and making it see things our way, looking at things a different way. When you photograph a landscape, the camera reduces it to its own vision, but that wasn't *your* vision, wasn't what you saw. This was an attempt to do something about that, and I suppose as a painter it had always been a subject close to my heart.³⁵

Walker brought a similar flatness to his next CSO production, *Tales From the Thousand and One Nights*, this time using the intricate patterned panels of

Arabic art as his visual source. Besides exploiting CSO's repertoire of effects, as one would expect, to create a dazzling array of creatures such as giants and genies appearing from lamps, Walker developed the same non-perspectival treatment of the screen through a different aesthetic.

One particularly successful device was used in 'The Tale of the Woman and the Five Suitors', during which a woman moves between her house and the residences of different characters, the local Governor, the Chief Magistrate, the King and a carpenter. These buildings, each appearing separately on an otherwise plain beige screen, were represented as flat, rectangular, Islamic patterned panels, with the building's occupant seated in front of the illustration to represent them inside, and the woman crossing the plain space of the screen to reach them. In spite of the overall flatness of the image, the woman passes behind pillars representing doorways, and windows which are part of the illustrations, an effect achieved by positioning a blue (or green, depending on the keying colour) pillar or wall panel with a window frame in the studio where the actress was performing, onto which the overlaid picture would appear as she walked behind it.

Whilst Walker's design contribution remained consistent with his earlier work for *Chester Mysteries*, the camera direction of *Tales* was markedly different, with many more medium close-up shots used throughout. Consequently, during close shots the background captions often appeared blurred, as the paintings' small scale prevented them from being effectively shot in this way whilst matching the scale of the characters. The images also appear less consistently collaged, as a result of the camera's close proximity refusing the distanced, painterly frame compositions, compromising the overall style of the CSO scenes. Walker was dissatisfied with the result, believing that it had been shot 'working against the technique, not with it', and comparing its shot style to that of a soap opera.³⁶ Walker's disapproval of the director's approach highlights the coherence of his own unique vision for the technique, which was not simply about the inclusion of anti-perspectival painted backdrops in a production, but was rather an entire aesthetic system, based on the presentation of carefully composed and aesthetically-pleasing collaged frames. Within this vision, shared by *Chester Mysteries'* director Piers Haggard, achieving beauty and balance within the contents of the frame was more important than the ability to cut in close on actors, which in *Tales* was achieved at the expense of the total image. In *Chester Mysteries*, Walker had used the limitations of CSO, its lack of depth and restricted camera, as the basis for a distinctive aesthetic approach that exploited, rather than resisted, these qualities.

Conclusion

Analysis of the aesthetic achievements and implications of these four specific productions has demonstrated some of the representational possibilities and constraints of the CSO technique and has revealed how these are, in fact,

intricately connected. Limitations that CSO imposed on editing and the treatment of space shaped innovative solutions of visual aesthetics, camerawork and performance, appropriate to each particular text.

Both *Candide* and *Alice* retain a more traditionally theatrical sense of space as a stage or set, the tableau effect of situating characters against depictions of perspectival landscapes in the two productions accentuated by the radical frontality and immobility of the camera, and in *Candide* the continuous presence of narrator Finlay and use of props such as the mechanical devices also contribute to the sense of the production's theatrical staging.

However, while the camera also remains mostly static during *Chester Mystery Plays*, its more abstract and non-perspectival rendition of space bears no resemblance to a theatre or television studio set, with graphic and human elements arranged in such a way that the space can only be read as a flat image and not a 3D space.

These distinct approaches taken by designers Eileen Diss and Stuart Walker in their CSO productions are surely at least partly attributable to their different backgrounds, Diss having originally studied theatre design before joining the BBC³⁷ and Walker having trained at the Royal Academy School of Art as a painter.³⁸

The methodology of interviewing staff who worked with CSO, looking at archival documentation, and analysing the visual style of completed programmes allows this essay to document the specific conjuncture of technology, professional expertise (especially that of the designer), and the texture of a brief period of aesthetic innovation. Contrasting the work of designers and drawing attention to their unusual degree of control over the contents of the frame in CSO productions, this essay offers a more nuanced understanding of the conceptualisation and realisation of small-screen dramatic fiction, qualifying the usual emphasis on the writer and/or director, and encouraging a re-evaluation of the role of design. The attention given to the contributions of James MacTaggart and Cedric Messina as champions of CSO, who assisted its development and created a space for CSO aesthetics within the television schedules, reveals the role of other key production personnel.

In an institutional culture that allowed scope for innovation in production, direction and design and encouraged it as an aspect of TV's expansion in the closing period of the duopoly (the 'Golden Age'), CSO was part of a wider picture of aesthetic ambition and the desire to create visually distinctive programmes. Against a background of naturalist drama, experiments with different forms of realism, and an interest in contemporary stories, BBC CSO dramas represented an interesting counterpoint that was appealing to production staff who wanted to use non-naturalist forms. CSO was particularly apt for productions based on pre-nineteenth-century literary sources (before the naturalist and realist traditions of the novel had become dominant in literary history), or sources that developed aspects of the fantastic. The use of CSO in one-off dramas, often shown at special times of the year and thus as exceptions to the usual schedule, gave the programmes a significant profile within the BBC and with audiences.

With their bold style and formal experimentation, these CSO productions produced during the 1970s and early 1980s exemplify the creative freedoms of television's 'Golden Age' and demonstrate one method by which 'quality' plays employed fantastic visual style, going beyond the dominant naturalist mode of studio-based drama. Through my discussion therefore, I hope to extend the canon of experimental drama by asserting the importance of such studio-based productions of literary sources.

This research connects with other work which traces a history of aesthetic experimentation in television³⁹ and which tries to re-evaluate the significance of the television studio and electronic video production. Whereas TV history has tended to valorise the filmed drama that increasingly supplanted it, and seemed to hold greater 'relevance', 'cinematic' quality and marks of individual creative authorship, this essay demonstrates how aesthetic complexity and authorial coherence can also be found in the neglected electronic studio production. Indeed, the configurations of scale, movement and spatial representation that CSO enabled suggest that the notion of the studio as a 'space' of creative production should extend beyond its physical and material properties, to encompass the 'virtual' territory of accompanying electronic technologies.

Notes

- 1 As this article refers to BBC productions, I use the term 'CSO' throughout.
- 2 Malcolm Hulke, *Writing for Television in the 70s*, Adam and Charles, 1976, p. 45.
- 3 Regrettably, due to limited space, I am unable to discuss some very interesting CSO-using plays including *Censored Scenes From King Kong* (1973, untransmitted) and episodes of the series *Shades of Greene* (1975 and 1976) as well as *The Adventures of Frank* (*Play for Today*, TX: 4/11–11/11/80) to name but a few.
- 4 NBC's Manager of Design and Creative Operations, Milt Altman, gave a presentation about Chroma Key to delegates on 7 November 1968. See BBC Written Archive Centre (WAC) T44/3/1.
- 5 Indeed, Eileen Diss identified a sequence during the shop scene in *Alice Through the Looking Glass* (25 December 1973) in which six cameras were used simultaneously.
- 6 Jeremy Bentham, 'Inlay and Optical,' *Doctor Who: An Adventure in Space and Time*, 52, September 1984, p. 8.
- 7 BBC WAC T12/1, 007/1 The Gnomes of Dulwich, 'Early Warning – Gnomes and Gardens'.
- 8 BBC WAC T/12/1, 007/1, Memo from Assistant (Vision Facilities) to Head of Television Operations, 4 November 1968.
- 9 See BBC WAC T/6/103, Memo from Chief Assistant, Features Group Television to Graeme Muir, 26 November 1968, and BBC WAC T/12/1, 007/1, Memo 3700/1 'Separation Overlay Demonstration Film,' from Michael Mills to Graeme Muir and Sydney Lotterby, 15 May 1969.
- 10 See BBC WAC T/6/103, Operations Meeting extracts, 'Colour Separation Overlay,' Item 20, 2 January 1969, and Item 256, 19 March 1970.
- 11 *Ibid.* Item 118, 19 June 1969.

- 12 See William Smart, *Old Wine in New Bottles – Adaptations of Classic Theatrical Plays on BBC Television 1957–85*, unpublished Ph.D. Thesis, 2010, especially chapters one and four.
- 13 John Hill, 'A "New Drama for Television"? *Diary of a Young Man*', in Laura Mulvey and Max Sexton (eds), *Experimental Television Drama*, Manchester University Press, 2007, p. 50.
- 14 John McGrath 'The Case Against Naturalism', in Max Franklin (ed.), *Television Policy: The MacTaggart Lectures*, Edinburgh University Press, 2005, p. 39.
- 15 Memo from Roger Smith and Christopher Williams to Elwyn Jones, BBC WAC T5/2399/1, cited in Hill, 2007, p. 50.
- 16 *Ibid.*
- 17 See Hill, 2007 for a detailed analysis of *Diary of a Young Man* and the use of Brechtian conventions. Oliver Wake also provides a useful overview of MacTaggart's experimental anthology dramas in 'James MacTaggart', *British Television Drama*, <http://www.britishtelevisionsdrama.org.uk/?p=351>, accessed 12 January 2012.
- 18 T. A. Strange, *French Interiors, Furniture, Decoration, Woodwork and Allied Arts*, Bonanza, 1968.
- 19 Richard Levin, James MacTaggart and Donald Wilson, 'The Designer's Requirements', in A. William Bluem and Roger Manvell (eds), *The Progress in Television: An Anglo-American Survey*, Focal Press, 1967, p. 283.
- 20 *Ibid.*, p. 283.
- 21 The Designer was responsible for scenic design, both within the studio and on location, including all considerations of the sets' appearance, tone and colour and camera access. It was the job of the Graphic Designer to produce any still images or 'captions' required for a programme, most commonly in the opening titles and closing credit sequences, but many more for a CSO production. See David Self, *Television Drama: An Introduction*, Macmillan, 1984, pp. 101–17 for a full account of different roles within a television design department.
- 22 Eileen Diss, Former BBC Television Designer, interviewed by Leah Panos, London, 11 November 2011.
- 23 *Ibid.*
- 24 See Anonymous Feature, 'That Synching Feeling,' *In-Vision*, 47, November 1993, and DVD mini-feature 'The Scene Synch Story,' on *Doctor Who: Meglos* DVD, 2 Entertain Video Ltd, 2011.
- 25 The complete hand-drawn storyboards for *Alice Through the Looking Glass*, *Chester Mystery Plays* and *Tales From the Thousand and One Nights* are still kept by their respective designers, Eileen Diss and Stuart Walker.
- 26 Lewis Carroll, *Through the Looking-Glass and What Alice Found There*, The Folio Society, 1990, p. 109.
- 27 *Ibid.* p. 112.
- 28 BBC WAC Audience Research Report VR/73/103, 'Play of the Month: *Candide*'.
- 29 BBC WAC Audience Research Report VR/76/209, 'Play of the Month: *The Chester Mystery Plays*'.
- 30 Diss, interviewed by Panos, 11 November 2011.
- 31 *Ibid.*
- 32 Piers Haggard interviewed in 'The Word Made Flesh,' *Radio Times*, 18 April 1976, p. 5.

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- 33 Hand-written letter dated 4 May 1976, from Cedric Messina to Stuart Walker, held by Walker.
 - 34 Stuart Walker interviewed in 'The Word Made Flesh', *Radio Times*, 18 April 1976, p. 5.
 - 35 Stuart Walker, Former BBC Television Designer, interviewed by Leah Panos, London, 24 February 2012.
 - 36 *Ibid.*
 - 37 Diss discusses her time studying theatre design in BECTU Oral History Project interview no.323, 7 April 1994.
 - 38 Walker, interviewed by Panos, 24 February 2012.
 - 39 Laura Mulvey and Jamie Sexton (eds), *Experimental Television Drama*, Manchester University Press, 2007, is currently the only critical anthology devoted to experimental television. Although it does not give any sustained attention to the CSO cycle of dramas, within it Lez Cooke discusses the use of CSO and employment of Quantel video special effects in the 1980 production, *The Adventures of Frank*, with an emphasis on the relationship between the play's various non-naturalistic devices and its political meanings; Lez Cooke, 'An experiment in Television Drama: John McGrath's *The Adventures of Frank*', in Mulvey and Sexton (eds), *Experimental British Television*, pp. 106–19.

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