'Don't box me in': Blurred lines in *Waking Life* and *A Scanner Darkly*

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Waking Life (Richard Linklater, 2001) and *A Scanner Darkly* (Richard Linklater, 2006) are two films that make use of Bob Sabiston's Rotoshop software. Thematically they deal with similar issues in that they engage with 'problems' the protagonists have in understanding their own identities. However, aesthetically and stylistically, the use of Rotoshop is arguably what is most noticeable when viewing these two films. This article seeks to evaluate the visual style of these films, predominantly through an analysis of the films' aesthetics. Through case studies of *Waking Life* and *A Scanner Darkly* I shall explore the use of Rotoshop as an expressive means to illustrate character and theme, where identity becomes sketched and multi-faceted rather than fixed or stable. Yet this aesthetic play with borders has a greater resonance than simply a means by which to delineate thematic preoccupations with troubled identity. While such representations are indeed key to these two films, the darkly outlined contours of character borders, which move and slide incessantly, also comment on the shifting boundaries of independent filmmaking in North America; and, more importantly for the purposes of this article, on the blurred divide between live-action and animation. The impact of technological change, and the increasing use of animation in a variety of filmmaking contexts, can help chart the pervasive nature of animation in current practice, whilst also posing questions for the

future of film production in its many contexts. In addition, this article uses the two films to interrogate the use of Rotoshop in relation to other production techniques, and briefly places Rotoshop within a historical development of film and technology, as well as contemporary technologies such as Computer Generated Imagery (CGI).

Central to the argument is the use of the *animated line* in understanding these two films; the line provides impetus for exploring several issues the films, and Rotoshop, raise. This article will therefore explore the following key ideas using *Waking Life* and *A Scanner Darkly* as case studies: the animated line and aesthetic analysis; Rotoshop technology; the representation of fragmentary identity; the relationship between photo-real cinema and animation, with particular focus on narrative and spectacle. Initially this article will frame these two films within an understanding of art and gesture; an understanding of style, form and aesthetics in these films allow for close analysis of the use of animation over live-action footage. This article will then seek to address these stylistic practices within the context of technology and spectacle; taking into account industry practices allows for an appreciation of how a technological innovation such as Rotoshop can change the shape of live-action cinema.[1]

Rotoscope/Rotoshop and the Imaginative Life

As scholars such as Donald Crafton (1982), Joanna Bouldin (2004), Kim Louise Walden (2008) and Paul Ward (2004) have noted, the use of rotoscoping has existed in animation since Max Fleischer patented it during the 1910s. Crafton notes that the original experimentation with rotoscope, for example the *Out of the Inkwell* series (1918-1929), can be aligned with 'the technical field' rather than with a regular cartoon series in mind. He points out that after an early 1919 release featuring what would become Koko the Clown, as much as a year later Koko was still not appearing regularly as a character (1982: 172-173). According to Crafton it was not until the early 1920s that the series was produced on a more regular basis (p. 175); prior to this the rotoscope fulfilled the role of novelty in moving image production in relation to technological advancement. Indeed a 1921 advertisement states that the *Out of the Inkwell* series is 'the greatest *novelty* creation of the screen' (p. 176, emphasis added). A preoccupation with technological advancement is important when considering the historical development of the rotoscope.

Bob Sabiston's more recent Rotoshop software has allowed for the convergence of live-action and animation in the digital age. What is interesting about films like *Waking Life* and *A Scanner Darkly* is that we do not really know how to categorize them, or as Paul Ward argues of the protagonist in *Waking Life,* 'The

fact that Wiley Wiggins cannot fully determine whether he is dreaming or awake is mirrored by our perception of the film – what is this: animation? live-action? a bit of both? His "uncertainty" directly reflects our own, regarding the ontological status of what we are experiencing' (Ward, 2005: 163). In one sense this use of Rotoshop is similar to the earlier examples cited above, where the use of this technology results in novelty; viewers experience an unusual visual that may both act as spectacle and also cause puzzlement as to how it was achieved. The formal qualities of the film raise questions about what we are actually experiencing as viewers, which in turn is related to the thematic content of the film where Wiley cannot determine whether he is awake or dreaming; what *Waking Life* depicts in its aesthetic is a dreamlike intensity. This is in line with what Roger Fry calls the 'imaginative life' which forms '"the completest expression" of human nature' (Howells, 2003: 35). Richard Howells links Fry's suggestion with the importance of form in art (he is talking about artists like Jackson Pollock) where 'meaning can be communicated as much by form as it is by content' (p. 32). *Waking Life*'s director, Richard Linklater, also links the film to art and painting. He states: 'I see this as a realistic film about an unreality, […] The gestures, the sound, the human expressions all seem real, but this reality is then re-interpreted artistically. It becomes a kind of moving painting' (Linklater quoted in Silverman, 2001).

If the film can be considered as 'a kind of moving painting' then the notion of gesture becomes important, and not just when considering these films, but in relation to the moving image in a wider sense. Pasi Väliaho, drawing on Giorgio Agamben's work, argues that 'the gesture is the basic expressive element of cinema' (2010: 17). In discussing the medical history and analysis of Tourette syndrome, where bodily rhythms are interrupted or uncontrollable, both Agamben and Väliaho suggest that 'cinema realizes a certain kind of modulation of bodily dynamics and also generates dislocated and erratic gestures in focus, a serious alteration of our corporeal rhythms' (2010: 17). While the gesture is, according to scholars such as Väliaho, imperative to understanding the moving image generally, in films such as *Waking Life* and *A Scanner Darkly*, where the visuals are disrupted and 'heightened', gestures become markedly more noticeable and skewed. Through overlaying the actors' gestures with animation, movement in the films is energized and literally marked out. As Väliaho suggests '[w]hat is important here is that the cinematographic image thus appears like an energetic field that directly involves our bodily dynamics and also affects our perception and agency' (2010: 18). What is already an energized medium therefore becomes doubly 'animated' through the use of Rotoshop. This is directly related to the visual spectacle on display, and our reaction to it, which can be linked to Tom Gunning's influential thesis of a 'cinema of attractions' where narrative drive is not the only way one engages meaningfully with the

moving image (Gunning, 1990; also noted in Väliaho, 2010). Gunning's work on early cinema is of particular note here, and this is for two reasons. Firstly, because his theorization of early film embodies the 'radical possibilities of the cinema' (1990: 56), and secondly, because he engages with how elements within the frame are presented to the audience, or more precisely 'visibility, this act of showing and exhibition' (p. 56). Rotoshop can be considered as an example of cinema that demonstrates 'radical possibilities'. And, how the body and its gestures are positioned and energized within the frame relates to questions of 'showing and exhibition' (further questions of 'visibility' will be explored below).

Gunning's compelling arguments about early film, prior to 1906, explore several aspects of exhibitionism. For my purposes it is worth noting that the body and gesture forms a part of this exhibitionism where he argues:

> [f]rom comedians smirking at the camera, to the constant bowing and gesturing of the conjurors in magic films, this is a cinema that displays its visibility, willing to rupture a self-enclosed fictional world for a chance to solicit the attention of the spectator (1990: 57).

The body and its gestures therefore become part of this 'cinema of attractions' because they are presented to the spectator in a way that disrupts the fictional, diegetic world: they are directly soliciting the attention of the viewer. This is not unlike the use of the body and gesture in *Waking Life* and *A Scanner Darkly*, where, because the animation overlays the live-action, the body and its every

move wavers, is shaded, outlined and highlighted: it directly solicits our attention and potentially draws us away from the narrative world. In further accounts of early film, gesture and movement of the body are linked to the concepts of ontology and life (as is, arguably, animation), as Väliaho argues on the body's life and movement:

> As early accounts of images invading the auditorium have pointed out, for example, the cinema takes hold of the animate body by which we prehend and apprehend our surroundings as well as the dynamics of our gestures that organize the world into meaningful patterns and establish psychic consistency. Since the earliest days of cinema, the world and the body in particular, indeed began to appear and be experienced as ontologically unpredictable and curiously malleable, and somehow not quite fitting into the categories of reason or corporeal schemata (2010: 25).

For Väliaho, cinema has had a profound effect on how we perceive the body, life and gesture where reason cannot account for the unpredictability and malleability of the body onscreen. Or to put it more succintly, 'cinema […] as a technology […] becomes the very stuff of life' (2010: 18).

It is here that this article turns to the form of animation as imperative to an understanding of the aesthetic qualities of *Waking Life* and *A Scanner Darkly,* and their representation of identity. The theorization of early film and the visibility/exhibitionism of the body/actor, as well as the unpredictable and malleable nature of the body onscreen, are a useful introduction to consider the use of animation in these two films. This is because it is very specifically the use of animation in these films that raises questions of visibility and exhibitionism;

the animation both solicits our attention and problematizes the representation of the body, movement and gesture (as well as potentially disrupting the fictional, narrative world). I am certainly not the first to analyse the form and style of these two films, but my attention goes back to the drawing board and to the line in animation, which is arguably its single most pressing difference from live-action cinema.

Although there is no widely accepted single definition of animation[2], Vivian Sobchack notes that 'the line, indeed, is one of the sufficient conditions of animation *for there are no lines inherent to the perceptible world of live-action, photo-real cinema'* (Sobchack, 2008: 252; emphasis in original). Sobchack goes on to note that in an example such as *Who Framed Roger Rabbit* (Robert Zemeckis, 1988) animation and live-action cinema are 'reconciled' up to a point, yet 'the animated line does not partake in an ontological debate between animation and photo-real cinema that ultimately argues for their reconciliation' (p. 252). A difference here is therefore seemingly inherent to a perception of animation *per se* and more specifically the animated line, where any union between photo-real cinema and the animated line does not exist. The line is integral to many forms of animation in that it is created from scratch (by a variety of methods). Photo-real cinema, on the other hand, is based upon the mediation of the profilmic in terms of landscape, objects, and actors, and where,

as Sobchack notes, there are no lines fundamentally perceptible. It is not the aim of this article to offer 'the line' as some form of definition of certain kinds of animation; instead the line becomes a way of interrogating some of the specificities of the formal qualities of Rotoshop examples. Firstly, it is necessary to think through the very notion of the line within philosophy on the one hand, and animation or artistic practice on the other.

Samuel B. Mallin discusses the line at length in his book *Art Line Thought*, where he relates the line to many areas of philosophy and phenomenology. Importantly he argues that the line allows one to think through art, and that the line is inherent to art practices. He notes that thinking through art using the line is a: 'working through the art-line and working line-thought through […] The effect of artists' work on the line (and thereby on space, time, culture, understanding and life) has been immense because the line is so basic to being' (1996: 416-417). The line is perhaps the most rudimentary of 'marks', and this is where its impact lies – in its very 'basicness'. It is also important because it can be the building block of artform and artists' work (depending on the medium). This in turn links the line to creative practice. Sobchack (2008) argues that the line in animation has much to do with creativity, which perhaps places it in the context of more experimental, 'art' based practices. Kim Louise Walden concurs that in the case of *Waking Life* 'Linklater set out with a much more experimental, artist-led

approach to the production of his first rotoscoped feature, *Waking Life*. He held auditions and "cast" (his word) artist animators in much the same way as actors were cast in character roles for the live action version of the film' (Walden, 2008). In this special issue, Paul Ward's article discusses creativity within a studio environment, and this article will not address this here. However, the creative playfulness of the line is important when considering, firstly, formal qualities of films such as *Waking Life* and *A Scanner Darkly*, and secondly, how viewing them might offer a unique experience of visual pleasure, albeit one that is based on the history of the line in artistic practice.

The line, while not inherent to photo-real examples of the moving image, is embedded in the practice of painting and drawing and in the context of art more generally. Ronald Paulson, on discussing William Hogarth's 'spectrum' of art, notes that 'at one end […] is the natural representation, the picture, which is simplified until at the other end it becomes the "perfect," "mysterious" line' (1997: xxxvi). Although this example refers to a picture that is ultimately 'line-based', this idea can be usefully applied to animation and the photo-real in that the concept suggests a sliding scale rather than a simple binary opposition. This is particularly useful when considering Rotoshop examples, where the visuals are neither simply line-based animation nor are they simply photo-real cinema[3].

The visibility of the line in *Waking Life* and *A Scanner Darkly,* and the ambiguity of how to categorize these films, is apparent in the mapping of the animated line onto photo-real cinema; this suggests more of a visible reconciliation than apparent in many other, more mainstream examples. In light of such questions of visibility, the use of Rotoshop highlights the 'jarring' effect that *Waking Life* and *A Scanner Darkly* might have, as Ward notes the 'surface play' of the rotoscoping 'simultaneously covers over and reveals the underlying reality of the image' i.e. the live-action footage (2005: 163). In one sense this relates to the body, gesture and identity, as Väliaho, drawing from E.T.A. Hoffman, suggests on early cinema:

> the zone of indetermination and indiscernability that arises with the moving image encompasses first and foremost the realm of pathos, bodily gestures, movements, physiognomy – affects and actions – that are characterized by a certain "formlessness" and even, a "mistrust of the human form" (2010: 28).

The jarring, continually moving, surface play of the animation in the Rotoshop examples interrogates the corporeal structure of the human body and engenders its malleability and 'formlessness'. In figure 1, for example, Wiley Wiggins' face is figured through a mesh of shapes and lines; he is recognisable, but malleable, and the solid structure of his actual human form is thrown into question. In another sense, such surface play that Rotoshop invokes also highlights the 'pleasure of pursuit' involved in 'seeing under' or between the form that images might take (Paulson, 1997: xxxvii). As Paulson says of Hogarth 'This is the

aesthetics of seeing under or into, stripping away and returning to essentials' (1997: xxxvii-xxxviii). He is discussing art in the form of an image of Venus, but such a conceptualisation of visual pleasure can certainly be related to the process of watching *Waking Life* or *A Scanner Darkly,* where the form of the animation allows for a 'seeing under' or between the animation and live-action, photo-real images.

Rotoscoped material allows and revels in this 'seeing under' and encourages viewers to see both under and between, whereas certain (albeit not all) other forms of digital (and pre-digital) effects in some way attempt to hide their derivation, or the fact that they are effects at all[4]. In many ways, with films that make use of special effects viewers are looking at something that *does* have a line (or *did* have a line) in the sense that it has been outlined, silhouetted, turned into a matte, and then this has been seamlessly integrated into another live-action context, making the (imposed) line disappear. In some respects, digital technology takes live-action footage and enables it to be broken down into constituent parts, which could include lines, and these can then be manipulated and re-inserted elsewhere. These examples differ from rotoscoped examples and highlight the fact that the borders between animation and live-action are complex and rather unwieldy. What does become apparent is that the line is present in all these examples even if it is visually undetectable in the final product; animation is therefore intrinsic to contemporary filmmaking that makes

use of effects and manipulation. The line, visible or not, is part of the whole of the finished product, or the edges open up multiple meanings related to the whole – there is nothing necessarily intrinsic here.

Hogarth's discussion of the 'The Line of Beauty' relates to the part and the whole; the part is the simplicity of the line which does not diminish from the whole of the painting, both of which can be considered in relation to beauty (Paulson, 1997: xxxix). Or the part is 'any particular part of the surface of an object we are viewing' (Hogarth, 1997 [1753]: 21); Hogarth's discussion of parts and surfaces lends itself well to understanding the aesthetics of Rotoshop, particularly as he suggests that surfaces of objects should be considered as 'many shells of lines' (Hogarth, 1997 [1753]: 41).

> Notwithstanding I have told you my design of considering minutely the variety of lines, which serve to raise the ideas of bodies in the mind, and which are undoubtedly to be consider'd as drawn on the surfaces only of solid or opake bodies: yet the endeavouring to conceive, as accurate an idea as is possible, of the *inside* of those surfaces […] will be a great assistance to us in the pursuance of our present enquiry (Hogarth, 1997 [1753]: 20-21) [emphasis in original]

Hogarth hints here at viewing the line in relation to perception and he suggests that the specificity of the line is intrinsically beautiful. There is an issue here of understanding something as purely aesthetic, which is difficult to quantify. Hal Foster's arguments relating to semiotic systems go against this (as does critical thought that places artistic products within cultural and political contexts). For example, there is a problem with simply suggesting that an expressive gesture is bound to an artist's intent. Foster critiques the expressive gesture where art can

be read through signs; here he suggests such a gesture is part and parcel of a semiotic system. He notes that in some examples of art there is a move towards 'fragmentary signifiers' rather than figuration, where 'dissolution of the sign' is apparent (Foster, 1996: 78). He goes on to argue, in relation to a number of artists such as Jackson Pollock, that 'dispersive gestures worked to reveal the material nature of the art rather than the subjective condition of the artist; this, too, was an exposure very different from the one desired by existentialist artists and critics' (Foster, 2004: 295). The argument against the subjective condition of the artist lies in the art, or the line, as part of a semiotic system where meaning cannot be isolated to one person's intent. And, the chain of meanings a semiotic system implies negates the idea that something can be intrinsically beautiful. An indicative example is the work of Roy Lichtenstein, who parodies expressive brushstrokes in his comic book style art, where he clearly 'reproduces' the expressive gesture apparent in the Neo-Expressionists of the Pollock era. Importantly, whether artists are intentionally '*exploit[ing]* the dissolution of the sign to demonstrate either the reification of aesthetic language (as in the tautologies of much conceptual art) or its fragmentation (as in the ephemera of much installation art)' (Foster, 1996: 80; emphasis in original), then *form matters*, an aesthetic language does have an effect, even if it is being exploited, parodied, fragmented, and played with.

In terms of source material, Hogarth's examples are drawn from 'life' whereas the Rotoshopped examples are based on photography. As noted earlier, Sobchack remarks there are no lines inherent to the photo-real world; similarly there is no interior to a photographed image. In the Rotoshopped examples, then, lines are mapped onto an 'empty' image, or an image that lacks a completely direct correlation to the 'real' world. In other words the Rotoshopped examples have been produced through three layers of materiality: the original actors being filmed; the filmed/photographed images; and the animation layered on top. The final films have been mediated through several processes of production and arguably cannot be considered in a purely aesthetic sense – the processes involved cannot be separated from the cultural and industrial means of production, or as Foster would argue, the semiotic systems apparent in making meaning. On the other hand, the layers of production apparent here do raise the profile of the formal qualities of the films. As noted, form matters and the aesthetic operations here do have an effect despite not working in isolation.

Viewing the animated line as a part of a larger whole is useful in an analysis of *Waking Life* and *A Scanner Darkly* because the self-conscious visual style of both films allow for seeing both the underlying live-action footage while also seeing the smaller parts, or the surface play, of the animated line. Such an aesthetic calls for a different method of interaction on the part of the viewer, who is not

necessarily sutured into the text in the 'usual way', but is perhaps also asked to pay more attention to the materiality of the films and how they have been made. This self-conscious style of Rotoshop is best explored through analysis of the films, where, for example in *Waking Life* characters, objects, shapes, and indeed anything that exists within the frame, are subject to a shaky, and continually shifting aesthetic, which is a direct product of the use of animation overlaying live-action footage.

Much that exists in the frame seems to move persistently with few moments of 'stillness'. Borders are not impermeable 'lines' in these Rotoshop films, rather they are harmonious and a unity in that they operate alongside, inside, under and between each other. An example is a scene close to the opening of the film where several characters are playing musical instruments (see figure 2). The characters in the frame exist as contrasting coloured shapes mostly without borders, or more precisely without the animated outlines one might expect from other animated films. The outlines in *A Scanner Darkly* however are much more prominent; Keanu Reeves is drawn as a darkly outlined, contoured character (see figures 3 and 4). In *The Weight of the Line*, a documentary about the making of *A Scanner Darkly*, much is made of the style guides they used for each character, where it is suggested that they remained imperative for the continuity of the animation in post-production. Because of the nature of *A Scanner Darkly*'s

production, with major studio involvement, style guides are more the 'norm', and arguably provide studios with an element of control (see Ward's article in this issue on studio involvement). That being said, the style guide for Keanu Reeves is notable in its use of very dark lines used to contour particularly his face, but also body; concomitantly the outlines used in *A Scanner Darkly* are more thickset throughout the film. It is useful to compare this to *Waking Life*, where there is more of a shift in relation to lines, colour and shape – particularly in relation to the protagonists of each film. Yet, the use of the scramble suit in *A Scanner Darkly* bears similarities to the instability and flexible nature of the line in *Waking Life*; here outlines and borders are continually changing from frame to frame and provide a none too subtle comment on the problems Bob/Fred increasingly has in having 'ownership' over his own identity. As we are told near the end of the film, his left and right hemispheres of his brain are in competition with each other, leading him to ask, 'I'm who?'

Sabiston's Rotoshop software allows for a fascinating representation of the 'human'; he states 'personally as far as the things I want to animate, I think I still just like the animation of personality-character portraits. The human face remains the most fascinating thing to me, as far as things go that change frame-to-frame' (Sabiston interviewed by Dave Filipi). The change from frame to frame is here explicitly linked to character personality, and by extension the shift in

outlines frame-to-frame acknowledges the changing nature of human identity, in finding the 'edges' of who characters are, where they end and other aspects of the frame begin. Outlines, or borders, exist to 'contain' characters, and presumably allow for a certain sense of stability in relation to character identification. Paul Atkinson, on discussing the line and movement in comic books follows Philippe Marion in suggesting 'it is in the sketch, and simple drawings such as caricature, that the image is at its most vibrant and the vibrancy is reactivated by the viewers/readers as their eye follows the gestural properties of the line' (2009: 271). He goes on to note, however, that in certain examples of comic books drawn lines are not always apparent in depicting outlines; they can be as much absent as they are present (p. 271-272). Such use of the line is important in terms of figuration or the image of characters. Following Marion once more, Atkinson notes that there are two categories of the line: one that outlines a figure in the fictional world and one that is 'partially detached from the object it describes' (p. 274).

Similarly, in *Waking Life* lines are used both to delineate characters but are also often detached from the object in that they wax and wane in visibility; concomitantly each of the characters lack any sense of stability due to the frequent lack of borders and continually shifting shapes and colours of the animation. Some of the dialogue in the film comments on this explicitly. The

'boatcar' driver near the opening of the film discusses life in the context of 'colouring in', stating 'colour outside the lines, don't box me in'; yet in *Waking Life* often these lines are not even present to be transgressed. The borderless violinists in Figure 2 can be compared to the protagonist whose outlines appear and disappear throughout – a visual metaphor for the theme of the film. The central premise of the film is a search for what is 'real' in relation to a waking life and dream life; Wiley searches for the 'edges' of his conscious self while seemingly lost in a world where other characters essentially exist to give him their view on various philosophies related to human existence. His own free will, ability to make choices and take responsibility seem redundant in this state where he wanders from place to place absorbing various lectures, ironically, on subjects such as the nature of free will and responsibility. In *A Scanner Darkly* the line is also ambiguous; thickset lines are often used to outline distinctly troubled characters while the scramble suit creates a mosaic of shifting colours, shapes and lines. The scramble suit animation speaks to this point about ambiguity on two counts. Firstly, the continually changing persona the suit presents obfuscates clear identities, and for the purposes of the narrative disguises the character's occupation as an undercover agent. Secondly, the suit has a metaphorical resonance in that in many ways it captures the visual style of the film as a case in point; the lines are constantly moving and wavering and avoids a fixed point upon which the eye may rest.

The edges, and lack of edges, in these two films can provide a useful way to (re-)address Sobchack's notion that any union between photo-real cinema and the animated line does not exist. Character outlines, or lack of, are mapped onto the photo-real human body of the actors and are in a sense a reconciliation of the line and that which is a stable human form. Yet the play with lines in both films points to Ward's earlier point that Rotoshop both reveals and covers over the underlying live-action footage. What is apparent however is that this particular aesthetic prioritizes the animated line, either in its presence or absence, and allows for a unique expression of the human form, both bodily and psychically. The line is therefore 'at the edges', in these films, of character development and representation, narrative and spectacle, but in itself is not an actual 'thing'. As Sobchack argues:

> The line, in existence, is a *meta-object* that can be conceived, drawn, and rendered but does not substantially exist 'as such'. Rather, like a diacritical mark (a comma or a period or an emoticon), it functions to point to (and sometimes bound) something that matters but is not itself matter: a disequilibrium or discontinuity or difference. Existentially speaking, then, the line is not a substantial 'thing' (2008: 253, emphasis in original).

Sobchack goes on to note that in movement the line can never be 'simple' – it is in fact creative, embodied with power and full of energy, and full of appeal (p. 253-255). Importantly, the line is never one thing; Birgitta Hosea, on reading Sobchack, notes 'It is a conceptual meta-object with no presence other than as an idea made graphic. It reduces existential complexity to the bare minimum, is

geometric not lived, evoking not being' (2010: 354). Sobchack continues to affirm that the line posits difference, that it 'insists on the mobility of its becoming, on its unfixing of and separation from itself, on its capacity to simultaneously both posit and negate itself' (p. 258). Although Sobchack is discussing the line in Raimund Krumme's Hilton Hotel advertisements, this is an apt description of the experience of watching both *Waking Life* and *A Scanner Darkly*. Here, the line is both fixed and unfixed to the underlying live-action footage; it is both present and absent, positing and negating itself at the same time. The line slips in and out of view consistently throughout and allows us to see through, under and in-between the animation and live-action footage.

Technology and Spectacle

While on the surface it may be difficult to relate Hogarth's beauty of the line, in terms of elegance and grace, to these films' continually shaky and wobbling lines, Hogarth's notion of 'parts' and 'wholes' allows for interrogating the visibility of the animated line and also the experience or visual pleasure it offers. As discussed above, the use of the line differs in these two films, but in both cases the line is playful; it dances over the underlying live-action footage, plays with shape and colour and highlights the problematic of character identity[5]. A history of the 'line' (that includes Hogarth) becomes apparent in these Rotoshopped films. Visual pleasure is offered through a startling play between what is under,

or in between, and what is surface, and in this sense the films offer a rather radical example of visual spectacle.

This article has outlined some key theoretical and philosophical ideas related to the line in an aesthetic sense. However, the use of Rotoshop in *Waking Life* and *A Scanner Darkly* is also part and parcel of the North American film industry (both independent production and Hollywood). It is worth briefly outlining some uses of animation[6] within mainstream live-action film, and how the line might be understood in such a context. As noted above, the line is in fact present even in its visual absence in many examples of moving image production. In Sobchack's example of *Who Framed Roger Rabbit* the animation and live-action realms co-exist alongside each other in the animation tradition of composites; in this film there is a narrative motivation for the (noticeable) juxtaposition of live-action and animation, as is also the case with a film such as *Mary Poppins*. In contrast, there are also many instances of rotoscoping being used for 'simple' matte work in moving image production. This is where a filmed character/actor is traced around and then composited into a scene with a different background. Here lines are at work in the use of 2D animation alongside live-action filming, but with the overall aim of producing a realistic effect, where the compositing use of rotoscoping is *not* noticeable; this is important in that largely in such instances the use of animation, and by extension the line, aims to be invisible.

In some examples of live-action films that feature visual effects instances of motion tracking and 'match moving' are often apparent. Here live-action footage is used as the basis for CG camerawork, with the overall aim being that the live-action and CG footage will seamlessly match and appear to be the same diegetic space. Motion-capture technology, used in examples such as *Beowulf* (Robert Zemeckis, 2007) and *The Polar Express* (Robert Zemeckis, 2004), involve an attempt at seamlessly matching, or capturing, the live-action bodies/movement of the actors. Reception of such films is often critical for being at once too real and not real enough[7]. Tom Hanks is clearly 'animated' in *The Polar Express*, as is also the case in *Toy Story* (John Lasseter, 1995), and the animated lines and shape of his face onscreen are produced to capture his appearance. This contrasts with the use of Rotoshop in *Waking Life* and *A Scanner Darkly* where the animation is used to *overlay* the live-action photo-real footage, which is still visible under the animation. In some ways the animation used in *Waking Life* and *A Scanner Darkly* bears resemblance to cel-shading, or toon-shading. Here animation is part of computer graphics designed to have the look of hand-drawn art or traditional painted animation. Usually this can be aligned with artistic practice, and is an aesthetic, or stylistic choice on the part of the artist to render images as non-photo-realistic. There are also films such as *Sin City* (Frank Miller; Robert Rodriguez, 2005) that make use of flat fields. All the examples here could

be considered as variants in a spectrum of the use of animation alongside live-action photo-real footage, where visibility of the animation, and the animated line, varies. The line is present, to some degree, but how noticeable it is ranges across the different texts, and this is particularly related to the kind of technology used and the context of production. Source material is also noteworthy; films based on comic books/graphic novels, for example, often aim to produce a non-photo-realistic style and visual.

Any discussion of Rotoshop (as well as the use of matte work or compositing) automatically incorporates the question of the role of technologies. Inventive use of technology is key to understanding how *Waking Life* and *A Scanner Darkly* have been created and the impact they have visually. However, Linklater is quick to stress that it is not the only element to *Waking Life*. He states:

> I'm not a technological fetishist. I want to tell a story in the right way. Technologies can help us in our human desire to express ourselves, to communicate and share our experiences […] I think that's why *Waking Life* is more than just an interesting moment in the history of film technology. The technology has allowed this particular story -- a story that probably wouldn't have worked in any other form -- to be told (quoted in Silverman, 2001).

Linklater here plays down the role of technology in these films; rather he places what he views as innovation in the context of the artist/director's authorial approach to telling stories in a particular way. Considering this use of Rotoshop, and by extension the line, Walden's earlier argument points towards an understanding of this type of animation in the context of more experimental

works. Indeed Howells' discussion of Roger Fry reminds us that traditionally in art 'the line communicates the artist's feeling directly to us' (Howells, 2003: 41). I have no room here to discuss the problems of authorship, Linklater's position as director, and the role of Bob Sabiston and the artist-animators who worked on *Waking Life* and *A Scanner Darkly*. However, in light of Walden's arguments, in a broad sense we can perhaps understand these films within an artist-led, experimental context[8].

In *Waking Life* and *A Scanner Darkly*, according to Linklater, technology becomes a platform that artists can use to express themselves in different ways[9]; this echoes Howells' discussion of art as a medium through which artists can articulate their expression. If this point is related to *Waking Life* and *A Scanner Darkly,* the medium, or technological input, becomes a tool which is used to foster creativity and storytelling. It is worth returning to Linklater's point that '*Waking Life* is more than just an interesting moment in the history of film technology'. The use of technology, in the form of Rotoshop, is dovetailed with the aesthetics and visual style of the film. However, the visual stylistics of the film is surely the most noticeable aspect on viewing and potentially detract from story and narrative. Geoff King argues, '[t]o assert the importance of narrative need not be to disregard the role of spectacle' (2000: 2), yet the *distinction* between the two is important. It seems inadequate to suggest that narrative and

spectacle are simply intertwined, or equally that one is more important than the other. It is more accurate to say that the borders between such concepts matter profoundly here, where those moments of crossover provide impetus or make visible the continually blurred lines, or oscillation, between spectacle, narrative, and performance. The aesthetics, or visual style, of both films are what stand out, at least initially, and can be understood in relation to spectacle, visibility and 'attractions'. As noted earlier, Tom Gunning's discussion of modes of address based on exhibitionism in early cinema can be thought of as 'attractions' (1990). In a slightly refracted way from Gunning's arguments, the use of the animation's visibility in *Waking Life* and *A Scanner Darkly* can be thought of as exhibitionism, as novelty, as attractions.

Animation in the form of CGI in mainstream filmmaking is noteworthy in that (depending on the type of animation/effect used) it often aims to be both visible and invisible; viewers are asked simultaneously to marvel at the spectacle before them whilst also suspending disbelief and allowing themselves to be sutured into narrative, despite 'interruptions' in the form of spectacle. Angela Ndalianis argues that 'contemporary cinema asks its audience to be astonished at its special effects, and to reflect on the way special effects films have become venues that display developments in new film technology [...] effects technology is both exposed and disguised' (2000: 256-259). This suggests that viewers are perfectly

aware that they are watching certain types of spectacle that has been created using a variety of digital effects, animation etc. On the other hand, Ward, on discussing the use of animation in live-action film, suggests that 'the animation is invisible in the sense that no one recognizes it *as* animation' (2005: 162, emphasis in original). Or, as King argues:

> It is quite possible that the realism of the spectacle is sufficient to ensure suspension of disbelief by many viewers, as is surely one intention of the filmmakers. In line with more general principles of 'classical' Hollywood filmmaking, the act of creation, of artifice, is concealed in order to carry the spectator into the world of the story. This is a dominant strain in the history of Hollywood cinema: the attempt to establish an 'invisible' style that does not draw attention to its own process. (2000: 51)

Ward's (2005) example is Gollum in the *Lord of the Rings* trilogy (Peter Jackson, 2001-2003), who is played by Andy Serkis but further performed using motion-capture technology and CGI; does Gollum's believability in a realistic sense coincide seamlessly with the spectacle of watching a rather startling example of CGI onscreen? While, as Ward argues (2005), animation may not be recognized 'as animation' in certain mainstream filmmaking practices and is drafted in by live-action – as for example in crowd scenes – the leap to the example of Gollum is somewhat tenuous. The mo-cap used to create Gollum is a very different kind of animation and is not actually invisible. Rather it is indicative of the very type of performative spectacle that oscillates between marvel at the animation used to create Gollum, marvel at Serkis' performance, whilst still calling for 'belief' in the diegesis on the part of the viewer. As Dan North writes,

Gollum sets up a dynamic between transparent illusion and the technical apparatus behind it – we need to be persuaded that Gollum is alive in order to believe in him as a diegetic presence, but we also need to be aware of the performative aspects of the illusion (2008: 175).

Gollum is not simply part of a seamless synthetic diegesis, instead he calls for a more fractured state of viewing where the visibility of the technology/animation and the actor slips in and out of view. King suggests (on discussing special effects in mainstream cinema) that '[t]he latest "magic" created by computer-based imaging was either celebrated, for its incredible "realism", or denigrated, as a distraction from any concern with character development or narrative' (2000: 41). However this 'distraction' is part and parcel of how spectacle works in the moving image. The same argument could certainly apply to the use of technological spectacle in different kinds of cinema, although King argues that in mainstream cinema narrative and spectacle work in tandem much more than is usually credited (2000). Indeed, perhaps it is more productive to suggest they work in oscillation – viewers are capable of being fully aware of how a technology (spectacle) was produced, and admire the production or craft behind it, and still be caught up in the spectacle of the moment, or allow the aesthetic operation to have an effect on them. This is a line of enquiry that North explores in depth, where he interrogates how special effects cinema and spectacle operate on a viewer. He argues that special effects calls for 'multi-focal viewing practices of spectators, who are simultaneously accepting fabrications as

narrative devices and decoding them as artificial contrivances' and ultimately suggests that this is an 'oscillatory spectatorial position' (2008: 12).

Gunning notes that in contemporary cinema 'effects are tamed attractions' which are dotted throughout the more dominant narrative (1990: 61), and on the contrary, Ndalianis argues that:

> contemporary effects cinema is a cinema that establishes itself as a technological performance, and audiences recognize and revel in the effects technology and its cinematic potential. Rather than centering the action solely around a story, this is a cinema that emphasizes display, exhibitionism, performance and spectacle (2000: 258).

In much of the writing that interrogates narrative and spectacle there appears to be a preoccupation with how one might dominate the other. Understanding narrative and spectacle as oscillatory allows for appreciation of how effects in cinema interacts with narrative and vice versa, *and* how effects cinema asks for North's 'oscillatory spectatorial position'. In *Waking Life* and *A Scanner Darkly* (which are less mainstream than the cinema North and Ndalianis are discussing) spectacle is apparent in another manifestation of the oscillation described above; rather than live-action films where animation/CGI might be used in set pieces where special effects are required, *Waking Life* and *A Scanner Darkly* combine live-action and spectacle continuously through constant use of Rotoshop to re-present images. As can be seen in Figures 3 and 4, spectacle is a constant in

these films through the very novelty of seeing familiar actors such as Keanu Reeves or Winona Ryder as animated figures onscreen.

Laura Mulvey's work on narrative cinema provides a gendered framework for understanding how the delectable spectacle of the star performer interrupts the narrative and captures the attention of the spectator (1988) (also see Garwood's article on Reeves' star performance in this issue). In these Rotoshop films the star image is even further fetishized by the use of animation which magnifies the onscreen presence of the actors' faces, bodies and gestures. Or, the continual process of watching animation, and particularly the animated line, layered over live-action footage provides another level of attraction and spectacle, beyond just that of the star image. In one sense this particular use of animation harks back to early cinema and the moving image that can be considered in terms of novelty and even 'magic' (Thompson, 1980). *Waking Life* and *A Scanner Darkly* are full of attractions in their visual style; novelty abounds in animated stars, while magic might be apparent in the wonder at how such a visual style was achieved. In part, the spectacle of both films relates to the ontology of what we experience visually:

> therein lies the haunting and problematic thing about rotoscoped animation – it has a very close relationship with live action, yet is 'not quite' live action. Or, more accurately, rotoscoped material is 'more than' live action; it is in a strange way revealing *more* of the real than the apparently real photographic imagery that acts as its basis (Ward, 2005: 164) [emphasis in original]

Ward goes on to stress that the focus on dreaming in *Waking Life* relates to the nature of the animation, which in turn is part of the spectacle offered by the film; this particular use of animation is fitting for the complex subject matter explored in the film (Ward, 2005: 169).

The line here then becomes important in a formal, stylistic sense, but also because it relates to the thematic content of both films in terms of understanding difficult identities. The line may be aesthetically beautiful, and as this article argues, aesthetics and formal qualities matter, but the line is also contextualized both in a history of art[10] and the industrial practices of cinematic moving images that make use of various animation techniques. In a climate where the mainstream and the independent converge, Rotoshop allows for a unique form of expressing that which might be difficult to tackle in just the photo-real, and in a more mainstream context. Through engaging with theorization of early film this article has shown that concepts of exhibitionism and gesture can fruitfully be applied to the case studies where the line magnifies the body, gesture and face, and animates the body's malleability and (in)visibility – the visual style of the films is therefore commentary on the thematic preoccupation with troubled identity. Importantly, films like *Waking Life* and *A Scanner Darkly* incorporate a continually visible use of animation which differs to the more standard uses of CGI for visual/special effects in much of mainstream cinema, where effects slip in

and out of view. The lines are murky between live-action and animation where spectacle and narrative can be seen to oscillate in these films in a slightly refracted way from that of special effects cinema in mainstream production. As I have argued, the use of animation alongside live-action is best understood in terms of a spectrum or a sliding scale. Rather unusually, however, in *Waking Life* and *A Scanner Darkly* the animated line is prioritized and given a starring role. The lines here are indeed blurred, but present enough to raise several questions - about the borders between animation and live-action, the relationship between contemporary cinema and theorization of early cinema, the visibility of animation in live-action filmmaking practices, and the varying nature of visual pleasure.

Bibliography

Atkinson P (2009) Movements within Movements: Following the Line in Animation and Comic Books. In: Buchan S (ed.) *animation: an interdisciplinary journal*, 4(3): 265-281.

Bouldin J (2004) Cadaver of the Real: Animation, Rotoscoping and the Politics of The Body. In: Furniss M (ed.) *Animation Journal*, vol. 12: 7-31.

Cholodenko A (2007) Introduction. In: Cholodenko A (ed.) *The Illusion of Life II: More Essays on Animation*. Sydney: Power Publications, 13-95.

Crafton D (1982) *Before Mickey: Animated Film 1898-1928*. Cambridge, MA: MIT Press.

Foster H (1996) *The Return of the Real*. Cambridge, MA: MIT Press.

Foster H (2004) *Prosthetic Gods*. Cambridge, MA: MIT Press.

Gaudreault A, Gauthier P (2011) Special Issue: Could Kinematography be Animation and Animation Kinematography? In: Buchan S (ed.) *animation: an interdisciplinary journal*, 6(2): 85-91.

Gunning T (1990) The Cinema of Attractions: Early Film, its Spectator and the Avant-Garde. In: Elsaesser T (ed.) *Early Cinema: Space, Frame, Narrative*. London: BFI Publishing, 56-62.

Hogarth W (1997 [1753]) *The Analysis of Beauty*. New Haven; London: Yale University Press.

Holmlund C & Wyatt J (2004) *Contemporary American Independent Film: From the Margins to the Mainstream*. London; New York: Routledge.

Hosea B (2010) Drawing Animation. In: Buchan S (ed.) *animation: an interdisciplinary journal*, 5(3): 353-367.

Howells R (2003) *Visual Culture: An Introduction*. Cambridge: Polity Press.

King G (2000) *Spectacular Narratives: Hollywood in the Age of the Blockbuster*. London; New York: I.B. Tauris Publishers.

King G (2002) *American Independent Cinema: An Introduction*. London; New York: I.B. Tauris Publishers.

Silverman J (2001) Animating a Waking Life. Available at: http://www.wired.com/culture/lifestyle/news/2001/10/47433.

Mallin SB (1996) *Art Line Thought*. Dordrecht; Boston; London: Kluwer Academic Publishers.

Mulvey L (1988) *Visual and Other Pleasures*. Bloomington: Indiana University Press.

Ndalianis A (2000) Special Effects, Morphing Magic, and the 1990s Cinema of Atractions. In: Sobchack V (ed.) *Meta-Morphing: Visual Transformation and the Culture of Quick Change. Minneapolis*, MN: University of Minnesota Press, 251-271.

North D (2008) *Performing Illusions: Cinema, Special Effects and the Virtual Actor*. London; New York: Wallflower Press.

Paulson R (1997) Introduction. In: Hogarth W (1997 [1753]) *The Analysis of Beauty*. New Haven; London: Yale University Press.

Sabiston B interview by Filipi D available at: http://www.thefilmjournal.com/issue2/sabiston.html

Sobchack V (2008) The Line and the Animorph, or 'Travel is More Than Just A to B'. In: Buchan S (ed.) *animation: an interdisciplinary journal*, 3(3): 251-265.

Thompson K (1980) Implications of the Cel Animation Technique. In: Heath S, De Laurentis T (eds.) *The Cinematic Apparatus*. London: Palgrave Macmillan, 106-120.

Väliaho P (2010) *Mapping the Moving Image: Gesture, Thought and Cinema Circa 1900*. Amsterdam: Amsterdam University Press.

Walden KL (2008) Double Take: Rotoscoping and the Processing of Performance. In: *Refractory: A Journal of Entertainment Media*, vol. 14. Available at: http://refractory.unimelb.edu.au/2008/12/24/double-take-rotoscoping-and-the-processing-of-performance-%E2%80%93-kim-louise-walden/

Ward P (2004) Rotoshop in Context: Computer Rotoscoping and Animation Aesthetics. In: Furniss M (ed.) *Animation Journal*, vol. 12, 32-52.

Ward P (2005) "I was dreaming I was awake and then I woke up and found myself asleep": Dreaming, Spectacle and Reality in *Waking Life*. In: King G (ed.) *The Spectacle of the Real: From Hollywood to Reality TV and Beyond*. Bristol; Portland: Intellect, 161-171.

Notes

[1] It is also worth briefly locating these films within the context of the American independent sector of filmmaking. In the current climate of the North American film industry, which is increasingly based on a convergence between independent production and mainstream finance, it is ever more difficult to define American independent cinema. Several critics have noted the difficulty in developing definitions of independent cinema in America; Holmlund and Wyatt follow Kleinhans' useful notion of thinking of independent cinema as a 'relational term' (2004: 3). Yannis Tzioumakis argues that defining independent American film incorporates many considerations including narrative, stylistic and aesthetic formats and qualities, although his study places greater emphasis on industrial, financial and economic factors (2006). Similarly, Geoff King suggests that aspects of the industry, style, form and aesthetics provide useful categories for noting difference, as well as convergence, on many levels (2002). While this article does not endeavor to define these films in relation to independent cinema, these previous attempts at definitions or approaches lend useful concepts to understanding these films in terms of their use of animation.

[2] Defining animation has spanned a number of debates. Scholars have debated its place alongside, within or without cinema and film, or alternatively that film is a 'part' of the broader notion of animation (for example, see Cholodenko, 2007, Gaudreault & Gauthier, 2011). It is also the case that from early animation to a contemporary context, the range of animation and techniques used to produce it are hugely varied, where the use of animation ranges from 'invisible' CGI production to more abstract or experimental works; it is impossible to place all of animation within one defining paradigm, and reductive to do so.

[3] According to Paulson, Hogarth's discussion of aesthetics in art is also useful as his theory takes into account the 'beauty of the line', and, perhaps more importantly, because he links pleasures (in art) to experience. For Hogarth, the 'beauty' of the line is apparent in its grace and elegance, which can be understood in relation to aspects of fitness, variety, uniformity, simplicity, intricacy and quantity (Hogarth, 1997 [1753]: 23).

[4] To think of this in terms of what the cinematic image reveals it can be noted that 'the moving image does not have the gesture as its object but becomes a sort of gesture itself' (Väliaho, 2010: 31); the visual composition mediates, or 'gestures', the body through its technological ontology.

[5] This problematic of character identity is key to understanding the difficulty of a correlation between Hogarth and these films. For Hogarth, the autonomous individual is present in art through a relation to the physical body. In a contemporary and postmodern experience, however, the subject is disengaged from the body, exists in a poststructural context, and becomes fractured and socialized in a way that cannot be understood as autonomous.

[6] Indicative examples will be noted here; this is by no means an exhaustive exploration of the use of animation in live-action cinema.

[7] See for example Stella Papamichael's review of *The Polar Express* that describes the cast as 'dead-eyed' (http://www.bbc.co.uk/films/2004/11/30/the_polar_express_2004_review.shtml) or Wally Hammond's description of the cast of *Beowulf* as 'creepier spectres than the creatures by

which they are often surrounded' (http://www.timeout.com/film/reviews/84501/beowulf.html). Dan North also outlines similar criticism of *Final Fantasy: The Spirits Within* (Hironobu Sakaguchi, 2001) (2008: 150-154).

[8] In a more holistic sense, perhaps *A Scanner Darkly* and *Waking Life* can be understood as independent in a multi-faceted sense, both in terms of industrial practices and aesthetics. Such an understanding of independent North American cinema is in line with King's discussion of independent film in relation to style, or 'formal/aesthetic strategies' and industry (King, 2002: 2). More specifically to *Waking Life*, Paul Ward notes that 'independent productions, as well as being cheaper to produce, will also tend to explore more serious, challenging or cerebral subject-matter' and Ward goes on to suggest that *Waking Life* can be seen in the context of Linklater's other live-action, relatively inexpensive independent productions shot on digital video, such as *Tape* (Ward, 2004: 43). However, it should be noted that the production problems apparent in the filming of *A Scanner Darkly* throw into question just how independent such a film can be considered.

[9] An interesting recent example that highlights the complex role of technology in more mainstream filmmaking is *Avatar.* James Cameron asserted that the film was centred on acting, and that animation was secondary to the role of the performance of the actors (see for example: http://www.cartoonbrew.com/ideas-commentary/james-cameron-its-not-animation-because-i-say-so.html). If performance or narrative is marketed as the defining feature of any given film, where the 'authentic' presence of actors is given precedence over 'mere' technology, then the importance of variety and method in film production is negated. While it is too simplistic to suggest that technology, narrative, performance, spectacle etc are all inextricably linked, or one organic unity, it is the case that these elements of filmmaking are isomorphic. This is not to suggest that they are causal or authorial, but that there is a one-to-one relation between the concepts: Andy Serkis' characterization of Gollum is both performance and spectacle and there is an intrinsic unity to both these concepts in such an example.

[10] Hogarth's 'wisdom' can be considered normative (apparent in his satirization of Gin Lane and Beer Street), contemporaries arguably do not share those norms; this is most clearly apparent in the dystopic, nightmarish vision of *A Scanner Darkly*. However, in both cases there is a preoccupation with figuration, character identity and social issues – the lines are therefore political as well as aesthetic.