慶應義塾大学学術情報リポジトリ
Keio Associated Repository of Academic resouces

Title	How post-credit scene affect customers' preference on movie in the context of cinematic universe : focusing on the effects of processing fluency and affective evaluation
Sub Title	
Author	郭, 璇(Guo, Xuan) 井上, 哲浩(Inoue, Akihiro)
Publisher	慶應義塾大学大学院経営管理研究科
Publication year	2019
Jtitle	
JaLC DOI	
Abstract	
Notes	修士学位論文. 2019年度経営学 第3544号
Genre	Thesis or Dissertation
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=KO40003001-00002019-3544

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

慶應義塾大学大学院経営管理研究科修士課程

学位論文（　　2019　年度）

論文題名

How Post-credit Scene Affect Customers' Preference on Movie in the Context of *Cinematic Universe*: Focusing on the Effects of Processing Fluency and Affective Evaluation

主　査	井上　哲浩　教授
副　査	坂下　玄哲　教授
副　査	小幡　績　准教授
副　査	

氏　名	郭　璇

論 文 要 旨

所属ゼミ	井上哲浩ゼミ	氏名	郭　璇

（論文題名）

How Post-credit Scene Affect Customers' Preference on Movie in the Context of *Cinematic Universe*: Focusing on the Effects of Processing Fluency and Affective Evaluation

（内容の要旨）

In the modern film industry, film franchising has been widely used as a method of reducing risks and maintaining box office performance. While recently, a new film franchise model has been introduced to the market and achieved significant success, which is called the "*Cinematic Universe*" model. Marvel has been the first company to adopt this franchising model and has become the most successful film franchise in the world. Among all the innovative marketing techniques Marvel has adopted, the use of post-credit scene has been explicit and becomes a symbol for a *Cinematic Universe* movie. The purpose of the research is to understand what role post-credit scene plays in drawing people's attention to the next coming movie and how the content of the post-credit scene affects people's preference on *Cinematic Universe* movies.

Based on literature review on people's buying behaviors of movies, especially sequels, spoiler seems to affect people's understanding of the next movie through altering people's Processing Fluency. Processing Fluency and Affective Evaluation have been proved to play a significant role when people are deciding whether to watch a sequel. To understand how post-credit scene containing spoiler information would influence people's film buying behaviors in the context of *Cinematic Universe*, four hypotheses were proposed in this research:
H1. Processing Fluency has a positive effect on Affective Evaluation.
H2. Affective Evaluation has a positive effect on Purchase Intention.
H3. If a post-credit scene features a new character of the next coming film, the positive effect in H1 would be stronger compared to a post-credit scene not featuring a new character of the next film.
H4. If a post-credit scene features a new character of the next coming film, the positive effect in H2 would be stronger compared to a post-credit scene not featuring a new character of the next film.

Control group experiments were used to test the hypotheses. As a result, H1 and H2 were accepted. However, H3 and H4 were rejected. Post-credit scene featuring spoiler information does not have the proposed effect on people's buying decisions of the spoiled movie. Future research possibilities and marketing applications were discussed at the end of the thesis.

Table of Contents

Chapter 1. Introduction 1
1.1 Background 1
1.2 Purpose of the Research 5
1.3 Thesis Structure 6
Chapter 2. Literature Review 7
2.1 Purchasing Behaviors of Movies 7
2.2 Movie as Sequel 8
2.3 Spoiler and Processing Fluency 8
2.4 Affective Evaluation and Purchase Intention 10
Chapter 3. Hypothesis 11
3.1 Reasoning for H1 11
3.2 Reasoning for H2 12
3.3 Reasoning for H3 and H4 13
Chapter 4. Methodology 14
4.1 Research Design 14
4.2 Data Analysis Methods 19
4.3 Reliability Analysis 19
4.4 Chi-square Test of Experiment Manipulation 20
4.5 Structural Equation Modeling 22
4.6 Multigroup SEM Analysis 26
4.7 Summary 30
Chapter 5. Conclusion and Discussion 31
5.1 Conclusion 31
5.2 Discussion 31
5.3 Future Research Possibilities 32
5.4 Application on Marketing 34
Reference 36
Appendix 38

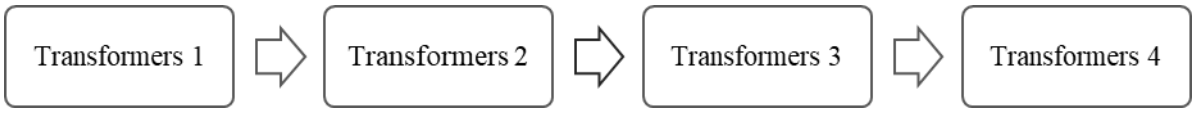
Chapter 1. Introduction

1.1 Background

In the modern film industry, film franchising has been widely used as a method of reducing risks and maintaining box office performance. Famous film franchises include the 007 series, Harry Potter series, and Pirates of Caribbean series, which have all enjoyed outstanding box office successes. While recently, a new film franchise model has been introduced to the market and achieved significant success, which is called the "*Cinematic Universe*" model.

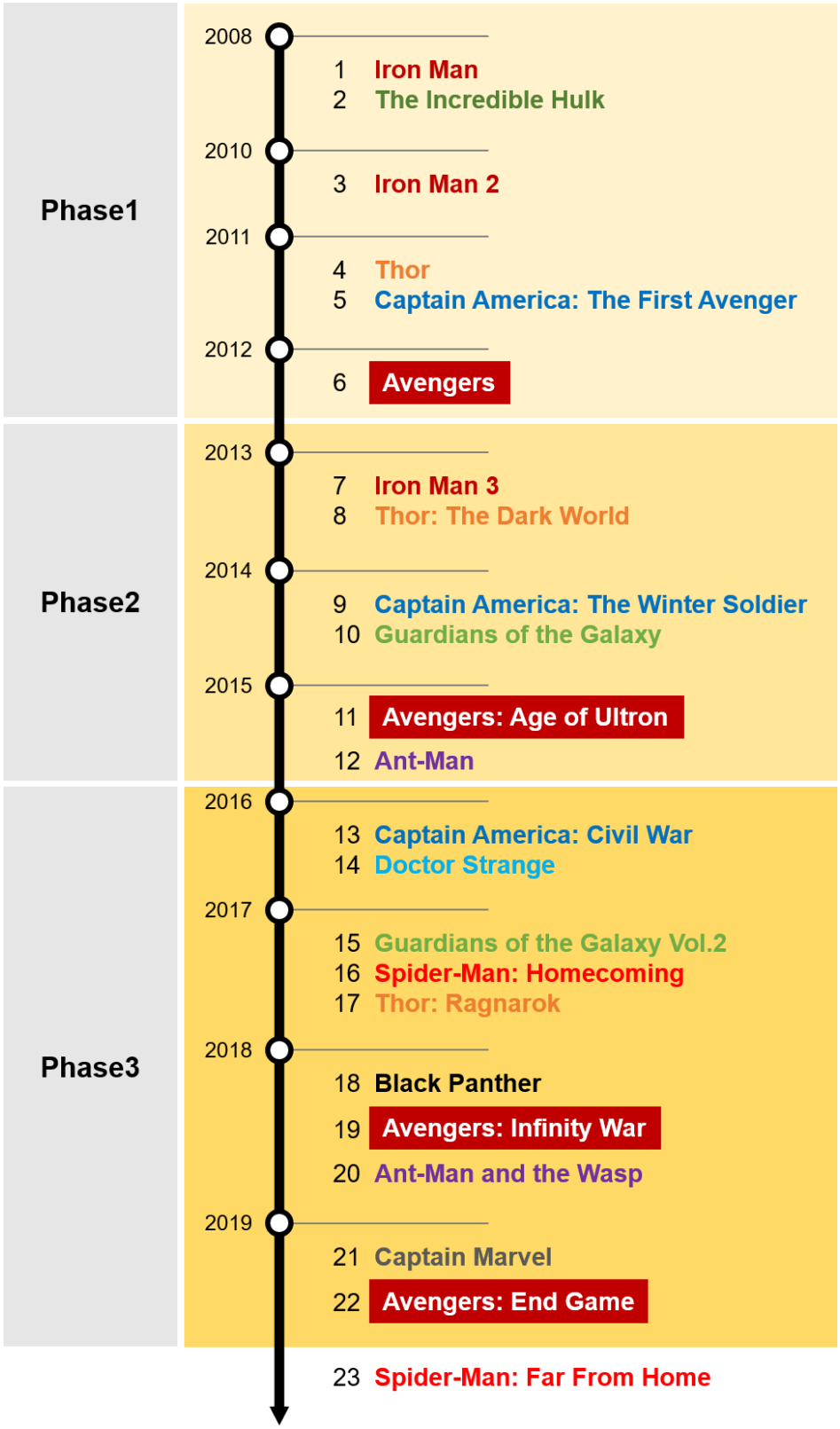
Unlike the common one-way and liner film franchising model, *Cinematic Universe* model adopts a more complicated multi-line structure on how to build up the whole story. In a *Cinematic Universe*, film series with different titles and different main characters (sub-franchise) are all included in a bigger franchise name (overarching franchise). Also, all of the films inside the overarching franchise are interconnected. All stories happen in the same and shared universe, which means a character from one sub-franchise is somehow connected with a character from another sub-franchise. While the story develops in this shared universe, the fate of main characters intertwined, creates impacts on each other's storyline, and finally shapes the future direction of the whole shared universe. We will explain further about the concept of *Cinematic Universe* with the most representative example of the Marvel *Cinematic Universe*.

Exhibit 1.1. Structure of a Common Film Franchise



(Source) Composed by author.

Exhibit 1.2. Structure of a *Cinematic Universe*



(Source) Composed by author.

If we see one film series as one brand, then a common film franchise is composed of only one single brand, all stories and new sequels are developed under this one single brand, which in this case is the *Transformers* brand. On the other hand, *Cinematic Universe* model is more based on a multi-brand strategy. Each of the main characters has his/her own independent sub-franchise. Their storylines are developed individually inside their own stand-alone series. While at the same time, different sub-franchise will influence and interact with each other's storyline. An event or an incident happened in sub-franchise A which was released in early years, will change the course of the storyline of the whole shared universe, so that a later film in sub-franchise B will be influenced by what happened in sub-franchise A. In the case of Marvel, as seen in Exhibit 2, the Iron Man sub-franchise, Captain America sub-franchise, and Thor sub-franchise, are all developing simultaneously and independently in the Marvel shared universe. While Iron Man and Captain America take on their own adventures, the stories happened in their independent sub-franchise will also make a difference in each other's storylines. Sometimes they even have crossovers or actually appear in each other's sub-franchise. For example, a critical supporting role who appears in the film of Captain America, has also appeared in the film of Iron Man to show the audience that they actually live in one world. Iron Man may also directly mention Captain America in the Iron Man films, which indicates that the main characters actually know the existence of each other.

After each individual sub-franchise has successfully made its start and shaped the character to make him/her well accepted by the audiences, a cumulative film that assembles all the main characters from different sub-franchises in one scene will be released. For example, in Marvel *Cinematic Universe* (MCU), Iron Man, Captain America, Thor, and Hulk have all appeared in the *Avengers* film and fought with the aliens together as a team. At the same time, each sub-franchise will keep releasing new films to keep building more flesh and blood into the character and enhance its own brand power as a stand-alone film franchise. After several new releases of individual films, *Avengers* will assemble them again by releasing a new film in the *Avengers* series. This happens periodically so that the audiences will know what to expect next. Through this way, the cumulative film like *Avengers* will form its own sub-franchise as well, backed with the strong brand power built through other individual sub-franchises.

Also, Marvel has been continuously introducing new characters with new sub-franchises and adding them to its brand portfolio, so that the brand portfolio gets more diversified and expanded. For example, after the first *Avengers* film, Marvel has introduced new characters

like Ant-Man, Doctor Strange, and Spider-Man to the shared universe, all of which have reached great box office performance. Through this continuous building process, a *Cinematic Universe* is expected to create sustainable profitability and expand to a larger user base. In addition, to maintain consistency and continuity, a film studio which adopting the *Cinematic Universe* model will try to sign long-term contracts with the main casting actors/actresses for 5-7 films, so that same characters are played by the same actors/actresses.

The *Cinematic Universe* film franchising model was first invented by Marvel Studios starting from 2008 when they released the first *Iron Man* film. Through this innovative franchising model, Marvel has acquired over 21.3 billion USD box office worldwide until this moment ("List of Marvel *Cinematic Universe* films" 2019) and has ranked as the film franchise with the highest cumulative box office in the world ("List of highest-grossing films" 2019). Due to the huge success of MCU, other big Hollywood film studios have started to release their own *Cinematic Universe*. In 2016, Warner Bros. which holds DC Entertainment under its brand, has released its own *Cinematic Universe* called EC Extended Universe (DCEU) by copying MCU's franchising model. DCEU is composed of several individual sub-franchises such as *Wonder Woman* and *Superman*, and an *Avengers* equivalent cumulative sub-franchise *Justice League*, following the same story structure of the *Avengers* film. Unfortunately, it has not received the same success as MCU does. In addition, Legendary Entertainment has launched its own *Cinematic Universe* franchise which is called MonsterVerse feathering Godzilla and King Kong. Until now it has released three films in the franchise with one more to come in the future. Universal Pictures also participated in this *Cinematic Universe* fever by launching the Dark Universe, but failed on the box office performance with the first film *The Mummy* released in 2017. Marvel's parent company Disney, which acquired Lucasfilm after the Marvel deal, has also rebooted the *Star Wars* series to turn it into the *Cinematic Universe* structure.

With so many major players in Hollywood adopting the *Cinematic Universe* franchising model, the film industry has entered a new era. The key success factor of this new reality has become how to create a successful and sustainable *Cinematic Universe*. The huge success of MCU has proved to the market that this new model will be the future of the world of film making. While *Cinematic Universe* has been appealing to so many customers, how it is different from the common franchising model and how it influences customers' buying behaviors have not been fully studied yet. This research will study more about the *Cinematic*

Universe model and find out what drives people to continuously go to the movie theaters to watch every new film within a *Cinematic Universe*.

A *Cinematic Universe* movie has a lot of characteristics, including the interconnected storyline, main characters that also appear in other sub-franchise movies, same cast members in multiple movies, etc. Among all of these characteristics, post-credit scene has been an outstanding symbol of a *Cinematic Universe* movie.

As a way to build interconnectivity among all the movies in the *Cinematic Universe*, Marvel has been using post-credit scene in MCU extensively. Every single movie in MCU has at least one post-credit scene after the movie ends. It has become a routine for all the audiences of MCU to wait in the movie theaters until the last minute of the end song so that they won't miss any possible post-credit scene. After the initial opening of the movie, there will always be someone to post online telling the other audiences how many post-credit scenes the movie has. People long for the information presented in the post-credit scene and see it as one of the most important things to pay attention to while watching a *Cinematic Universe* movie. Post-credit scene in MCU changed people's movie watching habits and plays a significant part in the *Cinematic Universe*. While the mechanism of post-credit scene has not been well studied until now. How the post-credit scene affects people's perception of the movie and whether it is really playing an effective role among all the marketing efforts of the *Cinematic Universe* still need further research.

1.2 Purpose of the Research

Among all the innovative tools and techniques Marvel has been using while building its MCU empire, the use of post-credit scene has been explicit and becomes a symbol for a *Cinematic Universe* movie. All competitors copy Marvel's use of post-credit scene and apply the technique to their own *Cinematic Universe* franchises. Finding out how post-credit scene functions in the *Cinematic Universe* and how it affects people's preference on movies could create great value for film production studios.

By definition, a post-credits scene or mid-credits scene is a short clip that appears after all or some of the closing credits have rolled and sometimes after a production logo of a film, TV

series, or video game has run. It is usually included for humor or to set up a possible sequel ("Post-credits scene" 2019). A post-credit scene might contain a lot of information, such as stories happened after the official ending of the movie, a hint to the next sequel in the franchise, etc.

The purpose of the research is to understand what role post-credit scene plays in drawing people's attention to the next coming movie and how the content of the post-credit scene affects people's preference on *Cinematic Universe* movies, with a specific focus on post-credit scene featuring the protagonist of the next coming film.

1.3 Thesis Structure

The thesis will start with understanding movie as an experiential product and the general characteristics of movie purchasing behaviors. Important concepts will be introduced based on literature reviews related to movie purchasing. Then we will introduce past studies of spoilers, Processing Fluency, Affective Evaluation, and Purchase Intention of movies in order to understand the consumption of movies and sequels.

After the literature reviews of important concepts, we will proceed into the hypothesis and research design part, following with data analysis and interpretation of the result.

At the last part, we will summarize the research and discuss the research result. The thesis will end with future research possibilities and application on marketing of the research.

Chapter 2. Literature Review

2.1 Purchasing Behaviors of Movies

Before getting into specific concepts related to this research, we need to understand the nature of movie as a product and the purchasing behaviors of movie.

According to Fowdur, Kadiyali, and Narayan (2009), movie by nature is a hedonic and experience product. Films can be identified as a product that offers emotional experience. Audiences hope film can bring special feelings such as love, surprised, happy, angry, sad, deeply moved, frightened through watching activity. Bassi (2010) argues that based on watching movie experience, audiences will obtain satisfaction if the movie is able to give surprise, attract attention and create strong emotions. We can then summarize that when making a purchase decision of film, audiences mostly consider and evaluate the emotional value of the film to determine if they would like to make the purchase.

Film is considered as a typical experience product. Carù and Cova (2003) divide the consumption experience into four stages: pre-consumption experience, purchase experience, core consumption experience and remembered consumption experience in which consumer wants to repeat the past experience. Detailed description of each stage is as below.

- Pre-consumption experience
  This stage involves looking for process, arrangement and imagine experience that will be gained.
- Purchase experience
  This stage is a result of execution of option, payment, packaging, feel service and environment.
- Core consumption experience
  This stage involves experiences such as feel the sensations, permeates, satisfaction or dissatisfaction, enjoying or not
- Remembered consumption experience
  This stage involves activities such as looking at photos, talk about your experiences with friends to then classify the memories.

Since this study will focus on studying the influence of spoiler information in post-credit scene on customers' preference and purchasing behavior of films, we will primarily look at the pre-consumption stage. Numerous previous studies have been conducted to verify what factors affect people's movie purchasing behaviors. According to Neelamegham and Jain (1999), commercials, film reviews, word of mouth communication are important factors affecting people's movie purchasing behaviors. Basuroy, Chatterjee and Ravid (2003) suggest that movie reviews, movie star power, and production cost would affect people's movie purchasing behavior. Furthermore, in Thurau, Walsh, and Wruck's study, genre and symbol, structure quality, and communication are factors that affect people's purchasing behaviors the most.

2.2 Movie as Sequel

In the context of *Cinematic Universe*, a new film can be considered as a sequel due to the story connectivity of *Cinematic Universe* franchise. In terms of purchasing behaviors of sequels, the sequel movie itself is seen as a brand extension of the mother franchise. For movie sequels, the parent-brand associations that come to mind are likely to be experiential attributes such as the original movie's storyline, its genre, and memorable scenes. These attributes are typically featured in movie trailers and television ads (Sood and Drèze 2006).

There have also been studies about people's affective expectation and its role in people's decision-making process of whether to watch a specific sequel. Anderson (2007) argues that consumers' choices for entertainment experiences are based on expectations of their affective benefits, rather than on attributes of the entertainment experience obtained through information search.

2.3 Spoiler and Processing Fluency

Besides the academic studies mentioned above, the studies of spoiler also indicate that spoiler information will affect people's purchasing decisions of films as well. Spoiler is defined as an element of a disseminated summary or description of any piece of fiction that reveals any plot elements which threaten to give away important details ("Spoiler (media)" 2019). In the

context of *Cinematic Universe*, Marvel has been using spoilers as a marketing tool to trigger interest among audiences for a long time. A primary way of imbedding spoiler information is the use of post-credit scene. When Marvel produces its films, it builds in several subtle spoilers inside each film that would imply some important event coming in future films of other sub-franchises. Among all the spoiler information Marvel has been trying to put inside its movies, the introduction of post-credit scene or Easter Eggs has been very innovative. It usually attaches one or more post credit scenes at the end of its movies to shed light on future films or introduce new characters into the universe. This has become a routine for all the Marvel films. Loyal fans will always wait in patience in the movie theaters after the movie ends to watch all the post-credit scenes until the light is on. The information included in the post-credit scene, which can be a new character for the upcoming film, or a hint to the plot of the next film, will always become the hottest issue on the next day after the movie's launching. These spoilers have been intentionally created by Marvel to trigger curiosity for the upcoming films and reward the loyal fans by providing plot hint which only loyal fans who have seen all the previous films will be able to catch.

Literatures in the field of spoiler study have already yielded a lot of intriguing but contradictory results. Early researchers such as Zillmann (1991) argues that suspense generates enjoyment upon a positive resolution of narrative uncertainty. However, recent studies directly tested the effect of spoilers on narrative enjoyment, and counterintuitively found that an awareness of how stories would turn out increased self-reported enjoyment (Leavitt and Christenfeld 2013). It is commonly accepted by the majority that spoilers can ruin one's enjoyment (Johnson and Rosenbaum 2015). While given the case of *Cinematic Universe*, spoilers have played such an important role in empowering the fans and creating buzz among the crowd.

Some studies attribute the effect of spoilers to Processing Fluency. Research in metacognition theory has shown that a key driver of attractiveness is how fluently people process a stimulus (Cho and Schwarz 2006). Reber, Winkeilman, and Schwarz (1998) define Processing Fluency as the subjective experience of the ease and speed with which an incoming stimulus is processed. The fluency signal is hedonically marked, such that high fluency elicits a positive affective reaction (Reber, Schwarz, and Winkielman 2004).

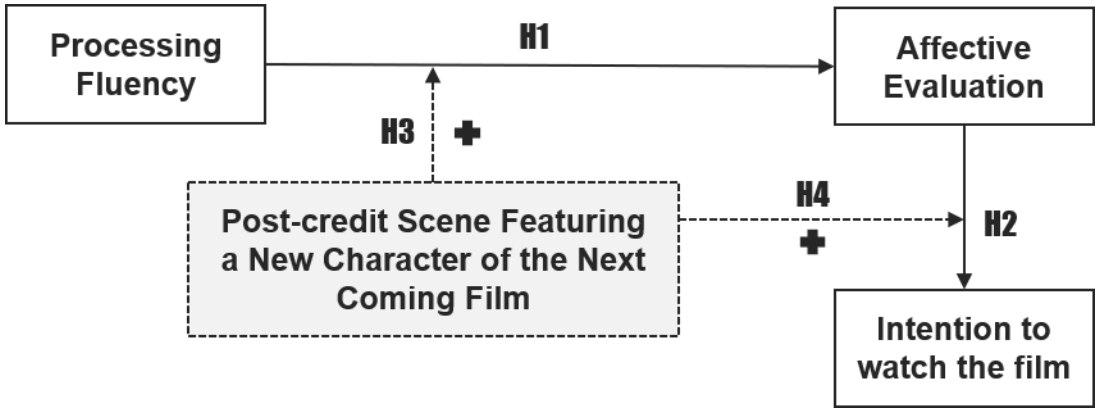
2.4 Affective Evaluation and Purchase Intention

As mentioned above, Processing Fluency is said to have a positive influence on people's affective reaction. There have been studies proving that people's affective attitude plays an important role in their cognitive-affective Purchase Intention (Kumar, Lee, and Kim 2009). Prior cognitive–affective models also suggest that affect impacts consumers' Purchase Intentions (Li, Monroe, and Chan 1994).

Chapter 3. Hypothesis

Based on the previous studies, this research will propose four hypotheses around the following concepts regarding the effect of spoilers on people's preference on movies in the context of *Cinematic Universe*.

Exhibit 3.1. Hypotheses



(Source) Composed by author.

H1. Processing Fluency has a positive effect on Affective Evaluation.

H2. Affective Evaluation has a positive effect on Purchase Intention.

H3. If a post-credit scene features a new character of the next coming film, the positive effect in H1 would be stronger compared to a post-credit scene not featuring a new character of the next film.

H4. If a post-credit scene features a new character of the next coming film, the positive effect in H2 would be stronger compared to a post-credit scene not featuring a new character of the next film.

3.1 Reasoning for H1

Hypothesis 1 is developed based on the literature review on relationship between Processing Fluency and Affective Evaluation. According to previous studies on non-*Cinematic Universe*

movies, Processing Fluency, defined as the subjective experience of the ease and speed with which an incoming stimulus is processed, has a positive effect on Affective Evaluation of the sequel movie. High fluency elicits a positive affective reaction (Reber, Schwarz, and Winkielman 2004).

In the context of *Cinematic Universe*, the sequels are composed in different patterns compared to the traditional way of film franchising. The story is more complicated since the plotline of a sequel is not only influenced by previous movies in its own franchise, but also previous movies in other sub-franchises. For example, *Captain America 3* is not just the sequel for *Captain America* series, but also a sequel for *Avengers 2*, which belongs to the *Avengers* series in MCU. This unique characteristics of sequels in a *Cinematic Universe* could create differences on people's Processing Fluency because information could be perceived differently. While on the other hand, sequels in MCU still follow the general rules of sequels by having its stories built on previous movies.

Therefore, Hypothesis 1 is proposed as that Processing Fluency has a positive effect on Affective Evaluation in the context of *Cinematic Universe*.

3.2 Reasoning for H2

Hypothesis 2 is developed based on the literature review on relationship between Affective Evaluation and Purchase Intention. Movie as an experiential product, is specifically developed to offer emotional experience. Previous studies suggest that audiences hope film can bring special feelings such as love, surprised, happy, angry, sad, deeply moved, frightened, through watching activity (Fowdur, Kadiyali, and Narayan 2009), which can then be summarized as the affective attitude. If people perceive the movie would provide them with high affective value, they will be more willing to choose to watch the movie. This nature of movie should not change in the context of *Cinematic Universe*. Affective attitude should still have the same effect on Purchase Intention.

Therefore, Hypothesis 2 is proposed as that Affective Evaluation has a positive effect on Purchase Intention.

3.3 Reasoning for H3 and H4

Hypotheses 3 and 4 are built on the foundation of previous studies on spoilers. Leavitt and Christenfeld (2013) suggest that an awareness of how stories would turn out increased self-reported enjoyment. Spoiler seems to have a positive effect on how much people enjoy the movie. With spoiler information before actually watching the movie, people would have a better understanding and some anticipation of what is going to happen in the movie. This might give them a feeling of control or ownership of the movie spoiled, since they now have superior level of information compared to people without the spoiler information. In the context of *Cinematic Universe*, the storylines are more complicated due to the connectivity among different sub-franchises. It is more difficult for *Cinematic Universe* audiences to get a clear view about the whole picture and each individual plotline in different sub-franchises and how they intertwined with each other. Predicting what will happen in the next Marvel movie involves cumulative analysis of all previous movies in the universe. Since it is more difficult to predict in *Cinematic Universe*, the joy of successful prediction might also be higher than in a common film franchise. A piece of spoiler information could be really helpful to have a better understanding of the universe, thus increasing people's Affective Evaluation of the whole franchise and the spoiled movie. The effects which originally existed between Processing Fluency and Affective Evaluation, and Affective Evaluation and Purchase Intention might become stronger with a piece of spoiler information, compared to a non-*Cinematic Universe* context.

Post-credit scene usually contains some kind of spoiler information. It could be hinting a big event in the future, a new emerging enemy, or a new adventure of the protagonist, etc. In this research, a post-credit scene featuring a new character of the next coming film will be used to test the hypotheses.

Therefore, Hypothesis 3 is proposed as if a post-credit scene features a new character of the next coming film, the positive effect of H1 would be stronger compared to a post-credit scene not featuring a new character of the next film. Hypothesis 4 is proposed as if a post-credit scene features a new character of the next coming film, the positive effect of H2 would be stronger compared to a post-credit scene not featuring a new character of the next film.

Chapter 4. Methodology

4.1 Research Design

In order to test the four hypotheses, an experiment was designed to test the Processing Fluency, Affective Evaluation, and Purchase Intention of the audiences under the influence of a post-credit scene featuring a new character of the next coming film. To make sure the effect of the post-credit scene is well measured, the experiment was designed to have two different control groups so that the differences between with or without the spoiler can be monitored. The experiment was designed as below.

Two audience groups were shown a paragraph describing the plotline and characters appearing in a post-credit scene of the film *Doctor Strange 2*. The contents of the paragraphs shown to the two groups were different. A new super hero named Siren was made up as the protagonist of the next Marvel movie. Group 1 would read a paragraph talking about the new hero Siren having a conversation with Nick Fury talking about a new force of enemy coming from outer space. Group 2 would read a paragraph talking about Doctor Strange having a conversation with Nick Fury about a new force of enemy coming from outer space. Then the two groups would be told that a new MCU film is about to release in the next month. The name of the film is *Siren: The Dark Hero*. Then they would be requested to answer a few questions regarding the new film, which aimed to measure their Processing Fluency, Affective Evaluation, and Purchase Intention of the new film *Siren*.

The manipulation of this experiment was that whether the audiences would receive the information of how Siren (the protagonist of the next MCU film) will be intertwined with the main plotline and other main characters in MCU. In Experiment A of Group 1, people would receive this piece of information, which could be perceived as a spoiler. While in Experiment B of Group 2, people would not receive this piece of information.

To imbed the spoiler information into the description of the post-credit scene naturally so that the participants of the experiments can perceive it and understand the role Siren would be playing in the MCU, several versions of descriptions were composed.

The original version of descriptions is as below.

Original Version of Description in Experiment A

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is resting in his room while the director of Agent of Shield Nick Fury appears in front of him bringing a man and introduced the man as Siren. Siren has brought an important piece of information about a new emerging enemy from space. Then they start to talk about this new enemy who is trying to invade earth.

Original Version of Description in Experiment B

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is resting in his room while the director of Agent of Shield Nick Fury appears in front of him. Nick Fury has brought an important piece information about a new emerging enemy from space. Then they start to talk about this new enemy who is trying to invade earth.

In the original version, Siren appeared as a complete stranger in front of the audiences. His only connection with MCU was that he was brought to Doctor Strange by the director of Agent of Shield Nick Fury, who is a known and familiar character for the audiences. This connection was rather very weak to demonstrate that Siren would be deeply involved in the upcoming story in the next Marvel movie, and lack associations with the whole Marvel universe.

As a result, minor adjustments were made along and the final version which was used in the actual experiments is as below.

Final Version of Description in Experiment A

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is sitting in his room while the Agent of Shield director Nick Fury appears in front of him with a man and introduced the man as Siren. Siren, who is a friend of Captain Marvel, has brought an important piece of information about a new emerging enemy from the space. Then they start to talk about this new enemy who is trying to invade earth.

Final Version of Description in Experiment B

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is sitting in his room while the Agent of Shield director Nick Fury appears in front of him. Nick Fury has brought an important piece information from Captain Marvel about a new emerging enemy from the space. Then they start to talk about this new enemy who is trying to invade earth.

In the final version, Siren was set to be a friend of Captain Marvel, who is also a familiar character for audiences with extremely strong super power and played a key part in saving the world in the final *Avengers* movie. The intention was that through this connection with Captain Marvel, we can enable the audiences to perceive Siren as an important part of Marvel universe in the future, deepen his association with other characters, and demonstrate how he will be intertwined in the plot line.

After the reading the above paragraphs, participants were asked to answer some questions regarding their preference of the movie *Siren*. If there are any differences between the responses of the two groups, we would be able to monitor how a post-credit scene featuring a new character will affect audiences' Processing Fluency, Affective Evaluation, and Purchase Intention of the new film *Siren*.

The questionnaires are designed as below.

Exhibit 4.1. Structure of Questionnaires

Latent measured		***Scale items***	***Label***
General information	Q1	Have you watched any Marvel movies before?	Experience
	Q2	How many Marvel movies have you watched before?	No. of movie CU familiarity
	Q3	Are you familiar with the concept of *Cinematic Universe*?	
Description of the post-credit scene			
Manipulation check	Q4	I have noticed that Siren **is/isn't** in the post-credit scene.	Manipulation
Processing Fluency	Q5	How easy do you find it to understand the information presented in the post-credit scene?	Understand pcs
	Q6	The post-credit scene helps me to anticipate what role Siren will play in the Marvel *Cinematic Universe*.	Anticipate siren
	Q7	The post-credit scene helps me to better understand what will happen in the movie "Siren".	Understand siren
	Q8	How difficult is it for you to describe what happened in the post-credit scene?	Describe pcs Search
Interest	Q9	I would search online to find out more about the character Siren.	Interest
Affective Evaluation	Q10	Given the above information, I believe this movie "Siren" would give me pleasure.	Give pleasure
	Q11	Given the above information, I believe this movie "Siren" would make me feel good.	Feel good
	Q12	Given the above information, I believe this movie "Siren" is one that I would enjoy.	Would enjoy
Purchase Intention	Q13	If I were going to watch a movie, I would consider watching "Siren".	Watch movie
	Q14	If I were looking for a movie to watch in a cinema, the likelihood I would choose "Siren" is high.	Likelihood
	Q15	My willingness of choosing to watch "Siren" would be high if I wereo buying a movie ticket.	Purchase
	Q16	The probability I would consider watching "Siren" is high.	Probability

(Source) Composed by author.

Since this research aims to study audiences' reaction to a movie inside of a *Cinematic Universe*, only people who had previously watched an MCU movie and understand what a post-credit scene is were invited to participate in the experiments. At the beginning the two groups were asked to answer several general questions regarding their experience with the MCU to make sure that they are eligible to participate. The questionnaire then follows with a paragraph describing a post-credit scene and condition setting, which were composed into two

different versions. Experiment A presented a post-credit scene with spoiler information featuring the main character of the next coming MCU film, while Experiment B presented a post-credit scene without the spoiler information. After the description participants were asked to answer a manipulation check question to make sure that the controlled information is actually perceived by the participants. After the manipulation check, participants were expected to answer 10 questions that intend to measure three latent variables: Processing Fluency, Affective Evaluation, and Purchase Intention of the next coming film in MCU. The questions to measure Processing Fluency were designed based on Orth and Wirtz (2014). The questions to measure Affective Evaluation and Purchase Intention were designed based on Bian and Forsythe (2012). All 10 questions used the 7-point Likert-Type Scale as scaling metrics.

As described above, in question 4, participants need to answer a manipulation check to make sure they have perceived the manipulated factor in the questionnaires. If they fail to recognize the information manipulated, then the experiments would be meaningless. The experiments would not be able to detect the influence of the manipulated information.

In Questionnaire A, the manipulation check question is:

4. I have noticed that Siren is featured in the post-credit scene.
Answers: Yes/No

"Yes" would be the desired answer since the spoiler information of how Siren is involved in the next film and his relationship with existing characters was presented in the post-credit scene.

In Questionnaire B, the manipulation check question is:

4. I have noticed that Siren is not in the post-credit scene.
Answers: Yes/No

"Yes" would be the desired answer since the spoiler information was not presented in the post-credit scene in Questionnaire B.

The questionnaires were distributed online to MBA students in a private university in Illinois, United States of America. All participants of the experiments had previous watched at least one MCU movie and were familiar with the concept of post-credit scene.

In total 132 people participated in the experiments with 64 participants in Experiment A and 68 participants in Experiment B. As a result, 124 answers are valid with 8 answers failing to pass the manipulation check question. Detailed data of the received answers is summarized as below.

Exhibit 4.2. Survey Result

	Total received	***Passed manipulation check***	***Did not pass manipulation check***
Experiment A	64	61	3
Experiment B	68	63	5
Total	132	124	8

(Source) Composed by author.

4.2 Data Analysis Methods

Detailed analysis was conducted in the following order:

1. Reliability Analysis

   Reliability analysis was used to verify the effectiveness of the scaling items and the internal consistency among items measuring the same latent variable of Processing Fluency, Affective Evaluation, and Purchase Intention
2. Chi-square Test

   Chi-square test was used to verify the effectiveness of the manipulation in the experiments.
3. Structural Equation Modelling

   Structural equation modeling was used to test the original hypotheses of H1 to H4 illustrated in Chapter 3.

4.3 Reliability Analysis

Reliability analysis was conducted to verify whether the questions in the questionnaires have been measuring the latent variables effectively and whether the questions measuring the same concept have internal consistency. Cronbach's alpha was used as the measure of scale reliability. The Cronbach's alpha of the three question groups are calculated as below.

Exhibit 4.3. Reliability Analysis Result

Scale items	*Latent variable*	*Cronbach's alpha*	*Cronbach's alpha based on standardized items*	*N of items*
Q5-Q8	Processing Fluency	0.791	0.791	4
Q10-Q12	Affective Evaluation	0.903	0.904	3
Q13-Q16	Purchase Intention	0.930	0.931	4

(Source) Composed by author.

The alpha coefficient for Processing Fluency items is 0.791, suggesting that the items have relatively high internal consistency.

The alpha coefficient for Affective Evaluation items is 0.903, suggesting that the items have relatively high internal consistency.

The alpha coefficient for Purchase Intention items is 0.931, suggesting that the items have relatively high internal consistency.

In conclusion, the scale items measuring Processing Fluency, Affective Evaluation, and Purchase Intention all have relatively high consistency. All of the questions are measuring the three latent variables effectively. All items should be used for further data analysis.

4.4 Chi-square Test of Experiment Manipulation

A manipulation check was included in the questionnaires to verify if the participants had noticed the manipulated factors of the experiments. To verify the effectiveness of the manipulation in the experiments, a chi-square test was conducted. Experiment A was conducted with manipulation by featuring the protagonist of the next coming film in the post-credit scene. Experiment B was conducted without manipulation by not mentioning the protagonist of the next coming film in the post-credit scene. The chi-square test result is as below.

Exhibit 4.4. Manipulation Result Cross Table

	Passed manipulation check question	***Did not pass manipulation check question***	***Total***
Experiment A	61	3	64
Experiment B	63	5	68
Total	124	8	132

(Source) Composed by author.

Exhibit 4.5. Chi-square Test Result

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Type * Manipulation	132	100.0%	0	0.0%	132	100.0%

Type * Manipulation Crosstabulation

			Manipulation		
			Without Manipulation	With Manipulation	Total
Type	Experiment B	Count	63	5	68
		% within Type	92.6%	7.4%	100.0%
	Experiment A	Count	3	61	64
		% within Type	4.7%	95.3%	100.0%
Total		Count	66	66	132
		% within Type	50.0%	50.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	102.033[a]	1	.000		
Continuity Correction[b]	98.545	1	.000		
Likelihood Ratio	123.048	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	101.260	1	.000		
N of Valid Cases	132				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.00.

b. Computed only for a 2x2 table

(Source) Composed by author.

Null hypothesis: Experiment A and Experiment B have no difference in being manipulated or not.

The Significance level (p-value) is 0.000<0.05, therefore the model is significant, null hypothesis is rejected.

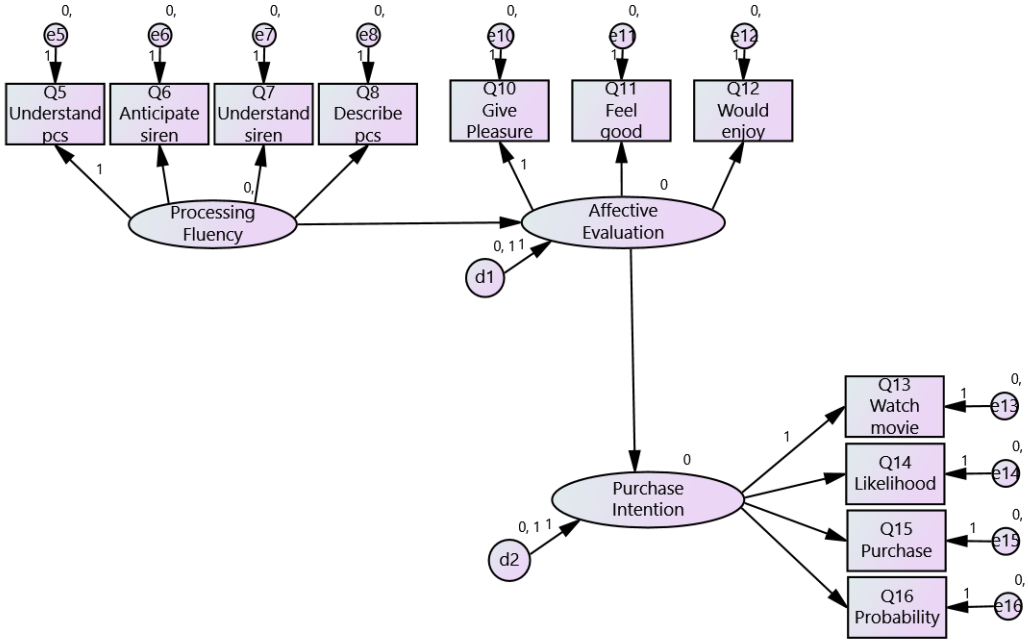
In conclusion, Experiment A and Experiment B are different in terms of being manipulated or not. The manipulation is successful in these experiments.

4.5 Structural Equation Modeling

Structural equation modeling was conducted to build the model of relationships among Processing Fluency, Affective Evaluation, and Purchase Intention. Since the three factors cannot be directly monitored, instead, they can only be measured through multiple indirect questions answered by the participants. It is necessary to form three latent variables to represent them. Thus, structural equation modeling was used as the analysis method.

The model based on the original hypotheses is illustrated as below.

Exhibit 4.6. Structural Equation Modeling Based on Hypotheses



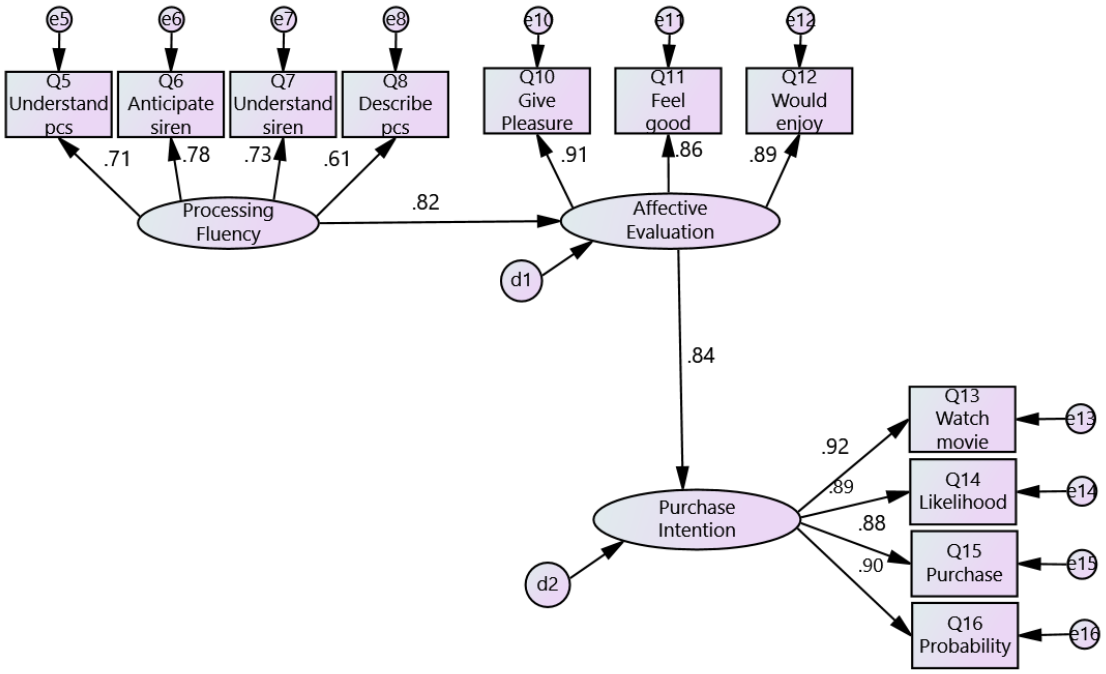
(Source) Composed by author.

Amos was used to conduct the SEM analysis. The model was built around the data collected through the two experiments with 124 valid participants in total. Question 5 to 8 were scale items to explain the latent variable Processing Fluency. Question 10 to 12 were scale items to explain the latent variable Affective Evaluation. Question 13 to 16 were scale items to explain

the latent variable Purchase Intention.

Firstly, it is necessary to verify if the model is significant in explaining the relationship among the scale items and the three latent variables. Below is the model based on the original hypotheses calculated with standardized estimates.

Exhibit 4.7. Structural Equation Modeling with Standardized Estimates



(Source) Composed by author.

As the first step, we need to conduct the model identification to verify the validity of the model. To test whether the model is identified, CFI and RMSEA are used as indicators of model fit.

Exhibit 4.8. Model Fit – Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.954	.940	.992	.989	.992
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

(Source) Composed by author.

Exhibit 4.9. Model Fit – RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.041	.000	.077	.614
Independence model	.395	.375	.416	.000

(Source) Composed by author.

The CFI of the model is 0.992>0.9. The RMSEA is 0.041<0.05. Both of the indicators verify that the model is significant.

As the second step, we need to verify if the 10 scale items have been successfully explaining the three latent variables, with Q5-Q8 attributing to Processing Fluency, Q10-Q12 attributing to Affective Evaluation, and Q13-Q16 attributing to Purchase Intention.

According to the model calculated above, scale items Q5-Q8 all have covariance (0.71, 0.78, 0.73, 0.61) with Processing Fluency at >0.5, indicating that the four items can well measure the latent variable Processing Fluency. All scale items of Q5, Q6, Q7, Q8 can be accepted as qualified indicators for Processing Fluency.

Scale items Q10-Q12 all have covariance (0.91, 0.86, 0.89) with Affective Evaluation at >0.5, indicating that the three items can well measure the latent variable Affective Evaluation. All scale items of Q10, Q11, Q12 can be accepted as qualified indicators for Affective Evaluation.

Scale items Q13-Q16 all have covariance (0.92, 0.89, 0.88, 0.90) with Purchase Intention at >0.5, indicating that the four items can well measure the latent variable Purchase Intention. All scale items of Q13, Q14, Q15, Q16 can be accepted as qualified indicators for Purchase Intention.

After verifying the validity of the model and scale items, we will start to test the hypotheses H1 to H4 proposed in Chapter 3. According to Exhibit 4.9, Processing Fluency has a positive effect of 0.815 on Affective Evaluation, suggesting that if Processing Fluency increases by one unit, Affective Evaluation will increase by 0.815 unit. To verify if this positive relationship is significant, we can refer to the p-value in Exhibit 4.10. P-value<0.05, suggesting the model is significant. In conclusion, Processing Fluency has a positive effect on Affective Evaluation.

H1. *Processing Fluency has a positive effect on Affective Evaluation.*
is accepted.

According to Exhibit 4.9, Affective Evaluation has a positive effect of 0.844 on Purchase Intention, suggesting that if Affective Evaluation increases by one unit, Purchase Intention will increase by 0,844 unit. The p-value of the estimate is <0.05 based on Exhibit 4.10, suggesting the model is significant. In conclusion, Affective Evaluation has a positive effect on Purchase Intention.

H2. *Affective Evaluation has a positive effect on Purchase Intention.*
is accepted.

Exhibit 4.10. Estimates – Standardized Regression Weights

			Estimate
A_Eval	<---	P_Flu	.815
P_Int	<---	A_Eval	.844
Q5	<---	P_Flu	.712
Q6	<---	P_Flu	.781
Q7	<---	P_Flu	.730
Q8	<---	P_Flu	.605
Q10	<---	A_Eval	.909
Q11	<---	A_Eval	.862
Q12	<---	A_Eval	.887
Q13	<---	P_Int	.921
Q14	<---	P_Int	.894
Q15	<---	P_Int	.875
Q16	<---	P_Int	.899

(Source) Composed by author.

Exhibit 4.11. Estimates – Regression Weights

			Estimate	S.E.	C.R.	P	Label
A_Eval	<---	P_Flu	1.132	.148	7.630	***	par_9
P_Int	<---	A_Eval	.912	.077	11.781	***	par_10
Q5	<---	P_Flu	1.000				
Q6	<---	P_Flu	1.228	.170	7.238	***	par_1
Q7	<---	P_Flu	1.103	.160	6.909	***	par_2
Q8	<---	P_Flu	.794	.126	6.290	***	par_3
Q10	<---	A_Eval	1.000				
Q11	<---	A_Eval	.833	.059	14.097	***	par_4
Q12	<---	A_Eval	.921	.062	14.964	***	par_5
Q13	<---	P_Int	1.000				
Q14	<---	P_Int	.976	.062	15.685	***	par_6
Q15	<---	P_Int	.964	.066	14.703	***	par_7
Q16	<---	P_Int	.936	.059	15.934	***	par_8

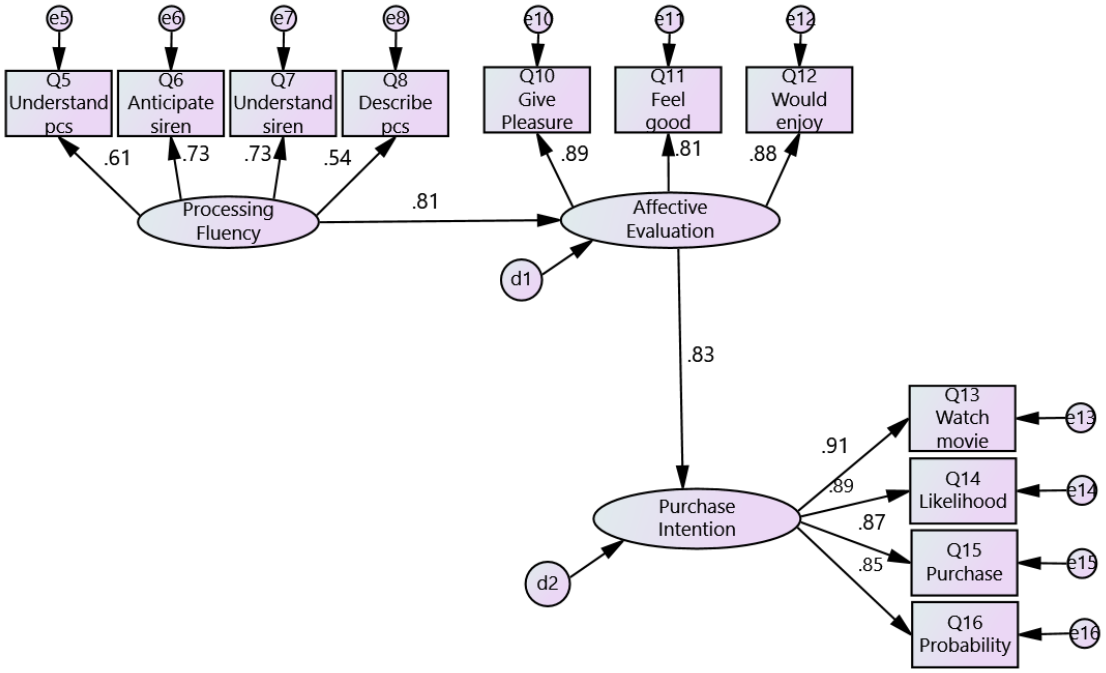
(Source) Composed by author.

4.6 Multigroup SEM Analysis

After testing hypotheses H1 and H2, we will proceed to test hypotheses H3 and H4. Since H3 and H4 involve comparison between Experiment A and Experiment B, we will use multigroup SEM as the analysis method. To separate the result of the two experiments, we defined a new variable of “Type” to identify results from different experiments. Data collected from Experiment A (with manipulation) was defined as Type 1. Data collected from Experiment B (without manipulation) was defined as Type 0. Then we divide the data into two groups in Amos and built two separate models for the two data sets. The calculated model of Experiment A is shown in Exhibit 4.11 and Experiment B in Exhibit 4.12.

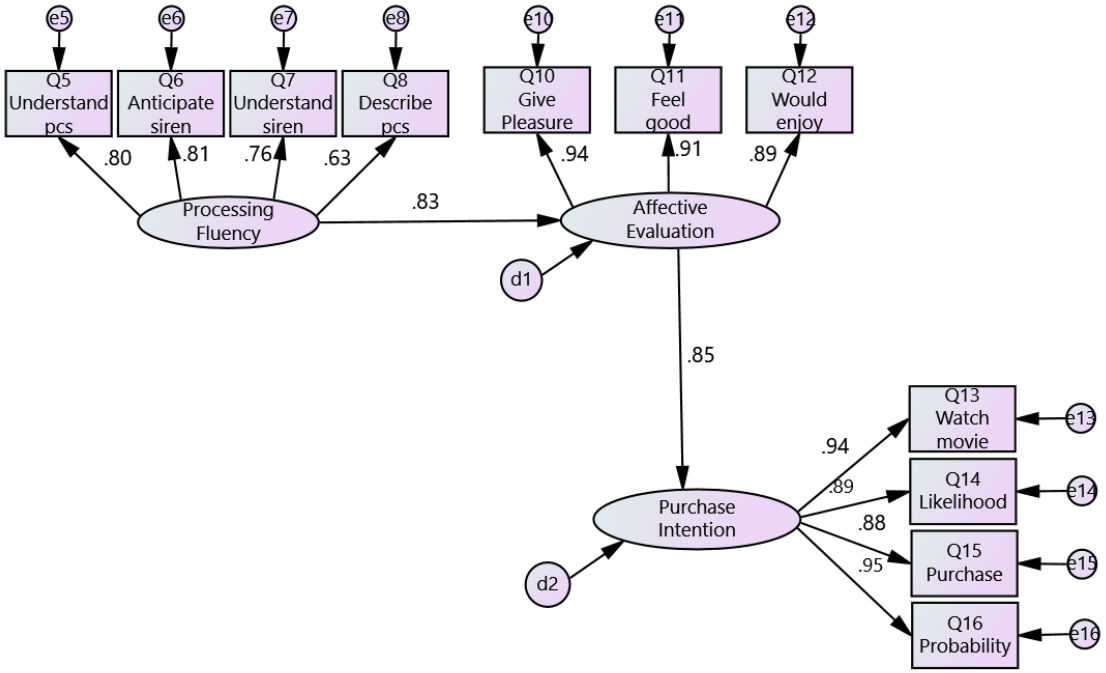
The coefficient between variables in the two models are slightly different. In order to determine whether the manipulation has created significant differences on the relationships between Processing Fluency and Affective Evaluation, and Affective Evaluation and Purchase Intention among the two models, Multigroup SEM analysis is conducted as below.

Exhibit 4.12. Experiment A – Model 1



(Source) Composed by author.

Exhibit 4.13. Experiment B – Model 0



(Source) Composed by author.

Exhibit 4.14. Model Comparison

Model	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Homogeneous_AE_PF	1	.442	.506				
Homogeneous_PI_AE	1	.120	.729				
Homogeneous_PI_AE_PF	2	.496	.780				

(Source) Composed by author.

To test H3, we need to find out if there is significant difference between the variable coefficient in Model 1 and Model 0 between Processing Fluency and Affective Evaluation.

In Model 1, the coefficient of relationship between Processing Fluency and Affective Evaluation is 0.81. In Model 0, the coefficient of the same relationship is 0.83. If the two coefficients are significantly different, we can say that post-credit scene featuring a new character of the next coming film will affect the strength of the relationship between Processing Fluency and Affective Evaluation. The verify if there are significant differences between the two coefficients. The following analysis is conducted.

Null hypothesis: The positive effects of PF-AE tested in H1 have no difference in Model 1 and Model 0.

According to Exhibit 4.13, the result of the model comparison in Amos indicates that the significance level (p-value) is 0.506>0.05, suggesting the model is not significant. Null hypothesis is accepted. In conclusion, the positive effects of PF-AE tested in H1 have no difference in Model 1 and Model 0. Post-credit scene featuring a new character in the next coming film does not influence the strength of relationship between people's Processing Fluency and Affective Evaluation of the film.

Therefore,

H3. *If a post-credit scene features a new character of the next coming film, the positive effect in H1 would be stronger compared to a post-credit scene not featuring a new character of the next film.*

is rejected.

To test H4, we need to find out if there is significant difference between the variable

coefficient in Model 1 and Model 0 between Affective Evaluation and Purchase Intention.

In Model 1, the coefficient of relationship between Affective Evaluation and Purchase Intention is 0.83. In Model 0, the coefficient of the same relationship is 0.85. If the two coefficients are significantly different, we can say that post-credit scene featuring a new character of the next coming film will affect the strength of the relationship between Affective Evaluation and Purchase Intention. The verify if there are significant differences between the two coefficients. The following analysis is conducted.

Null hypothesis: The positive effects of AE-PI tested in H2 have no difference in Model 1 and Model 0.

According to Exhibit 4.13, the result of the model comparison in Amos indicates that the significance level (p-value) is 0.729>0.05, suggesting the model is not significant. Null hypothesis is accepted. In conclusion, the positive effects of AE-PI tested in H2 have no difference in Model 1 and Model 0. Post-credit scene featuring a new character in the next coming film does not influence the strength of relationship between people's Affective Evaluation and Purchase Intention of the film.

Therefore,
H4. *If a post-credit scene features a new character of the next coming film, the positive effect in H2 would be stronger compared to a post-credit scene not featuring a new character of the next film.*
is rejected.

In addition, according to Exhibit 4.13, by applying two constraints to the model, the significance level (p-value) becomes 0.780>0.05, and also larger than the p-values of the previous tests in which only one constraint was applied. It indicates that the model becomes more and more insignificant as more constraints being applied. This suggests that more efforts trying to influence the relationships among Processing Fluency, Affective Evaluation, and Purchase Intention, will prove to be more meaningless, and create no differences in people's buying behaviors of movies.

4.7 Summary

Based on the above analysis, the conclusion can be drawn as below.

According to Exhibit 4.9, Processing Fluency has a positive effect of 0.815 on Affective Evaluation, with p-value<0.05, suggesting the positive relationship is significant. Affective Evaluation has a positive effect of 0.844 on Purchase Intention, with p-value<0.05, also suggesting the positive relationship is significant.

According to the Exhibit 4.13, the p-value of comparing Model 1 and Model 0 on the relationship between Processing Fluency and Affective Evaluation is >0.05, suggesting the positive effects of PF-AE tested in H1 have no difference in Model 1 and Model 0. The p-value of comparing Model 1 and Model 0 on the relationship between Affective Evaluation and Purchase Intention is also >0.05, suggesting the positive effects of AE-PI tested in H2 have no difference in Model 1 and Model 0.

As a conclusion,
H1. *Processing Fluency has a positive effect on Affective Evaluation.*
is accepted.

H2. *Affective Evaluation has a positive effect on Purchase Intention.*
is accepted.

H3. *If a post-credit scene features a new character of the next coming film, the positive effect in H1 would be stronger compared to a post-credit scene not featuring a new character of the next film.*
is rejected.

H4. *If a post-credit scene features a new character of the next coming film, the positive effect in H2 would be stronger compared to a post-credit scene not featuring a new character of the next film.*
is rejected.

Chapter 5. Conclusion and Discussion

5.1 Conclusion

Based on the analysis in the previous chapter, several conclusions can be drawn from the research.

Firstly, being consistent with the previous studies on Processing Fluency, Affective Evaluation, and Purchase Intention, in the context of *Cinematic Universe*, when people are making a decision on purchasing a movie, their Processing Fluency of the movie will have a strong positive effect on their Affective Evaluation. Affective Evaluation will also positively affect people Purchase Intention of the movie.

Secondly, the influence of post-credit scene on people's choice of movie was not as significant as expected. Being presented with a post-credit scene with spoilers of new characters in the next coming film will not affect people's perception of the new movie.

5.2 Discussion

At the beginning of the research, we have assumed that post-credit scene with spoiler information would influence people's behavior on selecting a movie to watch, because according to previous studies on spoilers and movie watching behaviors, spoilers were proved to have positive effect on people's Processing Fluency, thus help to increase their Affective Evaluation and Purchase Intention of the movie. However, based on the analysis in this research, post-credit scene featuring spoiler information does not create any significant difference on people's perception of featured movie. There are several possible reasons of why the hypotheses regarding post-credit scene are not accepted.

The first reason could be that Marvel has already had great reputation and brand awareness. With a stable fan base, even without the marketing efforts on post-credit scene, people would still want to watch any new Marvel movie. All Marvel movies have strong inter-connectivity

within and between each sub-franchise. This could create enough motivation for existing Marvel fans to keep watching any new movie in the franchise. In addition, all Marvel movies have achieved outstanding box office performance and continue to create great buzz on media. It also engages in multiple advertisement forms to drive sales. With the successful marketing coverage in all media forms, people are naturally interested in any new Marvel movie. Thus the influence of post-credit scene is diminished.

Another possible reason could be that in the context of film watching, instead of commercial marketing efforts, audience trust word of mouth better. The recommendation comes from friends, families, or even online rating sites might play a more significant role when customers are picking a film. There have also been a great number of studies doing researches on how word of mouth and online rating influence people's preference on movies. With word of mouth and online rating playing a big part in people's movie selection, the influence of post-credit scene turns out to be rather subtle and thus cannot be monitored.

5.3 Limitation and Future Research Possibilities

The research has several drawbacks and limitations.

The first one is that the description of the post-credit scene is purely text-based. In real world, the post-credit scene is shown after the movie as a short clip of video. Even through the text description tries to depict the scenes of the post-credit scene, it will never reach the same effectiveness of the video clip. Information will be lost in the text description and the impact will be largely different on audiences' mind. If the audiences can actually see the image of Siren, his face, his costume, his appearance, hear his voice, and witness his interaction with Nick Fury, Doctor Strange and Captain Marvel, their perception for this character will be much more vivid comparing the text-based description. Audiences can only imagine how Siren looks like with the text-based description. This way of experiment proves to be really difficult to perfectly simulate an actual post-credit scene. However, due to the inability to produce a Marvel level video clip of post-credit scene, it is impossible to have a perfect simulation of the actual post-credit scene. The text-based description will somehow affect people's perception of the experiments. Therefore, the experiment result might not be able to provide reliable reference for academic researches.

The second limitation of the study is that the post-credit scene was set to come from the movie *Doctor Strange 2*, which might lead to biased result on audiences' reaction if they have a negative feeling for the sub-franchise Doctor Strange. According to previous studies on movie as a sequel, it is said that customers see the sequel as a brand extension of the parent brand (Sood and Drèze 2006). They will evaluate the sequel based on their previous experiences with the parent brand (Sood and Drèze 2006). Even though Doctor Strange is part of the Marvel *Cinematic Universe*, the sub-franchise itself is an individual brand, which can also be perceived as the parent brand in this case. People's previous experiences with the Doctor Strange series will also affect their evaluation on the movie featured in the post-credit scene, which in this case, is *Siren*. The current research failed to take the effect of Doctor Strange brand into consideration. To improve the research design, an additional question could be added to the questionnaires to measure participants' attitude towards the Doctor Strange series. Answers indicating that the participants have a negative attitude towards Doctor Strange series should be eliminated from the data analysis. With this effort, the influence of the parent brand Doctor Strange can be minimized so that it will not affect people's perception of the post-credit scene.

The third limitation of the current research is that the manipulation of the post-credit scene might contains too little information. The spoiler information presented in the post-credit scene is too subtle to notice and the difference between the two experiments are not big enough. With the post-credit scene alone, it is difficult to create a difference in people's reaction. Further research to set the spoiler information more obvious with more detailed information could be conducted to test the influence of spoiler information in the context of *Cinematic Universe*.

The final limitation is that the current research mainly studied the spoilers' effect on Processing Fluency and Affective Evaluation. There are also possibilities that the spoiler information has an influence on people's movie purchasing behavior through factors other than Processing Fluency or Affective Evaluation. Further researches on how spoiler information affect people's movie selection behavior through other factors are possible.

5.4 Application on Marketing

Based on the research result, several insights can be considered to link to implications in marketing. The applications are illustrated as below.

Firstly, from the product perspective, it would be better for film studios to present the spoiler information in a more obvious way to generate a difference in customers' perception. Currently the experiment is designed to hint a new character of the next coming film in post-credit scene in a really subtle way. Result has shown that even if people can perceive the spoiler information, it creates no significant difference on the relationship among Processing Fluency, Affective Evaluation, and Purchase Intention. This indicates that if the spoiler information is not obvious enough, or big enough, even if customers receive the piece of information, it may still fail to create any difference in people's buying behaviors of the spoiled movie.

There are two options in redesigning the product by imbedding the spoiler information differently in order to actually influence people's buying behavior. The first option would be to imbed the spoiler information more obviously with higher level of valuable hints to the plotline in the post-credit scene. For example, instead of hinting a new character of the next coming film, the post-credit scene could present more detailed information regarding the relationship of this new character to other existing main characters, or how the feathered character is linked to an important future event in the *Cinematic Universe*. With more detailed information, customers are more likely to perceive it and take it into consideration while making a decision on whether to purchase a specific film. The second option would be to imbed the spoiler information also in the movie itself instead of only in post-credit scene. A link in plotline through the movie and post-credit scene might help the customers to acquire more information regarding the spoiled film. This might lead to more significant influence on how people choose the film they want to watch.

Secondly, from the promotion perspective, while film studios are building their marketing budget, it might be wise not to put in too much resources on the production and promotion of post-credit scene. According to the research result, information presented in post-credit scene does not seem to alter people's buying behaviors of the movie. Currently, some of Marvel

movies have more than one post-credit scenes at the end of the movie. This might not be necessary considering that producing each post-credit scene will cost a considerable among of resources. Instead of post-credit scenes, film studios could invest more recourses on other promotional channels, that have been proved to be effective in other researches on movie buying behaviors. If film studios still want to influence customers' Purchase Intention through spoilers, they may choose to provide the spoiler information through other channels such as online forum, SNS, etc. to actually generating a difference in audiences' decision-making process.

Reference

Anderson, J. (2007, June 10). How Sequels Seduce: Consumers' Affective Expectations for Entertainment Experiences. *University of Southern California Digital Library*. Retrieved from http://digitallibrary.usc.edu/cdm/ref/collection/p15799coll127/id/521839.

Bassi, F. (2010). Experiential Goods and Customer Satisfaction: An Application to Films. *Quality Technology and Quantitative Management*, *7*(1), 51–67.

Basuroy, S., Chatterjee, S., and Ravid, S. (2003). How Critical Are Critical Reviews? The Box Office Effects of Film Critics, Star Power, and Budgets. *Journal of Marketing*, *67*(4), 103-117.

Bian, Q., and Forsythe, S. (2012). Purchase Intention for Luxury Brands: a Cross Cultural Comparison. *Journal of Business Research*, *65*(10), 1443-1451.

Carù, A., and Cova, B. (2003). Revisiting Consumption Experience. *Marketing Theory*, *3*(2), 267–286.

Cho, H., and Schwarz, N. (2006). If I Don't Understand It, It Must Be New: Processing Fluency and Perceived Product Innovativeness. *Advances in Consumer Research*, *33*, 319-320.

Fowdur, L., Kadiyali, V., and Narayan, V. (2009). The Impact of Emotional Product Attributes on Consumer Demand: An Application to the U.S. Motion Picture Industry. *SSRN Electronic Journal*.

Kumar, A., Lee, H.-J., and Kim, Y.-K. (2009). Indian Consumers Purchase Intention toward a United States versus Local Brand. *Journal of Business Research*, *62*(5), 521–527.

Leavitt, J.D., and Christenfeld, N.J.S. (2013). The Fluency of Spoilers: Why Giving Away Endings Improves Stories. *Scientific Study of Literature*, *3*(1), 93–104.

Li, W.-K., Monroe, K.B., and Chan, D.K. (1994). The Effects of Country of Origin, Brand, and Price Information: a Cognitive-Affective Model of Buying Intentions. *Advances in Consumer Research*, *21*, 449-457.

List of highest-grossing films. (2019, June 10). Retrieved from https://en.wikipedia.org/wiki/List_of_highest-grossing_films#Highest-grossing_franchises_and_film_series.

List of Marvel *Cinematic Universe* films. (2019, June 10). Retrieved from https://en.wikipedia.org/wiki/List_of_Marvel_Cinematic_Universe_films.

Neelamegham, R., and Jain, D. (1999). Consumer Choice Process for Experience Goods: An Econometric Model and Analysis. *Journal of Marketing Research*, *36*(3), 373.

Orth, U.R., and Wirtz, J. (2014). Consumer Processing of Interior Service Environments: The Interplay Among Visual Complexity, Processing Fluency, and Attractiveness. *Journal of Service Research*, *17*(3), 296–309.

Post-credits scene. (2019, December 19). Retrieved from https://en.wikipedia.org/wiki/Post-credits_scene.

Reber, R., Winkielman, P., and Schwarz, N. (1998). Effects of Perceptual Fluency on Affective Judgments. *Psychological Science*, *9*(1), 45–48.

Reber, R., Schwarz, N., and Winkielman, P. (2004). Processing Fluency and Aesthetic Pleasure: Is Beauty in the Perceivers Processing Experience? *Personality and Social Psychology Review*, *8*(4), 364–382.

Sood, S., and Drèze, X. (2006). Brand Extensions of Experiential Goods: Movie Sequel Evaluations. *Journal of Consumer Research*, *33*(3), 352–360.

Spoiler (media). (2019, December 16). Retrieved from https://en.wikipedia.org/wiki/Spoiler_(media).

Thurau, H.T., Walsh, G. and Wruck, O. (2001), An Investigation into the Factors Determining the Success of Service Innovation: The Case of Motion Picture. *Academy of Marketing Science Review*, *6*, 1-23.

Zillmann, D. (1991). The Logic of Suspense and Mystery. In J. Bryant and D. Zillmann (Eds.), *Responding to the Screen: Reception and Reaction Processes*. Hillsdale, NJ: Lawrence Erlbaum, 281-303.

Appendix

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Type	124	0	1	.49	.502
Experience	124	1	1	1.00	.000
No. of movies	124	1	4	2.59	1.169
CU familiarity	124	0	1	.65	.480
Manipulation	124	0	1	.49	.502
Understand pcs	124	1	7	5.08	1.756
Anticipate siren	124	1	7	4.75	1.966
Understand siren	124	1	7	4.42	1.887
Describe pcs	124	1	7	4.80	1.638
Processing Fluency	124	1.25	6.75	4.7621	1.42347
Search	124	1	7	4.69	2.119
Give pleasure	124	1	7	4.57	1.786
Feel good	124	1	7	4.49	1.635
Would enjoy	124	1	7	4.65	1.753
Affective Evaluation	124	1.00	7.00	4.5726	1.57989
Watch movie	124	1	7	4.78	1.801
Likelihood	124	1	7	4.56	1.927
Purchase	124	1	7	4.58	1.951
Probability	124	1	7	4.80	1.839
Purchase Intention	124	1.00	7.00	4.6794	1.70978
Valid N (listwise)	124				

1.1 Questionnaire of Experiment A

Research regarding Marvel post-credit scenes A

Expected time of completion: 3 minutes

This questionnaire is composed by Ruby Guo (ruby.guo@kellogg.northwestern.edu) for the purpose of a research regarding the post-credit scene in Marvel movies. Your response will not be used for other purpose. If you have any question, please feel free to contact Ruby Guo at the above email.

* Required

Email address *

Your email

1. Have you watched any Marvel movies before? *

- ○ Yes
- ○ No

2. How many Marvel movies have you watched before? *

- ○ 0
- ○ 1-2
- ○ 3-5
- ○ 7-9
- ○ more than 10

3. Are you familiar with the concept of Cinematic Universe? *

- ○ Yes, I am familiar.
- ○ No, I don't know what that is.

Please read the text below and answer the questions.

"Doctor Strange 2" has just been released recently. At the end of "Doctor Strange 2" there is a post-credit scene. The content of the post-credit scene is described in the following paragraph:

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is sitting in his room while the Agent of Shield director Nick Fury appears in front of him with a man and introduced the man as Siren. Siren, who is a friend of Captain Marvel, has brought an important piece of information about a new emerging enemy from the space. Then they start to talk about this new enemy who is trying to invade earth.

Given the above context, Marvel announces that it will release a new film called “Siren” after "Doctor Strange 2", introducing a new superhero named Siren. Please answer the following questions about the post-credit scene and the film "Siren".

4. I have noticed that Siren is featured in the post-credit scene. *

- ○ Yes
- ○ No

5. How easy do you find it to understand the information presented in the post-credit scene? *

	1	2	3	4	5	6	7	
Very difficult	○	○	○	○	○	○	○	Very easy

6. The post-credit scene helps me to anticipate what role Siren will play in the Marvel Cinematic Universe. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

7. The post-credit scene helps me to better understand what will happen in the movie "Siren". *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

8. How difficult is it for you to describe what happened in the post-credit scene? *

	1	2	3	4	5	6	7	
Very difficult	○	○	○	○	○	○	○	Very easy

9. I would search online to find out more about the character Siren. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

10. Given the above information, I believe this movie "Siren" would give me pleasure. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

11. Given the above information, I believe this movie "Siren" would make me feel good. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

12. Given the above information, I believe this movie "Siren" is one that I would enjoy. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

13. If I were going to watch a movie, I would consider watching "Siren". *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

14. If I were looking for a movie to watch in a cinema, the likelihood I would choose "Siren" is high. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

15. My willingness of choosing to watch "Siren" would be high if I were buying a movie ticket. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

16. The probability I would consider watching "Siren" is high. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

Submit

This content is neither created nor endorsed by Google. Report Abuse - Terms of Service - Privacy Policy

Google Forms

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Type	61	1	1	1.00	.000
Experience	61	1	1	1.00	.000
No. of movies	61	1	4	2.51	1.192
CU familiarity	61	0	1	.64	.484
Manipulation	61	1	1	1.00	.000
Understand pcs	61	1	7	5.15	1.797
Anticipate siren	61	1	7	5.10	1.832
Understand siren	61	1	7	4.89	1.817
Describe pcs	61	1	7	4.95	1.617
Processing Fluency	61	1.25	6.75	5.0205	1.31679
Search	61	1	7	5.03	2.129
Give pleasure	61	1	7	4.52	1.757
Feel good	61	1	7	4.62	1.562
Would enjoy	61	1	7	4.64	1.684
Affective Evaluation	61	1.33	7.00	4.5956	1.48837
Watch movie	61	1	7	4.75	1.786
Likelihood	61	1	7	4.54	1.963
Purchase	61	1	7	4.54	1.937
Probability	61	1	7	4.85	1.860
Purchase Intention	61	1.00	7.00	4.6721	1.68791
Valid N (listwise)	61				

1.2 Questionnaire of Experiment B

Research regarding Marvel post-credit scenes B

Expected time of completion: 3 minutes

This questionnaire is composed by Ruby Guo (ruby.guo@kellogg.northwestern.edu) for the purpose of a research regarding the post-credit scene in Marvel movies. Your response will not be used for other purpose. If you have any question, please feel free to contact Ruby Guo at the above email.

* Required

Email address *

Your email

1. Have you watched any Marvel movies before? *

- ○ Yes
- ○ No

2. How many Marvel movies have you watched before? *

- ○ 0
- ○ 1-2
- ○ 3-6
- ○ 7-9
- ○ more than 10

3. Are you familiar with the concept of Cinematic Universe? *

- ○ Yes, I am familiar.
- ○ No, I don't know what that is.

Please read the text below and answer the questions.

"Doctor Strange 2" has just been released recently. At the end of "Doctor Strange 2" there is a post-credit scene. The content of the post-credit scene is described in the following paragraph:

The world is back to normal after the fierce fight between Doctor Strange and dark power. Doctor Strange is sitting in his room while the Agent of Shield director Nick Fury appears in front of him. Nick Fury has brought an important piece information from Captain Marvel about a new emerging enemy from the space. Then they start to talk about this new enemy who is trying to invade earth.

Given the above context, Marvel announces that it will release a new film called “Siren” after "Doctor Strange 2", introducing a new superhero named Siren. Please answer the following questions about the post-credit scene and the film "Siren".

4. I have noticed that Siren is not in the post-credit scene. *

- ○ Yes
- ○ No

5. How easy do you find it to understand the information presented in the post-credit scene? *

	1	2	3	4	5	6	7	
Very difficult	○	○	○	○	○	○	○	Very easy

6. The post-credit scene helps me to anticipate what role Siren will play in the Marvel Cinematic Universe. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

7. The post-credit scene helps me to better understand what will happen in the movie "Siren". *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

8. How difficult is it for you to describe what happened in the post-credit scene? *

	1	2	3	4	5	6	7	
Very difficult	○	○	○	○	○	○	○	Very easy

9. I would search online to find out more about the character Siren. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

10. Given the above information, I believe this movie "Siren" would give me pleasure. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

11. Given the above information, I believe this movie "Siren" would make me feel good. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

12. Given the above information, I believe this movie "Siren" is one that I would enjoy. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

13. If I were going to watch a movie, I would consider watching "Siren". *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

14. If I were looking for a movie to watch in a cinema, the likelihood I would choose "Siren" is high. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

15. My willingness of choosing to watch "Siren" would be high if I were buying a movie ticket. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

16. The probability I would consider watching "Siren" is high. *

	1	2	3	4	5	6	7	
Strongly disagree	○	○	○	○	○	○	○	Strongly agree

Submit

This content is neither created nor endorsed by Google. Report Abuse - Terms of Service - Privacy Policy

Google Forms

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Type	63	0	0	.00	.000
Experience	63	1	1	1.00	.000
No. of movies	63	1	4	2.67	1.150
CU familiarity	63	0	1	.65	.481
Manipulation	63	0	0	.00	.000
Understand pcs	63	1	7	5.02	1.727
Anticipate siren	63	1	7	4.41	2.045
Understand siren	63	1	7	3.97	1.858
Describe pcs	63	1	7	4.65	1.657
Processing Fluency	63	1.25	6.75	4.5119	1.48747
Search	63	1	7	4.37	2.074
Give pleasure	63	1	7	4.62	1.827
Feel good	63	1	7	4.37	1.707
Would enjoy	63	1	7	4.67	1.832
Affective Evaluation	63	1.00	7.00	4.5503	1.67542
Watch movie	63	1	7	4.81	1.830
Likelihood	63	1	7	4.57	1.907
Purchase	63	1	7	4.62	1.979
Probability	63	1	7	4.75	1.831
Purchase Intention	63	1.25	7.00	4.6865	1.74421
Valid N (listwise)	63				