

# Can spectators become co-authors in the process of a story narrative?

---

An exploration of the relationship between perceptions of spectators and narratives of authors in moving images

Enning Tang

Thesis/dissertation submitted to Auckland University of Technology in partial fulfilment of the degree of Master of Art & Design

**Name:** Enning Tang

**Thesis/dissertation title:** Can spectators become co-authors in the process of a story narrative? - An exploration of the relationship between perceptions of spectators and narratives of authors in moving images.

**Year of submission:** 2009

<b>Table of Contents</b>	1
<b>List of figures</b>	4
<b>Attestation of authorship</b>	8
<b>Acknowledgements</b>	9
<b>Abstract</b>	10
<b>Introduction</b>	11
<b>Methodology</b>	12
<b>Chapter 1 Diversity of Human Perceptions</b>	
1.1 A limitation of perception – physical positions of perceiving	13
1.2 Diversity of perspectives – psychological positions of perceiving	16
1.3 Human thoughts in the process of perception – virtuality	18
1.4 Different virtualities and multiple perspectives	20
1.5 Grounded theory and data visualisation	22
1.5.1 Grounded theory – building a theoretical base for the research	22
1.5.2 Data visualisation - framing the project	24
<b>Chapter 2 Freedom of Perception in Multiple Frames Narrative</b>	
2.1 Freedom of perception and deterritorialisation	26
2.1.1 Non-signifying code in deterritorialisation –reconstruction of meanings between frames	28
2.1.2 Hypersignification in deterritorialisation – further reconstruction for different meanings between frames	30
2.2 Utilising multiple frames in a narrative for multiple perspectives	31
2.3 The method of action research	36

2.3.1 Applying action research on the experimental stage -----	36
2.3.2 The process of the action research -----	37

## **Chapter 3 Montage in Multiple Frames Narrative**

3.1 The consistent attributes of multiple frames narrative and montage -----	39
3.2 The movement-image of montage – spatial deconstruction of a story -----	40
3.3 The time-image of montage – temporal reconstruction by spectators’ participation with story discourses -----	43
3.4 Multiple frames with equal hierarchy – freedom of spectators in perception -----	45
3.4.1 The model of panopticon – the power of observing all -----	45
3.4.2 Quantity of frames with equal hierarchy -----	47
3.5 Multiple frames with unequal hierarchy – dominance of authors in narrative -----	55
3.5.1 Positions of frames with unequal hierarchy -----	56
3.5.2 Sizes of frames with unequal hierarchy -----	57
3.6 A dilemma between freedom of spectators and dominance of authors -----	59
3.7 Self dialogue in heuristics -----	61

## **Chapter 4 The Relationship between Spectators and Authors in a Story Narrative and the Creation of Multiple Screens Narrative**

4.1 A conjecture about the equality between spectators and authors in the process of a story narrative -----	63
4.2 An opposite voice against the equality between spectators and authors in the process of a narrative -----	65
4.3 The findings of the relationship between spectators and authors in the process of a story narrative -----	69
4.3.1 The relationship between the freedom of spectators and the dominance of authors ----	69

4.3.2 The design of multiple screens narrative installation .....	71
4.3.3 The size of the screens and the distance between the screens in the installation .....	75
4.4 The inverted perspective in heuristics .....	81
4.5 The anticipation about the exhibition of the multiple screens installation .....	82
4.6 Creating a story for the multiple screens narrative .....	84
4.7 The strategy of audio in the installation of multiple screens narrative .....	84
<b>Conclusion</b> .....	85
<b>Glossary</b> .....	89
<b>Bibliography</b> .....	90
<b>References</b> .....	92
<b>Appendices</b> .....	93

## List of figures

**Picture 1:** Tang, E. (2009). *Overview of the Research*. [Picture].

**Picture 2:** Hanabusa, I. (1888). *Blind Monks Examining an Elephant*. Retrieved November 12, 2008, from commons.wikimedia:

[http://commons.wikimedia.org/wiki/File:Blind\\_monks\\_examining\\_an\\_elephant-3g08725u.jpg](http://commons.wikimedia.org/wiki/File:Blind_monks_examining_an_elephant-3g08725u.jpg)

**Picture 3:** Tang, E. (Director). (2008). *Flying Cube* [Motion Picture].

**Picture 4:** Gregory, R. L. (1997). *Eye and Brain: The Psychology of Seeing*. Oxford: Oxford University Press.

**Picture 5:** Gregory, R. L. (1997). *Eye and Brain: The Psychology of Seeing*. Oxford: Oxford University Press.

**Picture 6:** Tang, E. (Director). (2008). *Transformation of 1D/2D/3D* [Motion Picture].

**Picture 7:** Tang, E. (2008). *The System of Human Perception* [Picture].

**Picture 8:** Tang, E. (2008). *The Process of Perception* [Picture].

**Picture 9:** Tang, E. (2008). *Meanings of the Colour Red* [Picture].

**Picture 10:** Tang, E. (Director). (2008). *One Gear, Six Perceptions* [Motion Picture].

**Picture 11:** Tang, E. (2008). *The Process of Grounded Theory* [Picture].

**Picture 12:** Tang, E. (2009). *The Drawing of "Blind Monks Examining an Elephant"*. [Picture].

**Picture 13:** Tang, E. (2008). *The Drawing of "A Man, A Ball and a Basket Stand"* [Picture].

**Picture 14:** Tang, E. (Director). (2008). *Human Walking* [Motion Picture].

**Picture 15:** Tang, E. (Director). (2008). *Human Walking with Deterritorialisation* [Motion Picture].

**Picture 16:** Tang, E. (Director). (2008). *One Gear, One Virtual Machine* [Motion Picture].

**Picture 17:** Tang, E. (Director). (2009). *"Walking" in Comic Narrative* [Motion Picture].

**Picture 18:** Tang, E. (Director). (2009). *A Live-action Short Film: Walking and Driving* [Motion Picture].

**Picture 19:** Tang, E. (Director). (2009). *An Animation Short Film with Comic Narrative: Walking and Driving* [Motion Picture].

**Picture 20:** Tang, E. (Director). (2009). *An Animation Short Film with Comic Narrative: Walking and Driving in Multiple Frames* [Motion Picture].

**Picture 21:** Miller, F. (2005). *Frank Miller's Sin City: Hell and Back* (Vol. 7). (D. Schutz, Ed.) Milwaukee: Mike Richardson.

Horton, S., & Yang, J. M. (2008). *Professional Manga: Digital Storytelling with Manga Studio EX*. Oxford: Focal Press.

**Picture 22:** Tang, E. (2009). *The Experiment of a Short Animation "Walk and Drive" with Comic Narrative and Multiple Frames in Three Different Reading Orders* [Picture].

**Picture 23:** Kemmis, S., & McTaggart, R. (Eds.). (1988). *The Action Research Planner* (3rd ed.). Warrn Ponds Victoria: Deakin University.

**Picture 24:** Tang, E. (2009). *An Example of the Movement-image* [Picture].

**Picture 25:** Figgis, M. (Director). (2000). *Time Code* [Motion Picture]. USA: Columbia TriStar Home Video.

**Picture 26:** Tang, E. (Director). (2009). *Dark Room* [Motion Picture].

**Picture 27:** Tang, E. (2009). *Dark Room with Different Viewing Orders* [Picture].

**Picture 28:** Tang, E. (2009). Can Spectators Physically Participate in A Narrative Design Process? A Multiple Screens Installation Approach for Narrative within Moving Images. *The Art & Design Postgraduate Conference 2009* (p. 9). Auckland: Auckland University of Technology

**Picture 29:** Tang, E. (2009). *The Model of Panopticon and Multiple Frames Narrative* [Picture].

**Picture 30:** Driessen, P. (Director). (1995). *The End of the World in Four Seasons* [Motion Picture]. Canada.

**Picture 31:** Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" in Nine Frames on One Screen* [Motion Picture].

**Picture 32:** Spielberg, S. (Director). (2002). *Minority Report* [Motion Picture]. USA: Twentieth Century-Fox Film Corporation.

**Picture 33:** Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" in Nine Controllable Frames* [Motion Picture].

**Picture 34:** Unknown. (2009). *A Screen shot of World of Warcraft*. Retrieved December 28, 2009, from 15Game: <http://www.15game.com.cn/photo/bencandy.php?fid-314-id-2046-page-6.htm> (Unknown, 2009).

**Picture 35:** Dvorsky. (2009). *"Machinarium"*. Retrieved December 28, 2009, from the game playing by Enning Tang.

**Picture 36:** Dvorsky. (2009). *"Machinarium"*. Retrieved December 28, 2009, from the game playing by Enning Tang.

**Picture 37:** Tang, E. (Director). (2009). *"Memory" in Equal Hierarchy with Seven Frames* [Motion Picture].

**Picture 38:** Tang, E. (Director). (2009). *"Memory" in Equal Hierarchy with Four Frames* [Motion Picture].

**Picture 39:** Tang, E. (2009). *Freedom of Spectators Exceeds Dominance of Authors* [Picture].

**Picture 40:** Greenaway, P. (Director). (1996). *The Pillow Book* [Motion Picture]. USA: Columbia TriStar Home Entertainment.

**Picture 41:** Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" with Frame-inside-frame* [Motion Picture].

**Picture 42:** Tang, E. (Director). (2009). *"Memory" in unequal Hierarchy with Three Frames* [Motion Picture].

**Picture 43:** Tang, E. (2009). *Dominance of Authors Exceeds Freedom of Spectators* [Picture].

**Picture 44:** Tang, E. (2009). *A Conflict between Dominance of Authors and Freedom of Spectators* [Picture].

**Picture 45:** Tang, E. (2009). *A Balance Point to Solve the Conflict between Dominance of Authors and Freedom of Spectators* [Picture].

**Picture 46:** Tang, E. (2009). *A Diagram about an Author and an Ideal Spectator in Creating a Story Narrative* [Picture].

**Picture 47:** Tang, E. (2009). *A Diagram about a Spectator and an Ideal Author in Creating a Perception of a Story* [Picture].

**Picture 48:** Tang, E. (2009). *A Diagram of the Communication Process between an Author and a Spectator* [Picture].

**Picture 49:** Tang, E. (2009). *A Diagram of the Communication Process between an Ideal Author and an Ideal Spectator* [Picture].

**Picture 50:** Tang, E. (2009). *A Diagram of the Death of an Author and the Death of a Spectator* [Picture].

**Picture 51:** Tang, E. (2009). *The Relationship Between Dominance of Authors and Freedom of Spectators* [Picture]

**Picture 52:** Tang, E. (2009). *The Story Timeline of an Author in the Multiple Frames Narrative* [Motion Picture].



**Picture 53:** D-Fuse. (2001). *Small Global*. Retrieved September 3rd, 2008, from D-Fuse:  
<http://www.dfuse.com>.

**Picture 54:** Tang, E. (2009). *The Installation of the Multiple Screens Narrative in Full Circle* [Picture].

**Picture 55:** Tang, E. (2009). *The Installation of the Multiple Screens Narrative in Half a Circle* [Picture].

**Picture 56:** Tang, E. (2009). *The Experiment of Using Bigger Screens on the Multiple Screens Installation* [Picture].

**Picture 57:** Tang, E. (2009). *The Experiment of Using Smaller Screens on the Multiple Screens Installation* [Picture].

**Picture 58:** Tang, E. (2009). *The Experiment of Showing Shorter Distance between Screens in the Installation of the Multiple Screens Narrative* [Picture].

**Picture 59:** Tang, E. (2009). *The Experiment of Showing Longer Distance between Screens in the Installation of the Multiple Screens Narrative* [Picture].

**Picture 60:** Tang, E. (2009). *The Installation of the Multiple Screens Narrative in an Exhibition Room* [Picture].

**Picture 61:** Tang, E. (2009). *A 3D View of the Exhibition of the Multiple Screens Narrative Installation* [Picture].

**Picture 62:** Tang, E. (2009). *The Size of Screens and Distance between Screens in the Exhibition of the Multiple Screens Narrative Installation* [Picture].

**Picture 63:** Tang, E. (2009). *The Diagram about Using Computer Screens in the Exhibition* [Picture].

**Picture 64:** Tang, E. (2009). *The Diagram about the Spectator' Activities in the Final Exhibition at the Beginning* [Picture].

**Picture 65:** Tang, E. (2009). *The Diagram about the Spectator' Activities in the Final Exhibition after standing at the central area* [Picture].

**Picture 66:** Tang, E. (2009). *The Diagram about Using the Seating Strategy in the Exhibition* [Picture].

## **Attestation of authorship**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Enning Tang

## **Acknowledgements**

Mr. Laurent Antonczak

Dr. King Tong Ho

Dr. Welby Ings

Ms. Ying Li

Ms. Tatiana Tavanis

Mr. Ric Mann

Mr. Jia Yang

Mr. Nick Konings

Ms. Melody Zhang

Ms. Zoe Zhang

The whole Postgraduate team

## **Abstract:**

This project explores the areas of human perception and story narrative in moving images. Engaged by the research question, “Can spectators become co-authors in the process of a story narrative?”, the research focuses on exploring the co-existence and contradiction between the values of spectators and an author in a process of a narrative by developing a new potential narrative approach with multiple perspectives.

I hypothesise that spectators could participate with the story narrative process as co-authors. My key method is to engage with spectators’ participation within a narration (story) by displaying story fragments across multiple screens simultaneously. The potential of having a story spread across multiple screens might bring further interest to authors to re-think the notion of a spectator and tell a story with multiple perspectives in a narrative process with spectators.

In order to develop this project, I will use different approaches, such as Grounded Theory (Strauss & Corbin, 1998), Data Visualisation (Tufte, 1983), Action Research (Kemmis & McTaggart, 1988) and Heuristics (Moustakas, 1990), which I will explain in further details in each chapter of my exegesis.

## Introduction

Nowadays, moving images (animation, video...etc.) play a more and more important role in the media industry. As a tool of communication, moving images allow authors to present their stories (narratives) on screens, and to engage spectators to perceive stories through the screens. For example, traditional cinema is a place where authors can present their stories to spectators by moving images.

Ellis (1982) argues that traditional cinema provides the possibility of perceiving events to spectators. The spectators don't have anything to offer to the film apart from the desire to see and hear it. And what the spectators only can do during a narrative process is to sit in front of a screen at a fixed position. The physical position of spectators is extended to a psychological phase and described by Ellis (1982) that it's a power to understand stories rather than to change them. This is a narrative limitation to the spectators in the traditional cinema.

Should the spectators not change their physical positions when they watch a movie in a cinema? Could their position change the way they perceive in the narrative process if they have alternative choices? My research intends to challenge the traditional cinema and explore the position of the spectators in the aspects of physics and psychology. How can the spectators perceive a narrative within moving physical positions? And how can the mobile positions change the spectators' perceptions of a story? If the perceptions can be changed, does it mean the psychological position of the spectators represent a new power to not only understand but also change stories like co-author? Thus, I raised the main research question, "can spectators<sup>1</sup> become co-authors<sup>2</sup> in the process of story narrative?"

The following exegesis is composed of four chapters. In the first chapter, the starting point of the exploration begins with the area of human perception, where I discuss the reasons behind diverse human perceptions. It is the trigger for the participation of spectators in a story narrative process. In the second chapter, the idea of freedom of perception, as the reason for the diversity of human perceptions, is developed to design a method of multiple frames narrative, which is a narrative process of deconstruction and reconstruction that allows for spectators' participation. In the third chapter, I analyse methods of montage, and apply it to the development of the multiple frames narrative. A conflict is discovered in the experimental process of the multiple frames narrative. In the final chapter, the conflict engages me to hypothesise a potential equality, which allows me to

---

<sup>1</sup> See my explanation of "spectator" in Glossary 2.

<sup>2</sup> See my explanation of "co-author" in Glossary 3; it also relates to "author" in Glossary 1.

explore the relationship between spectators and an author, and also provides me with the possibility to bring out the argument of spectators becoming co-authors.

## **Methodology**

### **Flexible Coping with Multiple Methods**

My research was a process that I explored with different perspectives to the research question. The multiple perspectives brought me to the different research areas relating to the aim of the research. Each area contained a different research circumstance and connected with the others. This was the difficulty for me; to choose a suitable research method for coping with problems in different circumstances.

Cheng (2009) argues that variability in coping is essential, as a flexible coping method reflects an individual's tendency to formulate flexible strategies to handle different demands under changing circumstances. It inspired me to apply more than one method to the research process, and the flexibility of coping in the research was in using multiple research methods to satisfy different demands in the different circumstances of the process.

Therefore, the methodology of the research was a combination of four research methods. The first method was to collect and analyse theoretical data for building a research base; the second method allowed me to experiment with the collected theories for discovering new ideas and problems; the third method was about self questioning and critiquing for solving the problems with an inverted perspective; the fourth method played a role of framing the theories and experiments for presenting the key ideas and monitoring the whole project. The details of the methods will be discussed at the end of each chapter.

## Chapter One: Diversity of Human Perceptions

Ellis (1982) argues that film spectators occupy a particular position in relation to the events in the process of narration. In this position, the spectators are offered the possibility of seeing events and comprehending them by a narration. According to Ellis' argument, the position of the film spectators represents one specific power to understand events rather than to change them (p. 81). Inspired by the argument of Ellis (1982), I pose the research question: "Can spectators become co-authors in the process of a story narrative?" It is to seek a possibility whether the spectators could exceed the conventional position in the process of experiencing a story narrative, and participate with the narrative process by co-existing with the author.

The engagement of participation of the spectators with the process of a story narrative is a challenge to the orthodox understanding of the roles of spectators and authors in storytelling. What kind of vessel is suitable to experiment with this challenge? Wells (1998) argues that "...animation can redefine the everyday, subvert our accepted notions of 'reality', and challenge the orthodox understanding and acceptance of our existence" (p.11). Therefore, I chose animation as the medium of the experiments in my research, because its attributes allows spectators to perceive a story with a more open mind and imagination for exceeding the limitations of the position of spectators in the process of narrative.

In the experiments of Chapter One, I tested the different optical theory about perceptions by using virtual cameras in three dimensional animations. Based on the exploration of the process of perception, the utilisation of virtual cameras allowed me to directly simulate the sight and physical positions of spectators and test how the changes of the positions and surrounding information influenced the perceptions in both physical and psychological aspects. Real footage experimentation raised some issues such as budget and production, which didn't suite my research exploration. Thus, I chose three dimensional animations as the main practical method in the first stage of the research.

Based on the research question, I divide the research into two areas: one is the area of human perception; the other is the area of story narrative. Chapter One starts with the exploration of the area of human perception, and discusses how and why we perceive events differently through the process of human perception. From the exploration I define the system of human perception and form a theoretical base to the research, which is creating multiple perceptions from one story. The following sections will discuss the influence of three key components in the system of perception. The components are positions of perceiving, information from the surroundings, and virtuality.

### 1.1 A limitation of perception – physical positions of perceiving

Why do we perceive things differently? Gibson (1986, p. 195) argues that it is caused by a limitation of perceiving the world<sup>3</sup>. He says that what is seen at any moment from a physical position doesn't constitute the environment that is seen. What is seen is limited by the position of perceiving, which is only a detail of the world or even unclear. And seen at this moment and seen from here can only specify self, not the environment. From my understanding, the physical position of perceiving is a window or a channel that can determine what information flows into observers, and limit their views. Here, a Buddhist story of blind monks examining an elephant, from Chapter Thirty-Two in Mahaparinirvana Sutra, (Picture 2) explains how physical positions of perceiving limit our perception of an object.



Picture 2: The drawing of "Blind monks examining an elephant" (Hanabusa, 1888)

The story is about a group of blind men touching an elephant to learn what it is like. Each one touches a different part, but only one part, such as the side or the tusk. They then compare what they felt, and fall into complete disagreements about what an elephant is. In the story, the different experiences of touch are different channels that allow the blind monks to perceive the elephant. And this touching is also the limitation of their perception. The story indicates that a thing may be viewed differently depending upon one's perspective/position of perceiving, suggesting that what

---

<sup>3</sup> Gibson's discussion of a limitation of perceiving the world is only located in the area of optical perception.



seems an absolute truth may be relative due to the deceptive nature of half-truths. Therefore, the position of perceiving is one of key components in determining what we perceive. In animation, a virtual camera represents a “physical” position of perceiving that controls spectators’ sight to perceive a story. Using multiple cameras can present different events in a story, like the blind monks touching different parts of the elephant, which is discussed further in Chapter Two about creating multiple perspectives from one story.

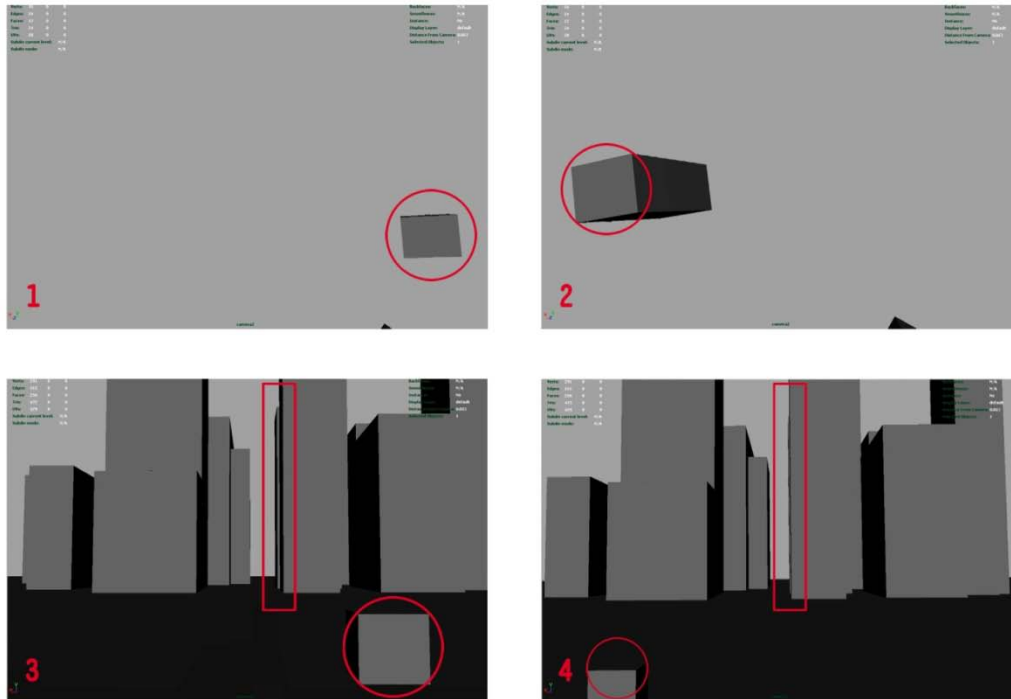
Gibson (1986, p. 126) brings out two other components in the process of human perception. He says, “information about the self accompanies information about the environment, and the two are inseparable... Perception has two poles, the subjective and objective, and information is available to specify both. One perceives the environment and coperceives oneself.” From his argument, I find there are two kinds of information influencing the process of perception. One is information from the surroundings; the other is self information. The information from the surroundings is a reference that allows viewers to identify the change of their positions of perceiving as the self information. And the shift of the position of perceiving also changes the information from the surroundings. Thus, the information from the surroundings cooperates with the position of perceiving in the process of human perception.

In the following experiment (Picture 3)<sup>4</sup>, I tested how these two key components worked together in the process of perception. I moved a virtual camera in a short animation to create illusions of a cube’s movements in two different backgrounds, and the cube was still at all times. In frames 1 and 2, the cube appears to fly from right to left. The illusion of flying is successful because the movement of the virtual camera (a position of perceiving) cannot be identified by referring to the information from the surroundings (background). Conversely, the illusion in frames 3 and 4 fails because the change of background reveals the trick. Therefore, the experiment shows the position of perceiving works with information from the surroundings together in the process of perception. Any changes to the two components can change the original perception. Moreover, the position of perceiving and information from surroundings are both important in story narrative, in that changes of the spectators’ physical positions in a multiple screens installation create different viewing orders (discourse) of story events, and allow the spectators to perceive a story narrative with multiple perspectives, which is discussed further in Chapter Four.

(The text of Chapter One is continued in the next page.)

---

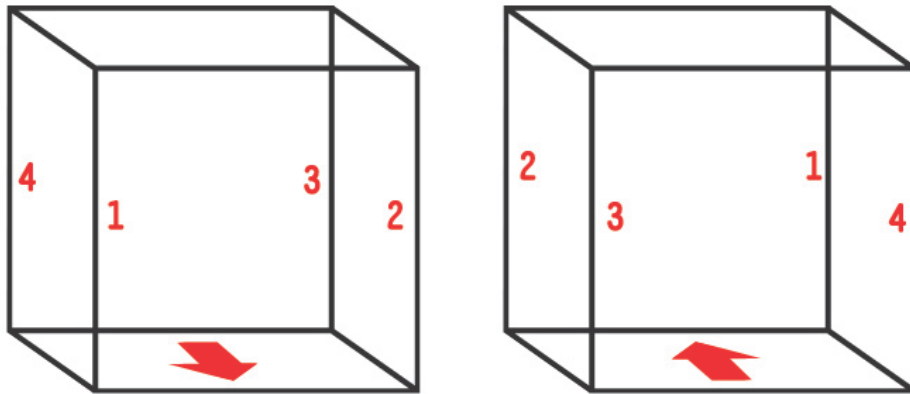
<sup>4</sup> See Appendix 1 for the animation of the experiment.



Picture 3: Screen shots retrieved from the experiment of “Flying cube” (Tang, 2008).

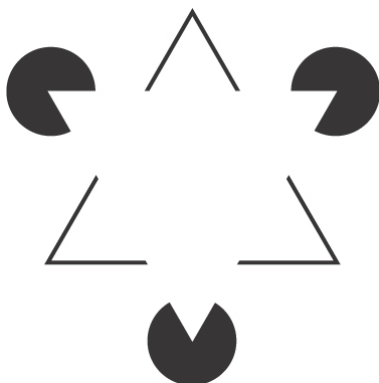
## 1.2 Diversity of perspectives – psychological positions of perceiving

The discussion above is based on perception in the aspect of physics. How does our mind act in the process of perception? Gregory (1997) claims we use our experience of the world to shape how we perceive visual perceptions. Our experience of the world is taken what we learn from everyday life, as Gregory argues that the concepts of the world in our mind influence our basic process of perception. Gregory (1997, p. 229) uses an example of visual illusions, “the Necker Cube” (Picture 4), to explain how different perceptions from one object are caused by different psychological positions of view. And the selection of positions is determined by our experience of perceiving, our habit of seeing things. From the picture of “the Necker Cube”, I can perceive the cube from left to right or from right to left, depending on which way my mind chooses. Therefore, Gregory’s opinion (1997) brings Gibson’s argument (1986) into the psychological area. The positions of perceiving include a physical position and a psychological position; and a psychological position of perceiving represents a perspective, which is treated as a viewing order of story events in the multiple frame narrative in Chapter Two.



Picture 4: The Necker cube<sup>5</sup> is from “Eye and Brain: The Psychology of Seeing” (Gregory, 1997, p.229), Edited by Tang (2008).

Moreover, Gregory (1997, p. 241) argues that illusions like “Kanizsa’s ‘fictional’ triangle” (Picture 5) that doesn’t have explicit information about a triangle but still suggests a virtual triangle for viewers because the viewers apply their conceptual knowledge of how the world is organised, which make up virtual information in their perceptions, and allow them to understand what they see. Creating virtual information in minds is also discussed further in Chapter Two about perceiving a story between frames.



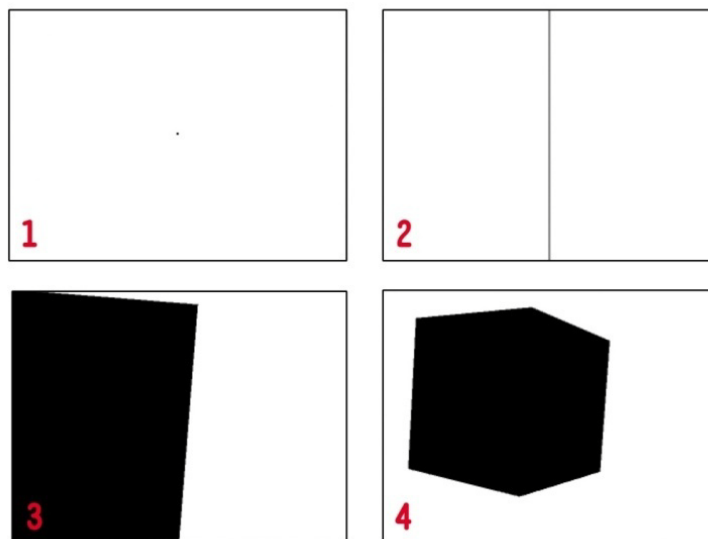
Picture 5: Kanizsa’s “fictional” triangle is from “Eye and Brain: The Psychology of Seeing” (Gregory, 1997, p.241).

Inspired by “the Necker Cube” and “Kanizsa’s ‘fictional’ triangle”, I created a short animation “Transformation of 1D/2D/3D” (Picture 6)<sup>6</sup>, which shows the possibility of transformation from 1D to 3D based on movements of a virtual camera at particular positions. There is only one black plane in

<sup>5</sup> The Necker Cube is an optical illusion first published in 1832 by Swiss crystallographer Louis Albert Necker.

<sup>6</sup> See Appendix 2 for the animation of the experiment.

the animation. The virtual camera shoots it from a very long distance away and it occurs like a dot on the screen. Then the camera zooms in at a very fast speed and aims at the edge of the plane, so it becomes a line. When the camera turns its angle and only shoots one part of the plane, the line transforms into a plane. After that, the camera zooms out and shows the whole plane, which is a hexagon. Like the concept of “Kanizsa’s ‘fictional’ triangle” (Gregory, 1997), spectators can perceive the hexagon as a three-dimensional object because the directions of the edges allow the spectators to imagine a three-dimensional object, or the spectators can also perceive it as only a plane based on the other perspective of view. The experiment shows that using a position of perceiving (a virtual camera) can create completely different perceptions from one thing by using the physical limitations of perceiving and the alternative psychological position of perceiving.



Picture 6: Screen shots retrieved from the experiment of “Transformation of 1D/2D/3D” (Tang, 2008).

### 1.3 Human thoughts in the process of perception - virtuality

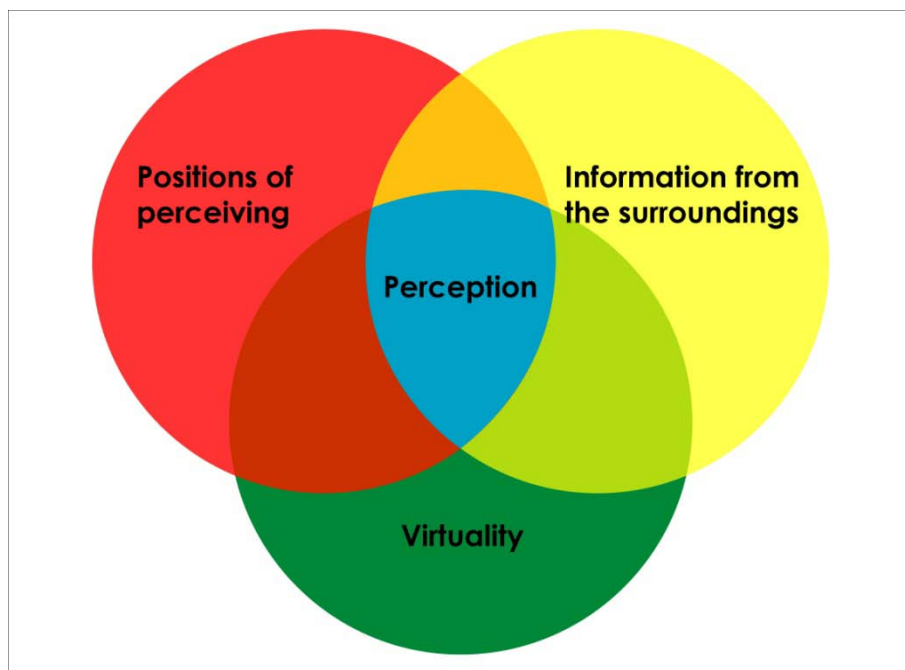
Perception in Gregory’s (1997) argument is formed by human experience of the world. What is the experience of the world and how does it work in the process of perception? Levy brings out a new term, “virtuality”, and he uses an example to explain it, which is:

A seed is oriented by a virtual tree, but we cannot describe exactly the shape of the future tree. We even cannot be sure that there will actually be a tree. The (virtual) tree is the problem of the seed, and it is at the same time the essence of its identity (Levy, 2002, p. 7).

From Levy's discussion, the virtual tree is the identity of the actual seed, and the tree only exists in our minds, which is formed by our knowledge and experience. Therefore, I find that virtuality is a concept or a method about a thing existing in the human mind, and it plays an inevitable part in the identities of activities or objects in the real world. And it is the essence derived from what we understand about our actual world – our knowledge and experience of the world.

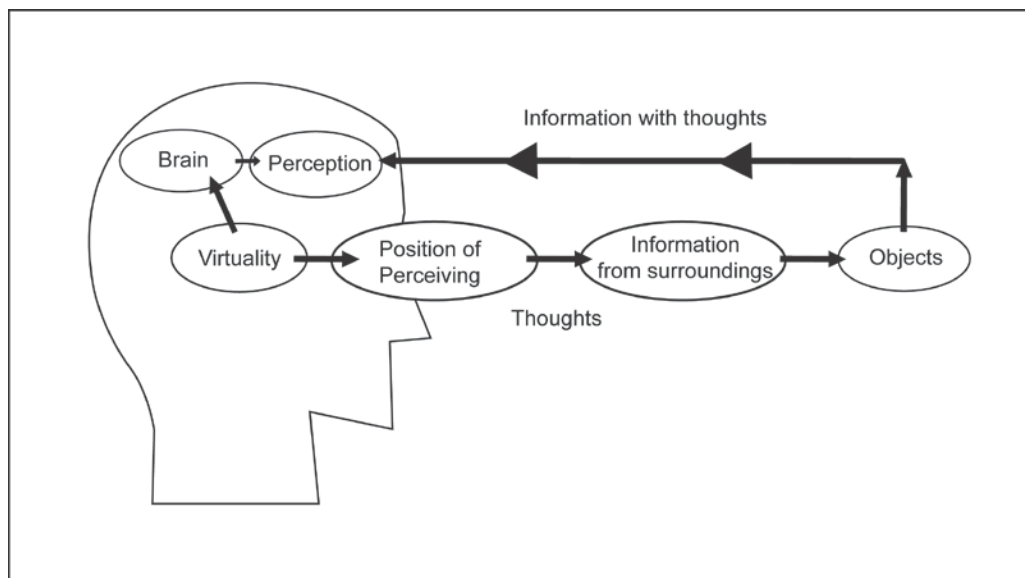
Moreover, an argument from Deleuze (1994) also interprets the relationship between perception and virtuality, and places virtuality at a dominant position of the perception process. He argues that the perception of a thing as actual is codetermined by the presence of virtual, and memory and sense are virtual domains that allow the plane of imminent imaging to be thought or perceived of as actual. It is hard to distinguish between the actual and the virtual when we perceive a thing. For example, I see a dog, and my memory intervenes at once to allow me to perceive the thing is a dog, but it is hard for me to find out whether the actual image of the dog comes into my brain first or my memory intervenes first. The actual and the virtual interact with each other and form my perception. Therefore, every perception is actual-virtual.

By synthesising the opinions of perception from Gregory (1997), Levy (2002) and Deleuze (1994) in the aspect of psychology, virtuality is the core of the key components in the system of perception, in that it not only controls the position of perceiving to determine what information we perceive, but also is the fundament of interpretations. The diagram of the system of human perception (Picture 7) shows that the three key components relate to each other to form perception.



*Picture 7: The system of human perception (Tang, 2008)*

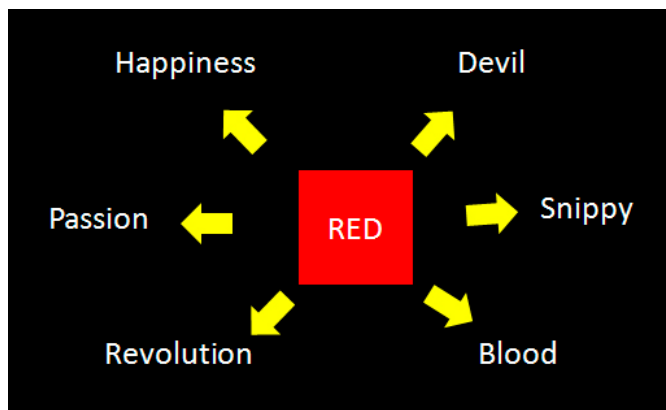
The diagram of the process of perception (Picture 8) presents how information of objects is perceived by humans through the system of human perception. Virtuality controls the positions of perceiving; the positions of perceiving limits information from the surroundings; information from the surroundings influences the information of the objects; the information of the objects enters the brain and is analysed based on virtuality; through interpretation, the information of the objects becomes the perception of the objects.



Picture 8: The process of perception (Tang, 2008)

#### 1.4 Different virtualities and multiple perspectives

Virtuality plays a dominant role in the system of perception, and people may have different virtualities depending on their different experiences. A synthesis of these two points can lead to speculation that different virtualities can create varied perceptions from one thing. Here I use an example “meanings of the colour red” (Picture 9) to illustrate my thoughts. From the diagram, the colour red represents different meanings depending on how different people understand it. For instance, Chinese people treat the colour red as a symbol of happiness, but Western people think the colour red represents devils.



Picture 9: Meanings of the colour red (Tang, 2008).

Barthes (1978, p.3) explains different perceptions arising from one thing in his argument about “the death of the author<sup>7</sup>”, which suggests that authors no longer exist in their writing after the texts are finished because different readers will have different understandings according to their own culture, background and experience. He says,

The author, when believed in, is always conceived of as the past of his own book: book and author stand automatically on a single line divided into a before and an after. The author is thought to nourish the book, which is to say that he exists before it (Barthes, 1978, p.3).

Barthes also explains that

A text is not a line of words releasing a single ‘theological’ meaning (...) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash. The text is a tissue of quotations drawn from the innumerable centres of culture (Barthes, 1978, p.3).

He (1978, p. 4) further explains his point from the position of the reader: “The reader is the space on which all the quotations that make up a writing are inscribed without any of them being lost; a text’s unity lies not in its origin but in its destination.” Here Barthes argues that a reader<sup>8</sup> is the space where the meaning of a text exists. The original meaning of the text is changed when the reader perceives the text. From my understanding, the space means virtuality of the reader; when the information of the text enters the reader’s brain, the meaning of the information is interpreted by the reader’s virtuality. A multi-dimensional space in a text means readers will have multiple

---

<sup>7</sup>

<sup>8</sup>

perspectives of view to the text because their virtualities create diverse meanings from the text, and the original meaning of the text is lost after the author finishes it.

Inspired by Barthes' opinion, I created an animation, "One gear, six perceptions" (Picture 10)<sup>9</sup> to experiment with different perspectives of one object by using the method of moving cameras. I used six cameras to shoot one gear at the same time from different angles, which represented different virtualities. Through different movements of the cameras, the gear becomes six different objects. In the first three scenes, the gear is still perceived as different gears because the movements of the cameras simulate different gears' actions. But, in the last three scenes, the camera movements simulate totally different movements of something else, which causes the gear to become three different objects.



*Picture 10: Screen shots retrieved from the experiment of "One gear, six perceptions" (Tang, 2008).*

From the experiment, I found that using different positions of perceiving (cameras) can create varied perceptions in the process of perception. If spectators could become co-authors, the narrative of an author should be able to allow multiple perceptions to co-exist in the narrative process. Thus, creating multiple perceptions in one narrative is fundamental to achieve my research aim, and it is discussed further in Chapter Two.

## **1.5 Grounded theory and data visualisation**

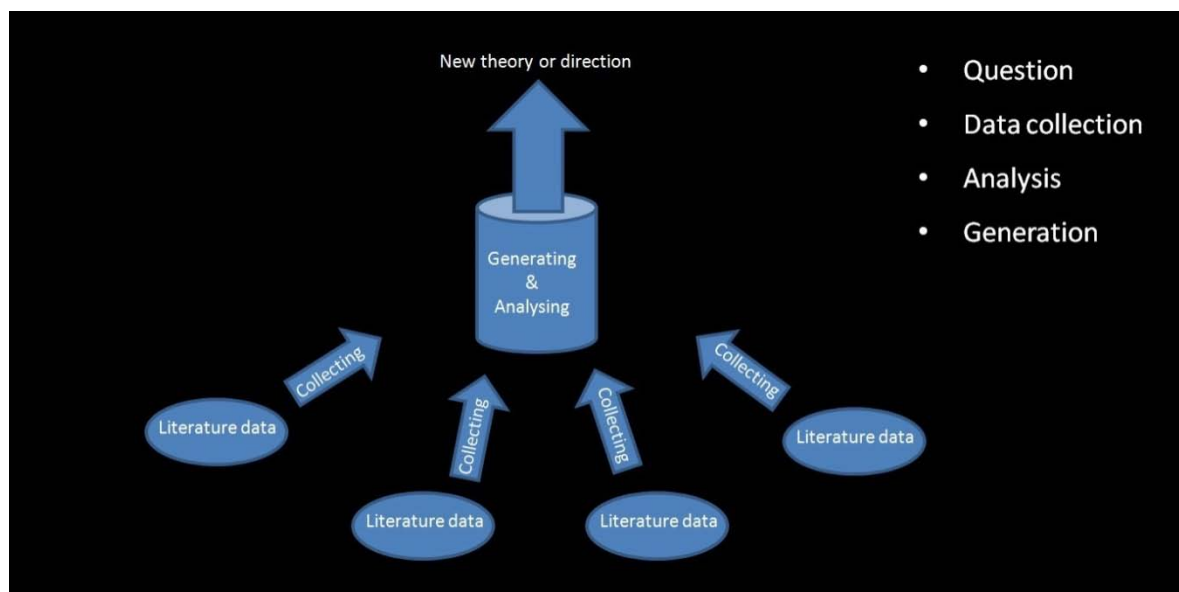
### **1.5.1 Grounded theory – building a theoretical base for the research**

In the Chapter One, the main research method is the method of grounded theory (Strauss & Corbin, 1998), which includes four steps in the process of research. The four steps are question, data collection, analysis and generation. The following diagram (Picture 11) shows the process of the four steps in grounded theory.

---

<sup>9</sup> See Appendix 3 for the animation of the experiment.





Picture 11: The process of grounded theory (Tang, 2008).

There are three reasons why I used grounded theory at the beginning of the research. Firstly, I started my research without a preconceived theory. Within this situation, Strauss and Corbin (1998, p. 12) claim that a researcher should begin with the area of the study and allows the theory to emerge from the data, if the research has no preconceived theory in mind. Grounded theory is to derive theory from data, systematically gathered and analysed through the research process. For example, the system of human perception I defined was derived from a limitation of perceiving<sup>10</sup>, different psychological positions causing different perceptions<sup>11</sup>, virtuality<sup>12</sup> and “the death of the author”<sup>13</sup>. Therefore, the theoretical base of my research was generated from the process of collection and analysis of this data.

Secondly, I collected and analysed data based on the research question. Starting the research with a question was necessary for me, to identify the research area and begin the process of data collection and analysis, which located my position in the study and allowed me to set up a direction. Strauss and Corbin (1998, p. 53) argue that a research question leads the researcher to examine data from a perspective and to use certain data-collecting techniques and modes of data analysis. Also, the questions set the tone for the project and help the researcher to collect relevant data, as there is a mass of information. For example, I started the research in the area of human perception with an initial question, “Why do we perceive events differently?”<sup>14</sup> This question sets up a basic direction

<sup>10</sup> Gibson (1986) see 1.1.

<sup>11</sup> Gregory (1997) see 1.2.

<sup>12</sup> Levy (2002) see 1.3.

<sup>13</sup> Barthes (1978) see 1.4.

<sup>14</sup> See 1.1.

for the research and engaged me in collecting data about physical perception. Then, with the progress of the research, a new question was raised by me to explore further in the aspect of psychological perception, such as, “How do our minds act in the process of perception?”<sup>15</sup> After that, the question “What is the experience of the world and how does it work in the process of perception?”<sup>16</sup> allowed me to define the system of human perception. Finally, all the questions led me to set up a direction to the area of multiple perceptions and positions of perceiving.

Thirdly, I collected literature data at the beginning of the research. At the beginning of my research, I was uncertain about the direction of the research. Collecting nontechnical literature helped me to understand more about the area of my study and to adjust the direction of my project. Strauss and Corbin (1998, p. 51) claim that theoretical sampling suggested by the literature, especially in the first stage of the research, can provide insights into where a researcher might go. It can direct the researcher to some situations that might never be considered. Moreover, “familiarity with relevant literature can help researchers enhance sensitivity to subtle nuances in data” (Strauss & Corbin, 1998, p. 49). For instance, the collection and comparison of the literature data about perception in the aspects of physics and psychology helped me to look into the deeper field of “the death of the author”<sup>17</sup> and to adjust the research direction to the creation of multiple perceptions.

### **1.5.2 Data visualisation – framing the project**

Although the method of data visualisation occupies only a small proportion of my research, it not only plays a key role through my theoretical research and practical research, but also is a bridge connecting both theoretical and practical processes.

At the beginning, it helped me to quickly sort all the data collected and to analyse the relationship of the relevant data. In the method of grounded theory, Strauss & Corbin (1998, p.19) claim conceptual ordering is important to organize data into discrete categories after data collection. Through the process of data visualisation, concepts or ideas can be clearly explained and defined. It helps researchers to make sense out of their mass of data according to a classificatory scheme. Therefore, the use of data visualisation allowed me to deeply understand the relevant theories and to clarify their relationships. And it also helped me to review the research process and fill up gaps inside the process.

---

<sup>15</sup> See 1.2.

<sup>16</sup> See 1.3.

<sup>17</sup> Barthes (1978) See 1.4.

Moreover, designing good maps can also help viewers to understand my research precisely in the presentation. Tufte (1983, p.87) claims that a well-designed data graphic can demonstrate the tremendous communicative power of graphics in letting viewers perceive information effectively, which is far more effective than words in showing the content of the research, such as the diagram of grounded theory<sup>18</sup>. Therefore, data mapping is not only useful for the researchers in sorting and analysing data, but also for viewers to gain a better understanding of the project.

To sum up, at the beginning of my research, I collected many different opinions about perception; after the filtration of the data, I designed a diagram of the system of perception<sup>19</sup> to help me to quickly understand their relationships. For analysing the process of perception, I made another diagram<sup>20</sup> to show how spectators perceive an object. The method of grounded theory was only suitable to the beginning of my research. With the development of the research, I used the other methods described in the next chapters.

---

<sup>18</sup> See 1.5.1.

<sup>19</sup> See 1.3.

<sup>20</sup> See 1.3.

## **Chapter 2 Freedom of Perception in Multiple Frames Narrative**

The context of the question, “Can spectators become co-authors in the process of a story narrative?”, is that the narrative should allow multiple perceptions to co-exist in the process that occurs between the spectators and an author. Chapter Two focused on seeking a method of creating multiple perceptions in a narrative. Through the discussion of freedom of perception from Deleuze (1994), the method of deterritorialisation (Deleuze & Guattari, 1972) engaged me to use different virtual cameras to create limitations of spectators’ perceiving. The experiments involved the concepts of non-signifying code (Deleuze & Guattari, 1987) and hypersignification (Goldman & Papson, 1994). At the end of the exploration, a method of comic narrative was discovered as an approach of multiple frames narrative to create multiple perceptions based on multiple discourses from one story content. Thus, I used the method of comic narrative with multiple frames narrative rather than three dimensional animations to experiment the new approach in the narrative process. The main methodology used in Chapter Two is action research (Kemmis & McTaggart, 1988) because the research at this stage concentrates on experimenting with discovered theories. The method of action research helped me to generate new ideas or directions from my experiments by reflecting to relevant theories. It also engages me to adjust my research direction and generated underpinning theories for the next exploration in Chapter three.

### **2.1 Freedom of perception and deterritorialisation**

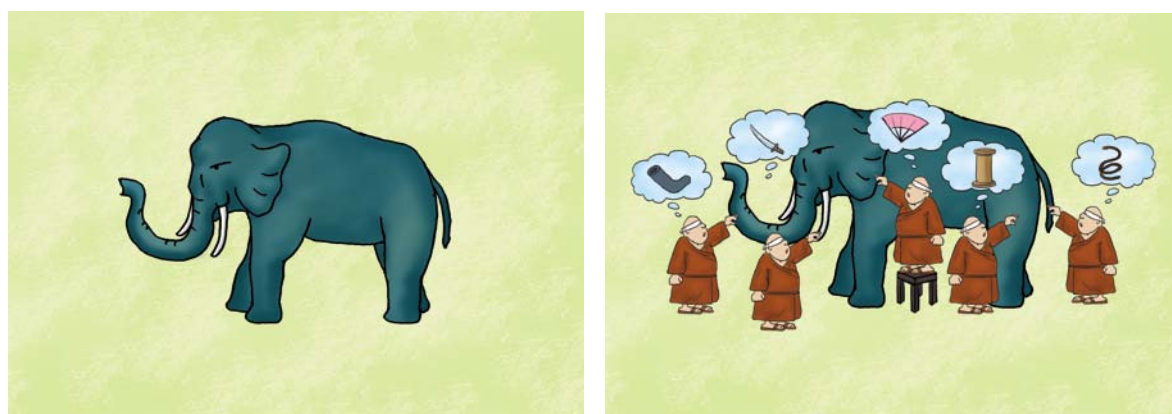
Deleuze (1994) claims that freedom of perception is the reason why humans can have each different perceptions of the one thing. Perception of the world is transformed into images and stored in our brain – memory, which acts like a virtual library. When humankind perceives a thing, the virtual will immediately transform itself into an image. Freedom happens when the virtual doesn’t immediately or automatically transform itself. This means the delay of the transformation allows us to consider the possibilities of different perceptions from the one thing. When the freedom occurs, the virtual can become varied.

Based on the discussion of freedom of perception, Deleuze (1994) introduces two kinds of perception to define perceptions before and after freedom, which are “molecular perception” and “human perception”. From my understanding, “molecular perception” is an immediate response or interaction between the subject and object without involving a delay of perceiving, which is like an interaction process of two chemicals. “Human perception” allows the human brain to impose a

delay on “molecular perception”, and it is the outcome of a series of molecular perceptions of increasing complexity, which gradually creates an essential distinction between content and expression.

To delay molecular perception for the purpose of creating human perception, the orthodox understanding and acceptance to the world need to be challenged, because they are the limits of freedom of perception. Deterritorialisation<sup>21</sup> (Deleuze & Guattari, 1972) is a method of providing possibilities to create different branches from immanence of things, which relies on a slowing down of molecular perceptions. From my understanding, it is possible then to create different deeper interpretations through the process of coding and decoding.

For example, the story of “blind monks examining an elephant”<sup>22</sup> about the limitation of perceiving<sup>23</sup>, in other words, is an embodiment of deterritorialisation (Picture 12). If the monks weren’t blind and they could see the elephant, their perceptions could be the same at the area of molecule perception because the monks could easily identify the elephant without any limitation. However, the blindness is their limitation that allows them to create multiple perceptions from the elephant. The body of the elephant is a vessel of multiple perceptions with the condition of a limitation of perceiving, and the limitation of perceiving is the way to create deterritorialisation by breaking the original forms or orders of a thing.



Picture 12: The drawing of “Blind monks examining an elephant” (Tang, 2009)

Moreover, here I draw three images (Picture 13) to simulate the limitation of perceiving; the first one is a man, the second one is a ball and the third one is a basketball stand. The images don’t have obvious connections between them. When the three images are put together, my brain perceives

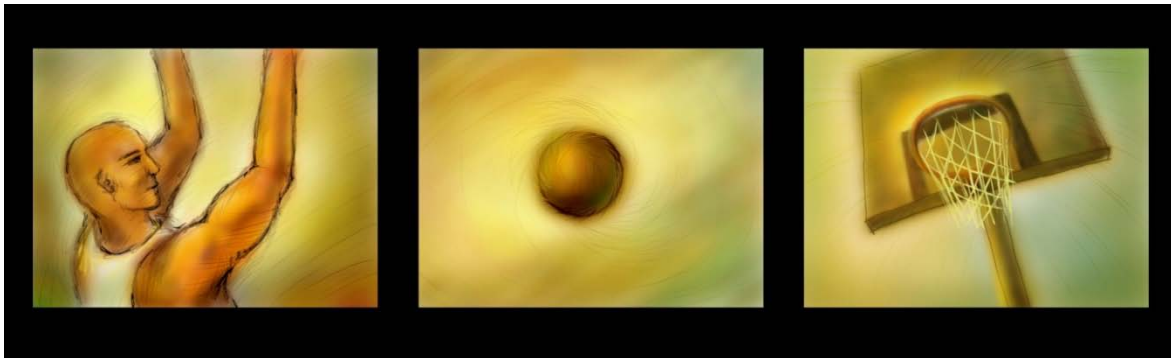
---

<sup>21</sup> Deterritorialisation means to take the control and order away from a land or place (territory) that is already established. It is to undo what has been done.

<sup>22</sup> The story is a Buddhist story from Chapter Thirty-Two in Mahaparinirvana Sutra, see 1.1.

<sup>23</sup> Gibson (1986) see 1.1.

the meaning of the images to be a man playing basketball because, personally, I like playing basketball. Therefore, my experience about playing basketball automatically makes up the virtual information as the signifier of the three images. And this making-up perception belongs to human perception<sup>24</sup> that is also an example of creating deterritorialisation. The multiple perceptions co-exist in between the three images. Therefore, using multiple frames with limitation of perceiving can create deterritorialisation for multiple perceptions from one thing.



*Picture 13: The drawing of “A man, a ball and a basketball stand” (Tang, 2008)*

### **2.1.1 Non-signifying code in deterritorialisation –Reconstruction of meanings between frames**

Deleuze and Guattari (1972) introduced a method of non-signifying codes in the exertion of deterritorialisation. A code doesn't convey information at the molecular level. Any connection of codes can create a territory. It will be accompanied by relative deterritorialisation, which means the outcome of the interaction is not fully determined and there will always be a possibility to different becoming. Therefore, even if I know all the present elements present I still can never determine the outcome, any interactions or connections of code will continually open new paths for me to create new perceptions from the process. This is an element of freedom in the process of perception.

Deleuze (1979) explains that freedom is what happens when we do not respond automatically and immediately with a delay. Also, the delay is between stimulus and response because of the intervention of the virtual and it leads us to believe that we are the authors of this freedom.

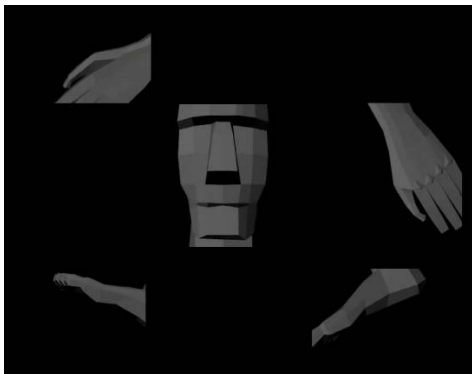
Therefore, when spectators have this freedom of perception, it is possible for them to become co-authors between narrative and perception.

The method of non-signifying code inspires me to create an animation that is composed by many different elements of an object, and it is also based on the result of the experiment of “a man, a ball

---

<sup>24</sup> Deleuze (1994) see 2.1.

and a basketball stand” above (Picture 12). Each element of the object doesn’t carry any particular message or meaning. The meanings only occur in the interactions or connections between two elements. Spectators have to perceive the object from interactions between elements. The short animation of “human walking” (Picture 14)<sup>25</sup> shows five parts of a human body: two hands, two feet and one head. The meaning of the movement from each individual part is unclear, but when all parts are combined into one scene, the movements of the five parts show a virtual moving image of a human. The empty space between the five parts allows spectators to imagine and create missing virtual information that is a man walking.



*Picture 14: A screen shot retrieved from the experiment of “Human walking” (Tang, 2008)*

Based on the experiment of human walking, I changed the five parts into different sizes and placed them at different positions and time occurrences on the screen (Picture 15)<sup>26</sup>. Through the changes, the reconstruction creates the freedom of perception that brings various perceptions from different compositions of the parts. To summarise the results of the two experiments above, I found that multiple perceptions can be created by deconstructing and reconstructing a story within multiple frames, and the meanings in between frames are changeable in the process of reconstruction. Different reconstructions represent different perspectives, and this allows the possibility for spectators to become co-authors if the spectators can arrange multiple frames at their will.



*Picture 15: Screen shots retrieved from the movie of the experiment of “Human walking with deterritorialisation” (Tang, 2008).*

<sup>25</sup> See Appendix 4 for the animation of the experiment.

<sup>26</sup> See Appendix 5 for the animation of the experiment.

### **2.1.2 Hypersignification in deterritorialisation – Further reconstruction for different meanings between frames**

Presenting parts of an object by multiple frames brings out a deeper interpretation beyond the original meaning of the object. Goldman and Papson (1994, p.35) also introduce a photographic method of presenting parts of an object that was adopted by advertisers in the 1980s. Using close-up shots of signifiers emphasised the detailed contours of the object or human and represented a directly-experienced social reality. All the separated close-up shots could be strung together and become hypersignifiers, which represented more real and profound meanings beyond their original meanings. Goldman and Papson (1994, p.35) use an example to explain hypersignification, which is Levis' "Wildman" advertisement featuring twenty-two shots of hands and twenty-six shots of eyes and facial expressions. These shots only show parts of the human body and create multiple spaces for viewers to recognize the media code and seek and identify stories.

From my understanding, the description of hypersignification by Goldman and Papson implies that humans can perceive things without sufficient information by making up virtual information in the mind to help to understand what they see. This corresponds with the opinion of Gregory (1997)<sup>27</sup> that is, receiving information from the surroundings to make up the necessary information for identifying an object. However, hypersignification of an object doesn't even need information from its surroundings to make up the virtual information required, because the meaning doesn't directly connect with the object's presentation or form. Hypersignification is explained thus: that the parts of an object can be treated as an indicator of a subjectivity; that is, the realism of hypersignifiers seeks to convey an existential quality by emphasizing its gestural significance rather than its form (Goldman & Papson, 1994, p.35).

Hypersignification inspired me to use multiple frames to present parts of an object and bring out a deeper meaning behind the parts. I edited the experiment of the animation "One gear, six perceptions"<sup>28</sup> by combining all the different parts of the gear with different movements into one scene "One gear, one virtual machine" (Picture 16)<sup>29</sup>. In the scene, the different movements of the gear present six different gears, and the six gears can be connected together by their concerted movements. These connections allow spectators to imagine there is a virtual machine behind the gears, although there is no information about a machine in the scene. Therefore, this is the other presentation of freedom of perception, because the virtual image of the machine can be varied from

---

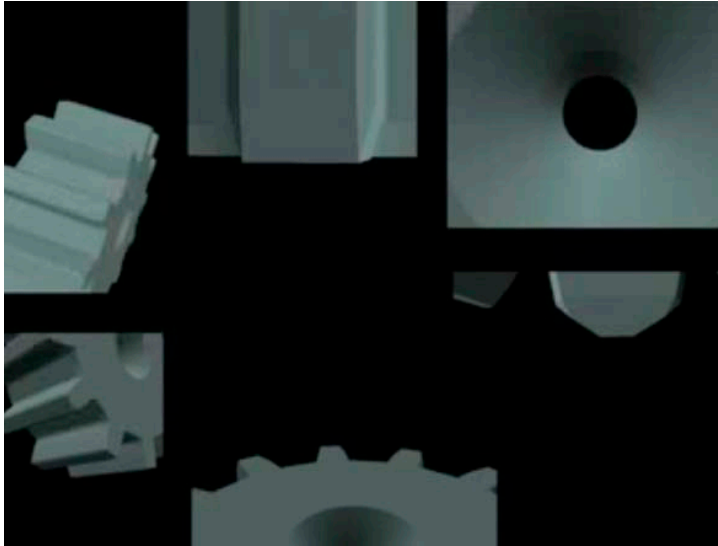
<sup>27</sup> See 1.2.

<sup>28</sup> See 1.4.

<sup>29</sup> See Appendix 6 for the animation of the experiment.



different virtualities. Thus, hypersignification is the method of using imagination to create meanings behind multiple frames and provide a possibility for spectators to have freedom of perception beyond the meanings inside frames.



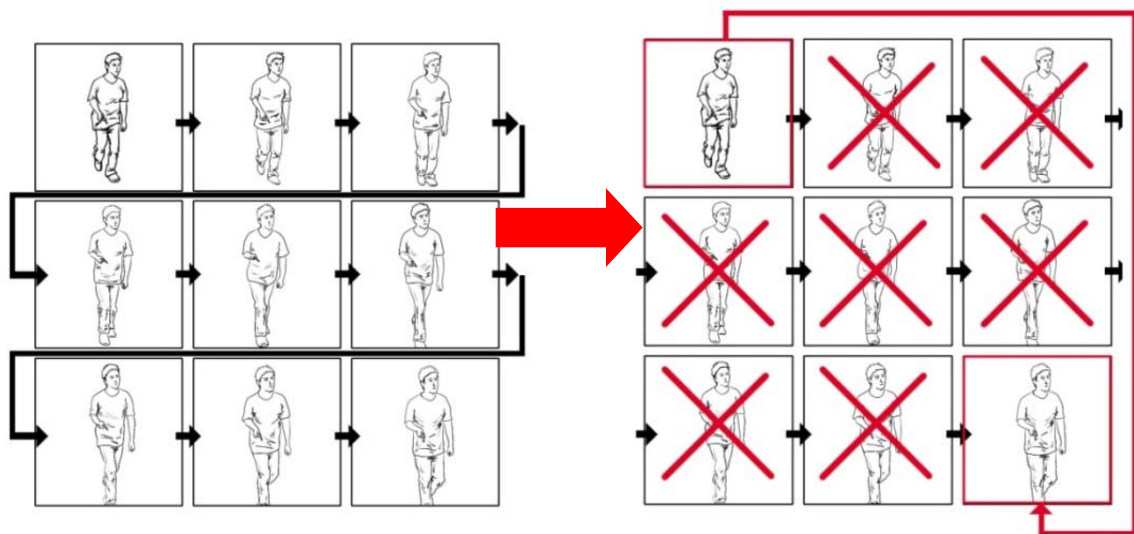
*Picture 16: A screen shot retrieved from the experiment of “One gear, one virtual machine” (Tang, 2008).*

## **2.2 Utilising multiple frames in a narrative for multiple perspectives**

From the experiments about the methods of non-signifying codes (Deleuze & Guattari, 1972) and hypersignification (Goldman & Papson, 1994), I find that using multiple frames is a method that creates freedom of perception for spectators. How can I tell a story by using multiple frames? The method of multiple frames focuses on presenting stories in between frames. This is the same with the basic attribute of comic narrative. Thus, the comic narrative can be the method of telling a story using multiple frames.

Wells (1998, p. 10) explains his working definition of animation as, “a film made by hand, frame by frame, providing an illusion of movement which has not been directly recorded in the conventional photographic sense.” By comparing movements in a live-action film and animation, Wells (1998) argues that a live-action film presents physical movements, but animation presents illusions of movements that focus on what the movements mean more than how they look (p. 11). Therefore, from my understanding, a story in animation consists of meanings generated from numbers of illusions of movements, where the illusions are created between the frames.

Moreover, for discussing meanings from movements in animation, Wells (1998) explains the opinion of McClaren that “animation is not the art of drawings that move, but rather the art of movements that are drawn. What happens between each frame is more important than what happens on each frame” (p. 10). Based on this opinion, I created a short animation of “Walking”, and then I slowed down the speed of frames’ movement (picture 17)<sup>30</sup>. The movement of “Walking” is divided into nine still images, and then I only showed two pictures to show the movement in the way of comic narrative, where the two pictures represent the key moments of the movement. Showing the key moments is the way to tell a story by comic narrative.



Picture 17: The experiment of “Walking” in comic narrative (Tang, 2009)

In the aspect of comic narrative, McCloud (1993, p. 66) claims it allows human imagination to take two separate images and transform them into a single idea. This opinion corresponds to the theory about making up virtual information for perception<sup>31</sup>. Carrier (1944, p. 51) argues that the process of perceiving a comic is a jumpy process of perception constructed by spectators, where the construction includes hypothesis and synthesis. Carrier’s argument about comic narrative is a representation of the theory about freedom of perception<sup>32</sup>, because the jumpy process slows down the perceiving and it requires spectators to construct all the images into a story. After synthesizing these opinions, I found that comic narrative with multiple panels can be applied to animation for creating different perceptions, where an author deconstructs a story and the spectators reconstruct pieces of the story for different perceptions. The process of deconstruction is based on showing key

<sup>30</sup> See Appendix 7 for the animation of the experiment.

<sup>31</sup> Gregory (1997) see 1.2.

<sup>32</sup> Deleuze (1994) see 2.1.

meanings from a story, and the key meanings can be presented in multiple frames that allow the spectators to reconstruct them.

Within the following experiments, I used three narrative methods to tell a short story, “Walk and drive”, which are: linear narrative in live-action films, comic narrative in animation with one frame and comic narrative in animation with multiple frames. Firstly, I shot a live-action film that shows a man walking to his car and driving away (Picture 18)<sup>33</sup>. The shot is linear and nonstop in a limited space and timeline. In the linear narrative, the story is very easy to perceive because the camera records everything in the story and the process of perception doesn’t involve a complex and deep interpretation; it is only at the level of molecular perception<sup>34</sup>.



*Picture 18: Screen shots retrieved from the experiment of a short live-action film “Walk and drive” with linear narrative (Tang, 2009)*

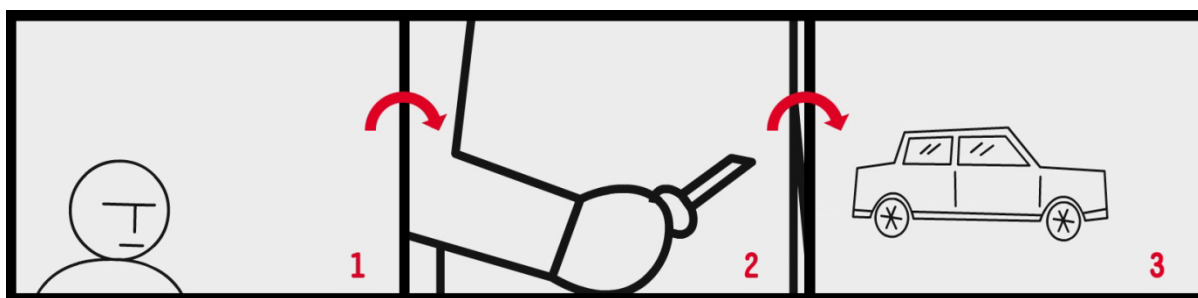
Secondly, I represented the story in the animation style by comic narrative in one frame that only shows the key moments (Picture 19)<sup>35</sup>. In the first scene, the camera captures the movement of the head that represents walking. The second camera shot of the hand playing a car key implies the intention of driving a car in scene two. In the third scene, the camera shows the car driving away without showing the man. All the scenes have a straightforward direction from left to the right. The interpretation of the story using the method of comic narrative requires a delay in the process of perception and allows spectators to create virtual information between the scenes to complete the story. The delay of interpretation and the creation of virtual information mean that the perception of the story is at the level of human perception<sup>36</sup>.

<sup>33</sup> See Appendix 8 for the animation of the experiment.

<sup>34</sup> Deleuze (1994) see 2.1.

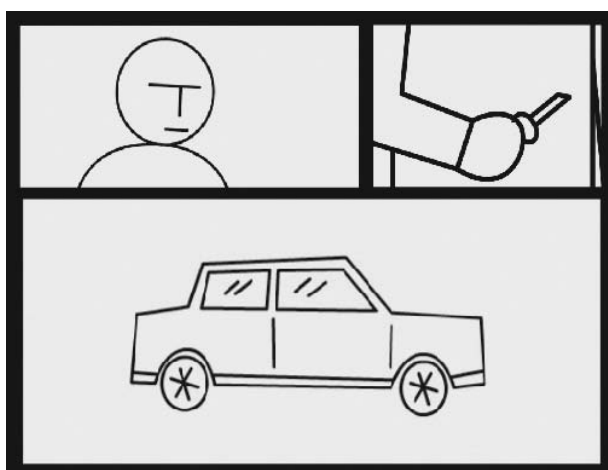
<sup>35</sup> See Appendix 9 for the animation of the experiment.

<sup>36</sup> Deleuze (1994) see 2.1.



Picture 19: Screen shots retrieved from the experiment of a short animation “Walk and drive” with comic narrative in one frame (Tang, 2009)

Thirdly, I use the comic narrative to represent the animation by deconstruction into multiple frames (Picture 20)<sup>37</sup>. There are three frames shown on the screen at the same time, which show the scenes of the head, the hand with the key, and the car.



Picture 20: A screen shot retrieved from the experiment of a short animation “Walk and drive” with comic narrative in multiple frames (Tang, 2009)

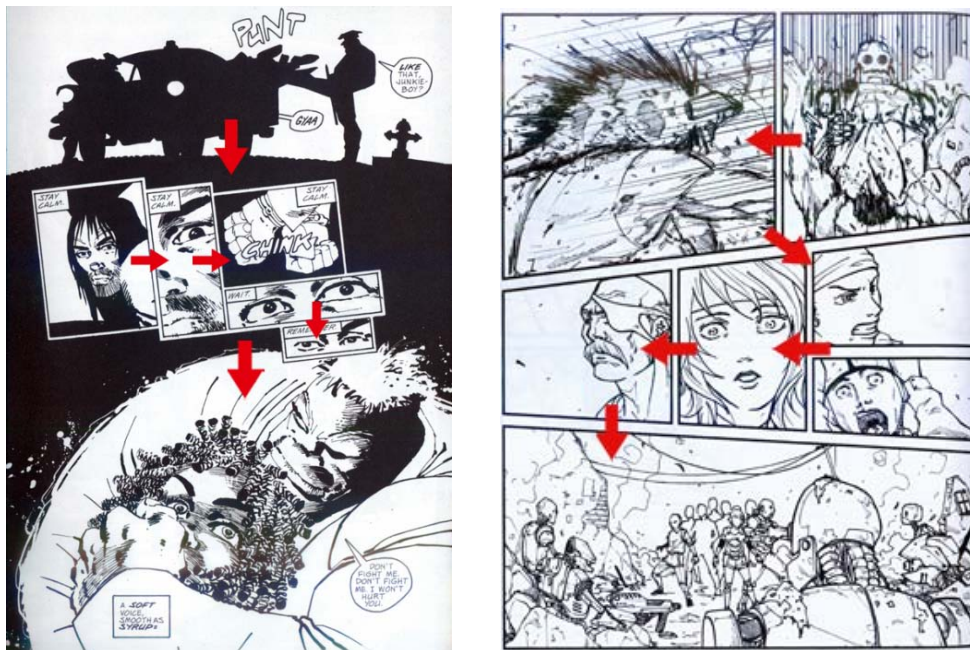
The three scenes can be reconstructed in different reading orders. Reading orders are a way that readers organise frames in the comic, which are the representations of different readers’ virtualities. Carrier (1944, p. 52) argues that the readers are accustomed to read the body of the frames as straightforward narrative, moving left to right and top to bottom in the western tradition (Picture 21, the left image<sup>38</sup>) or moving right to left and top to bottom in the eastern tradition (Picture 21, the right image<sup>39</sup>). In either way of reading, the straightforward narrative contains one time line. Based on the time line and the accustomed reading orders, audiences visualise the missing parts between

<sup>37</sup> See Appendix 10 for the animation of the experiment.

<sup>38</sup> The arrows in the left image show a western reading order in the process of perception.

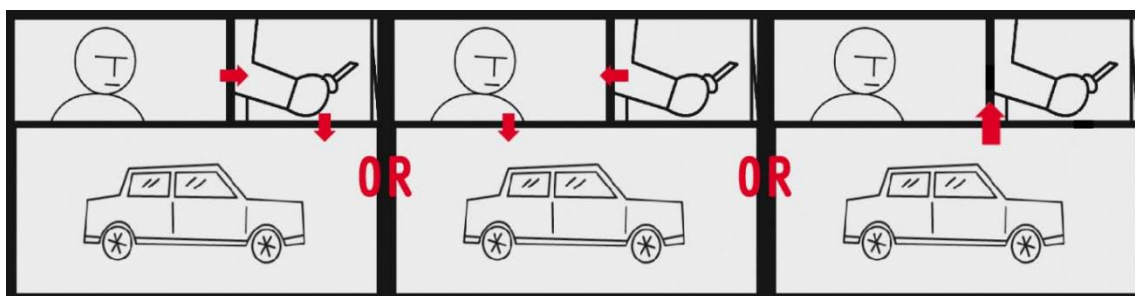
<sup>39</sup> The arrows in the right image show an eastern reading order.

frames; their imagination creates the connections in their mind and allows them to jump through the frames and perceive the story.



Picture 21: Left: the reading order of a western comic. Right: the reading order of an eastern comic; retrieved from (Miller, 2005) *Sin City: Hell and Back* and (Horton & Yang, 2008) *Professional Manga*. The red arrows are added by Tang (2009).

Therefore, the animation of “Walk and drive” in multiple frames can be perceived in both western and eastern reading orders, or the reading order can also start from the bottom to the top (Picture 22). Different orders create different perceptions and represent different perspectives. According to the results of the experiments, I ask a new research question, “how can I deconstruct and reconstruct a story into multiple frames in the aspects of story timeline, space, and reading orders?”. In the next chapter, the exploration focuses on deconstruction and reconstruction of a story in multiple frames based on this new question.



Picture 22: The experiment of a short animation “Walk and drive” with comic narrative and multiple frames in three different reading orders (Tang, 2009)

Moreover, the method of comic narrative with multiple frames replaced the method of using virtual cameras in three dimensional animations in the experimental stage of my research. Using virtual cameras in three dimensional animations was a good method to simulate spectators' positions of perceiving and focus more on physical perceptions. And this method was generated to the approach of multiple frames narrative, which related to the comic narrative. The comic narrative with multiple frames became the main experiment method that was to create a possibility for spectators to reconstruct stories as co-authors from different perspectives. Thus, using comic narrative with multiple frames is the potential in my research to develop a new approach for challenging the traditional cinema and exploring the relationship between authors and spectators in the narrative process.

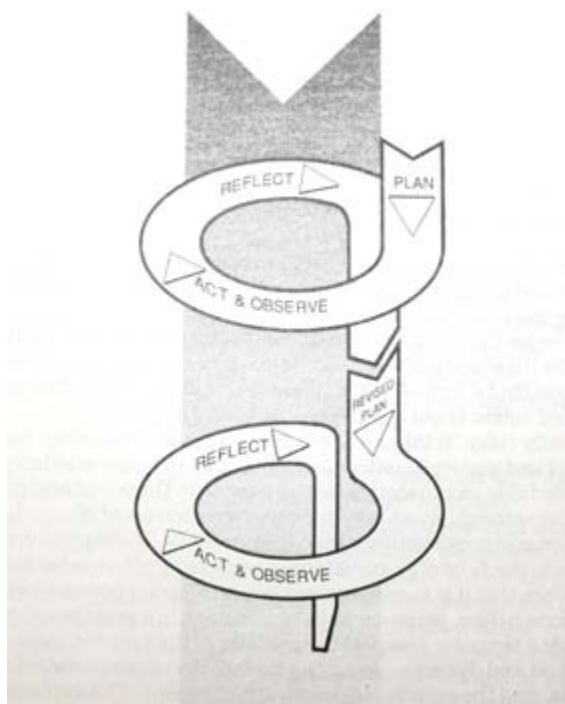
## **2.3 The method of action research**

### **2.3.1 Applying action research on the experimental stage**

The research exploration in Chapter Two is based on the results of the exploration in Chapter One. At the beginning of the Chapter two, I continued to use the methodology of grounded theory introduced in Chapter One for finding theoretical data relative to the question and trying to find possible approaches to the question. After that, I started testing the theories I had collected and developed the research through experiments. However, grounded theory is only suitable for searching and building a theoretical base for the research. Thus, when my research entered the experimental stage, it is necessary for me to use other suitable research methods at this stage. The method of heuristic research is used throughout the whole process of my research, but it is not the main research method at the experimental stage. Moustakas (1990) claims that "heuristics is a way of engaging in scientific search through methods and processes aimed at discovery; a way of self-inquiry and dialogue with others aimed at finding the underlying meanings of important human experiences" (p. 15). However, the exploration at this stage didn't involve self-inquiry and dialogue with others and I lacked of experience relating to the research aim, which limited me from discovering underlying meanings of the experiences. Therefore, I used the method of action research (Kemmis & McTaggart, 1988) to develop the research by utilizing learning theories to experiment with and gather experiences, which was for preparation.

### 2.3.2 The process of the action research

The method of action research is a method that focuses on gaining knowledge from experiences of practice, and improving practice by testing new ideas and reflecting on theories. It can also help researchers to establish a self-critical system, which might involve only individual or several researchers (Kemmis & McTaggart, 1988, p. 11). Moreover, the model of simple action research (Picture 23) shows that action research needs to go through four cyclical phases for developing the study, which are planning, acting, observing and reflecting.



Picture 23: The model of simple action research (Kemmis & McTaggart, 1988, p.11)

Kemmis and McTaggart (1988, p. 11) explain that in the four cyclical phases, planning is the definition of the problem and organization of research practices; acting is implementation; observing is action and collection of data; reflecting is developing revised action derived from what has been learned.

For example, I used the theories of freedom of perception<sup>40</sup> and deterritorialisation<sup>41</sup> to form the base of my experiments<sup>42</sup>, which was seeking how to create multiple perceptions. This was planning

<sup>40</sup> Deleuze (1994) see 2.1.

<sup>41</sup> Deleuze & Guattari (1972) see 2.1.

<sup>42</sup> Picture 11: the drawing of "Blind monks examining an elephant" (Tang, 2009) & Picture 12: the drawing of "a man, a ball and a basket stands" (Tang, 2008).

stage. Then I used two methods of non-signifying codes<sup>43</sup> and hypersignification<sup>44</sup> to experiment with the possibilities of multiple perceptions, which was acting stage. After acting I observed and collected the results of the experiments. Through the process of observing, I analysed the results by going back to the knowing theories in Chapters One and Two. Finally, I generated a new idea about using comic narrative with multiple frames on one screen to create multiple perceptions, such as the experiment of “Walk and drive”<sup>45</sup>. This was the stage of reflecting. After I generated the new idea, I collected theoretical data about the new idea, and then I planned new experiments based on the new learning theories in the following chapter. Therefore, a new cycle of the four phases begun with a new planning, which means the research developed exactly like the diagram of the model of simple action research from Kemmis and McTaggart (1988)

---

<sup>43</sup> Deleuze & Guattari (1972) see 2.1.1.

<sup>44</sup> Goldman & Papson (1994) see 2.1.2.

<sup>45</sup> Picture 19: the experiment of a short animation “Walk and drive” with comic narrative and multiple frames in three different reading orders (Tang, 2009).



## **Chapter 3 Montage in Multiple Frames Narrative**

Chapter Three continues the exploration of deconstruction and reconstruction in multi-frames narrative from Chapter Two. By referring to the theory of film montage (Eisenstein, 1986) and the model of panopticon (Bentham, 1785), the discussion of the experiments focuses on two concepts of film montage that are “the movement-image” about space, and “the time-image” about the story timeline, introduced by Deleuze (1986 & 1989). The multiple frames narrative uses the methods to engage spectators to participate with the process of a story narrative and create their own discourses of the story. However, a problem of multiple frames narrative was discovered through the comparison between equally hierarchic multiple frames and unequally hierarchic multiple frames, where the categories of the experiments are the number of frames, the position of frames, and viewing orders within frames. This chapter mainly uses the method of heuristic research (Moustakas, 1990) to discover the problems and search for possible solutions through the process of self inquiry and dialogue between me and the problems. Self inquiry and dialogue result from gathering experiences through the experiments between me as an author and a spectator, and allow me to dig into the phenomenon of the problems to search for answers.

### **3.1 The consistent attributes of multiple frames narrative and montage**

Deconstruction and reconstruction from linear narrative to multiple frames narrative is the process that breaks a story into several story fragments and presents them simultaneously on one screen as discussed in Chapter Two. In my opinion, this process is the same as the description of montage, which in French means putting together, and in English means the juxtaposition of two or more shots in a sequence (Aumont, Bergala, Marie, & Vernet, 1983).

Soviet montage theorist Eisenstein (1986) says:

The basic aim and function of film montage is the need for connected and sequential (meaning) of the theme, the material, the plot, the action, the movement within the film sequence and within the film drama as a whole ensures that not only is the narrative logical connected but contains maximum of emotion and stimulating power (p. 13).

The method of multiple frames narrative represents a story in between frames by creating the juxtaposition of story fragments on one screen, which allows spectators to construct a story like reading a comic book. Film montage puts all the fragments into one frame sequence in only one

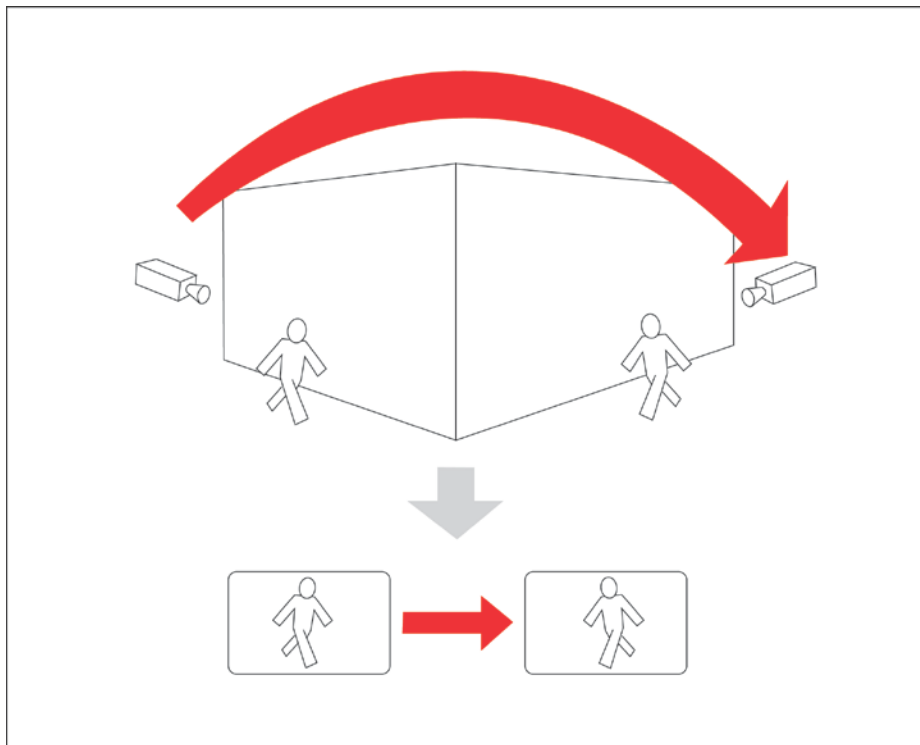
reading order constructed by an author. Therefore, I find the method of multiple frames in narrative is a kind of montage used with more than one frame. Based on the theory of film montage, I find there are two basic categories of film montage I can apply to the multiple frames narrative: the movement-image (Deleuze, 1986) and the time-image (Deleuze, 1989).

### **3.2 The movement-image of montage – spatial deconstruction of a story**

In the spatial aspect of film montage, Deleuze (1986) introduces the movement-image. He argues that cinematic art doesn't present movements of a thing in immobile points; contrarily, the thing is presented by its movement, and this creates a perception that is different from what we perceive in everyday life. Deleuze (1986) explains that cinema frees the point of view from a single immobilised viewer, and allows the viewer to perceive the world through movements without limits of fixed points of view. The movement-image interrupts or dilates vision, freeing it from action and actualised images, multiplying points of view and presenting movement itself.

By producing in this way a mobile section of movements, the shot is not content to express the duration of a whole which changes, but constantly puts bodies, parts, aspects, dimensions, distances and the respective positions of the bodies which make up a set in the image into variation... It is because pure movement varies the elements of the set by dividing them up into fractions with different denominators – because it decomposes and recomposes the set – that it also relates to a fundamentally open whole, whose essence is constantly to “become” or to change, to endure; and vice versa (Deleuze, 1986, p. 23)

From my understanding, in the movement-image we no longer see a movement as a shift from one point to another in an immobile space. Space itself is an open and mobile whole. In this space, cameras are allowed to jump through the whole space and capture the movements of different objects discontinuously. For example, we perceive stories of films in the same mode as our everyday life, which is that the movements of objects in immobile space and time are just the connection or sequence of all the movements. But in the movement-image (Picture 24), the camera can follow the movement of one object, and then jump to another object, and the flow of time doesn't connect the movements of the two objects.



*Picture 24: An example of the movement-image (Tang, 2009)*

Here is an example of movement-image in multiple frames. “Time code” (Figgis, 2000) is composed of four frames of simultaneous actions that alternately present different characters in different spaces at the same time. The activities of the characters don’t have any obvious connections with the other activities in a different space, but, at some particular time, their spaces merge together and the activities influence each other. In the movement-image, Deleuze (1986) argues that the movement-image interrupts or dilates vision, freeing it from action and actualised images, multiplying points of view and presenting movement itself. In the movie “Time code”, the story is perceived from four different perspectives, which break the limit of spaces and ask audiences to concentrate on the movements of the characters for identifying the relationships between them. Through the changeable connections between the frames and the movements of the characters, the story can be interpreted by different constructions of the four frames. For example (Picture 22), to understand the reason why the character in frame two is depressed, frame one and frame three can be connected, because the two characters are both using a phone and there could be something between them to cause the character in frame one to be depressed. The answer is announced at the end of the film, which holds the spectators’ attention until the movie ends. Therefore, the multiple frames with movement-image engage spectators to perceive and connect the movements of the characters very carefully, and allow them to compose the story by using their own imagination.



*Picture 25: A screen shot retrieved from the movie “Time code” (Figgis, 2000)*

The film “Time code” (Figgis, 2000) inspired me to create an animation “Dark room”, with five frames on one screen (Picture 26)<sup>46</sup>, which the story is about a man writing in his dark room. The function of the frames is to create multiple small spaces from one story, rather than show a whole immobile space. I used one virtual camera to show the environment of the dark room, and one camera to show a clock in the room. These two cameras present the environment and the atmosphere of the animation. I also used three cameras to capture the movements of the face, the back and the hand. These three frames show the character’s movements to form a story. The five frames divide the story as a whole into five different spaces. The spaces contain information within the frames as the fragments of the story, which asks spectators to construct the story fragments into a virtual space of the story, by imagining what meanings are between the frames. The animation doesn’t show an obvious time line because all the movements don’t have connections within the flow of time, except that the frames of the face and the hand have a conflicting moment that implies there is a before and an after between the frames. In other words, the time line in “dark room” depends on viewing orders created by the spectators. A viewing order as a creation of the flow of time by spectators in the process of narrative is discussed further in the following sections.

---

<sup>46</sup> See Appendix 11 for the animation of the experiment.



Picture 26: A screen shot retrieved from the experiment of “Dark room” (Tang, 2008)

### 3.3 The time-image of montage – temporal reconstruction by spectators’ participation with story discourses

In the temporal aspect of film montage, the time-image (Deleuze, 1989) frees perception of time and provides a virtual possibility which is never actually given, and time is no longer just the connection or sequence of movements, which become virtual movements in the human brain.

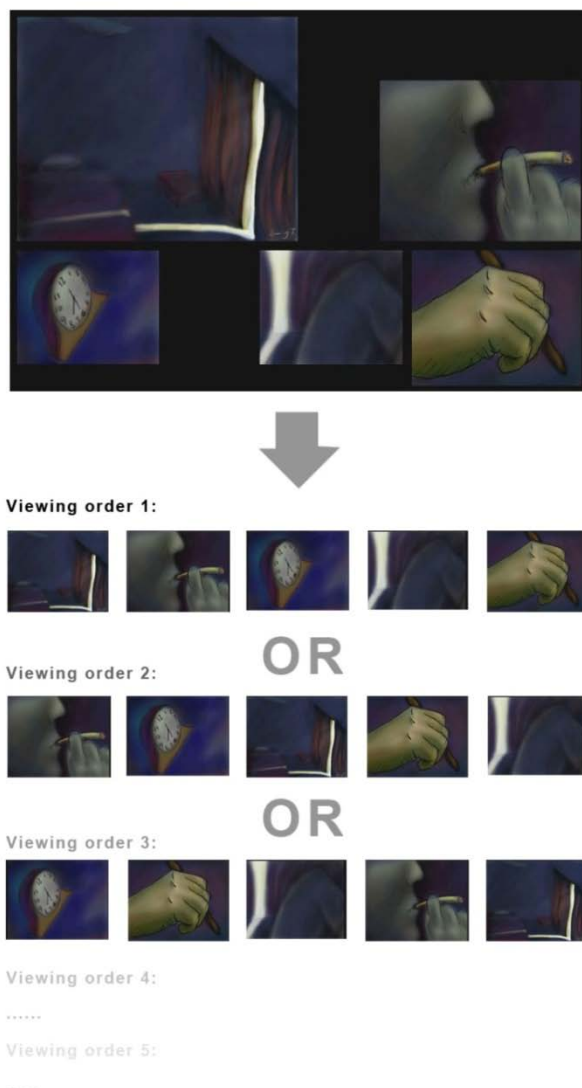
From my understanding, time in cinema is derived from movements, and it is something virtual that we cannot see but that we imagine or feel; we imagine the flow of time as a link connecting one action or object to another. Therefore, the flow of time is a combination by the actual (difference of one object) and the virtual (thinking) based on the delay of perception – human perception<sup>47</sup>. The slowing down allows our brain to decide how to perceive and understand what we see, and it gives virtual images of time in our brain. Based on the theory of virtuality<sup>48</sup>, any perception is possible in the world because images of the world are also made up by the actual (content) and the virtual (expression). Time is also changeable because it is made by virtual images. The time-image allows the past, the present and the future in a timeline of a story to be reconstructed and represented to

<sup>47</sup> Deleuze (1994) see 2.1.

<sup>48</sup> Levy (2002) see 1.3.

viewers. Therefore, the time-image can destroy the timeline of a story and deterritorialise<sup>49</sup> it to cross a threshold of perception for perceiving the story from different perspectives.

I find that the process of perceiving the multiple frames narrative with the movement-image can create the time-image, because viewing orders of spectators actually create different timelines in a story. For example, there are no connections of time between the multiple frames of the experiment “Dark room”<sup>50</sup>. The lack of connections offers a possibility to spectators to reconstruct the story fragments in chronological orders without limitation from the author (Picture 27). Different orders represent different timelines with different perspectives to the story, which is the freedom of perception<sup>51</sup> for the spectators.



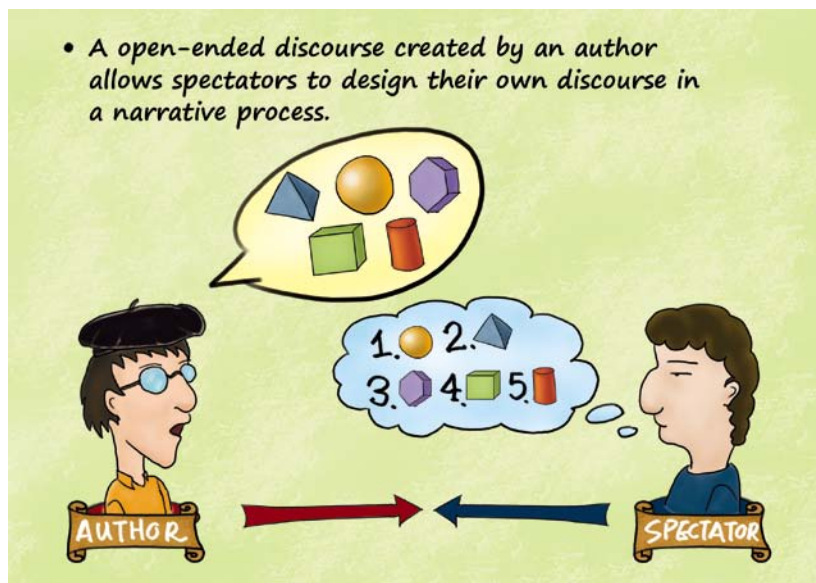
Picture 27: the experiment of “Dark room” with different viewing orders (Tang, 2008)

<sup>49</sup> Deleuze & Guattari (1972) see 2.1.

<sup>50</sup> See 3.2.

<sup>51</sup> Deleuze (1994) see 2.1.

Chatman (1978, p. 19) argues that a narrative has two parts: one is a story (content); the other is a discourse (expression). The story is what is in a narrative and the discourse is how to tell the story. Applying the argument of Chatman to the multiple frames narrative (Picture 28)<sup>52</sup>, an author presents story content within multiple frames, and the movement-image and spectators create their own discourses by reconstructing the multiple frames with the time-image, resulting in different chronological orders of story fragments.



Picture 28: A screen shot retrieved from a presentation at the 2009 Postgraduate Conference by Tang (2009)

Therefore, multiple frames narrative with the montage of the movement-image can offer an opportunity for spectators to become co-authors in the aspect of discourse in the design process of a narrative. This is an important discovery in my research that will become the core of my following exploration.

### 3.4 Multiple frames with equal hierarchy – Freedom of spectators in perception

#### 3.4.1 The model of panopticon – the power of observing all

The multiple frames narrative with the movement-image<sup>53</sup> allows spectators to reconstruct story fragments in their chronological order in the way that an author does in the design process of story narrative. If I assume that the spectators can become co-authors in the multiple frames narrative,

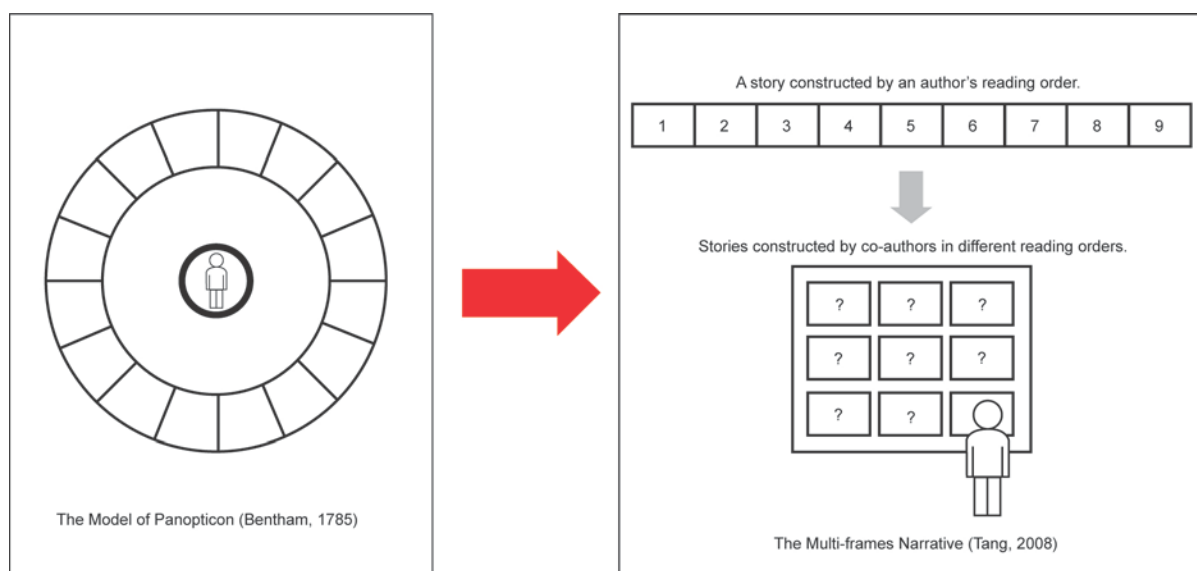
<sup>52</sup> See Appendix 12 for the animation of the experiment.

<sup>53</sup> Deleuze (1986) see 3.2.

the spectators have the power of an author in a narrative, which means that the spectators stand in the position of an author. How to define the position of an author in the process of narrative? I find that the design of the model of Panopticon, which was originally designed by Bentham (1785), shows the position of a dominator in the model like the position of an author in a narrative. The concept of the design is to allow an observer to observe visually all the prisoners, without the prisoners being able to tell whether they are being watched (Foucault, 1975). Foucault (1975) offers the following descriptions:

At the periphery, an annular building; at the centre, a tower; this tower is pierced with wide windows that open onto the inner side of the ring; the peripheric building is divided into cells... All that is needed, then, is to place a supervisor in a central tower... like so many cages, so many small theatres, ... perfectly individualized and constantly visible. The panoptic mechanism arranges spatial unities that make it possible to see constantly and to recognize immediately (p. 200).

The model of Panopticon is a system providing a possibility to observe all cells in the system from a dominant position of view. The multiple frames narrative also provides possibilities for spectators to view all the story fragments from the position of an author. Therefore, I applied the design of panopticon to the multiple frames narrative (Picture 29).



*Picture 29: The model of Panopticon (Bentham, 1785) is applied to the multiple frames narrative (Tang, 2008)*

Firstly, I deconstructed a story into many fragments. Secondly, I put all the fragments on to one screen and showed all of them at the same time. Thirdly, I placed a spectator in front of the screen,



like the observer in the Panopticon, seeing all the fragments. Using the movement-image<sup>54</sup>, the spectators can organize the fragments and create their own timelines of the story. In the model of Panopticon, all the cells have an equal size and status on the screen, which allows the observer to view every cell equally. Thus, the multiple frames narrative in equal hierarchy can erase the authors' dominant influence and maximise the freedom of perception for the spectators. Although the spectators may have reading habits like the western reading order or the eastern reading order<sup>55</sup>, there are still some possibilities that the spectators can reconstruct the story fragments in different orders.

### **3.4.2 Quantity of frames with equal hierarchy**

Based on the model of Panopticon, I used one part of the Disney film, "Snow White and the Seven Dwarfs" (Hand, 1937) to experiment with the idea of multiple frames narrative with equal hierarchy. I used an existing story to save the time of making new stories, and to quickly find out the results of the experiments of multiple frames narrative with equal hierarchy. The following experiments were conducted to find out how the quantity of the frames would influence the perceptions.

By referring to the animation short film, "the end of the world in four seasons"(Picture 30), (Driessen, 1995), I used nine frames on one screen to represent the story of "Snow White" (Picture 31)<sup>56</sup>. As the duration of the original film is about one hour and twenty minutes, that was too long for the experiment, so I deconstructed the film into nine selected scenes. Then I put the nine scenes together on one screen.

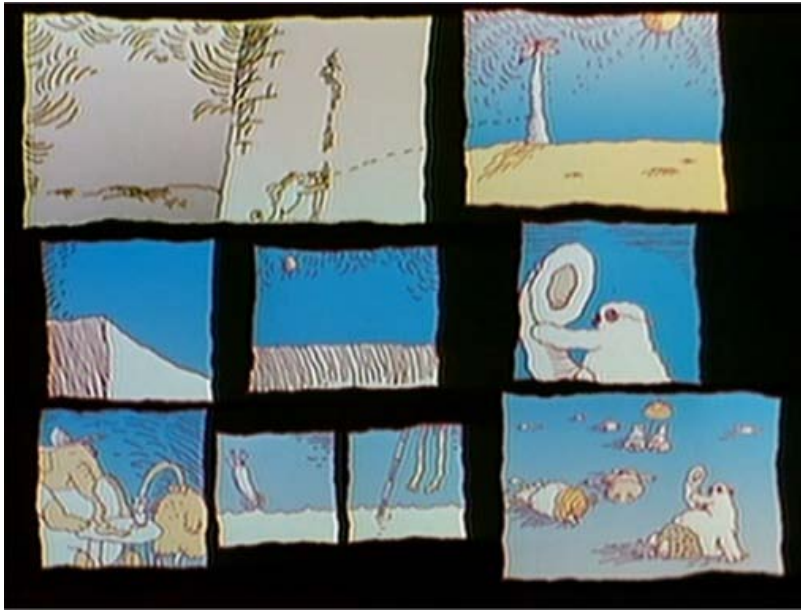
(The text of Chapter Three is continued in the next page.)

---

<sup>54</sup> Deleuze (1986) see 3.2.

<sup>55</sup> Carrier (1944) see 2.2.

<sup>56</sup> See Appendix 13 for the animation of the experiment.



Picture 30: A screen shot retrieved from an animation short film, “the end of the world in four seasons” by Driessen (1995) in *Animation Unlimited* (Walters & Faber, 2004)



Picture 31: A screen shot retrieved from the experiment of “Snow White and the Seven Dwarfs” in nine frames on one screen (Tang, 2009)

During the experiment, I discussed that there are three problems with using nine frames. Firstly, the nine frames make it hard for spectators to re-arrange the story, because the human eye can only focus on one activity at one time. I found that the human eye could only quickly scan through a maximum of two or three frames, with the loss of attention to the other frames. Secondly, the higher quantity of multiple frames cause shorter amount of time in which spectators can re-arrange

the story. When a story is deconstructed into several fragments that are presented at the same time, it means that the duration of the story is reduced to the same as the duration of the story fragments. For example, if a story with one hour duration is deconstructed into five fragments, the duration of the five frames narrative from the story only is contained in only twenty minutes. Thirdly, the information in each frame needs to be simple for spectators to understand and re-arrange. If one of the story fragments is too complex to be interpreted, how can the whole story be perceived? The animation short film “the end of the world in four seasons” (Driessen, 1995) is successful with nine frames because each story fragment contains no complicated information and the fragments loop for spectators to view again.

To solve the problems of the higher quantity of frames and the shorter duration of the story narrative, I added a play controller to each frame, which was inspired by a scene from the movie, “Minority Report” (Spielberg, 2002). The scene (Picture 32) describes how Chief John Anderton uses his hands to re-arrange the fragments of a pre-crime scene on one touching screen in the movie. Therefore, the play controller on each frame allows spectators to play, stop and pause each story fragment, like the pre-crime scene in “Minority Report” (Spielberg, 2002). This means that the spectators can re-arrange the story fragments without limitation from the quantity of frames and the duration of the story fragments.



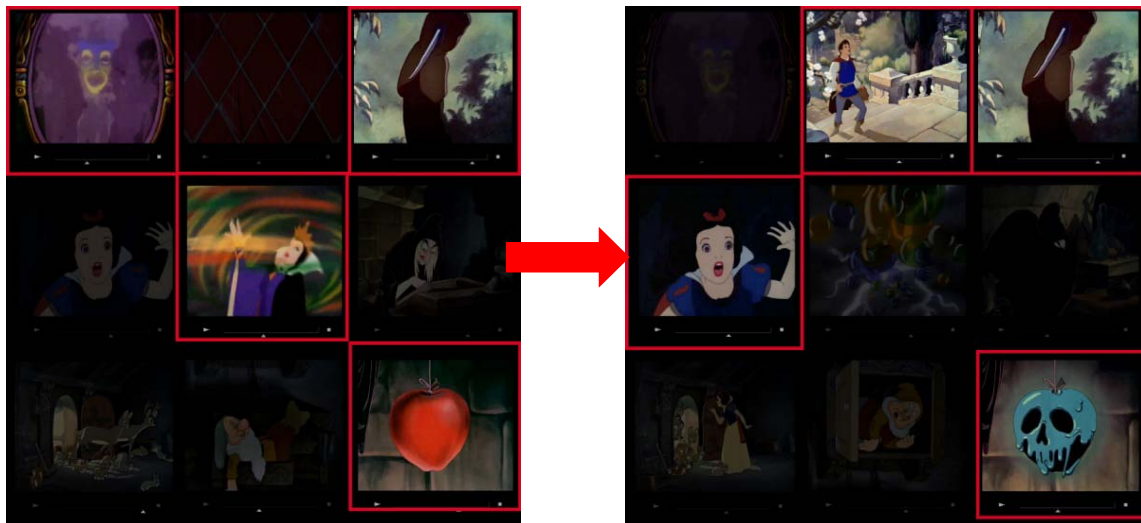
Picture 32: A screen shot retrieved from the movie, “Minority Report” (Spielberg, 2002).

The experiment of “Snow White and the Seven Dwarfs” in nine controllable frames (Picture 33)<sup>57</sup> shows that each story fragment has a controller with the functions of play, pause and stop. I can play, pause and stop any fragments that I want to perceive. So I can spend enough time on watching details in one frame, and I can also play back a fragment if it is unclear about connections with the

---

<sup>57</sup> See Appendix 14 for the animation of the experiment.

others. However, the problem with the controllers was that the design was only suitable for one spectator at one time.



*Picture 33: Screen shots retrieved from the experiment of “Snow White and the Seven Dwarfs” in nine controllable frames (Tang, 2009)*

This experiment with the controllers extended my research exploration in the area of interactive media, such as video games. Generally, video games involve interactions with a user interface to generate visual feedback on a video device. Every game contains one story that is created by game designer. Referred to my discussion about authors and spectators in the glossary, the game designer is the author of the games he/she creates; and the game players are the spectators during the games, which is also a narrative process composed by authors and spectators. Video games can be played by one or multiple spectators at the same time; for example, the online game World of Warcraft can be played by one player or a number of players through the Internet (Picture 34). Can the idea of video games be utilised to answer the problem of the previous experiment action with the controllers?



*Picture 34: A Screen shot of World of Warcraft retrieved from 15Game:*

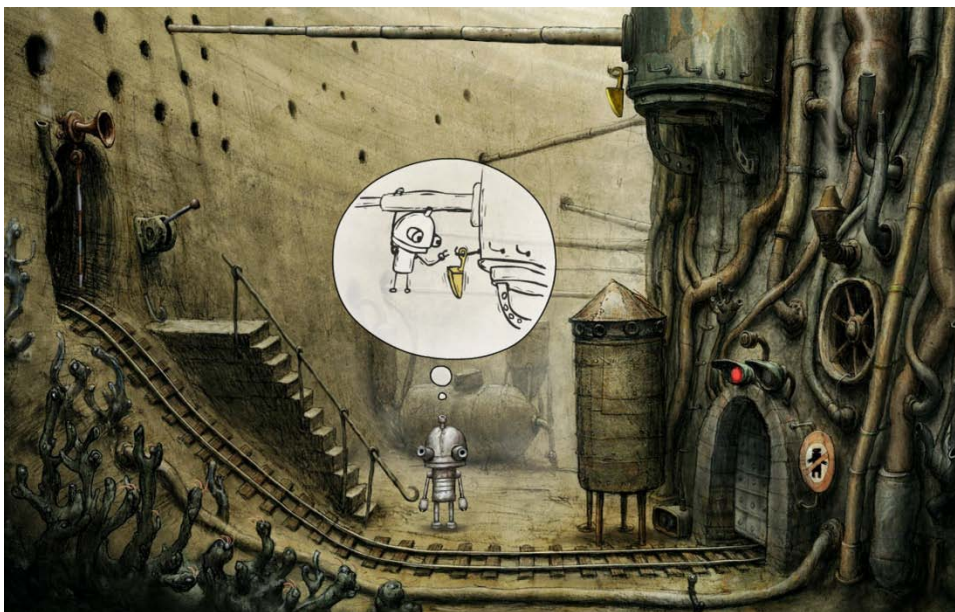
*<http://www.15game.com.cn/photo/bencandy.php?fid-314-id-2046-page-6.htm> (Unknown, 2009).*

My experimental purpose is to seek a new narrative approach to allow spectators to engage with stories and become co-authors in the narrative process. It means spectators could have ability or power to change stories at their positions. Is the interaction between game players and games the same that the participation between spectators and stories? If the game players can change the games, does it mean the game players become the game creators like the original designers? In my opinion, I don't think that the spectators (the game players) can become co-authors (game designers) in the interactive gaming process. In the award winning game "Machinarium" (Dvorsky, 2009), the game designers set up a series of rules to limit game players' activities and force them to achieve one result at every level of the game. Although the game players might play differently, the results are the same. It means the authors (the game designers) allow the spectators (the game players) to participate with the story (the game) only at a limited range without changing the ending of the story. From the screen shots of "Machinarium" (Dvorsky, 2009) (Picture 35 & 36), the game designers set up the way how to play the game, which implies that the game players can never be co-authors in the interactive gaming process because it involves a conflict between the values of authors and spectators in the narrative process. This will be discussed further at the end of this section. Moreover, my research focuses on exploring the relationship between authors and spectators in film narrative rather than creating an interactive cinematic gaming system. Therefore, my research will not get move into the area of video games, although the interactive cinematic gaming narrative is one of the potential developments in the multiple screens narrative.





Picture 35: A Screen shot retrieved from the video game "Machinarium" (Dvorsky, 2009).

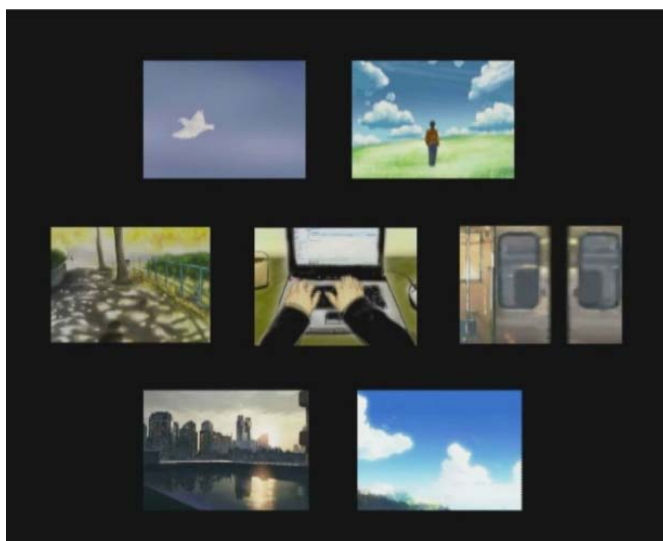


Picture 36: A Screen shot retrieved from the video game "Machinarium" (Dvorsky, 2009).

Without the controllers, how can I provide more time for the spectators to arrange the story fragments? And what will happen if I use equal multi-frames when telling a new story? Every one knows the story of "Snow White and the Seven Dwarfs", which means that the spectators already have the time line of the original story and it limits their imagination of a reconstruction of the story fragments. Thus, I created a new story, "Memory" (Tang, 2008) (Picture 37)<sup>58</sup> and deconstructed it into seven frames to prolong the time of reconstruction. Also, the story fragments contain simple

<sup>58</sup> See Appendix 15 for the animation of the experiment.

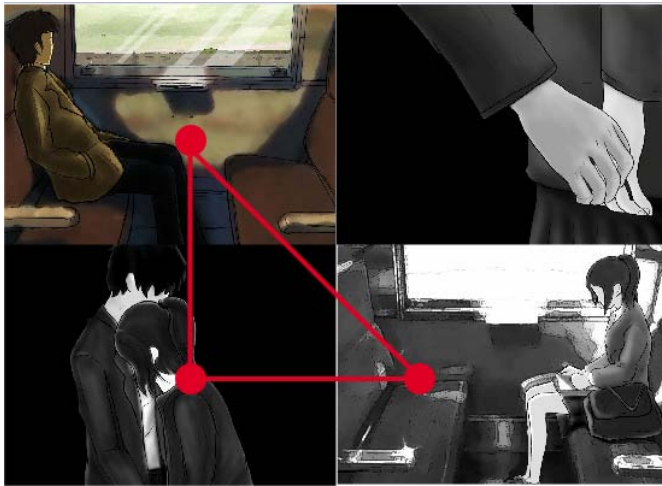
movements, to reduce the difficulty of arrangement of complex information. The story is about a man missing his lover, that is a combination of a number of the man's memory pieces. The experiment didn't achieve what I expected. First of all, the seven frames still contained too much information at the same time, even though the movements are simple and the number of frames is reduced. The number of frames must be decreased to an acceptable level for the human eye. Secondly, the multiple frames narrative with equal hierarchy can lead to a result that no spectators perceive the same story as that of the author. What is the value of an author in the process of narrative if the spectators have freedom of perception and lose the control of the author? This question is discussed further in Chapter Four about the conflict between the two parties' value in the process of story narrative – dominance of authors and freedom of spectators.



*Picture 37: A screen shot retrieved from the experiment of "Memory" in seven frames on one screen (Tang, 2009).*

In order to solve the problems with the experiment with the seven frames narrative, I needed to reduce the number of frames to a suitable level for visual arrangement. So I decreased the number of frames to four. Through the experimenting with the four frames narrative, I found that the outcome was much better than the previous experiments, but there were still three problems. The first problem (Picture 38)<sup>59</sup> was that my sight could only connect as a maximum the information of three frames in a short time, and the fourth frame's information was always missed in the process of reconstruction.

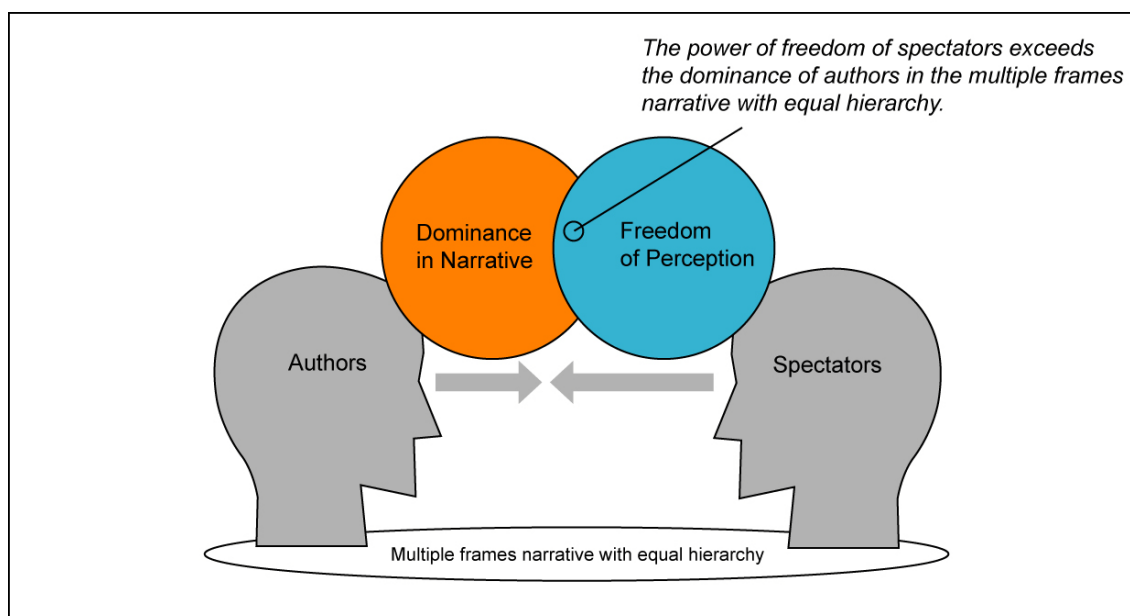
<sup>59</sup> See Appendix 16 for the animation of the experiment.



*Picture 38: A screen shot retrieved from the experiment of “Memory” in four frames with a triangle of visual connection between the frames (Tang, 2009)*

To summarize the results of the experiments with different numbers of multiple frame narratives, there were two main problems in the multiple frames hierarchy. The first problem was that the higher quantity of the frames brought more difficulties to spectators to reconstruct story fragments at a shorter duration of a narrative. Based on the results of the experiments about the quantity of multiple frames, three is the best quantity for the multiple frames narrative. However, the multiple frames narrative still has a drawback when representing the relationship between the position of authors and the position of spectators in the process of story narrative; this drawback is discussed further in the next chapter. The second problem is a risk that can result from the multiple frames narrative, which is the loss of the author’s value in the process of narrative, with uncontrollable perceptions (freedom of the spectators’ perceptions) applied to the authors’ stories (dominance in narratives) (Picture 39). This problem is discussed further at the end of the chapter.





Picture 39: A diagram of “freedom of spectators exceeding dominance of authors” (Tang, 2009)

### 3.5 Multiple frames with unequal hierarchy – Dominance of authors in narrative

The experiments of multiple frames narrative with equal hierarchy provided the freedom of perception to spectators by reducing the dominance of authors in the process of story narrative. But the freedom of perception brought a risk about losing the value of authors in narratives. For solving the problem, I changed the experiment direction to the side of the authors, to focus on the dominance of the authors in narratives to retain the value of the authors, by reducing the freedom of spectators. McCloud (1993, p. 99) claims that the shapes of comic panels can influence the reading experience in the aspect of story timelines. Because the multiple frames narrative is referred to as comic narrative<sup>60</sup>, in my understanding, the shapes of panels or frames, such as their sizes, can influence spectators to create viewing orders, which means that an author can use different sizes of frames to create an underlying order of viewing within the multiple frames narrative, and the underlying order may limit the freedom of perception of the spectators.

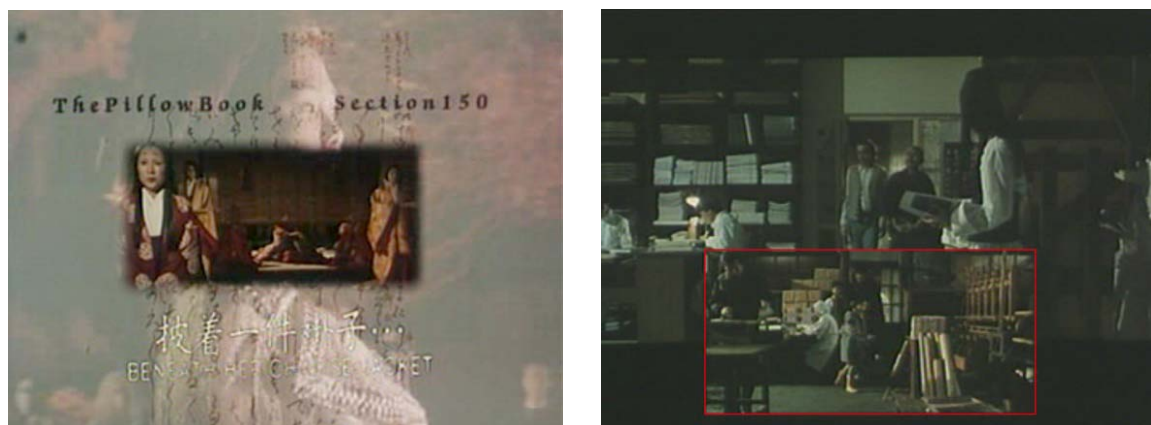
Therefore, I changed the multiple frames narrative with equal hierarchy to multiple frames narrative in unequal hierarchy for maintaining the authors’ stories, and examined it to find out if the spectators can still have freedom to create their own viewing orders. Moreover, I also considered that changes to the positions of frames might also influence the freedom of spectators’ perceptions.

<sup>60</sup> See 2.2.

The following experiments of multiple frames narrative with unequal hierarchy focussed on the aspects of positions and sizes of frames.

### 3.5.1 Positions of frames with unequal hierarchy

The first experiment refers to the method of frame-inside-frame from the film “The Pillow Book” (Greenaway, 1996) and explored how changes of positions of frame influence perceptions of spectators . In “The Pillow Book” (Picture 40), the narrative method of using two frames presents temporal montage, in which the small frame shows the future or the past, and the big frame as the background presents the present on one screen. The two frames connect two unrelated events happening in different time and space, and strengthen meanings of the conflicts in the story behind the scenes.



Picture 40: Two screenshots of “The Pillow Book” (Greenaway, 1996)

Inspired by the method of frame-inside-frame, I put two story fragments inside one story fragment to represent the conflicts in the story “Snow White and the Seven Dwarfs” (Picture 41)<sup>61</sup>. At the beginning of the experiment, one small frame shows that the “Queen” places an order to kill “Snow White”; the other small frame presents the killer drawing his knife; the big frame as the background shows “Snow White” being attacked. And then I changed the frames’ sizes and positions by following the movements of the characters within the frames. The first scene implies a conflict between “Snow White” and the “Queen”, and the change of the positions of the frames in the second scene shows a conflict between the killer and the “Queen”.

<sup>61</sup> See Appendix 17 for the animation of the experiment.



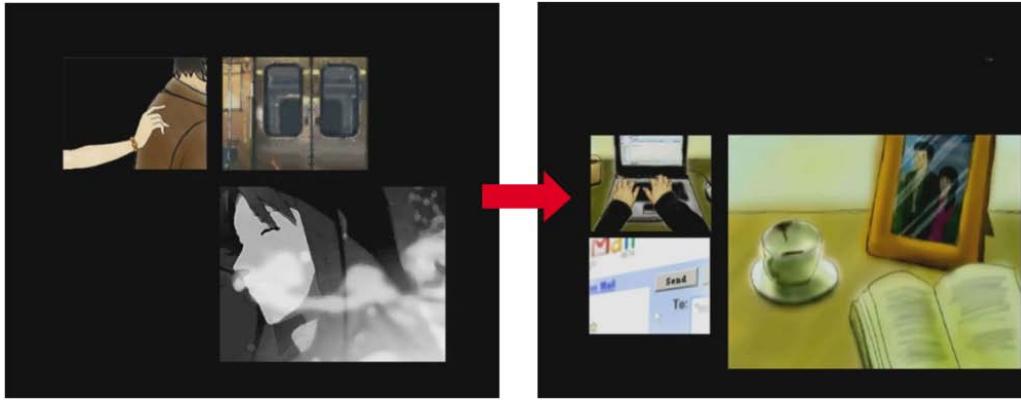
*Picture 41: Two screenshots retrieved from the experiment of frame-inside-frame based on the movie of "Snow White and the Seven Dwarfs" (Tang, 2009)*

The change of the positions of the frames creates a strong dramatic effect to perceptions and allows spectators to quickly understand the conflicts between the characters. However, the connections between the frames are quite obvious, which means that the spectators don't have other choices to reconstruct the story fragments. The change limits the spectators' imagination and fails to deliver the freedom of perception to the spectators.

### **3.5.2 Sizes of frames with unequal hierarchy**

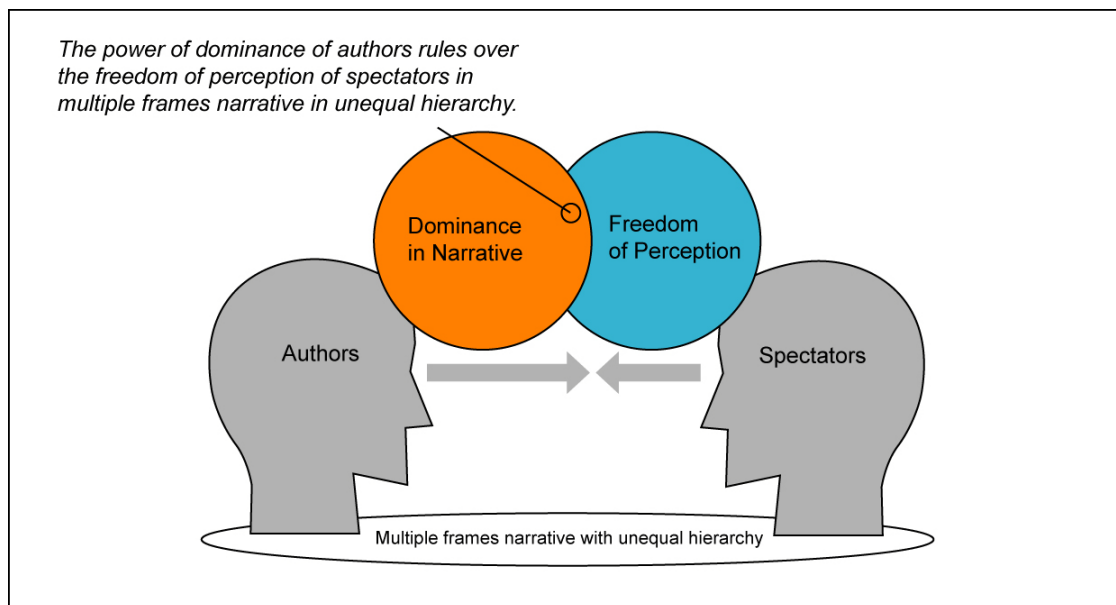
The second experiment tested how changes of sizes of frames in the animation of "Memory" affected perceptions of the story. I placed the frames with different sizes into one screen, and the sizes of the frames kept changing during the animation (Picture 42)<sup>62</sup>. Through the experiment, I found that no matter what information is showing in the three frames, human sight always catches the biggest frame as a starting scene. Therefore, the frame with the biggest size becomes the first scene, and then the one with smaller size becomes the second. This order is not arranged at the author's or the spectators' will, but created by human instinct in the visual aspect.

<sup>62</sup> See Appendix 18 for the animation of the experiment.



Picture 42: Two screenshots retrieved from the experiment of multiple frames narrative in unequal hierarchy in the animation of “Memory” (Tang, 2009)

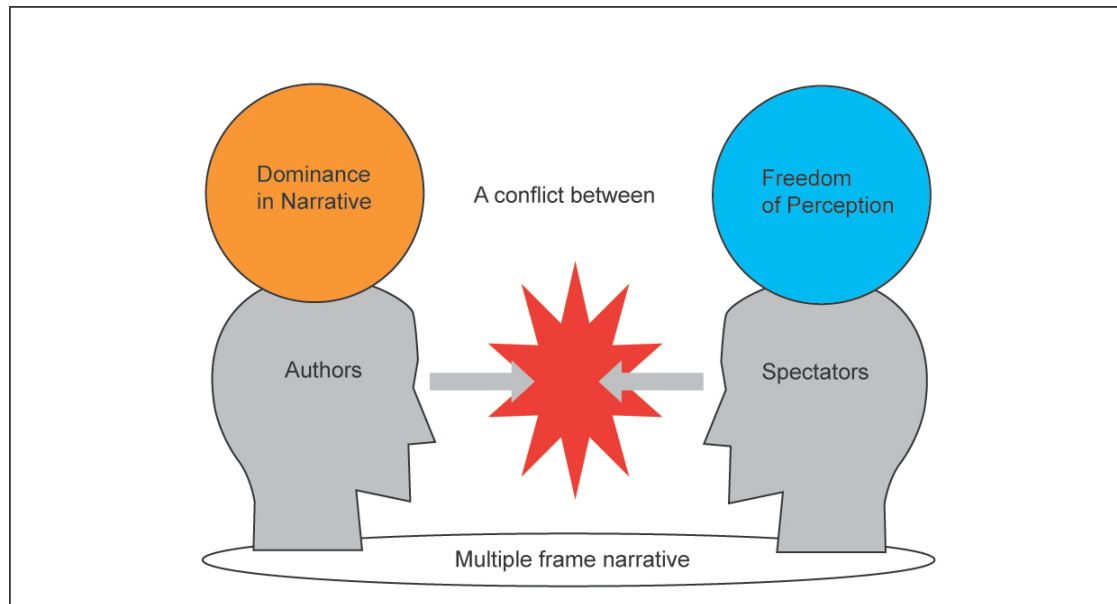
To sum up, the experiments about positions and sizes of frames in multiple frames narrative in unequal hierarchy brought out a problem that the dominance of the authors rule over the freedom of the spectators in the process of story narrative, because the underlying orders of viewing in the multiple frames narrative limit the freedom of the spectators (Picture 43). The Spectators cannot reconstruct story fragments and create their own viewing orders. It is impossible for the spectators to become co-authors in this kind of multiple frames narrative. Therefore, the multiple frames narrative in unequal hierarchy is not the answer to my research question.



Picture 43: A diagram of “dominance of authors exceeding freedom of spectators” (Tang, 2009)

### 3.6 A dilemma between freedom of spectators and dominance of authors

From the experiments of the two kinds of multiple frames narrative: equal hierarchy and unequal hierarchy, I found there is a dilemma between these two methods in the multiple frames narrative, which represents a conflict between the freedom of spectators and the dominance of authors (Picture 44).



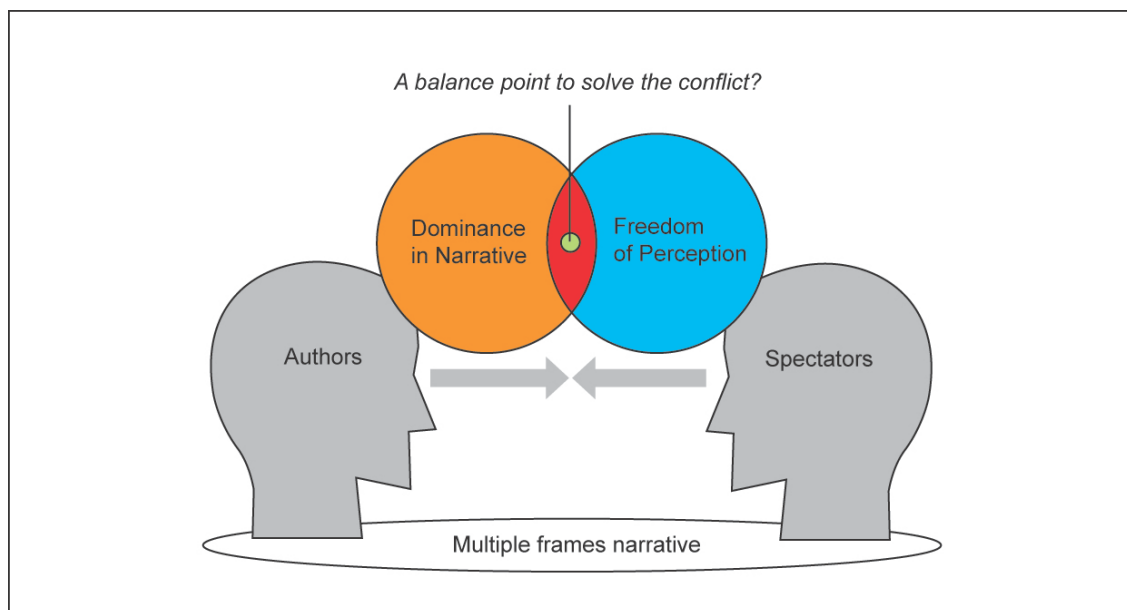
Picture 44: A diagram of “a conflict between dominance of authors and freedom of spectators” (Tang, 2009)

What is the freedom of spectators in perception? Based on the theories of “the death of the author”<sup>63</sup> (Barthes, 1978) and freedom of perception<sup>64</sup> (Deleuze, 1994), spectators have the freedom to perceive stories at their free will because perceptions are controlled by the spectators’ virtualities. What is the dominance of authors in narrative? Ellis (1982) argues that authors want to offer film narratives with as wide as possible a range of curiosities to spectators as a ideological trends in society. From my understanding, the authors always expect as many as possible spectators to understand and perceive their stories. And the story narratives are created accompanied by the assumption of a general understanding of the world, which can be interpreted by the spectators who have a similar understanding. None of the authors would tell a story that no spectators could understand. Therefore, the spectators have the power of freedom of perception that conflicts with the power of authors – the dominance in narrative.

<sup>63</sup> See 1.4.

<sup>64</sup> See 2.1.

The multiple frames narrative seeks a possibility for the spectators to become co-authors and participate with the process of story narrative in the aspect of designing discourses. In the process of the multiple frames narrative, the authors have to give up some of their power and give it to the spectators, and the dominance of authors and the freedom of spectators have to be connected together. Based on the experiments of the multiple frames narrative with equal hierarchy and unequal hierarchy, I found that both the dominance of authors and the freedom of spectators cannot rule over their opposite sides. Moreover, if I assume that the spectators can become co-authors, it means that the spectators could be equal to the authors in a narrative, and the freedom of the spectators could also be equal to the dominance of the authors. If both the parties could be equal, there should be a balance point between the two parties (Picture 45). Therefore, locating a balance point between the dominance of authors and the freedom of spectators is the only possibility for solving the research dilemma between the two parties and achieving my research aim. I pose two new questions: “can spectators be equal to authors in the process of a story narrative?”; “can this relationship between spectators and authors be represented in the multiple frames narrative?”. The next chapter focuses on exploring the relationship of equality between spectators and authors in a narrative and searching for the answer to the research question.



*Picture 45: A diagram about locating a balance point to solve the conflict between dominance of authors and freedom of spectators (Tang, 2009)*

### 3.7 Self dialogue in heuristics

The primary research method in my research is heuristics (Moustakas, 1990). Moustakas (1990) explains that, “heuristic inquiry is a process that begins with a question or problem which the researcher seeks to illuminate or answer”, and it is, “a way of self-inquiry and dialogue with others aimed at finding the underlying meanings of important human experiences” (p. 15). However, although I started my research with the research question “can spectators become co-authors?”, I didn’t have a theoretical base and enough experiences relating to the research area. Thus, at the beginning of the research, I had to use grounded theory<sup>65</sup> and action research<sup>66</sup> to build up a theoretical base and gather more experiences from theories and experiments. Also the exploration from Chapter One to Chapter Two is to prepare for a deeper exploration of the research question by utilising the method of heuristics in Chapter Three.

Based on the discovery of the multiple frames narrative in Chapter Two, the Chapter Three sought to develop the multiple frames narrative to explore the research question in the areas of spectators’ perception and authors’ narrative. I used the method of self-dialogue (Moustakas, 1990) from heuristics to explore both sides by becoming a spectator and an author. Self-dialogue occurs when one enters into a dialogue with what one is seeking to know, and allows the phenomenon to speak directly to one’s own experience and to be questioned, which is the critical beginning (Moustakas, 1990, p. 16). For example, in the experiments of the multiple frames narrative with equal hierarchy, I reduced the influence of the authors for having freedom of perception weighted towards the side of the spectators. Then, I critiqued the experiments to the side with the authors, and found out that the multiple frames narrative with equal hierarchy can cause the loss of the value of an author in a narrative, so it had a negative impact on authors. After that, I, as an author, limited the freedom of the spectators in the experiments of the multiple frames narrative in unequal hierarchy. To analyse the results of the experiments, I became a spectator to question the limitations from the author, and realised that the multiple frames narrative with unequal hierarchy works against spectators becoming co-authors.

Moreover, in self-dialogue, Moustakas (1990) argues that “one faces oneself and must be honest with oneself and one’s experience relevant to the question or problem” (p. 17). When I self-critiqued my experiments, I place myself at the opposite position and focus on disclosing myself with the question, which is a better way to facilitate disclosure than others. Because there is an issue of uncertainty about others’ participation in the process of investigation, an investigation that uses

---

<sup>65</sup> See 1.5.1.

<sup>66</sup> See 2.3.

outsiders could bring some unexpected difficulties from the investigation to the research. This is the reason why I use self-critiqueing instead of using an external source to participate in the investigation of the experiments.

Therefore, through self-dialogue between me as a spectator and as an author, I discovered the conflict between the freedom and the dominance, and a possibility to solve the conflict that is hypothesising a balance point between freedom of spectators and dominance of authors. The possibility leads to a new question, “can spectators be equal to authors in a narrative?” that allows me to explore the research question from an inverted perspective in the next stage. The inverted perspective will be discussed as a part of the method of heuristics in the following chapter.



## Chapter 4 The Relationship between Spectators and Authors in a Story Narrative and the Creation of Multiple Screens Narrative

Chapter Four will continue exploring the equality and the conflict between the freedom of spectators and the dominance of authors in story narratives, based on the question from Chapter Three. The exploration will seek to find the balance point between freedom and dominance by referring to two key theories: the theory of equality from Qi Wu Lun<sup>67</sup> (Graham in Yu, Bol, Owen & Peterson edited, 2000) and the theory of contradiction from Hegel<sup>68</sup> (2002). After that, the relationship between the spectators and the authors in the process of a story narrative will be discussed, accompanied by the research question “can spectators become co-authors?”. Then, I will discuss how the multiple screens narrative will be designed based on the method of multiple frames narrative, which will represent the relationship between the freedom of spectators and the dominance of authors within an installation. The research at this stage will continue to use the method of heuristics with the inverted perspective (Moustakas, 1990).

### 4.1 A conjecture about the equality between spectators and authors in the process of a story narrative

In order to seek the balance point between freedom and dominance, the discussion was to validate the existence of the equality between spectators and authors in the process of a story narrative based on the theory of Qi Wu Lun (Graham in Yu et al, 2000). The core brief of Qi Wu Lun (Graham in Yu et al, 2000) is “Seeing things as equal” (Graham in Yu et al, 2000, p. 58).

Gramham (in Yu et al, 2000, p. 63) explains the theory of Qi Wu Lun that, “What is *It* is also *Other*, what is *Other* is also *It*”, which means the *It* is equal to the *Other*. He argues that, “There they say ‘That’s it, that’s not’ from one point of view, here we say ‘That’s it, that’s not’ from another point of view”. In my opinion, the *It* is an identity or a meaning of a thing that exists in virtualities<sup>69</sup> and so is the *Other*. Because people have different virtualities, the meanings of the *It* and the *Other* in the different perspectives are changeable depending on how people define them. For example, the colour red represents happiness in the eastern culture but it also represents anger or danger in the western culture. However, the colour red in both eastern and western cultures is the same red. Therefore, everything is equal before human virtualities give them meanings.

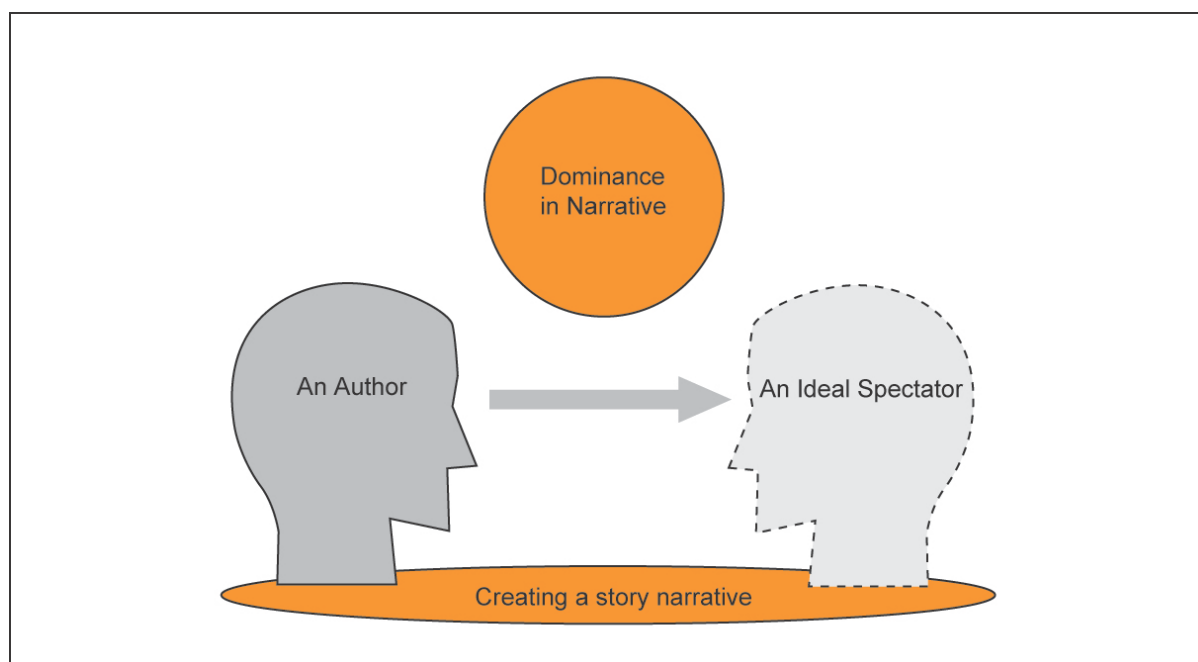
---

<sup>67</sup> The theory of Qi Wu Lun is original from Zhuangzi (370 – 301 BC).

<sup>68</sup> The theory of contradiction is original from Hegel in 1929.

<sup>69</sup> See 1.3.

From an author's point of view, when considering narratives, an author is equal to a spectator in the process of a story narrative. Ellis (1982) claims that each narrative proposes an ideal spectator and a position for that spectator. From my understanding, when an author creates a story narrative, the author expects an ideal spectator who could totally understand his or her story. However, it is impossible that real spectators can become the ideal spectators because different virtualities cause different perceptions, as referred to by the theory of "the death of the author"<sup>70</sup>. The only ideal spectator is the author himself. The ideal spectator's position offered by the author is actually the author's position in the narrative process (Picture 46). For example, A Chinese author tells a happy story to spectators by using the colour red. When the author presumes the spectators are Chinese people who can understand the meaning of the colour red in the eastern culture, the author shifts his or her position to the side of spectators and becomes a Chinese spectator by using the colour red.

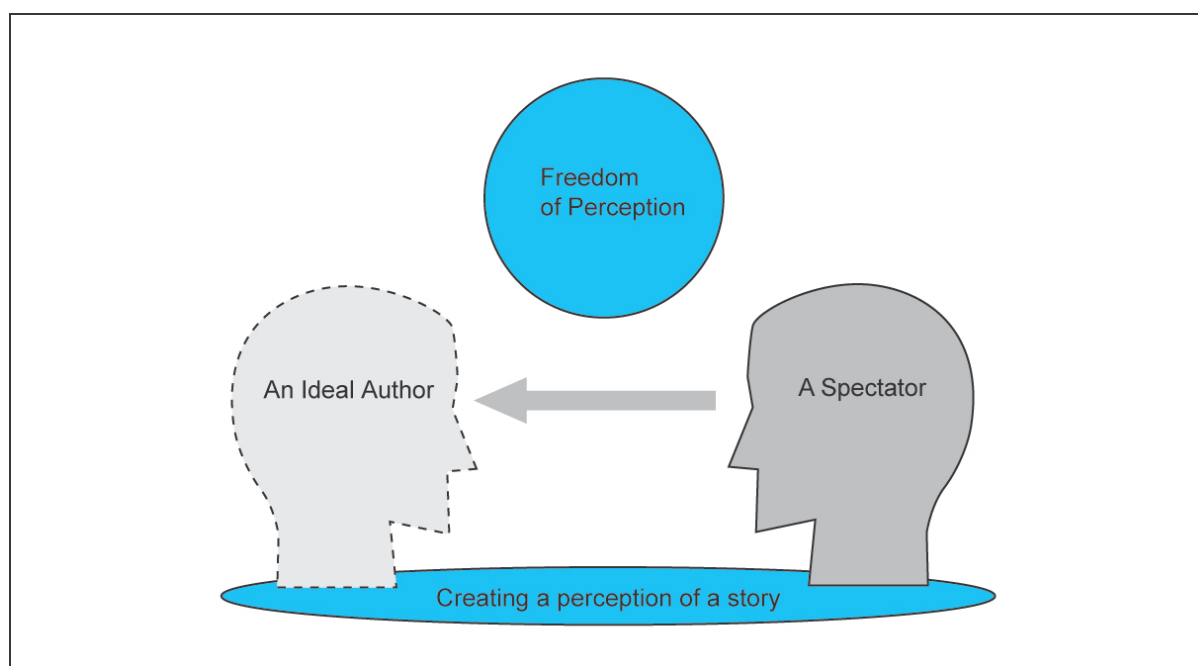


*Picture 46: A diagram about an author and an ideal spectator in creating a story narrative (Tang, 2009)*

From a spectator's point of view, when considering perceptions, a spectator is equal to an author in the process of perception. Chatman (1978) claims that any interpretations to a story are the spectators' psychological participations with the story (p.28). Based on the theory of "the death of the author", the spectators perceive the story with different understandings according to their own life experiences. In other words, the spectators become ideal authors to create their own stories through their psychological participation with the original story in the process of perception (Picture

<sup>70</sup> See 1.4.

47). For example, if spectators in the western culture perceive the story with the colour red, the story might become a demonic story. It means the spectators move their positions to the side of authors and become the authors of the new story.



Picture 47: A diagram about a spectator and an ideal author in creating a perception of a story (Tang, 2009)

Therefore, based on the theory of Qi Wu Lun (Graham in Yu et al, 2000) and the exploration of equality between the positions of spectators and authors, the spectators and authors can theoretically be equal to each other because their positions in the process of a story narrative can be interchanged. However, this conjecture about the equality doesn't involve itself with the discussion about the conflict between the two sides. If spectators and authors are equal, could the problem of the conflict be solved by locating the balance point? The next discussion will focus on the conflict and the existence of the balance point.

#### **4.2 An opposite voice against the equality between spectators and authors in the process of a narrative**

There is an opposite voice against the theory of equality from Qi Wu Lun (Graham in Yu et al, 2000), which is the theory of contradiction from Hegel (2002). Hegel (2002) claims that everything is inherently contradictory, and Rockmore (2002) explains:

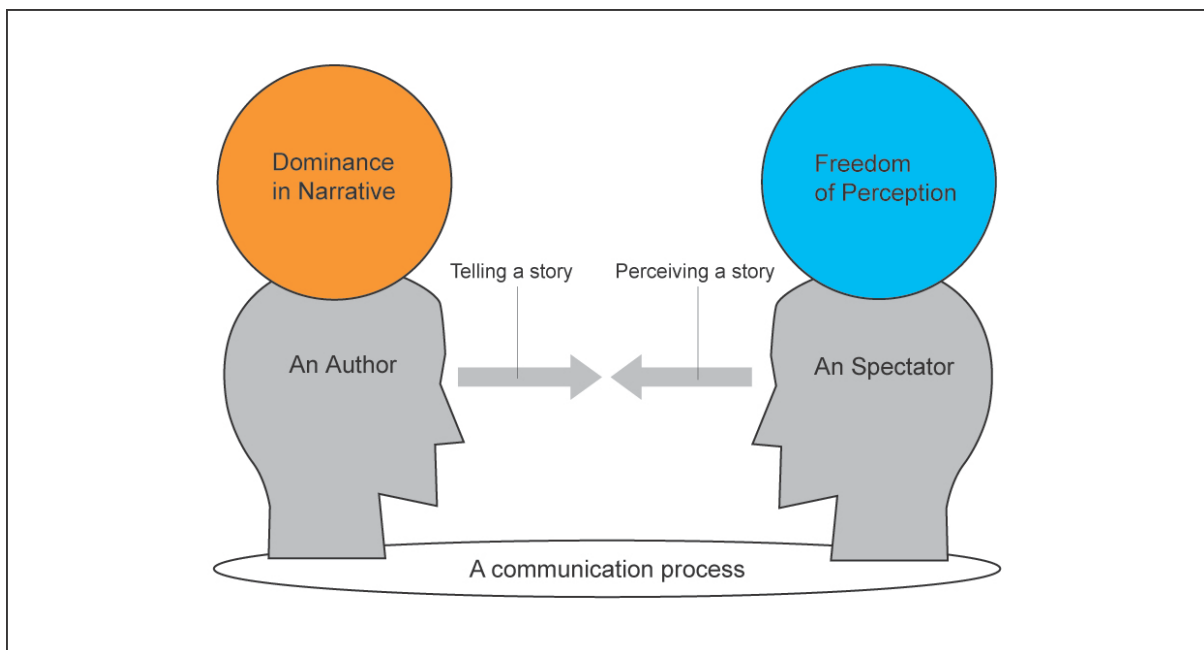
Every particular thing is doubly contradictory. On the one hand, it is a unity of unity and diversity, or more precisely the unity of its own singular existence, that is, that it is, or that

it exists, and its diverse properties, or how it is, in a word the unity of unity and difference.

On the other hand, as a unity it excludes other things or possibilities (p. 189).

I applied the theory to the process of a story narrative and found that it is a process of the contradiction between an author and spectators, which is represented by the communication with the conflict between the freedom of spectators and the dominance of an author.

Firstly, a process of a story narrative is a unity composed of an author and a spectator. Chatman (1978) argues that a narrative is a communication process from an author to a spectator. Therefore, the two sides in the process are the reason that the narrative exists. If the spectator is equal to the author, the spectator could become the author by shifting his or her position to the position of the author. Then the communication cannot exist, because the process lacks of one of the two sides. In other words, a spectator and an author exist depending on their opposite sides (Picture 48).

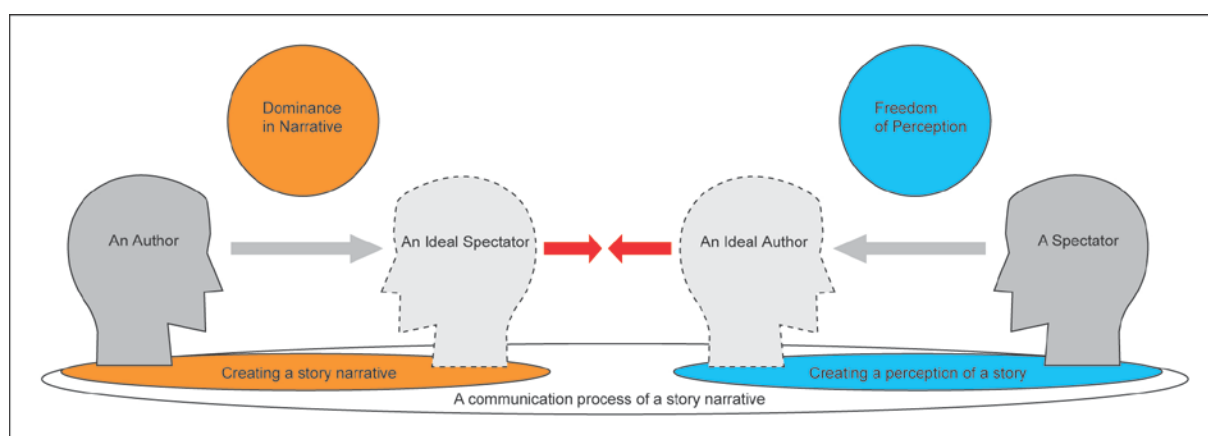


Picture 48: A diagram of the communication process between an author and a spectator (Tang, 2009)

Secondly, Chatman (1978) claims the real authors and spectators communicate only through their counterparts, which are only implied authors and spectators as their counterparts (p. 31).

Conversely, based on the equality of authors and spectators, the real authors and spectators should be able to communicate directly without the implied authors and spectators because the two parties have equal status in the processes. In my opinion, the real authors can only communicate with the real spectators via the implied authors and spectators. For instance, an author creating a story narrative bases it on an ideal spectator who can completely understand the author's story, and a spectator perceiving the story also depends on an ideal author who is the spectator's virtuality – the

representation of their understanding of the world. Thus, the direct communication happens between the ideal spectator and the ideal author (Picture 49). This demonstrates the diverse properties of unity in the theory of contradiction that Rockmore (2002) explains above, because the spectators may have different kinds of same understanding of the world with the author, hence the processes of the communications between the spectators and the author can be diverse. The diversity is represented by the conflicts between the author and the different spectators.



*Picture 49: A diagram of the communication process between an ideal author and an ideal spectator (Tang, 2009)*

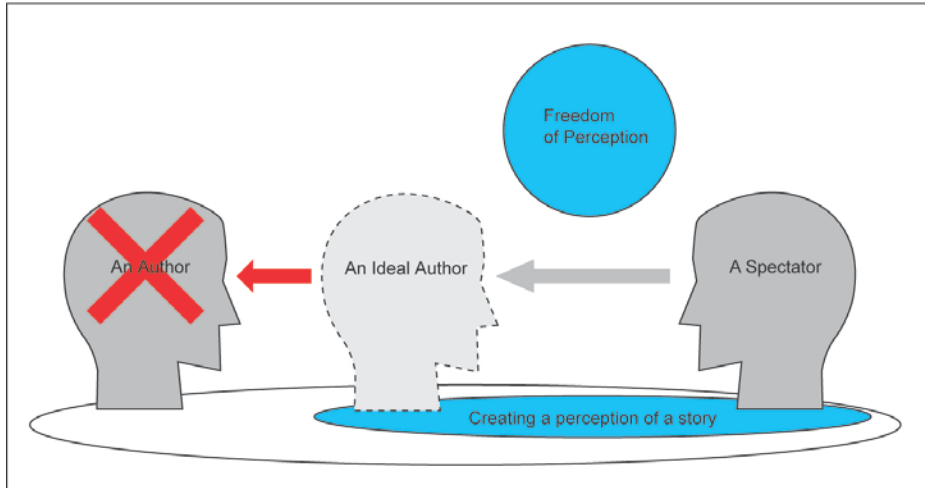
Thirdly, based on the argument of Rockmore (2002) about the theory of contradiction, I found that a story narrative excludes other unrelated perceptions; in other words, if a spectator's perception from a story narrative completely differs to what an author expects, the original story narrative to the spectator doesn't exist, and neither does the author. From the example of the happy story with the colour red<sup>71</sup>, if the western spectators perceive the happy story as a demonic story, the happy story doesn't exist in the process of this narrative and neither does the Chinese author. I believe that this is a particular example of the theory of "the death of the author" at an extreme level, which means the author is "dead" because no spectators understand the author's story or the spectators create completely different stories (Picture 50). Moreover, I also claim that there must be an opposite side to the theory of "the death of the author", which "the death of the spectator" is considering narrative from the author's point of view. "The death of the spectator" only happens when the author's story is completely understood without any loss of meaning, which means that the spectators' virtualities aren't involved in the process of perception (Picture 50). For example, when spectators perceive a story in the process of human perception<sup>72</sup>, the original information from the story has been changed by the spectators' thoughts before it arrives at the spectators'

<sup>71</sup> See 4.1.

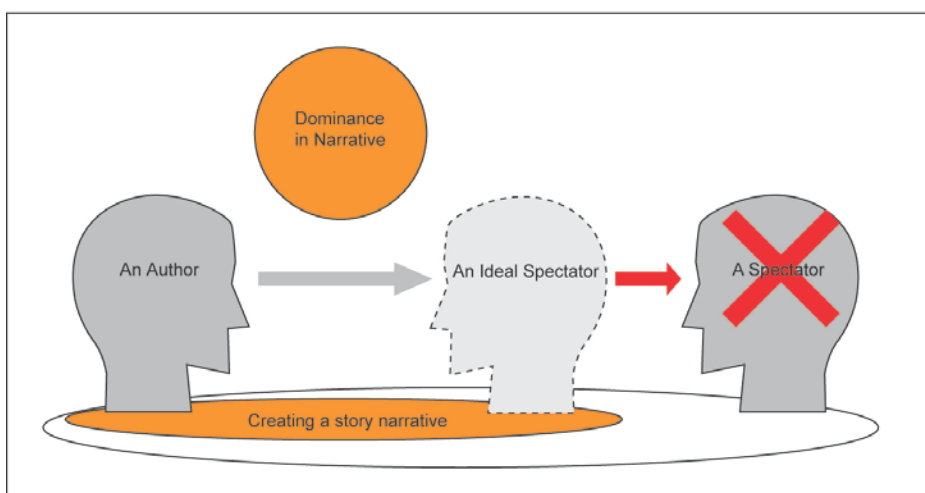
<sup>72</sup> See 1.3, Picture 7.

brains. It is impossible for spectators to receive information without thinking, except when the spectators' brains become computer hard drives for loading intact information – “the death of the spectator”.

#### The death of the author



#### The death of the spectator



Picture 50: A diagram of the death of an author and the death of a spectator (Tang, 2009)

The author always wants to control the spectators' perceptions from a dominant position in a narrative process and the spectators always create their own perceptions from a position of free will. This is the conflict between the freedom and the dominance, and neither of them can take full control in the process because of “the death of the author” and “the death of the spectator”. Therefore, in my opinion, there is no complete freedom for the spectators to become authors and create stories at completely free will; there is also no complete dominance for the authors to have ideal spectators to fully understand their stories. The conflict between the freedom of spectators

and the dominance of authors is vital to the existence of the spectators and the authors in story narratives.

To sum up, through the arguments about the equality and the contradiction between spectators and authors, I found that the equality only theoretically exists by referring to the theory of Qi Wu Lun (Graham in Yu et al, 2000). On the other hand, the contradiction (Hegel, 2002) is the vital condition of the existence of a story narrative, an author and spectators. And only the limited freedom of spectators and dominance of authors allow the spectators and the authors to perceive and tell a story in the process of a story narrative. Therefore, the conflict cannot be solved in the real world because the balance point between the freedom and the dominance doesn't realistically exist.

### **4.3 The findings of the relationship between spectators and authors in the process of a story narrative**

#### **4.3.1 The relationship between the freedom of spectators and the dominance of authors**

The contradiction discussed above is realistically irreconcilable in the relationship between the dominance of authors and the freedom of spectators, which testifies to the existence of spectators and authors in the process of story narratives. Thus, I reached the result of the research that spectators cannot become co-authors because of the contradiction in a narrative process.

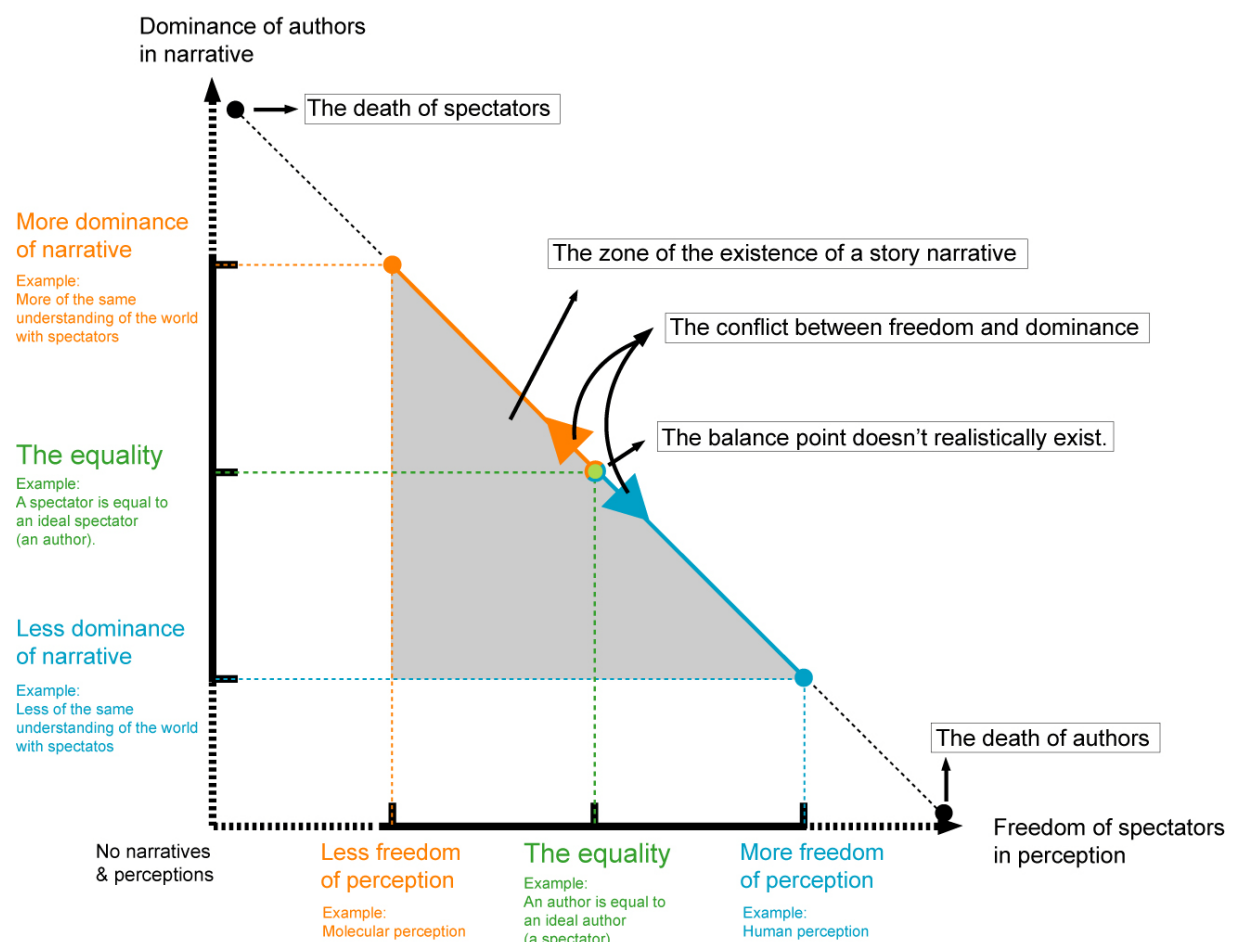
The contradiction is changeable because the diversity of spectators' perceptions brings different levels of freedom to the conflict with the dominance of authors. For instance, the dominance of an author might exceed the freedom of spectators in the process of a story narrative, because the author usually writes a story based on a common understanding of the world. Moreover, the dominance of the author might be overcome by the freedom of other spectators as the spectators' understanding of the world could be completely different to the author's. On the other hand, the author could become a spectator, or a spectator could be an author, when the equality between the two sides theoretically exists.

I created a diagram (Picture 51) to represent this relationship. The diagram is composed of one horizontal line, one vertical line and one oblique line. The horizontal line represents the freedom of spectators in perception and the vertical line shows the dominance of authors in narratives. The two lines compose a process of a story narrative from the authors to the spectators. The oblique line shows how the point of the contradiction moves between the two lines. The point at the top of the vertical line (the dominance of authors) shows "the death of the spectators"<sup>73</sup>, which means the

---

<sup>73</sup> See 4.2.

dominance of the authors has full control in the process of the story narrative. The other point at the right end of the horizontal line presents “the death of the authors”<sup>74</sup>, which shows the freedom of the spectators fully controls the process. The green point as the point of equality in the middle of the oblique line represents the balance point, which is connected by the points of an ideal spectator and an ideal author. It means the equality doesn’t exist in reality because an ideal spectator cannot be equal to an ideal author. Moreover, the green point with two arrows pointing in different directions represents the contradiction that can shift between the dominance of authors and the freedom of spectators. From the upper oblique line, it shows that the spectators have less freedom of perception when the authors have more dominance of narrative; the lower oblique line expresses the opposite result.



Picture 51: The diagram about the relationship between dominance of authors and freedom of spectators (Tang, 2009)

<sup>74</sup> See 4.2.



Based on the diagram, I applied the method of multiple frames narrative to design an installation that can physically represent the relationship between the freedom and the dominance. The following discussion explains the design of the installation.

#### **4.3.2 The design of multiple screens narrative installation**

The method of multiple frames narrative in Chapter Three was applied to search the balance point between the dominance of authors in narratives and the freedom of spectators in perceptions. Although the balance point doesn't realistically exist, the method of multiple frames narrative is the way that allows the dominance and the freedom to co-exist through the spectators' participations in the process of a story narrative.

Based on the previous exploration about the multiple frames narrative, the author tells a story within three frames by the method of the movement-image<sup>75</sup>, and the spectators create different discourses of the story at free will by the method of the time-image<sup>76</sup>. However, when an author creates a story narrative, the story narrative should include story content and discourse – the author's story timeline. Therefore, the only way to put the author's story timeline into the three frames is to ensure that the story timeline goes in the direction of the vertical line and the story space is presented at the horizontal line, as in the following diagram (Picture 52)<sup>77</sup>.

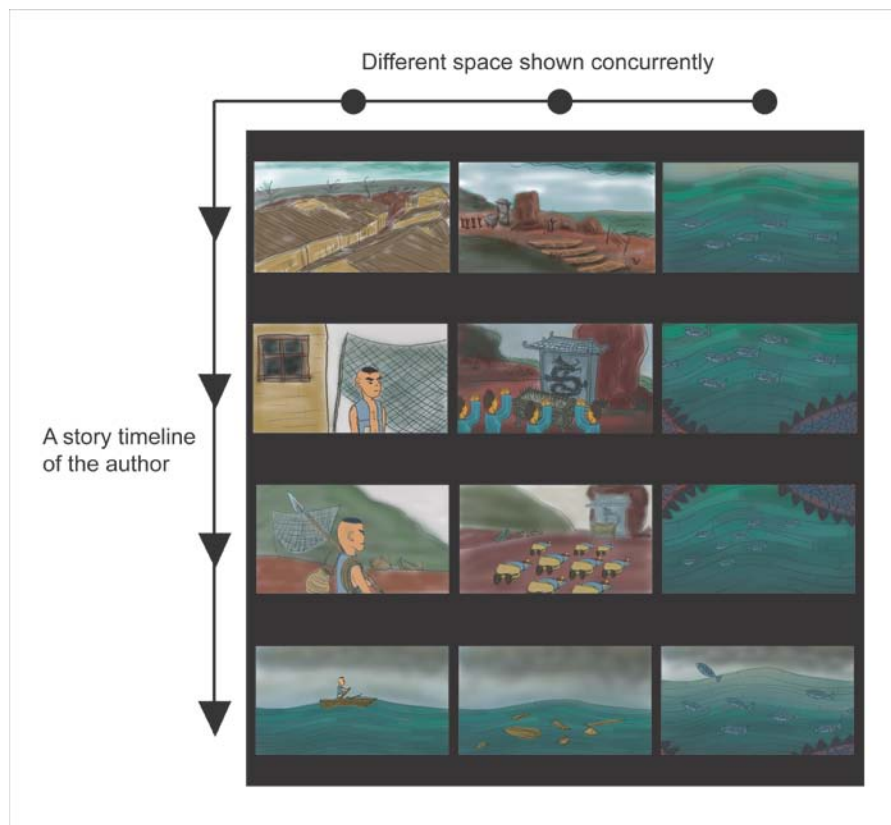
(The text of Chapter Four is continued in the next page.)

---

<sup>75</sup> See chapter 3.2.

<sup>76</sup> See chapter 3.2.

<sup>77</sup> See Appendix 19 for the animation of the experiment.



*Picture 52: The experiment about the story timeline of an author in the multiple frames narrative (Tang, 2009)*

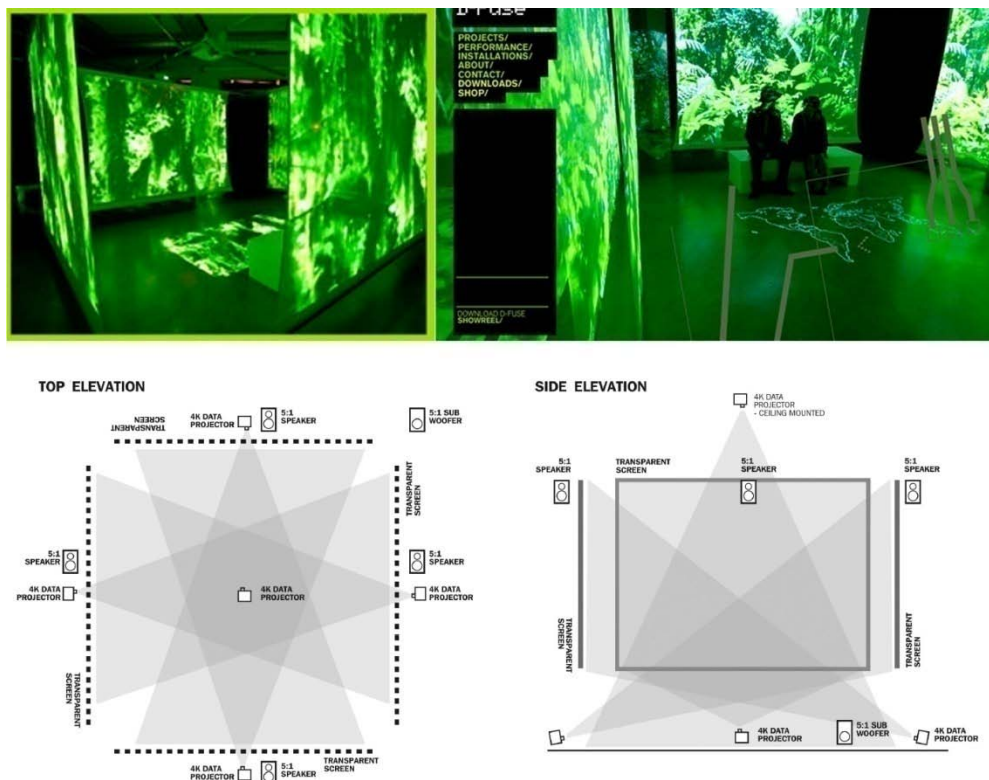
On the other hand, if I use the multiple frames narrative to present the author's story timeline, the spectators could possibly view it and limit their reconstruction of the story fragments because the multiple frames on one screen can easily be seen as one frame. Also any physical positions of the spectators in front of the screen can become the position of the ideal spectator, where the spectators see what the author wants them to see; this area only represents that the dominance of authors rules over the freedom of spectators. Thus, the method of the multiple frames narrative needs to be changed to a method that can separate the area in front of the screens into two areas: the position of the spectators (the freedom of spectators) and the position of the ideal spectator – the position of the author (the dominance of authors).

To divide the area into the two areas, the key is to allow the spectators to watch the frames one by one and all the frames as one. Inspired by the project of Small Global<sup>78</sup> (D-Fuse, 2001)(Picture 53) and the model of Panopticon<sup>79</sup> (Bentham, 1785), I changed the method of the multiple frames into a design of multiple screens narrative (Picture 54). The method of multiple screens narrative is

<sup>78</sup> The project of Small Global is composed of four individual screens that show the relationship between human consumption and the environment of the earth.

<sup>79</sup> See 3.4.1.

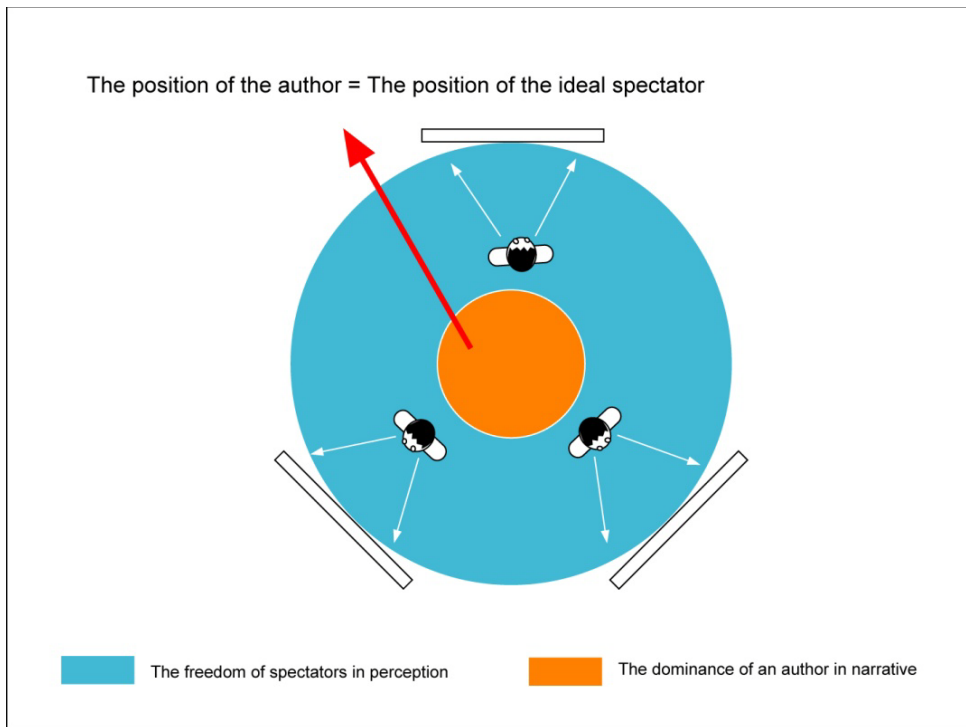
composed of three individual screens, where the screens are at the status of equal hierarchy. Three screens with equal hierarchy provide the spectators with the possibility of watching the screens in different viewing orders without objective interferences. A screen with the first sighting would become the beginning of a story, and based on the theory of limitation of perceiving<sup>80</sup> (Gibson, 1986), the spectators' perceptions are limited by their positions, so they can only see one part of the story at one time. Therefore, in order to see the whole story, they have to enter the position of the author. Referring to the model of Panopticon (Foucault, 1975)<sup>81</sup>, the position of the author is the dominant position in the middle of the installation for seeing all the story fragments, which is also the position of the ideal spectator. However, the central position is theoretically treated as the position of the ideal spectator, but real spectators cannot view 360 degrees at the same time in this position. Multiple screens with a circle shape (Picture 54) are the only ideal design to represent the relationship between the freedom and the dominance, but it is also non-realistic, because it only represents the area of the freedom of spectators physically.



Picture 53: Screen shots retrieved from the installation of "Small Global" (D-fuse, 2001).

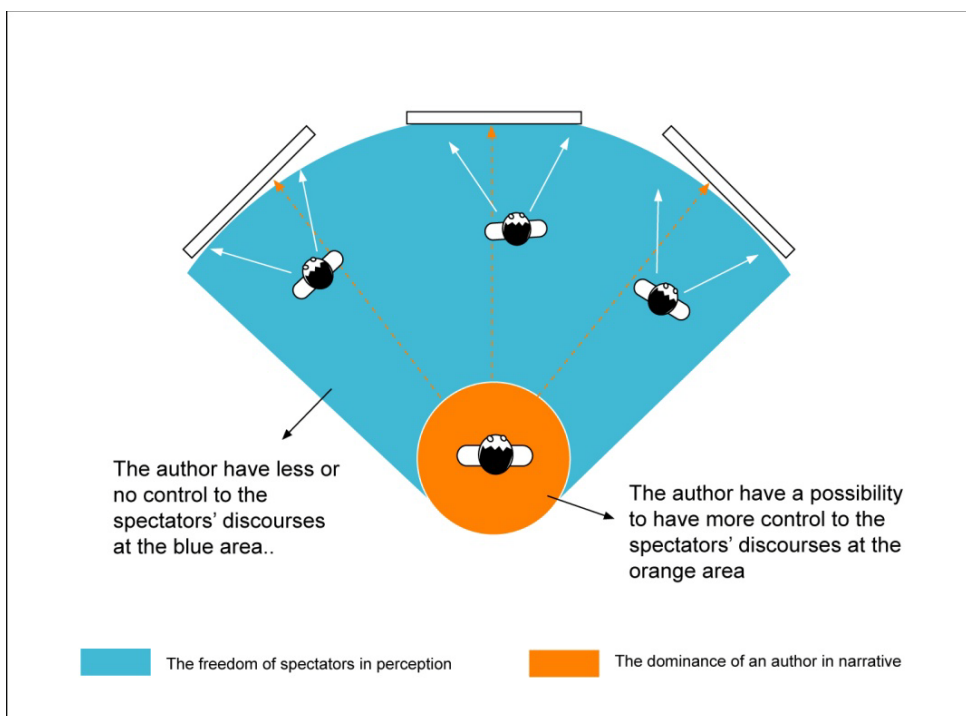
<sup>80</sup> See 1.2.

<sup>81</sup> The design of the model of Panopticon is original from Bentham (1785).



Picture 54: A diagram of the installation of multiple screens narrative with a circle shape (Tang, 2009)

Therefore, to synthesize the method of the multiple frames narrative and the multiple screens narrative, I changed the design of the multiple screens narrative with a circle shape to the one with half a circle shape.



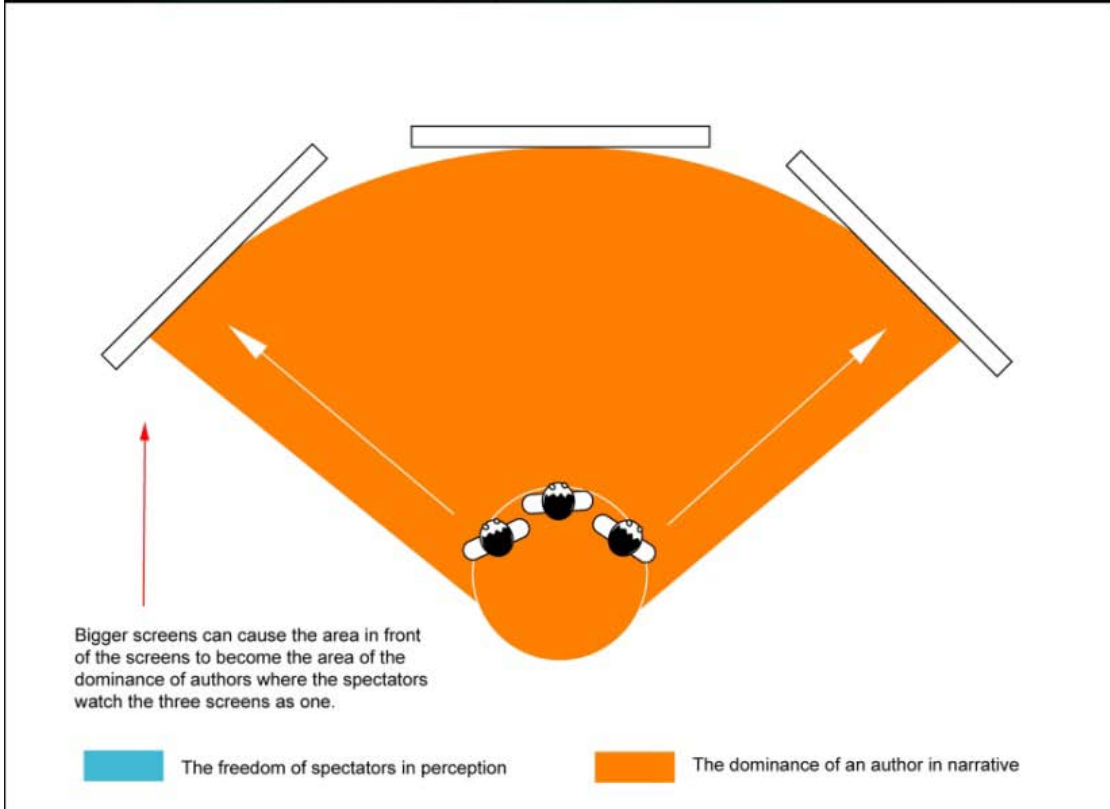
Picture 55: A diagram of the installation of multiple screens narrative with half a circle shape (Tang, 2009)

The design of the multiple screens narrative with half a circle shape (Picture 55) can represent both the dominance of authors and the freedom of spectators in the area in front of the three individual screens, which forms a shape of half a circle. The blue area represents the freedom of the spectators, where the spectators can freely move their physical positions and view the screens one by one for creating their own story timelines. The orange area implies the dominance of the author, because the author has a possibility to have more control over the spectators' discourses when the spectators view the three screens as one and perceive a story with the author's story timeline at this area. Why does the author have only the possibility of the dominance? From my observation, the spectators in the area can still watch the screens one by one without the author's control. The reason is that the balance point between the freedom and the dominance doesn't realistically exist. The orange area only contains one possibility of the dominance of the authors, which is not equal to the blue area. The freedom of the spectators actually covers both the areas. Thus, the freedom of the spectators exceeds the dominance of the authors in the design of the installation. This is the disadvantage of the design as it is developed for engaging spectators to participate with the process of a story narrative without a consideration of how to create stories at the authors' point of view.

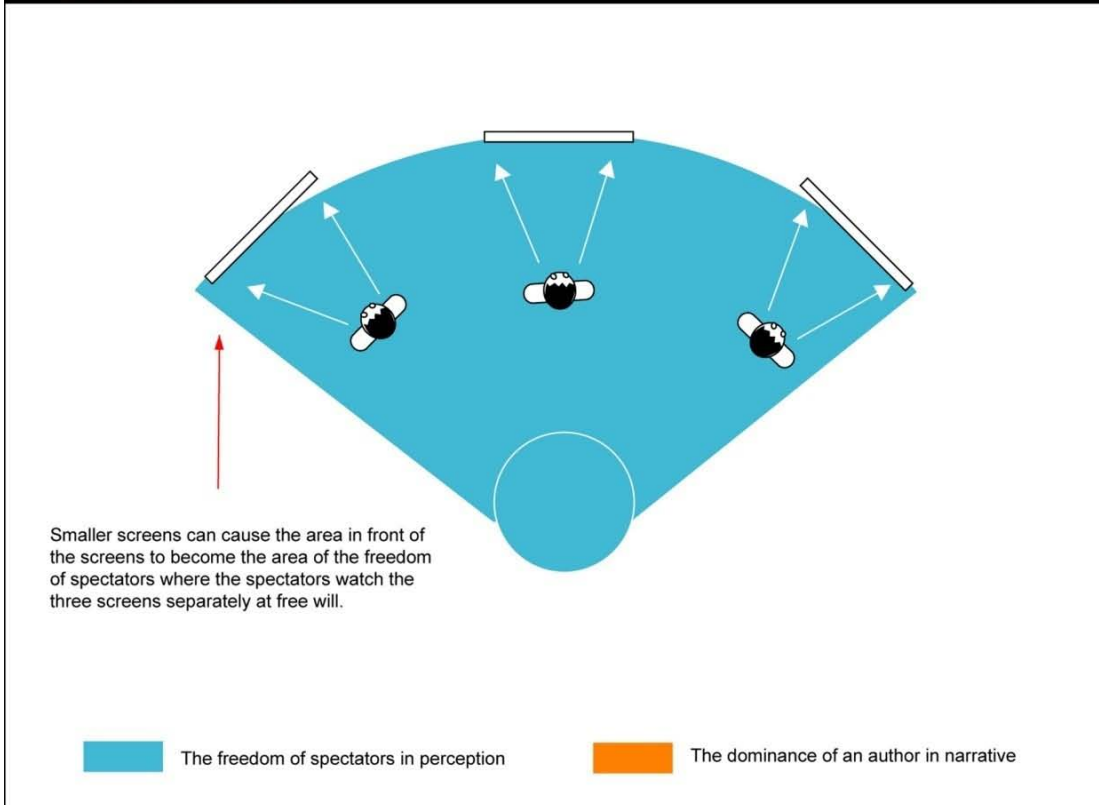
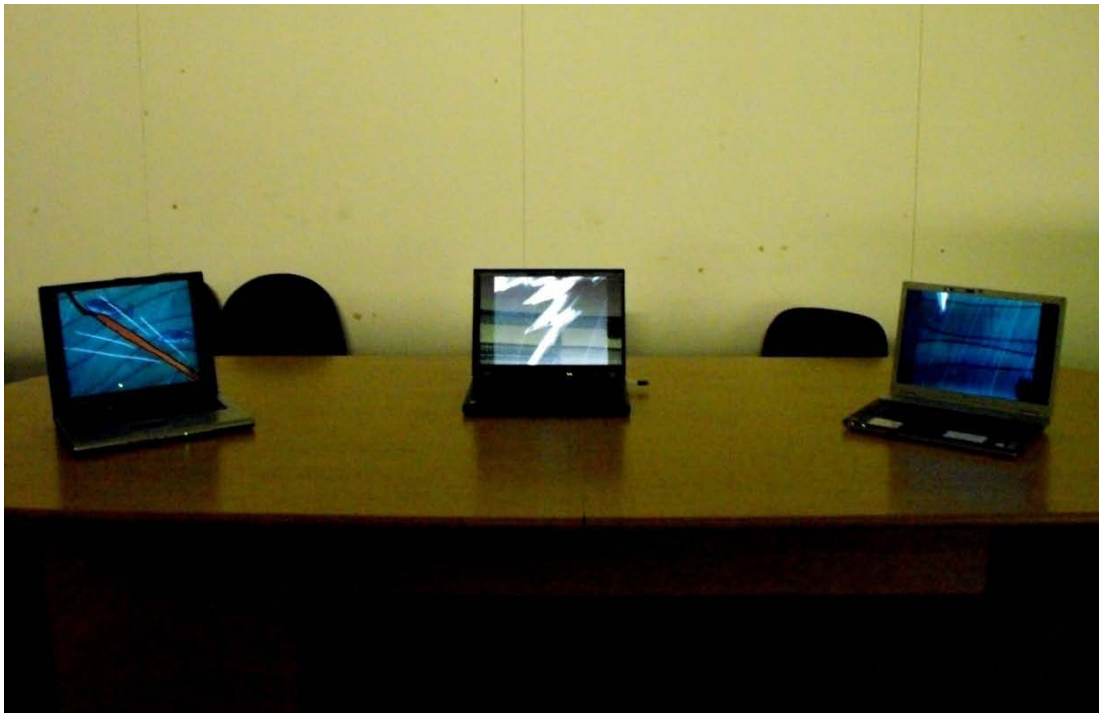
#### **4.3.3 The size of the screens and the distance between the screens in the installation**

The size of the screens will influence spectators to watch the story at different positions whether it is close to the screens or far away from the screens. When the spectators stand close to the screens, they will have to watch the screens one by one; when the spectators stand far away from the screens, they will have the possibility of watching the screens as one. The screens with a bigger size will force them to stand further away from the screens, which can change the previous area into the area of the dominance of the authors (Picture 56). The screens with a smaller size will require the spectators to stand closer to the screens, which can transform the area in front of the screens into the area of the freedom of the spectators (Picture 57).

(The text of Chapter Four is continued in the next page.)



Picture 56: The experiment of using bigger screens on the multiple screens installation (Tang, 2009)

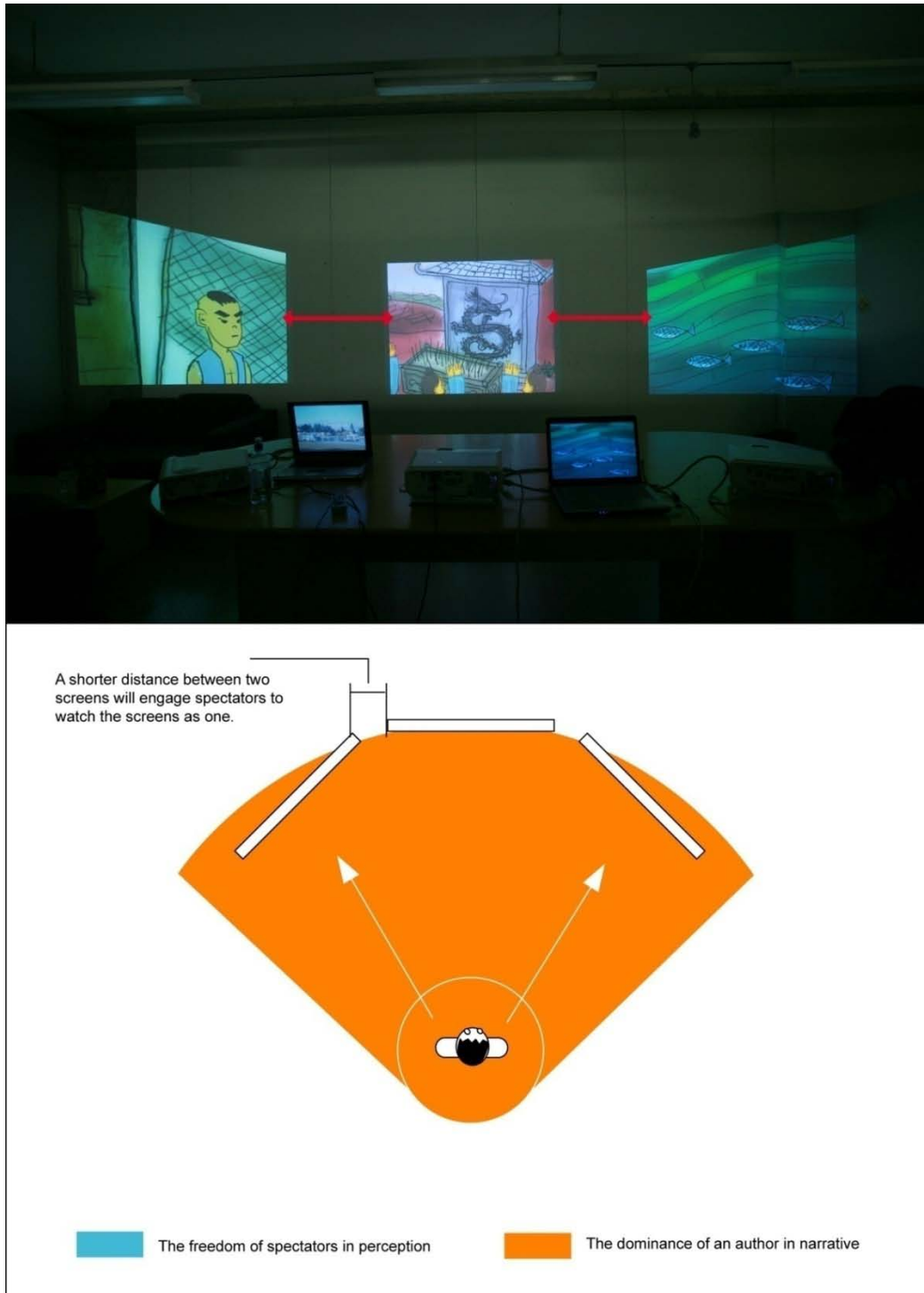


*Picture 57: The experiment of using smaller screens on the multiple screens installation (Tang, 2009)*

Moreover, the distances between the screens can also affect the spectators to re-arrange the story fragments at different positions. The shorter distance between the screens can engage the spectators to watch the three story fragments as one by glancing at them quickly (Picture 58). On the other hand, the longer distance between the screens leads the spectators to view the fragments

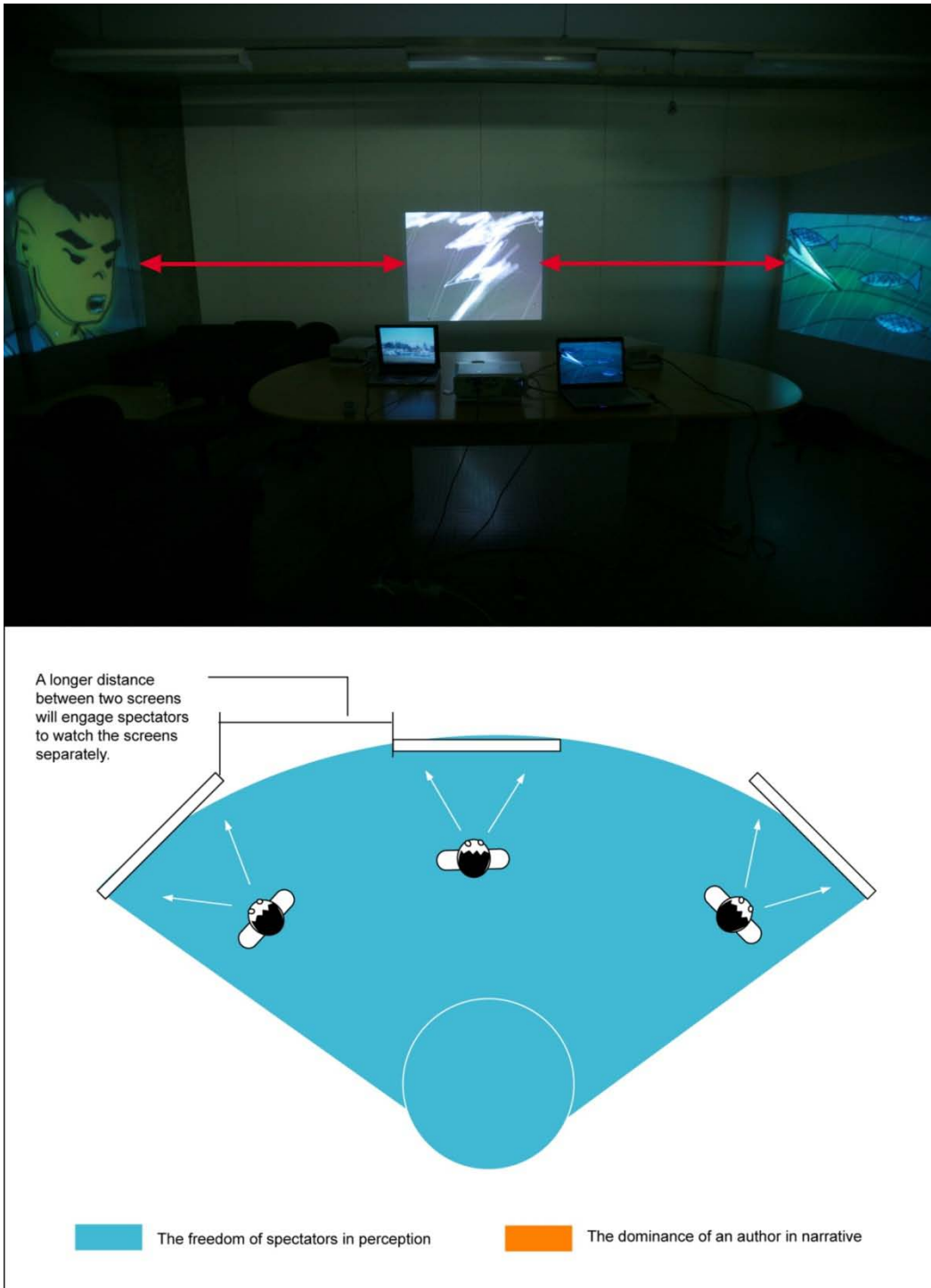


one by one. The spectators may still stand farther away from the screens for watching all as one. However, the smaller screens with the longer distance increases the difficulty of perceiving all the screens as one at the position of the author (Picture 59).



Picture 58: The experiment of showing shorter distance between screens in the installation of the multiple screens narrative (Tang, 2009)

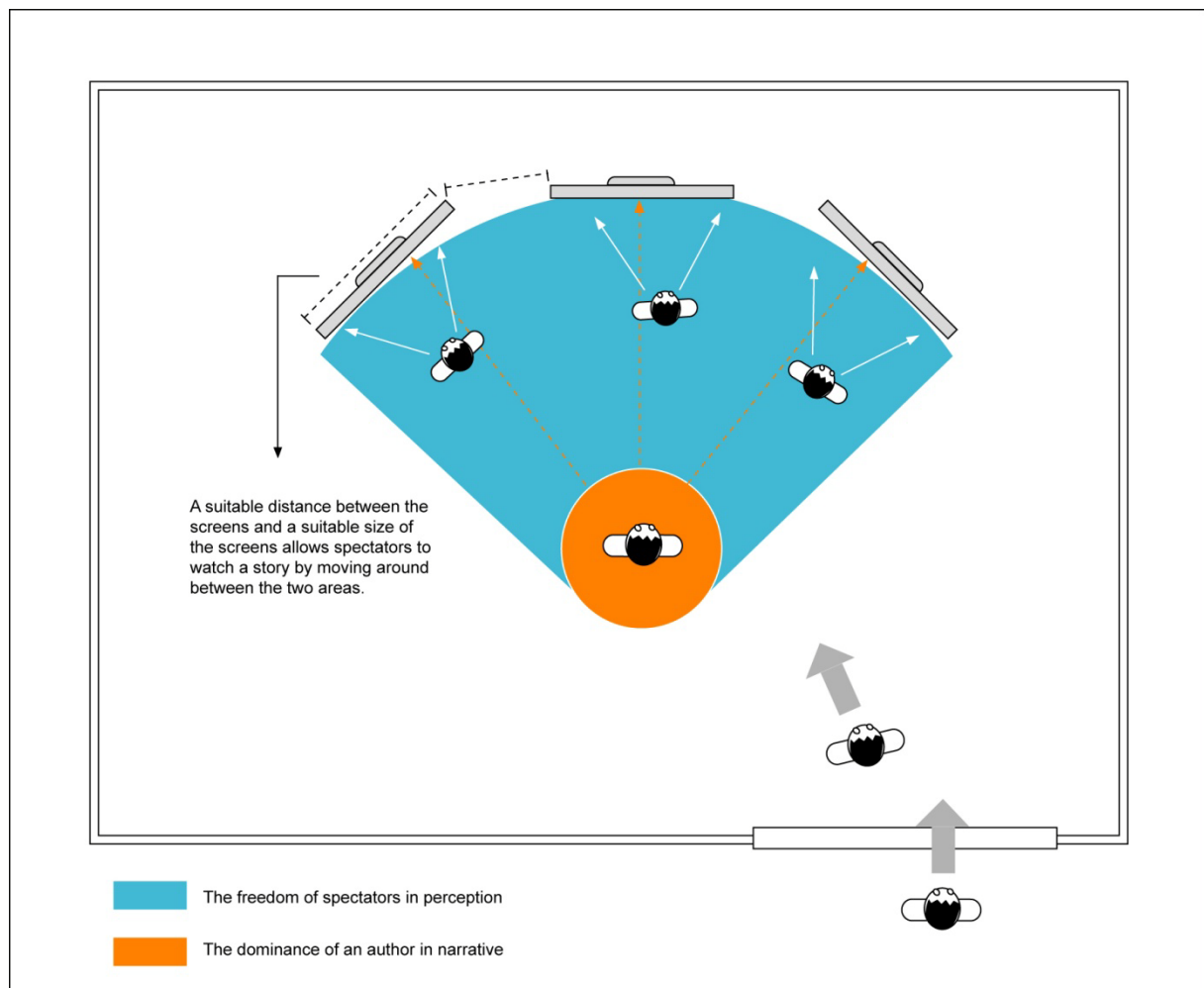




*Picture 59: The experiment of showing longer distance between screens in the installation of the multiple screens narrative (Tang, 2009)*

To summarise, the bigger screens and shorter distance between the screens can bring more possibilities to the spectators to stand at the position of the author and watch all the story fragments as one. The smaller screens and longer distance between the screens has the opposite impact on the spectators' perception, which engages them to stand at the position of spectators.

The size of the screens and the distance between the screens influences the outcomes of the installation by shifting the position of the spectators between the areas of the dominance and the freedom, which represents the conflict between the two sides. Thus, the perfect size of the screens and distance between the screens, such as the balance point is hard to be found in the space of the installation as the non-existence of the balance point implies the irreconcilable contradiction between the freedom and the dominance. Therefore, I can only hypothesise that there would be a suitable size and distance that could allow spectators to watch the three screens and re-arrange the story fragments with their own discourses, by moving their positions and sight between the areas of the dominance of the authors and the freedom of the spectators (Picture 60).



*Picture 60: A diagram showing the installation of the multiple screens narrative in an exhibition room (Tang, 2009)*

#### 4.4 The inverted perspective in heuristics

I continued to use the method of heuristics in Chapter Four for seeking a balance point between the dominance of authors and the freedom of spectators. The balance point was the problem between equality and conflict of the two sides in the research, and this was the area of concentration at this stage. Moustakas (1990) argues that the method of heuristic research is that, “one is able to get inside the question, become one with it, and thus achieve an understanding of it” (p. 15). The methods of self-dialogue and self-critique in heuristics were accompanied by the inverted perspective to allow me to get inside the question: hypothesising the balance point.

Moustakas (1990) uses the argument of Salk (1983) to explain the inverted perspective, where one needs to imagine oneself in the position of the question. In Chapter Three I raised the questions from both sides, of authors and spectators, and shifted my position between the two sides for getting into the questions and searching for answers. In Chapter Four, the inverted perspective is not between the sides of authors and spectators. It is between the question and the answer hypothesised. For example, the question was “can spectators be equal to authors in story narratives?” I hypothesised that the answer was “Yes”, based on the theory of Qi Wu Lun<sup>82</sup> (Graham in Yu et al, 2000), and I explored the conflict between the two sides and found that the equality only exists theoretically and the contradiction is realistically irreconcilable as it represents the existence of an author and a spectator in a story narrative process.

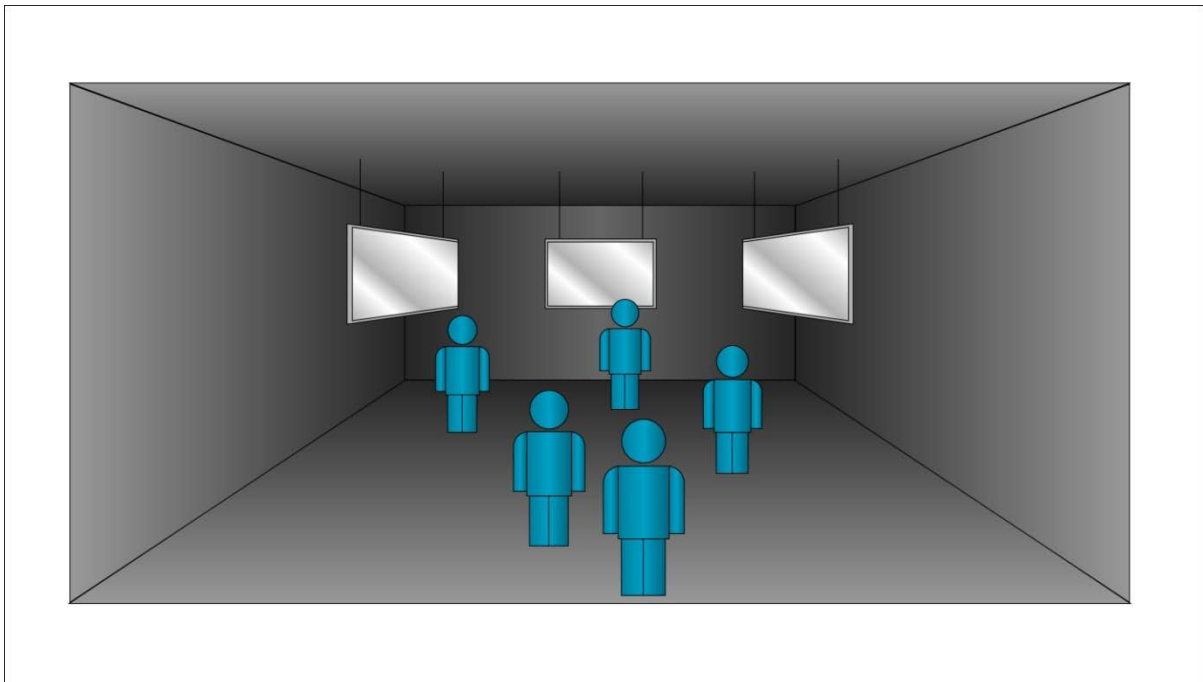
Moreover, the inverted perspective also allowed me to gain access into the design of the multiple frames narrative to represent the relationship between the spectators and the authors in the narrative. It helped me to define the problem of the multiple frames narrative that only shows the freedom of the spectators, and improve the design to the multiple screens narrative in half a circle by hypothesising a particular answer to the question and examining the answer with self-critique. Through self-critique in the inverted perspective, I also found out the drawback of the design in that the research only focuses on freedom of the spectators, and the lack of exploration about the dominance of the authors because the freedom exceeds the dominance in the design of the multiple screens narrative.

---

<sup>82</sup> See 4.1.

#### 4.5 The anticipation about the exhibition of the multiple screens installation

For the exhibition, I will install the multiple screens in a dark room (Picture 61). The installation will be composed of three screens so that their positions form the shape of half a circle. The screens will be placed at the end of the room in order to create a depth of the space. It will allow spectators to walk around in front of the screens, and the spectators will be able to move their sight and positions for watching the animation inside the area of the half a circle shape. The screens will be hung from the ceiling to avoid the situation where spectators close to the screens could block the sight of others farther away from the screens.



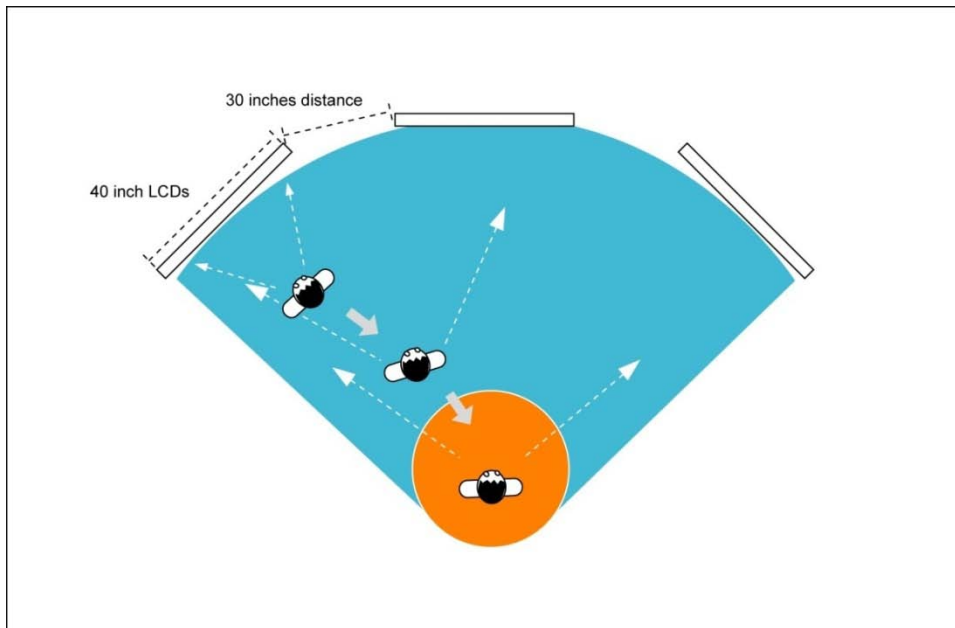
*Picture 61: A 3D view of the exhibition of the multiple screens narrative installation (Tang, 2009)*

Based on the discussion about the size of the screens<sup>83</sup>, I prefer to use three 40 inch TV LCD screens in the installation because this size of LCD will allow spectators to be able to watch the animation from any position in the area. If the size of the screens is too small, spectators would stay close and lose the possibility of viewing the three screens as one; if the size is too big, spectators would watch the three as one by viewing at a long distance from the screens. Moreover, with regard to the distance between two screens, I also prefer that a distance between two 40 inch LCDs will be about thirty-five inches. The distance will not be longer than the size of the screens or shorter than the size of half a screen. For example, the distance between two 40 inch LCDs will be between thirty-five

---

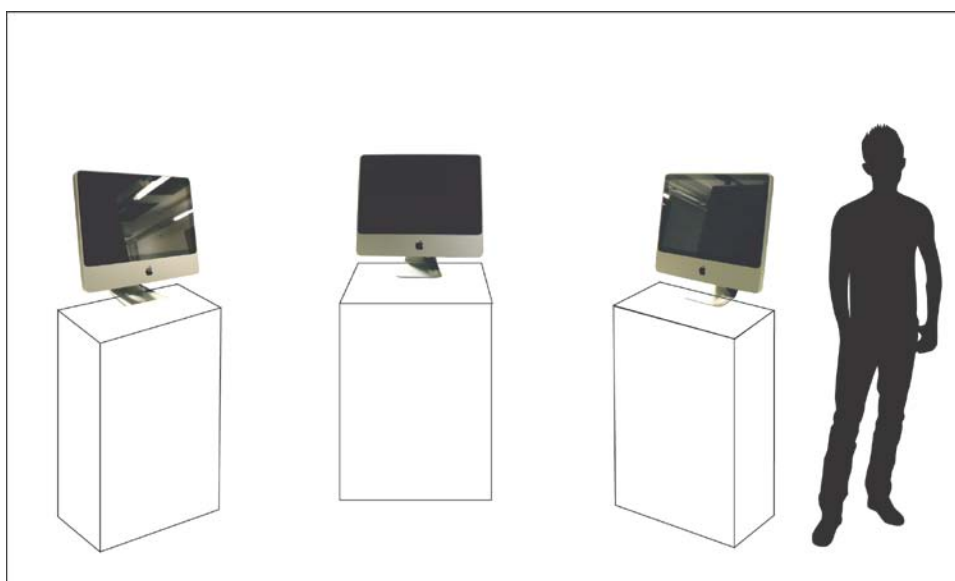
<sup>83</sup> See chapter 4.3.3.

inches to forty inches. This distance will allow spectators to clearly view the screens as one screen, or one by one (See Picture 62).



*Picture 62: The size of screens and distance between screens in the exhibition of the multiple screens narrative installation (Tang, 2009)*

However, using three 40 inch TV LCDs is the ideal set-up for the installation in the exhibition. The limitation is that the cost of the screens exceeds the budget of the research. Therefore, I will use three 20 inch computer screens instead of the TV LCDs, and the distance between two screens will be reduced to about 20 inches (Picture 63).



*Picture 63: The diagram about using computer screens in the exhibition (Tang, 2009)*

#### 4.6 Creating a story for the multiple screens narrative

The story of the animation shown on the three screens needs to be deconstructed into three story fragments, and the story fragments will be looping without the limitation of the animation duration. This will allow spectators to watch the story over and over again to allow for reconstructing their own stories. Therefore, I created a story named, “The boy and the dragon”.

Here is the brief of the story:

*A Chinese boy lives in a small poor fishing village. At the shore, he sees that the villagers pray to the sea lord (a dragon statue) for safety during the fishing season. The boy takes his fishing equipments, and jumps on a small boat and goes fishing. In the sea, a group of fish swim by following a dragon. The dragon swims around the fish and holds them as a group under its protection. The fish swim towards the boy's boat. The boy sees the fish and grabs a fishing spear, aiming at the fish. He throws the fishing spear a couple of times but all the fish escape and swim away. Strangely, a fish jumps out of the water and tries to warn the boy about something. The boy aims at this fish and tries to kill it at once. At the same time, under the water the dragon quickly raises a big wave. The boy falls into the sea and is turned into a fish by the dragon. The fish (the boy) swims away with the fish that tried to warn him before, followed by the dragon. The sea becomes quiet... After that, another Chinese boy jumps on a small boat and goes fishing...*

In this story, the starting point about the boy going fishing is also the ending. When the story reaches the ending, it actually starts again. It keeps the story playing and allows spectators to re-arrange the story fragments without the limitation of duration.

#### 4.7 The strategy of audio in the installation of multiple screens narrative

Through the experiments of multiple screens narrative, I found the audio as one of the components in the narrative process should be considered in the installation. The soundtracks of the animation could influence the spectators' viewing orders to the three story fragments. The loudest sound attracted the first attention to the accompanied animation. It limited the spectators to reconstruct the story fragments at their free will and created an underlying viewing order to the spectators. Therefore, I put only one soundtrack with the same level of audio into the three story fragments, which was to set up equality between the fragments. The equality could make sure the spectators can freely reconstruct and place the author at the neutral position in the narrative process.

## Conclusion

This exegesis covered the following key topics:

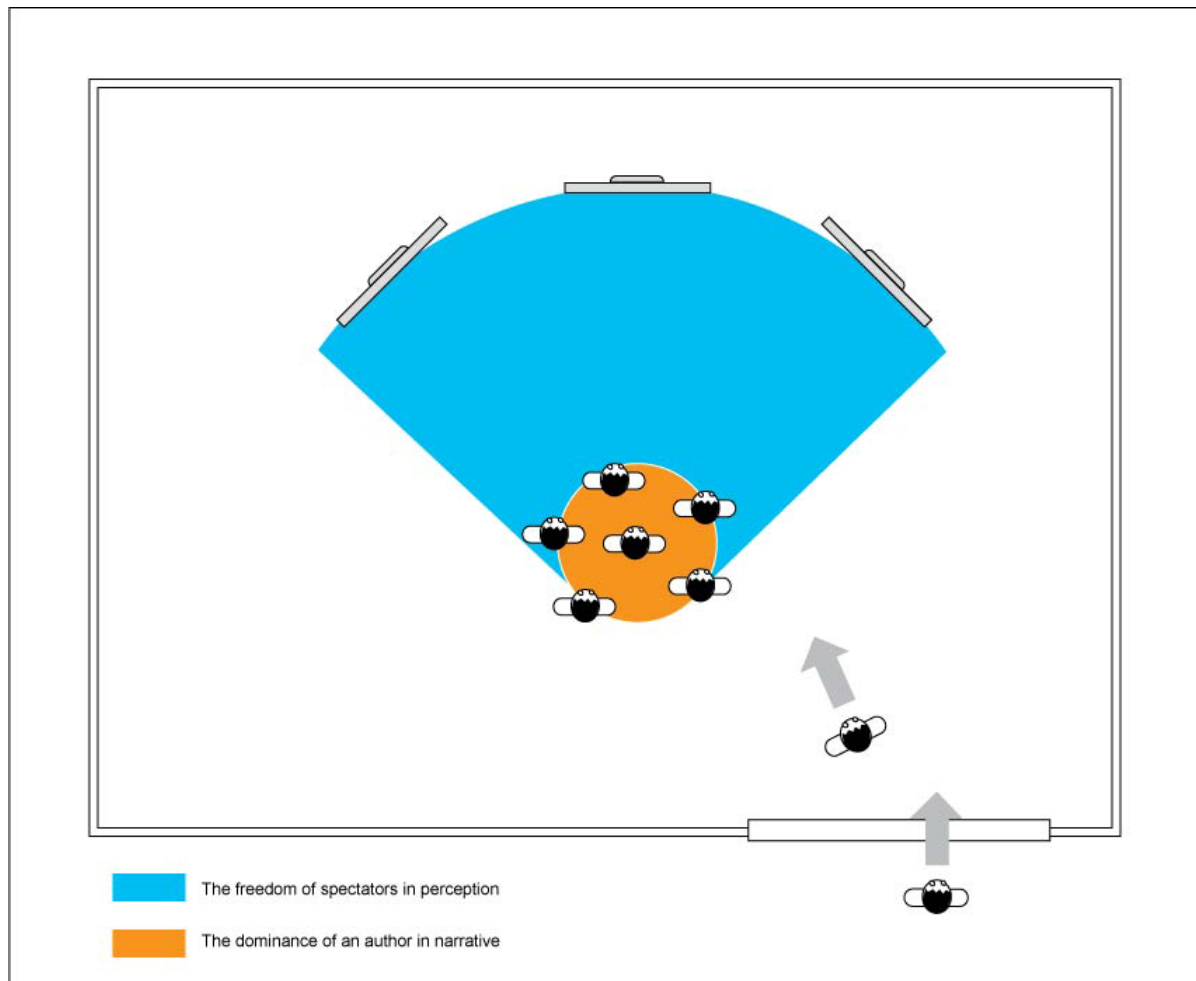
1. Diversity of human perceptions;
2. Freedom of perception;
3. Montage in the multiple frames narrative;
4. The contradiction in the relationship between spectators and authors and the design of multiple screens narrative.

The relationship between spectators and an author, about multiple perspectives in the process of a story narrative in moving images, was based on the research question “Can spectators become co-authors in the process of a story narrative?”

Throughout the exploration, the discussion focused on the equality and the contradiction between the freedom of spectators in perceptions and the dominance of authors in narratives. If the freedom of spectators is equal to the dominance of authors and the contradiction can be solved by the equality, spectators could become co-authors. However, the contradiction between the two sides is the vital element that proves the existence of spectators, an author and a process of a story narrative. Therefore, I reached the conclusion that spectators cannot become co-authors because of the irreconcilable contradiction.

In order to physically represent the relationship of the spectators and authors, I changed the method of the multiple frames narrative to the multiple screens narrative. Its design represented the relationship between the freedom and the dominance physically within the space of the installation, which defined the areas of the freedom and the dominance in front of the multiple screens. Through the development of the multiple screens narrative, I found that an author only had a possibility to control the perceptions of spectators in the area of the dominance, which meant that the freedom of spectators exceeded the dominance of authors in the installation of the multiple screens narrative.

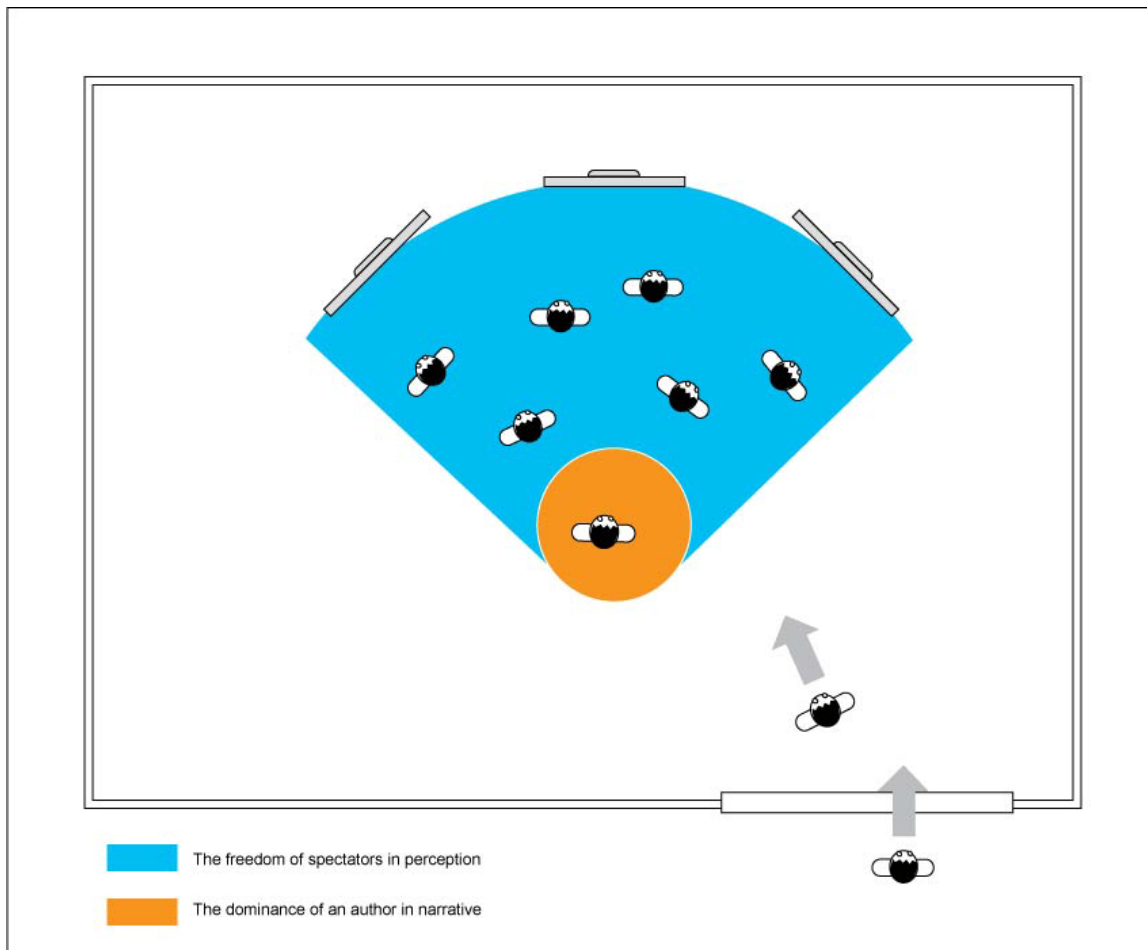
Through the development of the multiple screens narrative, I found that an author only had a possibility to control the perceptions of spectators in the area of the dominance, which meant that the freedom of spectators exceeded the dominance of authors in the installation of the multiple screens narrative. In the final exhibition, I found that most of spectators only stood at the centre of the installation where represented as the dominance of authors (the orange area in Picture 64).



*Picture 64: The diagram about the spectator' activities in the final exhibition at the beginning (Tang, 2009).*

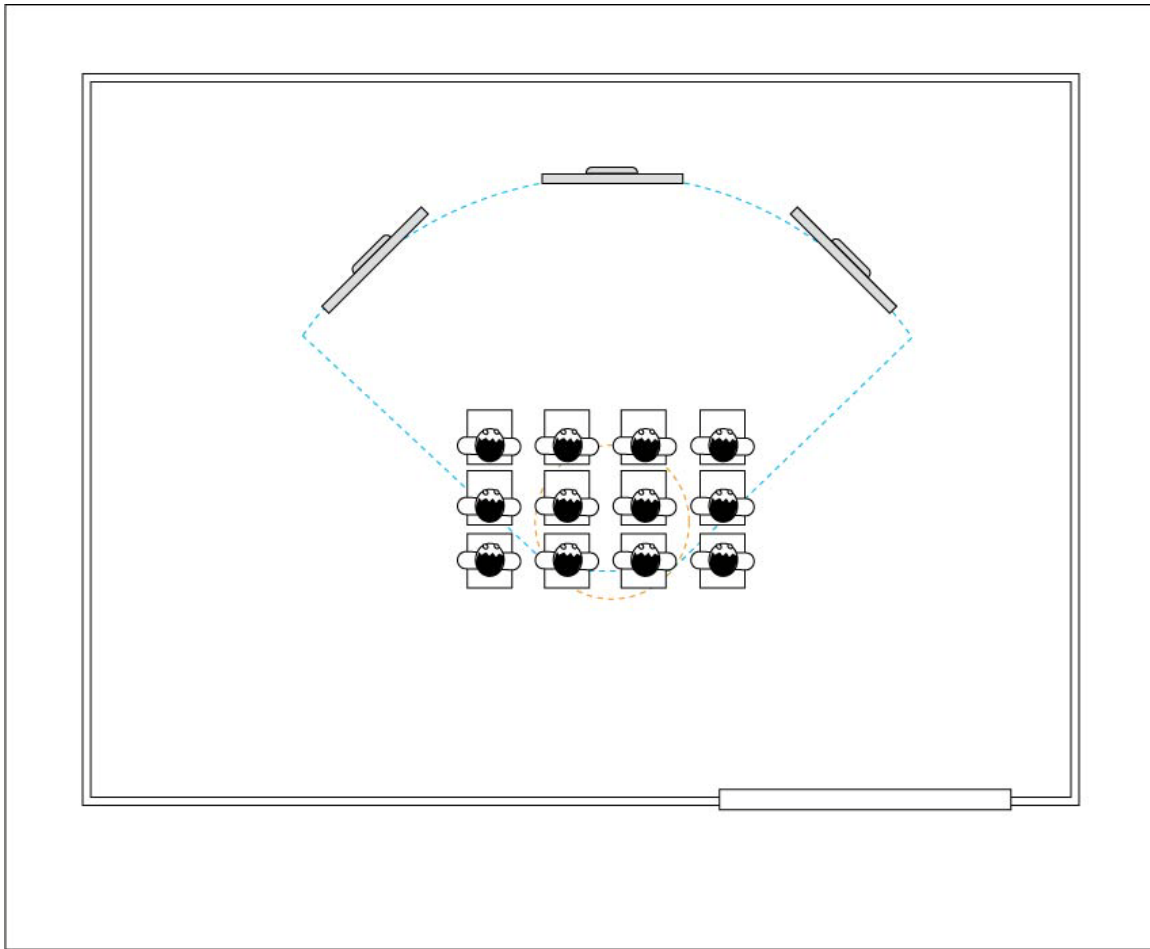
This finding, which the spectators didn't move around at the area of freedom of spectators, seemed to be against the result from the development of the multiple screens narrative above. However, although the spectators stood at the area of dominance of authors, it doesn't mean the spectators were totally controlled by the author in the narrative process because the spectators' sight is one component that the author could not control. At the centre of the installation, the spectators still watched the three screens one by one at the beginning of the narrative process. And then they connected the screens together and tried to reconstruct the story by their own perspectives. After that, they stood closed to the screens and moved around to watch the details of each story fragment (Picture 65).





*Picture 65: The diagram about the spectator' activities in the final exhibition after standing at the central area (Tang, 2009).*

Through the observation to the final exhibition, it was approved that the freedom of spectators exceeded the dominance of authors in the installation and the author couldn't control the spectators even they stood at the area of the dominance of authors. This is the limitation of the design of the multiple screens narrative installation. To reduce the freedom of spectators in the installation, one of the possible solutions is to place immobile seating at the central area of the dominance of authors. This method would provide a cinematic atmosphere to the spectators and become a new approach to challenge the traditional cinema (Picture 66).



*Picture 66: The diagram about using the seating strategy in the exhibition (Tang, 2009)*

Concurrently, the results of the research and the final exhibition, on one hand, brought me to a further potential development of designing a story for the multiple screens narrative, in order to potentially increase the authors' control over the participation of spectators in the installation. On the other hand, the scene of the pre-crime machine in the movie of "Minority Report" (Spielberg, 2002) led me to another direction, which is to enhance the engagement of the spectators. This perspective should investigate the design of multiple screens narrative towards the area of film interactivity, which it could lead to another research area: film narrative in an interactive video game.

## Glossary

### 1. Author

In the argument of “the death of the author” (Barthes, 1978), from my understanding, the term “author” means a creator of a text such as a writer. In my thesis, the meaning of author refers to one of the definitions of “author” in the Cambridge Advanced Learner's Dictionary, which is “formal a person who begins or creates something”. Hence, the term of author in a narrative presents a role as a story teller in the process of the narrative. When a story teller wants to tell a story, he/she needs to create his/her own way or strategy to transfer his/her understanding of the story to spectators. The story teller is the creator of the story telling. Therefore, the term author in my research area describes a narrative creator such as a story teller, a film director or a film script writer.

Moreover, the term author doesn't mean that a story told by a story teller originally belongs to the story teller. Chatman (1978, p. 19) argues that a narrative has two parts: one is a story (content); the other is a discourse (expression). My thesis focuses on exploring the method to express a story to spectators and the authorship of a discourse in a narrative process in moving images. Thus, the term author in my thesis mainly locates in the part of a discourse in a narrative process.

### 2. Spectator

In the Cambridge Advanced Learner's Dictionary, “spectator” is explained as a person who watches an activity without taking part. The term spectator in my thesis means perceivers in a narrative process, which refers to the role of the readers in the theory “the death of the author” from Barthes (1978). A narrative process is composed by two sides: one side is an author (a story teller); the other is spectators (perceivers). An author tells a story to spectators, and then the spectators perceive the story based on their own understanding. These form a communication process between an author and spectators. Therefore, the term spectator in my research describes ones watching and perceiving moving images except of authors at a location such as cinema or a moving image installation.

### 3. Co-author

“co-” is a combining form that means “together” or “with” in the Cambridge Advanced Learner's Dictionary. The term co-author, from my point of view, means a collaborating or joint author who creates or tells stories with other authors. In my research question, a co-author means one can create own stories based on what the one perceive in a narrative process (a story telling process). A co-author has the same role with an original author in a narrative process.

#### 4. Moving image

Moving image, from my understanding, generally means motion of pictures on screens. In my research, I focused on moving image in cinema and more specifically in animation because it was more suitable to my research exploration and my research budget. I used animation as a medium to generate and test the different theories. At the beginning of the research, I used 3D animation as the medium; and by following the development of the experiments, I changed to 2D animation for testing the idea of comic narrative with multiple frames narrative. Moreover, using animation reduced the cost of the project and allowed me to progress the research. Therefore, the narrative process discussed in my thesis points at the area of 2D/3D animation in moving images.

### Bibliography

#### ▪ Published and Electronic Sources

Bathes, R. (1978). *The Death of the Author*. In R. Bathes, *Image Music Text* (A. Lavers, Trans.). London: Hodder and Stoughton.

Bentham, J. (1785). *Panopticon*. London: Verso.

Carrier, D. (1994). *The Aesthetics of Comics*. Pennsylvania: The Pennsylvania State University Press.

Chatman, S. (1978). *Story and Discourse: Narrative Structure in Fiction and Film*. London: Cornell University Press.

Cheng, C. (2009). Dialectical Thinking and Coping Flexibility: a Multimethod Approach. *Journal of Personality*, 77 (2), 471.

Deleuze, G. (1989). *Cinema II: The Time-image*. (H. Tomlinson, & R. Galeta, Trans.) Minneapolis: University of Minnesota Press.

Deleuze, G. (1986). *Cinema I: The Movement-image*. (H. Tomlinson, & B. Habberjam, Trans.) Minneapolis: University of Minnesota Press.

Deleuze, G., & Guarrati, F. (1994). *Difference and Repetition*. (P. Patton, Trans.) New York: Columbia University Press.

Deleuze, G., & Guattari, F. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*. (B. Massumi, Trans.) Minneapolis: University of Minnesota Press.

Deleuze, G., & Guattari, F. (1977). *Anti-Oedipus: Capitalism and Schizophrenia*. (R. Hurley, M. Seem, & H. R. Lane, Trans.) Minneapolis: University of Minnesota Press.

Eisenstein, S. (1986). *The Film Sense*. (J. Leyda, Trans.) London: Faber & Faber.

- Ellis, J. (1982). *Visible Fictions*. New York: Routledge.
- Foucault, M. (1975). *Discipline and Punish: The Birth of The Prison*. (A. Sheridan, Trans.) London: Penguin Books.
- Gibson, J. J. (1986). *The Ecological Approach to Visual Perception*. London: L. Eribaum.
- Goldman, R. & Papson, S. (1994). Advertising in the Age of Hypersignification. *Theory, Culture and Society*, 2 (1), 23-53.
- Graham, A. C. "Qi Wu Lun. Zhuangzi: Seeing Things as Equal". In P. Yu, P. Bol, S. Owen, & W. Peterson (Eds.). (2000). *Ways with Words. Writing about Reading Texts from Early China*. London: University of Clifornia Press.
- Gregory, R. L. (1997). *Eye and Brain: The Psychology of Seeing*. Oxford: Oxford University Press.
- Hegel, G. W. (2002). *Science and Logic*. London: Routledge.
- Horton, S., & Yang, J. M. (2008). *Professional Manga: Digital Storytelling with Manga Studio EX*. Oxford: Focal Press.
- Kemmis, S., & McTaggart, R. (Eds.). (1988). *The Action Research Planner* (3rd ed.). Waurm Ponds Victoria: Deakin University.
- Levy, P. (2002). Welcome to Virtuality. In C. Beardon, & L. Malmborg (Eds.), *Digital Creativity: a read* (pp. 7-17). Lisse: Swets & Zeitlinger.
- Mahaparinirvana Sutra*, (Vols. 32). (100-210CE). Retrieved November 12, 2008, from commons.wikimedia: [http://en.wikipedia.org/wiki/Blind\\_men\\_and\\_an\\_elephant](http://en.wikipedia.org/wiki/Blind_men_and_an_elephant).
- McCloud, S. (1993). *Understanding Comics: The Invisible Art*. New York: Harper Collins Publishers.
- Miller, F. (2005). *Frank Miller's Sin City: Hell and Back* (Vol. 7). (D. Schutz, Ed.) Milwaukie: Mike Richardson.
- Moustakas, C. (1990). *Heuristic Research: Design, Methodology, and Applications*. California: Sage Publications.
- Neupert, R. (1995). *The End: Narration And Closure In The Cinema*. Detroit: Wayne State University Press.
- Rimmon-Kenan, S. (1983). *Narrative Fiction: Contemporary Poetics*. London: Methuen.
- Rockmore, T. (2002). *Marx After Marxism. The Philosophy of Karl Marx*. Oxford: Blackwell Publishers.

Strauss, Anselm & Corbin, Juliet. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (2nd ed.). California: SAGE Publications.

Todorov, T. (1977). *The Grammar of Narratives*. In *Poetics and Prose*. (R. Howard, Trans.) New York: Cornell University Press.

Tufte, E. R. (1983). *The Visual Display of Quantitative Information*. Cheshire, Connecticut: Graphics Press.

Wells, P. (1998). *Understanding Animation*. London: Routledge.

#### ▪ Films

Driessen, P. (Director). (1995). *The End of the World in Four Seasons* [Motion Picture]. Canada: National Film Board of Canada (NFB).

Figgis, M. (Director). (2000). *Time Code* [Motion Picture]. USA: Columbia TriStar Home Video.

Greenaway, P. (Director). (1996). *The Pillow Book* [Motion Picture]. USA: Columbia TriStar Home Entertainment.

Spielberg, S. (Director). (2002). *Minority Report* [Motion Picture]. USA: Twentieth Century-Fox Film Corporation.

## References

Aumont, J., Bergala, A., Marie, M., & Vernet, M. (1983). *Aesthetics of Film*. (R. Neupert, Trans.) Austin: University of Texas Press.

Baudrillard, J. (1995). Simulacra and Simulation. In *In Theory: Histories of Cultural Materialism* (S. F. Glaser, Trans.). USA: University of Michigan Press.

Bantinake, K. (2007). Pictorial Perception as Illusion. *The British Journal of Aesthetics*, (UK) 47 (3), 268.

Chandler, D. (1994). *Semiotics for Beginners*. Retrieved March 22, 2008, from Aber: <http://www.aber.ac.uk/media/Documents/S4B/semiotic.html>

Eisenstein, S. (1968). *Film Essays with a Lecture*. (J. Leyda, Trans.) London: Dennis Dobson.

Faber, L., & Walters, H. (2004). *Animation Unlimited: Innovative Short Film Since 1940*. London: Laurence King Publishing.

Gondry, M. (Director). (1996). *Sugar Water* [Motion Picture]. France: Partizan Midi Minuit.

*New Perceptive Pixle Multi-Touch Video*. (2007, July 08). Retrieved June 15, 2009, from YouTube Web site: New Perceptive Pixle Multi-Touch Video.

Rowley, S. (2005). Life Reproduced in Drawings: Preliminary Comments upon Realism in Animation. *Animation Journal*, 13, 65-83.

Schirmacher, W. (1999). *Art(ificial) Perception*. Retrieved March 24, 2008, from The European Graduate School Media & Communication:  
[http://www.egs.edu/faculty/schirmacher/schirmacher-art\(ificial\)-perception.html](http://www.egs.edu/faculty/schirmacher/schirmacher-art(ificial)-perception.html)

Schwarzpaul, T. A. (2008). *2008 Action Research and Grounded theory*. Retrieved May 13, 2008, from AUT Arden:  
[http://aratika.aut.ac.nz/adpgn\\_movies/lecture2008/08\\_tina\\_grounding\\_theory.pdf](http://aratika.aut.ac.nz/adpgn_movies/lecture2008/08_tina_grounding_theory.pdf)

Varini, F. (1997). *3D Painted Rooms Illusion*. Retrieved March 24, 2008, from Mighty Optical Illusions: <http://www.moillusions.com/2006/03/3d-painted-rooms-illusion.html>

Tiffin, J. & Terashima, N. (2001). *HyperReality-Paradigm for the Third Millennium*. London: Routledge.

## Appendices

### ▪ Experiment with Motion Picture

1. Tang, E. (Director). (2008). *Flying Cube* [Motion Picture].
2. Tang, E. (Director). (2008). *Transformation of 1D/2D/3D* [Motion Picture].
3. Tang, E. (Director). (2008). *One Gear, Six Perceptions* [Motion Picture].
4. Tang, E. (Director). (2008). *Human Walking* [Motion Picture].
5. Tang, E. (Director). (2008). *Human Walking with Deterritorialisation* [Motion Picture].
6. Tang, E. (Director). (2008). *One Gear, One Virtual Machine* [Motion Picture].
7. Tang, E. (Director). (2009). *"Walking" in Comic Narrative* [Motion Picture].
8. Tang, E. (Director). (2009). *A Live-action Short Film: Walking and Driving* [Motion Picture].
9. Tang, E. (Director). (2009). *An Animation Short Film with Comic Narrative: Walking and Driving* [Motion Picture].
10. Tang, E. (Director). (2009). *An Animation Short Film with Comic Narrative: Walking and Driving in Multiple Frames* [Motion Picture].
11. Tang, E. (Director). (2009). *Dark Room* [Motion Picture].

12. Tang, E. (2009). Can Spectators Physically Participate in A Narrative Design Process? A Multiple Screens Installation Approach for Narrative within Moving Images. *The Art & Design Postgraduate Conference 2009* (p. 9). Auckland: Auckland University of Technology.
13. Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" in Nine Frames on One Screen* [Motion Picture].
14. Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" In Nine Controllable Frames* [Motion Picture].
15. Tang, E. (Director). (2009). *"Memory" in Equal Hierarchy with Seven Frames* [Motion Picture].
16. Tang, E. (Director). (2009). *"Memory" in Equal Hierarchy with Four Frames* [Motion Picture].
17. Tang, E. (Director). (2009). *"Snow White and the Seven Dwarfs" with Frame-inside-frame* [Motion Picture].
18. Tang, E. (Director). (2009). *"Memory" in Unequal Hierarchy with Three Frames* [Motion Picture].
19. Tang, E. (Director). (2009). *The Story Timeline of an Author in the Multiple Frames Narrative* [Motion Picture].

▪