

Doubling the Duality

Doubling the Duality:
A Theoretical and Practical Investigation
into Materiality and Embodiment of Meaning
in the Integration of Live Action and Animation

By

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P U B L I S H I N G

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to farm animals

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LIST OF FILM PRACTICES

- Nothing to Do with Weather** **2009**
Stop-frame, hand-drawn, 3-D computer animation; digital compositing. 3'50"
- Animating Animator the Animated** **2011**
Pixilation, hand-drawn animation; live action; digital compositing. 8'27"
- Flying Tunes** **2012**
Pixilation, 3-D computer animation; live action; digital compositing. 2'47"

PREFACE

This book is based on my PhD thesis for Loughborough University, the outcome of a practice-led research undertaken from 2007 to 2013. The original thesis is comprised of a body of work (hybrid films) and its contextual analysis. Being both the source and product of the themes expressed in the written thesis, the practical component of the project consists of three hybrid films: *Nothing to Do with Weather* (3'50"), *Animating Animator the Animated* (2'47"), and *Flying Tunes* (8'27"). Since all the films can be accessed online, they are not attached with this book.

Aiming at understanding and re-interpreting the dialogical relationship between live action and animation, this research argues that from its beginning the art of moving images has presented a struggle between opposed tendencies – such as “imprint” and “construction”, “machine eye” and “artist’s hand”, “dissection of time” and “condensation of time”– that are found between the unstable duality of live action and animation. While mainstream cinema has focused most of its efforts on taming the collisions that occur within the integration of live action and animation, it has also relied on the interface’s instability to animate its being. As the interface becomes more invisible in the digital age, this research reconsiders the interaction between live action and animation in moving-image production and the construction of meaning in filmmaking as it incorporates the digital into its languages.

Before the PhD study, I worked in a multimedia company as an animation designer in Taiwan. But my media career actually started from making documentary films at a TV station. My animated works, therefore, often presented the meeting between aspects of animation and live action in some way. The consistent interest in the possibility of the integration of live action and animation became the subject matter of the PhD study. However, the whole PhD journey was not just about tensions between the two media, it was also about the collision between creative practice and systematic inquiry. And most of all, it was about the encounter between different cultures.

Because of a desire to know what the highest academic degree for animation would be like, I left the comforts of life I was having then, flying halfway round the world, to join the practice-led research

programme at Loughborough University. As it was quite common among international students who had to stay for an extended period to complete the study, I experienced profound culture shock. I went through the loneliness and sterile bitterness of a person who was abruptly isolated from her established network; but I also came across the sweetest friendship and the most passionate and creative moments in my life. All the anxiety, distress and illness were mixed with excitement, exoticism and a dreamy quality. It turned out to be an exceptionally memorable adventure, and a weirdly productive time. Overall it seemed to demonstrate a well-known saying: “the days you are most uncomfortable are the days you learn most about yourself”, and understanding is the foundation for meaningful change to happen. This, as far as I am concerned, applies to the encounter between live action and animation as well.

I owe much to the various kinds of encouragement, support and commentary that have come from friends and colleagues during those years. Yun-Ju Chen and Ching-Chun Huang have been highly supportive even when we were on opposite sides of the earth; they also offered direct help in my practical endeavour.

For their constant encouragement and close support I would particularly like to single out Lingqi Kong, Xinyi Wang, James Lee and Anna Yang. Chunyan Wu has made the final stage of the study far more colourful than days waiting for examination and submission could be. I owe an especial debt to Harry Gui, a fascinating hybrid of Chinese and British cultures who I was very lucky to know from my first year in the UK. He has been a vital friend, landlord and intellectual prompter who pulled me through the study with humor and discerning critical suggestions.

For the support I received in completing the degree I should like to thank my supervisors Johanna Hällsten and Paul Wells. I am particularly grateful to Marion Arnold, Director of Research Programmes at School of the Arts, for her invaluable comments upon the thesis and help of many kinds. I would never have finished the thesis had I not met Jayne Pilling in the final stage. She read the whole manuscript and offered the most crucial help with the revision when it was most needed. It is with great affection and gratitude that I mention her here.

My parents and siblings have never questioned my choice of career pursuit. Their unreserved support has allowed me to gain achievement from my acts of daring and wondering. I would also like to thank my partner, Wei-Chien Wu, whose relentless encouragement gave me confidence whenever I was subdued by self-doubt. Throughout the six-year leaving his faith and patience continually gave me strength to take various kinds of challenges.

INTRODUCTION

0.1 Background and Aims of Research

The primary aim of this thesis is to contribute to the field of animated filmmaking through a consideration of its theoretical framework and the submission of a body of work (three hybrid films). The contextualisation of the films re-interprets the relationship between live action and animation for filmmaking. The second aim is to raise the awareness of the interface between live action and animation in moving-image production through the discovery and construction of meaning in filmmaking as it incorporates the digital into its languages.

Live action and animation have a dialogical relationship that dates back to the beginning of the invention of the cinematic device. There have been discussions about their different natures, roles and functions and about how their qualities oppose or supplement each other. For example, while most independent animated films are characterised by a high degree of physical and aesthetic intervention and engagement from the artist, live-action film is usually described as a product of machine vision that informs the realistic aesthetic traditions of cinema (Benjamin 1992 [1935]: 213; Kracauer 1960: 28; Manovich 2001:307) (this will be discussed in Chapter 1). The relationship between live action and animation appears to speak for the opposed tendencies embraced across the field of moving image. However, the advent of digital technologies has brought about changes in their relationship.

Digital technologies are so powerful that animated images can easily be mixed with live action without this being recognised. As a result, as Manovich points out (2001: 295), “cinema can no longer be clearly distinguished from animation”. Moreover, the reintroduction of manual processes and the privileged role they can play in digital cinema may have turned cinema into a particular category of painting, making the “kino-eye” become a “kino-brush” (Manovich (2001: 308). Overall the digital seems to promise two things: the first relates to freedom of expression, and the second to the renaissance of animation. For the first, digital technologies have the capacity to realise the filmmakers’ desire to be freed from live action film’s indexical nature and its inclination to realism. The

availability of affordable and technologically advanced personal computers also makes it possible for filmmakers to get rid of traditional equipment, which is expensive and bulky, and thus to escape the complex organisational structure of big studios. As for the second issue, the newer methods of computer-based postproduction represent a return of pre-cinematic moving-image techniques such as hand-painting and hand-animating; this can make filmmaking a subset of animation so as to redeem animation's role in cinema.

It has now been more than twenty years since the release of Adobe Premiere, the first popular digital video editing application. The production of moving images in mainstream cinema, however, does not present the riotous profusion that could be realised through the availability and capacity of digital imaging technology. On the contrary, it appears to converge around an even more homogenous aesthetic. The dominant aesthetic seems not so different from that of the pre-digital era. For example, digital tools are powerful and convenient tools with which to create different kinds of integration of heterogeneous elements; yet instead of making the interface between live action and animation more varied and intriguing, the accommodation of digital tools seems to have merely enhanced the hegemony of a few dominant aesthetics such as photorealism and seamless compositing (which will be discussed in detail in Chapter 1).

The performance of “photographicness” (North 2008: 12) as a principle illusory strategy in digital cinema also undermines the idea of animation's revival (in Manovich et al's sense) because what digital tools facilitate may not be what some (classical or experimental) animators might consider to be animation. Mainstream cinema's pursuit of photorealism seems to efface and repress computer-generated imagery's potential to be a subversive and liberated form of animation. Thus, as North (2008: 12) argues: “perhaps animation is merely pretending to be part of mainstream cinema, sneaking back in to acceptance by disguising itself as photography, following its banishment to the realms of children's entertainment in the early decades of the twentieth century”.

Under these circumstances, I felt an urge to re-examine and recognise the relationship between live action and animation, to explore the vitality of the interface between them, and the function of digital technologies in terms of their integration. As a film practitioner from eastern Asia, I was trained and received most of my creative experience in Taiwan, and I consider that the cultural identity of the researcher is inevitably reflected in his/her practice and thesis. My research is, therefore, responsive not only to the events of digitalisation but also to some extent to the issues of my own experiences of different cultures, and different traditions of image making.

The title of the thesis uses the term “doubling the duality” to indicate

my views of the relationship between live action and animation as a permeable interplay between emergent and receding aspects inherent in their integration. This standpoint, I believe, is worth exploring not only by theorists but also by practitioners. Scholars such as Darley (2000), Manovich (2001) and McClean (2008) have discussed the relationship between live action and animation at length, but in those discussions the relationship is not seen as unstable or to possess playful dualities, which is, in part, the focus of this study. In some academic texts, e.g. Broadfoot & Bulter (1991), Cholodenko (1991b), Clancy (1991) and Riggs (2007), the relationship is examined from deconstructionist standpoints and described as dynamic and mobile. However these are mainly voices from theorists that are not derived from the making of practice. On the premise that understandings derived from practice are also crucial for knowledge, this study hopes to enrich the discussions about the relationship from my double role as both a practitioner and a theorist. Moreover, although carried out in the UK within Western academic paradigms, I hope my being a non-Westerner and having the experience of filmmaking within Taiwanese culture can bring a cross-cultural dimension to the research that will further enhance and contribute to the diversity of existing discussions.

The notion of “doubling the duality” reflects some basic concerns of this study, including the nature of the cinematic apparatus, an inclination to question hierarchies and distinctions in the digital age, and my idea of what constitutes an artistic practice. “Doubling the duality” does not simply indicate a repetitive use of the dialectic or a balanced pairing; rather, the notion can be discussed with reference to a number of philosophical concepts, especially those having benefited thinkers in the film and animation disciplines.

The Deconstruction of Presence

Deconstruction is a poststructuralist theory introduced by the French philosopher Jacques Derrida. He first employs the term “deconstruction” in *Of Grammatology* (1967). One of its key assumptions is the undermining of binary opposition. For Derrida, the structures of binary opposition that are essential to logocentric language are actually hierarchies, defined not simply by differences but by the privileging of one term at the expense of the other (Derrida 1981: 42-44). Deconstruction contends that such hierarchies can be inverted, and the opposition can be undermined or collapsed. Furthermore, everything is comprised of opposed tendencies and is in a state of becoming rather than a fixed, static being.

Deleuze and Guattari (1987: 238) stress that becomings are not evolutionary but symbiotic, resulting in alliances between disparate

entities which, in themselves, are actually unimportant to the principle of becoming and they note, “What is real is the becoming itself, the block of becoming, not the supposedly fixed terms through which that which becomes passes”. In this sense, when we say something is animation, this is actually pointing out its state of “becoming-animation”, and likewise live action means a state of “becoming-live action”. They themselves are in a continuous and mobile state. The integration of animation and live action therefore is a doubling of duality, where “dual” becomes “ambidual” (meaning “both-are-double”; see Fordham 2007: iii), and the hybrid figure on the screen becomes a becoming of two becomings. The opposed attributes between live action and animation are interdependent, and their integration, as I will suggest in Chapter 1, makes the hybridised figures playful riddles that have multiple meanings.

Potential for the Subversive

Although the distinctions between live action and animation are often flexible and mutable, exploring the seemingly opposed qualities between live action and animation is still useful in understanding moving images. Deleuze (2004: 32-33) considers that all identities are effects of difference. Not only are no two things ever the same, the categories we use to identify individuals in the first place derive from differences. Moreover, we cannot think about the notion of becoming without considering the difference. Deleuze and Guattari (1987: 245) emphasise the radical difference at the heart of becoming. For them, “such difference serves as a questioning of traditional methods of thinking which presuppose the unshakeable existence of truth and error.” Therefore, the idea of seeing things as becomings reveals the construction of meanings, and also that of “values”. Not surprisingly the integration of live action and animation, the becoming of becomings is often employed by artists in a reflexive way to express their political perspectives (for example, in Gehman & Reinke 2005 and Wells & Hardstaff 2008). A dynamic relation is initiated by “difference”, as Deleuze uses this concept. While intending to mobilise cinematic imagery by recognising it as an unstable and undecidable becoming, I start the exploration by looking for incompatible meanings within it. By “teasing out the warring forces” (Johnson 1980: 5) of figuration within cinematic imagery, the integration of live action and animation – with a mutable, supplemented and ever-changing relationship between them – can serve both an aesthetic, and political purpose (in terms of challenging the status quo).

Connection with the Uncanny

The term “double” recalls that of the “doppelganger”, one of the key aspects in Freud’s notion of the “uncanny”. He suggests in the 1919 essay “*Das Unheimlich*” that the feeling of the uncanny would be at its peak when it is triggered by the reappearance of a familiar object that has been forgotten or repressed for a long time (Freud 2009: 129). It has to do with the return of what is forgotten but has frightened us in our childhood or, anthropologically speaking, the childhood of the human (2009: 156-157). Moreover, the uncanny is bound to Freud’s notion of the death drive. It is death that returns (149). Cholodenko (1991: 28) has an intriguing comment on the bond between the uncanny and the notion of the death drive illustrated by Freud:

In *Beyond the Pleasure Principle* Freud speculates that the human comes from the inanimate and that there is a death drive which leads the human to his/her own proper death, the restoration to the inanimate state from which one came. Such a death drive keeps one alive to find one’s proper death; and therefore, the death drive is indistinguishable from a life drive, or better, the death drive is both life and death drive at the same time. It suggests that life is never without its death at the same time, even that in a sense we have not one but two deaths – the one which precedes us, the one which awaits us – and a third as well – the one which lives with us.

What it implies would advance both notions of animation and of live action: animation always has something of the inanimate about it; likewise live action always embodies the corpse in itself. The inescapable antithesis within each of them both “allows” and “disallows” their being them. As a result, as an extension of Cholodenko’s statement, in a sense the uncanny is always with us in the act of integrating live action and animation.

Research Questions

Grounding

This research is an inquiry into how to find ways to realise a sense of estrangement; yet in the earliest phases, the main part of this research was generated by the following preliminary questions:

- 1) In live-action/animated hybrid films, how could an animation filmmaker define and interrogate the relationship between live-action and animated elements?
- 2) How does contemporary digital image technology function in the relationship between live-action and animated elements in live-action/animated hybrid cinema?

These questions emerged from the animated film *Nothing to Do with Weather* (2009), developed during my first year of research. I wanted to create a piece of work that demonstrates as many examples of the interfaces between live action and animation as possible. In the actual process of making I tested, and experimented with, the combination of animated and live-action elements within the confrontation between character and environment, character and character, environment and environment. The process and results facilitated locating key aspects from my work that exploit the tension between live action and animation as some of its focus.

To offer a more detailed understanding of the preoccupations driving this research, a number of salient conceptual points in *Nothing to Do with Weather* are summarised below. There is no specific storyline. Most of the scenes come from my illustrated diary¹ made in the first year of my study abroad when the feeling of dislocation was intense and disturbing. The film begins with the sound of rain and a corner of a sitting room with an empty sofa (fig. 0-1a). The protagonist enters, takes a seat and draws a girl on the drawing pad. She gives her a cup of tea and a book (fig. 0-1b). The girl on the pad opens the book, sips the tea, and then starts a tour in the 2-dimensional hand-drawn world (fig. 0-1c, 0-1d, 0-1e, 0-1f). At the end of the tour she falls into the photographic world and settles on the sofa. After returning the cup to the photographic protagonist, she leaves the corner (fig. 0-1g). And we are back to the opening scene again (fig. 0-1h).

The sitting room scenes are made using stop-frame photography, which makes the photographic figure² a frame-by-frame manipulation. The conceptual points I identified in this practice emphasise questions around: (1) a dynamic duality; (2) the tension between live action and animation and the experience of estrangement; (3) the negation of the codes of realism.

¹ Part of the diary can be accessed online from my personal blog:
<http://blog.yam.com/fabia>

² I use the term 'figure' when discussing characters in the film in order to stress its figuration, its image, its representation.



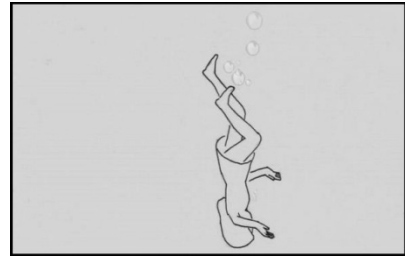
(a)



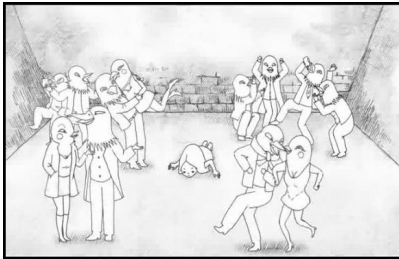
(b)



(c)



(d)



(e)



(f)



(g)



(h)

Fig. 0-1: Stills from *Nothing to Do with Weather* (2009, 3'50'')

The first question is to explore live action's and animation's opposed attributes in the process of film-making, and the visual result of their integration or juxtaposition in different ways. The second relates to how experiential estrangement informs the manipulation of materiality. That fact that this practice is built on my illustrations, which reflect the inner experience of my first-year adventure of studying abroad, inevitably makes it an attempt to combine visual material with experiential issues. Moreover, the situation depicted in this practice reminded me of Freud's uncanny, which, as Royle (2003:2) comments, is about "a strangeness of framing and borders, an experience of liminality". This leads to a further investigation of aesthetic estrangement.

The third question explores negating or challenging established codes. There are two attempts to integrate different techniques within a character in this practice: the photographic figure made by frame-by-frame manipulation, and a hand-drawn figure traced from a 3-D computer generated model in some sequences. I noticed the intriguing effect of frame-by-frame photography (which soon developed into my experiments with pixilation throughout the project); I also noticed the hampered movement performed by the hand-drawn figure due to the combination of a 3-D computer model (with its rigging being very simple). A hypothesis therefore emerged: when the integration happens within the character, there may be conflict or inconsistency between the figuration of the body and its performance – for example, caricatured figures are expected to have cartoony performance, while characters making up and dressing up in a naturalistic way may be expected to perform in a more realistic manner – and this may become a source of aesthetic estrangement. This then led me to this project's core experiment: integrating photographic imagery and cartoon's hyperrealistic performance.

Through the cyclic research process described later in this introduction, the initial research questions were repeatedly clarified and refined, and became the main question described below.

Main Question

How can the integration of the opposing attributes between live action and animation interrupt perceptual realism and produce a sense of estrangement in a meaningful way?

In this research it is considered crucial to develop practice strategies that would link existential and aesthetic estrangement appropriately, and to reflect the condition of existence by expressing it both materially and thematically. In this way, hybridised figures can be used to explore the estranged subjectivity on the screen. Besides, the integration of live action and animation is used as a way to estrange existing aesthetic styles, such as cartoon's hyperrealism.

0.2 Methods and Methodologies

This section explains the methodology used and how it established interaction between my live-action/animated practice and its contextual and theoretical positioning.

A major purpose of research is to create new knowledge that “increases our awareness of whom we are and about the world in which we live” (Sullivan 2005: 73). In this sense practice and theory together could consummate the research engagement since “to know” means to be able to think and act and thereby to change things. The problem is how to interweave them meaningfully. The methodology used herein aims to establish a constructive relationship between practice and theory for the emergence of ideas and the re-conceptualisation of working methods.

Contextual review (including literature review, case study, and synthesis of my previous works) is used in the development of practices, and the making of practice (along with documentation, reflection in and after the making process) is used to embody, test and push existing understandings. Practice and theory are carried out alternately so that they can be interwoven conceptually and physically. Cyclic strategy constitutes the basic framework of the research process. As described in the previous section, the research questions and the early arguments of the thesis are framed around both making and positioning the first practice of this study, *Nothing to Do with Weather*. The arguments are constructed through the process of answering research questions, which are gradually reshaped and in response to the practices and commentary texts (made up of practice documentation, self-analysis, and analysis of context) in a cyclic research process.

Due to the multi-dimensional characteristic of the combination of live action and animation, a wide range of literature is referenced to reassess its function and implications. In this section the body of literature is introduced under four headings: “the uncanny and a formalist approach”, “moving image as aesthetic experience”, “moving image as cultural experience”, and “moving image as philosophical inquiry”. These categories are used to explain how I located the moving image in different fields of knowledge. For the actual research process, this study began with film and animation theories, including definitions of early cinema, definitions of what constitute of live-action cinema, and literature about animation that is testing and working with mainstream cinema’s definitions (for the most part, examined during the Prior Stage in the cyclic process). The function of the integration was then re-considered with reference to Freud’s notion of the uncanny, where the effect of estrangement was encountered and further explored (in Cycle A). The idea of estrangement is strongly related to Russian formalist Victor Shklovsky’s

concepts in “Art as Device” (1917).

However, instead of limiting the idea of estrangement in a conventional formalist sense, I tried to keep it open by looking at its link with Freud’s uncanny and re-addressing it with reference to some Taoist ideas, hoping to provide an understanding which is nourished by both ancient and cross-cultural ideas. Through these concepts the conceptual and physical aspects of the integration become co-dependent. The physical manifestations of the integration incorporate questions raised about its meaning in terms of aesthetic, cultural, and philosophical dimensions. These theories simultaneously affect different approaches to considering and understanding the integration of live action and animation. The main theories and theorists consulted in this study are introduced in this section.

Three practices were produced during the research process: *Nothing to Do with Weather* (Practice A, completed in 2009), *Animating Animator the Animated* (Practice B, completed in 2011), and *Flying Tunes* (Practice C, completed in 2012). Through the use of different research tools, an account of the features of integration emerged along with the body of practice, its documentation and contextualisation. As a practice-led research, I hope the exploration of the operation and meaning of their integration has generated knowledge “grounded in the praxis of human engagement” and yielded outcomes that “can be seen to be individually liberating and culturally enlightening” (Sullivan 2005: 74).

Cyclic Strategy

An extensive variety of methods was used to combine practice and research in other projects. As Kroll (2008: 5) points out, “[s]tudio practice supported by notebooks, journals, etc. could provide raw data ... then used by the researcher to exemplify, interrogate, or amplify practice.” Nevertheless they would never be sufficient. The result is usually a lack of economy in reporting, as well as a relative lack of rigour. To remedy this weakness, Dick (1999) suggests the application of dialectic approaches – emphasising the use of brief and multiple research cycles. At each cycle the researcher collects multiple data sets, and then interprets the data by focussing on the agreements and disagreements within the two or more data sets and compares this to prior interpretation. Adapted from Dick’s idea, my research process is defined as a cyclic process formed of four stages: prior stage, Cycle A, Cycle B and Cycle C, which is visualised in fig. 0-2.

In terms of the relationship between practice and research, Bruce Archer (1995: 9) has distinguished between “research about practice”, “research for the purpose of practice”, and “research through practice”. Andrew Taylor (2006), however, designates only two kinds of approaches:

extrinsic/prior and intrinsic/formal research. In this project, contextual studies in the prior stage are composed of “research about practice” and “research for the purpose of practice” in Archer’s sense. It belongs at the same time to Taylor’s extrinsic/prior research, where the exploration is carried out into subject matter and into what has an independent existence external to the practice. The following three cycles then activate the intrinsic/formal research type through embracing the practical exploration and extension of pre-existing forms or concepts, and the formulation of new ones. During the process of filmmaking, there is also an accompanying extrinsic study inspired by the hands-on process. Both kinds of methods work together, with one prompting the other. In this sense, all the three types of relationship in Archer’s sense were contained in each of the cycles.

To sum up, the cyclic process (containing Prior Stage, Cycle A, Cycle B and Cycle C) begins with exploring extrinsic materials/texts and getting a general idea of how thinkers and practitioners in film and animation discipline understand the relationship between live action and animation. Rudimentary answers and arguments are yielded in the early cycle and used to refine both questions and methods for later cycles. The process and content are successively refined at each cycle, and a set of comparatively stable argument is reached in the end of the research. The whole process is explained in detail below.

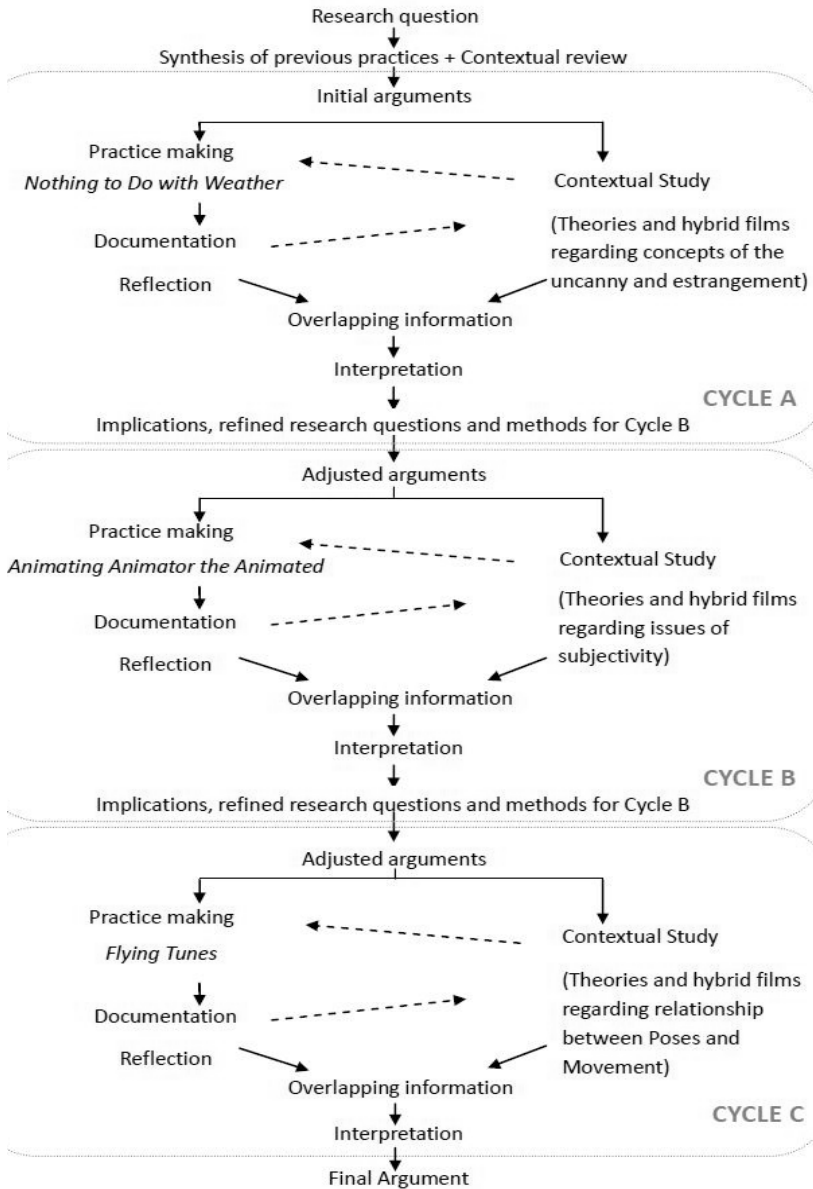


Fig. 0-2: Research Cycles

Prior stage

In the prior stage, I explored my research interests, and made initial arguments. I reviewed articles, papers and a body of historical hybrid films in relation to the dialectic relationship between live action and animation. I also examined my previous practices and thought about their implications. In this stage I recognised that, instead of a harmonised or seamless integration between live action and animation, it was the tension and discordance I intended to explore. The study in this stage formed my interpretation of live action and animation as an opposing pair, as discussed in Chapter 1.

A script for the first practice, *Nothing to Do with Weather*, was then conceived in order to get hands-on experience in testing the visual effect of various ways of integrating live action and animation. The first practice plan was carried out afterward in Cycle A. A cyclic process thus began.

Cycle A

As described in the “Research Questions” section, along with the making of *Nothing to Do with Weather*, the initial arguments were modified, and the research questions were formed during this stage. This first practice, although based on my illustrated diary for the first year studying aboard, was an expressive work carried out quite freely, aiming to gain some idea of my ability to handle diverse filmmaking techniques. I kept a diary and documented the inspirations and in-action reflections that occurred through the process. After the creative process ended and the first work was displayed in an exhibition, I pondered on the documentation created during it, and wrote up retrospective reviews.

As previously described, this practice was developed around the idea of creating a piece of work that could demonstrate as many examples as possible of the integration between live action and animation. Also discussed previously was how this attempt echoed an experience of in-between two states, and led me to focus on theories about the uncanny and Shklovsky’s Russian formalism. Together they formed the basis of my understanding of estrangement, as delineated in Chapter 2. While most of the discussion of the impact of digital tools seems to focus on their ability to conceal the contrast between live action and animation, I wished to explore their ability in a different way; and the idea of estrangement became an interpretive tool for me to endow the operation of material with meaning. At the end of this stage I identified the effect of estrangement as a core notion for my subsequent practice, where the integration of pixilation and cartoon’s hyperrealism became the centre of my technical exploration.

Cycle B

This cycle was the longest and most complicated, in which I encountered various technical challenges in practice and came up with numerous ideas in writing. The bulk of the time and effort went into two things: experimenting with how to integrate pixilation and cartoon's hyperrealism, and developing a story which could make this integration a way to demonstrate my idea of estrangement.

In terms of the technical experiment, I planned to first produce several pieces of hand-drawn animation, and then, with the help of stop-motion software, ask a live actor to act the animated sequences out frame by frame (as explained in Chapter 4). I planned to shoot the pixilation performance in front of a green screen so that the pixilated result could be combined with a virtual background. Therefore, at this stage I studied green-screen methods (e.g. Jackman 2007), compared various ways of chroma keying using After Effects, and carried out several tests both at home and at the University's Studio. For a practical knowledge of character animation, I consulted books by Culhane (1988), Thomas & Johnston (1981), Whitaker & Halas (1981), and Williams (2001). I produced five pieces of hand-drawn animation sequences, including around one thousand drawings (including those discarded). I decided to be the live actor myself because, as it was still in the early phase of testing, the shooting process would encounter occasional technical problems, and I was the one who would be available at any time. Besides, the method of making pixilation with stop-motion software was time-consuming and exhausting and it was very difficult to find a volunteer to be the actor.

In terms of story and script development, the main aim was to make the narrative and the technical application meaningful for each other. Initially I had an idea about how a fly suggests a growing feeling between a man and a woman. I kept making and re-making the script around this idea. As a result, there were four versions of the same story, but none of them seemed ideal for the pixilated sequences produced at this stage. I therefore decided to temporarily abandon this story and started a whole new one: *Animating Animator the Animated* (2'47''), which became Practice B.

This story is about the animator's subjectivity, about animating and being animated, manipulating and being manipulated. This theme, although it clearly related to my life and creative experiences at that time, only became fully articulated and conscious when I was trying to sum up my understandings of historical hybrid films in different eras. I found that subjectivity was one of the major themes highlighted by the integration of live action and animation in those films. Moreover, an estranged subjectivity could be a good way to reflect on a common feeling in our

digital era. The construction of subjectivity in hybrid films became the subject of Chapter 3.

Although it took much time and effort, the result of the technical experiment in integrating pixilation and cartoon's hyperrealism in this cycle did not match my expectations (as mentioned in Chapter 4), so prompted further technical experiments in the next cycle. The story abandoned at this stage was continued, with modifications, and filmed/animated in the next cycle and became Practice C, *Flying Tunes*.

Cycle C

Flying Tunes (8'27") is the longest work in this project. Its title references the Warner Bros. classical cartoon series "Looney Tunes" (1930-1969) because the caricaturised performance presented in *Flying Tunes* was aiming for the crazy funniness of the "Looney Tunes". I also used sound effects and melodies extracted from "Looney Tunes" in *Flying Tunes* to indicate their connection.

Apart from aiming to develop an improved integration of pixilation and cartoon's hyperrealism based on the experience acquired in Cycle B, this third practice also experimented with combining different kinds of performance style: naturalistic, stage, and cartoonal performances. In addition, through the integration of live actors and CGI background, the tension between live action's naturalism and CGI animation's photorealism would emerge. The final script for this practice was developed around the idea of the double and the inexplicable behaviour in people's lives that hopefully would make the above technical strategies meaningful in producing the effect of estrangement. All these contributed to the discussions in Chapter 2 and 3, where the issues of estrangement and subjectivity are examined. Yet the technical experiment with producing cartoony pixilation had led to an inquiry into the relationship between poses and movement, which became the subject of Chapter 4.

Use of Theory/ Main Theorists

The theories consulted in this research are categorised and introduced under four groupings: the uncanny and a formalist approach, moving image as aesthetic experience, moving image as cultural experience, and moving image as philosophical inquiry. These are not exclusive categories defined in a strict sense. Aesthetics, for example, is often considered as a branch of philosophy dealing with the nature of art. This categorisation is simply used to illustrate how I located the moving image in different fields of knowledge, and how the research topic was accessed from various perspectives.

The uncanny and a formalist approach

In understanding the idea of estrangement, the following texts are considered central resources in this research: Freud's "The Uncanny" (1919), Shklovsky's "Art as Technique" (1917), Nicholas Royle's *The Uncanny* (2003) and Carlo Ginzburg's essay "Making it Strange" in *Wooden Eye: Nine Reflections on Distance* (2001).

When thinking about the method of making practice, beyond the consideration of tools, materials and techniques, etc., there are other fundamental methods regarding the work's purpose and function, something that may make a practice "art". As for the question of what art is, Shklovsky (1956[1917]: 11) regards the main element of art as estrangement: he states that "the purpose of art is to impart the sensation of things as they are perceived and not as they are known". Harold Bloom (1994: 2) reckons that "[o]ne mark of an originality that can win canonical status for a literary work is a strangeness that we either never altogether assimilate, or that becomes such a given that we are blinded to its idiosyncrasies". Royle (2003: 15) links Bloom's "strangeness" with Freud's uncanny and lead me to the connection between uncanny and Shklovsky's formalist standpoint. Ginzburg (2001: 1-24) understands estrangement in connection with the riddle when he traces the Russian formalist notion of de-familiarization back to Marcus Aurelius' *Meditations*, and then to the lore of the folk riddle. I draw on these ideas in my account of the effects of the integration, and suggest that a formalist approach actually enacts a bridge between my technical and thematic concerns. The use of these related concepts is understood as a metaphor to expand technical issues into the implications of content and the narrative, and place the concerns of filmmaking into the area of visual culture.

Moving image as aesthetic experience

Manovich's *The Language of New Media* (2001) talks at length about the changing states of the interface between live action and animation under the influence of digital technology. Its analysis provides a starting point for this research. The discussions on montage and digital compositing (Manovich 2001: 136-160) are especially pertinent to my speculation about the integration of live action and animation.

Discussions about stitching together pieces of film have long been an integral part of film theory. Significant texts include Sergei Eisenstein's montage theory (Eisenstein 1992; 1998), classical editing theory (Bordwell & Thompson 2010; Giannetti 2011), and the suture theory (Bordwell 1985; Butte 2008; Oudart 1978). While looking like similar

devices, they emphasise very different functions and aspects. Eisenstein's notion of montage is "a *collision* ... of two factors [that] gives rise to an idea' (Eisenstein 1998: 87); the classical editing strategy is about continuity, and about telling stories efficiently; the suture theory is about "creating gaps and then filling them", about the "Absent One" (Bordwell 1985: 111), and is often a topic in meditations on the representation of subjectivity in film narrative (as presented in Butt 2008). Although they mainly focus on editing and the arrangement of camera, they are all suggestive of the juxtaposition of heterogeneous elements between shots or within a shot.

In processing the research questions, I was inspired by a range of theoretical works on early cinema, the nature of animation, classical cinema and new media. Tom Gunning (1989: 1995) was one of the first scholars to look at the reliance on spectacle and special effects of early and silent films. Although the academic research of animation is still marginal compared to film studies, the texts of Donald Crafton (1993), Paul Wells (1998), and Esther Leslie (2002) constitute comprehensive understandings of animation's nature and capacities. They are illuminating in terms of understanding animation's subversive characteristics in contrast to live-action cinema. Shilo McClean's *Digital Storytelling* (2007) and Dan North's *Performing Illusions* (2008) discuss the roles of digital visual effects in filmmaking. North's text emphasises special effects' function of subverting the integrity of cinematic image's relation to its referent. McClean, on the other hand, claims that while greatly expanding the possibilities for contemporary filmmaking, the use of digital visual effects remains simply a set of tools in the service of classical storytelling. Along with David Bordwell's and Kristin Thompson's standard textbook on the analysis of cinema *Film Art: An Introduction* (2010), McClean's text provides an understanding of the function of special effects from the perspective of classical filmmaking.

Jay David Bolter's and Richard Grusin's *Remediation* (1999) was one of the first academic works that describes new media as a genre with unique aesthetic markings. Lev Manovich's *The Language of New Media* (2001) and Andrew Darley's *Visual Digital Culture: Surface play and Spectacle in New Media Genres* (2000) offer some rigorous and far-reaching theorisation on this subject. They both emphasise new media's historical continuity with pre-existing forms, and at the same time, the need to understand new media on its own terms. Although presenting different concerns, they have both worked on mapping the aesthetics of new media, including digital imaging, which is central to my study.

Moving image as cultural experience

My consideration of how to account for the meaning of the interfaces

between live action and animation was influenced by some of the ideas in Fredric Jameson's *Postmodernism and Cultural Theories* (1989) and *Postmodernism, or, The Cultural Logic of Late Capitalism* (1991), where he analyses culture as a historical and social phenomenon alongside economic production and distribution or political power relationships. From this point of view, it is necessary to perceive the key elements of the production of artistic objects within its social context.

In respect to considering visual production within the social/cultural context, Jonathan Crary's *Techniques of the Observer* (1992), Andrew Darley's *Visual Digital Culture* (2000) and Dan North's *Performing Illusions* (2008) provide plenty of cues. Crary's text is about vision and its historical construction before 1850, and is working at a redefinition of the relations between modernity, modernism and spectatorship. Darley's text explores the relationship between digital technologies and existing media, and considers the effects of these new image forms on the experience of visual culture. North's text situates cinematic effects in the cultural lineage of the stage performers and illusionists of the nineteenth century. They all highlight the notion that art is a social phenomenon that should be understood within the historical development and the specificity of social context.

Crary (1992: 1) has noted that the formalization and diffusion of computer-generated imagery have brought "the ubiquitous implantation of fabricated visual "spaces" radically different from the mimetic capacities of film, photography, and television". Indeed the intervention of digital technology is one of the hot topics in the territory of cultural history and criticism. There have been debates among cultural commentators on a sense of change in the character of cultural/aesthetic practices from around 1960s onwards, where a perceived shift seemed to be under way in the general experience of culture (particularly in the developed countries of the West). Either it is understood as a new phase of modernism itself ("late" or "later modernism"), or a move to something altogether different (so-called "postmodernism"), the idea of a shift in cultural and aesthetic practices is widely acknowledged. For example, Darley (2000) indicates that some new features are now so prevalent as to constitute a new and significant dimension of representation within it. By looking at the works of Jean Baudrillard (whose thinking was influenced by the work of Walter Benjamin and Marshall McLuhan), Umberto Eco and Fredric Jameson, Darley (2000: 58-77) introduces a host of related terms such as reproducibility and repetition, self-referentiality and intertextuality, simulation and pastiche, and superficiality and spectacle. These have been used with cultural and aesthetic connotations as concepts to explain and describe practices, processes, forms and conditions within contemporary visual culture.