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Time and again: exploring the relationship between memory and stop motion animation

by

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Abstract

In the broadest terms, stop motion animation is the animation of physical objects (as opposed to computer-generated images or drawn animation). It has been suggested that this medium is in some way related to memory. Animators such as Jan Švankmajer and Chris Sullivan have linked their own work in the field to memory. This MA by Research seeks to interrogate this premise through animation practice.

Taking the form of a series of short animated films and experiments and critical analysis thereof, this research concludes that the use of materials in stop motion animation lends itself to engagement with the associations between particular objects and memories. Furthermore, the form that the medium takes – a series of still photographs that imply movement – demands cognitive engagement from the viewer than is similar to the narrative organisation of memories. These findings are contextualised within historic forms of representation and how artistic practice can serve as acts of remembrance.

Acknowledgements

<u>Time and again: exploring the relationship between memory and stop motion animation</u>

The catalyst for this research is a short animated film I made: *Meanwhile, in the Past*. The narrative concerns a bedroom whose present tenant is oblivious to the experiences of previous occupants, fragments of whose lives are depicted in silhouette around the room. The characters were realised by filming actors at 25 frames per second and projecting the footage into the miniature set constructed from canvas and dolls' house furniture, one frame at a time. Intended as a darkly humorous affront to nostalgia with unreliable narration, the film depicts a collapsing of time at memory's behest, creating a world where there is only the unworthy present and the cherished past, the two distinct from one another both visually and in the narrator's attitude towards them. The past events depicted are depicted as fragments with no orderly temporal relationship between them; they are united only in the space that they occupy – the room. The narrator's irrational disdain for the present and favouring of a frequently mundane past is intended to undermine his position. This reveals something of my disposition – an inclination towards nostalgia met by a belief in its worthlessness. That the film is indicative of my disposition is a realisation I was slow to reach. When asked by viewers how much of the film was inspired by my own memories, I have always been quick to distance myself. It is a fact that none of the depicted memories were consciously based on any lived experience of mine and to claim ownership of the film's nostalgia would, in my view, obscure the anti-nostalgic sentiment I intended. Only later did I consider that this sentiment is, of course, deeply personal to me. This struggle with the personal and impersonal is evident in the practical element of this research, wherein the work that engages explicitly with my own memories is sandwiched between less personal, more technical works.

Through my critical reflections on the film, I came to realise that its allusions to memory went beyond my conscious intentions. Before making the film, I recognised but could not articulate the importance of depicting past characters as silhouettes; it was a design decision to which I was committed but whose implications were richer than I knew. Appearing as shadows on the room's walls, these figures appear incomplete, reduced to a trace of their physical presence in the space. Crucially, they hark back to Pliny's myth of the origin of art, wherein the shadow's outline is "captured once and for all on the wall" and "immortalizes a presence in the form of an image, captures an instant and makes it last" (Stoichita, 1997: 15).

Whether through intuition or luck, stylistic and methodological decisions I made in the creation of *Meanwhile, in the Past* supported the narrative theme memory. This led me to question whether stop motion animation as a medium is intrinsically related to notions of memory. My search for literature on the subject did not unearth a wealth of information; however, two pertinent references to memory and animation appeared significant. A relationship between the two has been noted by Švankmajer (in Wells, 1998: 90), who describes the appeal of working with stop motion as follows: "For me, objects are more alive than people, more permanent and more expressive. The memories they possess far exceed the memories of man." Elsewhere, the animator and academic Chris Sullivan claims, "Animations are closer to the ethereal quality that memories have, they kind of crumble in your hands…" (*Sullivan: A Feature Animation 14 Years in The Making*, 2011) That it is animators such as Švankmajer and Sullivan who have suggested a link between the two is cause to suspect that there may be some procedural aspect to it. The questions I am left posing are: how does stop motion animation lend itself to the construction of narratives about memory? Are there fundamental aspects of stop motion that link it to

memory? How can stop motion animation be exhibited in such a way as to strengthen its connection to memory?

<u>Methodology</u>

Having come upon the topic by way of creative practice myself, it seems prudent to continue in this vein. My method, however, is one of countless available within stop motion, which is itself just one approach to animation. Establishing an appropriate definition of animation succinctly is made difficult by both the variety of methods employed by animators and the other art forms with which it intersects. By defining animation in the broadest terms then homing in on the particulars of stop motion specifically and my own particular method, I will map a route via which findings through my practice can be considered in relation to the medium more generally. Small and Levinson (1989) offer a simple definition of animation as "the technique of single-frame cinematography", a description whose allure is also its inadequacy. As Furniss (2014: 5) notes, this definition serves only to highlight "the most basic characteristic of the practice". McLaren (in Furniss, 2014: 5), meanwhile, looks beyond single-frame cinematography to another aspect of the process in what is among the most frequently cited definitions of animation:

> "Animation is not the art of drawings that move but the art of movements that are drawn; What happens between each frame is much more important than what exists on each frame; Animation is therefore the art of manipulating the invisible interstices that lie between the frames."

Despite the specific reference to drawing, the fundamentals of this statement are also true of animating objects, whereby each frame captures a static moment and the illusion of movement relies on the animator's actions between frames and the viewer'. It is this – the animation of physical objects – to which I refer with the term 'stop motion animation'.

For her part, Furniss (2014; 5-6) proposes a continuum between what might commonly be described as animation and live action film – or, in her terms, mimesis and abstraction respectively. Where the former seeks to mimic "natural reality", the latter "describes the use of pure form – a suggestion of a concept rather than an attempt to explicate it in real like terms". This interpretation of the form will prove very useful in the critical analysis of the films comprising this research.

Central to my animation method is the use of projected images. As detailed above, this began with *Meanwhile, in the Past.* The images projected can be individual photographs, frames of live action footage or frames of live action footage. As will be discussed in greater detail over the course of this thesis, the placement of an animation on that spectrum need not be fixed and can, in fact, convey narrative in and of itself. The methodological particulars of any given film will be detailed in the corresponding analysis but all involve the projection of an image or images onto objects and are intended to explore the associations of the combination of these principal elements. The projected image(s) can be anything from a still photograph to an excerpt of moving footage captured in real time at 24, 25 or 50 frames per second; to bring the number of images down to the more manageable frame rates typical in animation, I cull half or more of the captured frames. The remaining frames are then projected one at a time into a physical environment and captured by a DSLR.

Animation practice lends itself to research on the basis "that creative options and new associations occur in situations where there is intense concentration, but within an open landscape of free-range possibility rather than a closed geography of well-trodden pathways." (Sullivan, 2006) Certainly, the painstaking process of stop motion meets these criteria; one of the key characteristics of animating objects is the potential for unexpected outcomes. While

drawn and digital animation, in their hegemonic forms at least, are restricted to parameters

defined by key frames early in the process, the destination of any animation involving the

physical manipulation of objects and materials cannot be pre-empted. Such animation,

therefore, has the capacity to facilitate discovery and generate new ideas.

The artist William Kentridge, himself an animator, describes drawing in terms that, despite their

specificity to the medium, can be transposed to the process of animation:

> arriving at the image is a process, not a frozen instant […] There may be a vague sense of what you're going
>
> to draw but things occur during that process that may modify, consolidate or shed doubts on what you
>
> know. So drawing is a testing of ideas; a slow-motion version of thought. It does not arrive instantly like a
>
> photograph. The uncertain and imprecise way of constructing a drawing is sometimes a model of how to
>
> construct meaning. What ends in clarity does not begin that way." (Christov-Bakargiev, C., 2006)

The way in which my previous film led me to this research is indicative of a methodological

approach where "[s]erendipity and intuition that direct attention to unanticipated possibilities

has long be a valued part of experimental inquiry" (Sullivan, 2006).

<u>Film, photography and memory</u>

While the term 'stop motion animation' describes the method by which I work, my practice

could equally be described simply as filmmaking. There is an argument to be made that lens

based animation represents something of an intersection between film and photography, its

process sharing similarities with the latter and its product generally resembling the former. As

such, an understanding of the way each of these forms engages with ideas around memory

forms a sound background for this research.

The subject of film and memory has been reasonably well covered elsewhere. Bordwell (2015: 37) considers the two to be linked by virtue of both being narrative constructions, suggesting that "memory must be seen not as a simple reproduction of a prior perception, but as an act of construction, guided by schemata". Burgoyne (2008) describes the effect that cinema has on its audience, arguing that it "seems to evoke the emotional certitude we associate with memory [because] it engages the viewer at the somatic level, immersing the spectator in experiences and impressions that, like memories, seem to be burned in". The ubiquity of audio-visual media, says Burgoyne (2008), has transformed the once impersonal concept of history into an "'experiential' collective memory", a phenomenon described by Landsberg (2008) as "prosthetic memory". Turim (2015: 1-2), meanwhile, has written extensively on the use of flashback in film, noting that memory is among the concepts underpinning the device narrative device. In her terms, the flashback in film as "a privileged moment in unfolding that juxtaposes different moments of temporal reference. A juncture is wrought between present and past." While the flashback is a ubiquitous device, one film to make prominent use of it has particular relevance to this research: *The Grand Budapest Hotel* (Anderson, 2014). Centring on a nested narrative of stories within stories, the narrative events at the furthest remove from actuality have been filtered through recollections and retellings over the years, with special effects and some exterior shots achieved using stop motion animation. The departure from the mimesis of 'live action' and towards the abstraction of animation foregrounds the construction of the narrative, both within and without the diegesis. The film demonstrates Turim's (2015: 2) assertion that "[s]ome flashback narratives actually take as their project the questioning of the reconstruction of the historical" and its use of animation is one of several devices used to this end.

The collision of past and present described by Turim (2015) has can be considered beyond the confines of the flashback and applied to film more generally. Ely-Harper's (2014) describes film as "a 'multitemporal presentation' able to bring two events together: the first event the initial recording of an event and the second the viewing of the representation of the first event on film."

Mulvey (2006: 18) proposes that "the technological drive towards photography and film had always been animated by the aspiration to preserve the fleeting and instability of reality and the passing of time in a fixed image." Saltzman (2006: 2-3) traces the idea of film and photography preserving representations of the past to Pliny's creation myth, wherein the creative act is driven by "anticipated absence". Indeed, by Pliny's account, art's very origin is as a "ritual of remembrance" (Saltzman, 2006: 2).

Mulvey having noted the shared drive behind film and photography, the connection between photography and memory is ultimately more apparent. According to Edwards (2009), "photographs belong to that class of objects formed specifically to remember, rather than being objects around which remembrance accrues through contextual association (although they become this as well)".

Early considerations and experiments

To begin with, practical work on this project presented a number of technical considerations to mull over. For *Meanwhile, in the Past*, I used the built-in projector of a Sony HDR camera. The benefit of this was that the camera was mountable on a tripod while the projector was attached to the articulated viewfinder and had a very short throw, making it highly manoeuvrable in the small space surrounding an animation rig. On the other hand, in the time that was available to

me, the only way of feeding the individual frames into the camera ready for projection was to display them on a television screen and point the camera at it. The project could absorb the resulting loss of fidelity due to the style of the film – that the projected images weren't crystal clear contributed to the fragility of the memories depicted.

For this project, I am using a Hitachi ED-X15, primarily for its availability over the course of the year. However, this is a much bigger unit than the Sony camera and less manoeuvrable; it is designed to be mounted to a ceiling fitting or rested on a desk. It also generates a lot of heat, so working conditions might be less comfortable than in the past, though this should be somewhat ameliorated by the longer throw, which necessitates my working in a larger space.

For my own benefit as much as anything, I have attempted to break down the precise nature of the images I am creating. The light bouncing off a person is interpreted and stored as binary by a DSLR; my laptop, connected to a projector, interprets the binary and produces more light as a facsimile of the original light; this light is bounced off an object and, once again, captured by a DSLR as binary. Short of projecting directly into someone's eye (which is essentially what a computer screen or television does), the projected light relies on a suitably positioned surface, according to the projector's throw and focal settings, to generate the image. Projecting, as I do, in an otherwise dark space, the surface or screen onto which I am projecting cannot be seen without the projected light and the light cannot be seen without the screen. The two work in tandem and the images I capture in these conditions are composed of both elements. Projecting the image of a man onto the pages of a book is, to state the obvious, placing the man's image inside the book. At the same time, however, I am placing the book inside the man's image.

More than anything, early work was comprised of experiments with the particular animation method I am using; in other words, projecting images against a variety of surfaces simply to see

what different combinations might imply. What became apparent was the differential between

footage projected slowly and screen played back quickly; the application of paint between

individual frames of a man talking, for instance. When viewed, the animation depicts two events

simultaneously, each with their own distinct temporality. The result is animation which

foregrounds the discrepancy between the temporarily of its capture and the temporality of its

presentation. The multi-temporality of film, described by Ely-Harper (2014), is coded into the

animation process of these films. Even as they are being animated, the projected images are

temporally distinct, reproducing moments captured previously.

Having established this, *Westgate on apple* constitutes unsuccessful attempts to further

highlight this visual dialogue, projecting onto a surface liable to materially change over the

duration of capturing the projected images frame by frame. From a technical perspective, some

of the limitations of the method are laid bare in this animation, making clear the difficulty of

capturing a single image that coherently communicates both of its key components – the

projected image and the object against which it is projected. Nevertheless, the resultant image

is a conflation of two components: the projected image and the screen against which it is

reflected. This duality – essentially the material relations fundamental to animating objects

(Wells, 1998: 90) – could prove useful in exploring memory as comprising both present and past.

Gramps

It is somewhat inevitable, when using creative practice to research a subject that intersects so

much with personal experience, that the researcher's own memories will come to the fore, as is

the case with this film. To avoid engaging with my own experience of memory would be to treat

the subject as a strictly abstract concept and arbitrarily limit the extent to which I can engage

with it. In the plainest terms, this film consists of a still photograph of a man projected onto

every page of a book, one page at a time, and played at 6 frames per second. The man, in fact, is

Dick Horrex, my late grandfather, and the book – Alan Bennett's novella *The Uncommon Reader*

– was selected for the way I associate it with my grandfather. It is book for which we shared a

mutual enthusiasm, and the copy featured in the film was his. As such, it has become piece of

'reminiscentia', an object whose present existence induces remembrance of the past (Sherman,

1991). In his analysis of Japanese animation of the 1960s, Furuhata (2014) notes the potential

for animation to appropriate and repurpose other media, and it is in this tradition that a book

forms the basis of the film.

Compositionally, it is noteworthy that the film – at least at its beginning – does not depict a

man's image projected onto pages of a book but a man fabricated by the collision of two

elements: the digital projection of his image and the paper which reflects that light. In the

absence of any source of light beyond the man's projected image, what one sees is essentially a

man fabricated by the pages of a book. Once the man's image has been projected onto each

page, the process is repeated using the frames captured on the previous iteration; rather than

the man projected onto the page, we see the man projected onto the page and projected onto

the page again. This process is repeated, the clarity of each successive run through diminished

until the image is unreadable as that of a man, each degradation making more apparent the

pages onto which the image is projected, gradually exposing the material reality of the image's

fabrication (Wells, 1998: 90). In effect, the memory object overwhelms the memory associated

with it through repeated use; the material overwhelms that which it is being used to represent.

The narrative that emerges is founded on the man's image evolving from a digital photograph

grounded in mimesis to something increasingly abstract. This narrative is constructed purely through animation, with no film techniques such as editing or sound design used.

Degrading a digital image is easily done; even the most basic photo editing software allows the user to lower the resolution of an image. What is notable about the degradation in *Gramps*, however, is the way it occurs as a by product of repeating the process of rendering the image. In the context of this research, the method of repeating the animation process, each time projecting its last iteration, supposes that the recollection of a memory becomes entwined with the memory itself, influencing future recollections. This process is known by neuroscientists as retrieval-induced distortion. According to Bridge and Paller (2012), "memories are updated with information produced during retrieval".

The original digital photograph is, among other things, an abstraction of the moment it captures, reducing it to binary. In its projection onto the surface of the book, the image's tangible presence is restored; it exists in three dimensions, its clarity determined by the precise position of each page in relation to the projector. According to Mulvey (2006: 18), "the digital, as an abstract information system, made a break with reality, which had, by and large, dominated the photographic tradition". Digital photography's conversion of the concrete to the abstract can be viewed in parallel to the way in which concrete, lived events are stored as abstract memories, with this method of animation seeking to restore a concrete form to this abstract image or memory. This points towards the material possibilities of fabrication to facilitate the use of objects in constructing the memories associated with them. Bachelard (1964: 59) writes, "The image is created through cooperation between real and unreal". Rather than dealing in strict terms of real and unreal, here we have the abstract and the concrete.

In this film, the actual animation – that is, the movement – that results from projecting the photograph onto every page of the book individually and photographing each one incorporates more than the obvious bombardment of the words from each page. Due to minor inconsistencies in the positioning of the pages, the projected image interacts differently with each one, seemingly comes to life and moving uncannily over the course of the film. In Wells's terms, stop motion animation "relies upon the complicity of the materials in the construction and representation of particular kinds of personal world" (1998: 90-91). Here, my failure to impose total control on the pages demonstrates a limit to their complicity and the result is animation informed by the materials with which I am working. Such inconsistencies can be seen to reflect the retrieval errors that distort memories and, perhaps, reflect the fragility to which Sullivan refers to in his description of memory and animations "seeming to crumble in your hands" (*Sullivan: A Feature Animation 14 Years in The Making,* 2011). Through making this film, I have developed an animation method that runs parallel to the experience of remembering, whereby each time the memory or image of my grandfather is accessed, it incorporates the particulars of previous access. The image of my grandfather is fragile in as much as it is destabilised by the accumulation of such inconsistencies or mistakes in my method of rendering it. This method of animation, like memory, is a delicate process of creation in which the animator is not wholly autonomous and the product is susceptible to mistakes which leave an indelible trace. The gradual degradation of my grandfather's image also reflects the experience of animating this film. My prolonged exposure to this photograph diminishes its power as a signifier of the man himself as I increasingly come to view it simply as a component of the film I am making.

Reflecting on this film, I see that it very specifically conforms to Silverman's (2015: 3) understanding of palimpsestic memory:

> The relationship between present and past therefore takes the form of a superimposition and interaction of different temporal traces to constitute a sort of composite structure, like a palimpsest, so that one layer of traces can be seen through, and is transformed by, another.

This relates to the multitemporality of film discussed previously, emphasising that memory, too, is a multitemporal event. The dialogue between a past moment and the present moment in which it is recalled is a dialogue, in which the past and present influence one another. The visual dialogues that are a foundation of stop motion animation (Wells, 1998: 93) facilitate the expression of this interaction, and this is what *Gramps* expresses. The book's pages are lit by the image of the man and the image of the man is reflected by the pages, each shaped by the other and each representing a distinct moment in time.

Sunflower

This film begins with a straightforward time-lapse of a sunflower's death. The time-lapse is animation at its most basic; an expression of time, its narrative constructed from change or loss over time. As Laybourne (1998: 72) explains, "the time-lapse technique alters our perceptions by collapsing time. This compression of the normal sequence of events will usually reveal either a process of generation or one of destruction."

The time-lapse footage was then projected frame by frame onto a black screen, each still of the flower traced with white paint to reflect its image into the camera's lens to be captured again. That footage was then projected onto a black screen and traced in chalk. The process repeated, each time traced with alternate paint and chalk. In the film, the initial death of the sunflower is

followed by each successive version recorded, played firstly in reverse to depict the flower coming to life and then played forwards to depict its death once more.

The death of the sunflower represents a linear understanding of time and life, where decay and entropy are inevitable – the natural order of things. While the sunflower itself is beholden to its material reality and its decomposition according to factors of time and environment inevitable, its memory persists by way of artistic recreation. Moreover, the flower's restoration through art reflects the creative process involved in the *Gramps* film. While that film depicts a memory of my grandfather polluted by the present object that encourages it, the fact that I have made a film about that, using his image, has itself entwined itself with the associations I attach to the memory object and the memory itself. Essentially, *Sunflower*'s narrative incorporates the use of artistic practice as an act of remembrance.

More than simply depicting the fading of a memory over time, the process engages with the creative act of capturing or reconstituting moments past. The process itself proves significant, harking back to Pliny's creation myth of art as "a ritual of remembrance" (Saltzman, 2006: 2). In particular, the use of paint to produce a suitably reflective surface onto which the images of the sunflower can be projected alludes to the artistic process, the tracing of the projected images reflecting the actions of the daughter described by Pliny. Saltzman (2006: 2-3) describes the through-line from Pliny's myth to modern techniques thusly:

> "Conjured in Pliny's tale are techniques that, unlike painting, bear something of a relationship of physical contiguity to their subjects. A luminous flame as a means of casting the shadow of the body before it, a drawn outline as a means of capturing the evanescent image of that body, a sculptural cast as a means of reconstituting and concretizing something of that lost body; in Pliny's tale, much as we may see the seeds of an iconic form of representation, namely, drawing and figure painting, we are also presented with an art of

the index, with strategies of representation that structure the visual object as the material trace of a fugitive

body."

Indeed, Pliny's myth permeates every stage of the process. The initial capture of the dying

sunflower – a series of photographs taken at regular intervals – depends on the "anticipated

absence" (Saltzman, 2006: 2) that forms the basis of Pliny's story; the movement implied when

the frames are played in succession is predicated on each frame being taken in

acknowledgement of the flower's gradually diminishing presence The simple narrative of the

dying flower is communicated through still moments which, together, depict an accumulation of

material changes. This speaks to the nature of lens based animation more generally – that each

frame anticipates change and seeks to capture a fleeting present. Animation is a medium

concerned with change and, crucially, with the invisible – the change that occurs between

frames creates the illusion of movement on which the form depends, as proposed by McLaren

(in Furniss, 2014: 5).

Saltzman's (2006: 3) analysis of Pliny's myth is applicable to the restoration of materiality

described previously in relation to *Gramps*, stating that "the father's compensatory work of

sculptural casting attempts to restore a certain material, if not, in the end, bodily fullness and

presence." Stop motion animation is, as Wells (1998: 90) says, "directly concerned with the

expression of materiality, and, as such, the creation of a certain *meta*-reality which has the same

physical property as the real world." While neither the figure in *Gramps* nor the eponymous

sunflower here is restored according to its original material properties, both are represented

through the complicity of other objects and materials. This is arguably the nature of all

representation in art and these works have explored some of the ways in which stop motion

animation's own representational peculiarities.

The two principal works discussed above – *Gramps* and *Sunflower* – form the basis of the video installation *Time and Again*, presented as part of a show shared with three other artists and based on the theme of 'place'. The intention on my part was that the place in which the work was installed (a small room in the corner of the gallery) would itself become embedded in the work, its features imposing themselves on the films projected within. Any viewer's experience of the films would be inseparable from the context – the place – in which they were seen; the image of the sunflower, for instance, now containing the grey wall onto which it was projected. There are other ways in which presenting the work as an installation coheres with its themes. Digital art can be endlessly reproduced, backed up, viewed without decay. As a video installation, the work – or, at least, this presentation of it – becomes a limited entity, with a defined existence beyond which it lives only in memory. Even a restaging of it would be precisely that – a reconstruction of the original from memory.

In addition to *Gramps* and *Sunflower,* the room containing the installation is adorned with the materials from which the films were animated. Torn pages of *The Uncommon Reader* are strewn across the floor while what remains of the eponymous sunflower sits in the centre of the room. The placement of these objects in the room is designed to confront the materiality of the animation. Their physical presence in the room establishes the animation as a reconstruction of the past, intangible by comparison but nonetheless persistent. The "multi-temporal presentation" (Ely-Harper, 2014) of the objects' past and present is the focal point. In the projected films, the objects are animated; in the space itself, they are dormant, proposing a line of inquiry around the construction of the films, their fabrication and the goings on between frames.

Once again, however, the absent is arguably of greater importance than the objects present.

Just as the viewer must mentally construct the movement implied by successive frames of

animation, my absent grandfather, as a man whose material presence in the world has been

reduced to ashes, must be reconstructed mentally between objects whose associations with him

endure. By exhibiting this work, I am, in a sense, distilling an aspect of his memory to one book

he happened to like and surrendering that aspect to the cognitive will of the installation's

audience. However reductive this might be, the ambiguity between the installation's constituent

parts – the films, the remains of the sunflower, the disassembled book, even the room itself –

encourages the viewer to construct a narrative beyond my intent and breathe their own life and

experience into it. This is the nature of memory itself; as Schacter (2000) writes, "memories for

individual events resemble jigsaw puzzles that are assembled from many pieces," and it is

normal for people to "knit together the relevant fragments and feelings into a coherent

narrative or story."

Conclusion

One of the key findings of this research has been the parallels between the dialogues with which

memory and stop motion animation are respectively concerned: memory, between the past and

present; animation, between the material reality of the objects being animated and the people,

places and ideas they represent. It has become clear over the course of this research is that it is

the visual dialogues inherent to stop motion animation (Wells, 1998: 93) that make animation

such fertile ground for exploring memory. In particular, the medium lends itself to the idea of

memory as malleable, fragile and distinct from the historical document. Stop motion's capacity

to display its artifice rather than strive for mimesis presents opportunities to engage with

memory's nature as a construct. Further to this, I have found that the experience of viewing stop motion to bear similarities to the construction of memories. Stop motion presents fragments of its process in its static frames and requires the viewer to construct narrative from them. It is an art form structured around absence, demanding that the viewer reconstruct the movement that it, as a process, did not. Together, the frames evoke more than their explicit contents, just as photographs serve to remind those concerned of more than the precise moment of their capture. Furthermore, the fragmentary nature of stop motion and its parallels with memory can be complemented through its exhibition as a video installation, liberating the material from the confines of film structure and presenting it alongside relevant artefacts.

As a medium of filmmaking that lends itself to working alone and personal expression, animation lends itself to approaching memory as a personal, subjective phenomenon. Animation and memory can both be understood as reconstructions by an individual; however, factors beyond the individual's control impact on the results. Being able to use significant memory objects in the fabrication of my animation has highlighted the unique potential for animation practice to function as an act of remembrance, representing its own approach to the foundations described by Pliny.

Going forward, I hope to interrogate the role of temporality in animation further. That time plays a crucial role in memory seems almost too obvious to state, yet this research has drawn my attention to the subject. Considering memory as a combination of two essential components – past and present – points towards the scope of further exploring visual dialogues between the two. Factoring in the multifaceted temporality of animation as a medium might open up any number of avenues for further research. Stop motion animation expresses three distinct notions of temporality: capture time, whereby each shot is essentially a time-lapse of its own creation;

diegetic time; and the time it takes to view the footage. With capture time so far removed from

viewing time and diegetic time (with the exception of the traditional time-lapse), I propose that

the tension between these different temporal modes could be exploited to narrative effect,

perhaps through the use of unstable or especially malleable materials in the fabrication. *Melting*

screens demonstrates a series of experiments on this subject, the image of my grandfather once

again projected onto frozen surfaces and captured as a time-lapse while the surfaces melt to

reveal a sunflower and torn pages of *The Uncommon Reader* beneath. The results are

unsatisfactory but it is a technique I intend to refine through further attempts.

The methods used in this research represent a narrow range of those available to stop motion

animators. While the findings touch on fundamental aspects of the medium and are therefore

applicable more widely, it is entirely possible that other approaches would produce their own

unique findings. Indeed, given how well the medium lends itself to the idiosyncrasies of

individual animators, this is to be expected. As such, no single piece of research on the subject

should be considered comprehensive.

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