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碩士論文

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伊朗和台灣青年對未來意象的比較性研究：  
以科幻電影為例

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Master's Thesis

Advisor: Professor Sohail Inayatullah  
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**A Comparative Study of the Images of the Future by  
youth in Iran and Taiwan: A Case Study Through  
Science Fiction Films**

Student: Ali Montazami  
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<sup>1</sup> GIFS: Graduate Institute of Futures Studies

<sup>2</sup> JFS: Journal of Futures Studies: <https://jfsdigital.org/>

<sup>3</sup> TKU: Tamkang University

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<sup>4</sup> WFSF: World Futures Studies Federation: <https://wfsf.org/>

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論文提要內容：

本研究旨在探討科幻電影中之未來貌與青年可欲的未來兩者間之異同。作者透過討論十部賣座的科幻大片，與十四位伊朗籍及臺灣籍研究生進行訪談。研究結果指出多數賣座的科幻電影勾勒出反烏托邦的未來，與青年可欲的未來相差甚遠。再者，電影中的未來主題幾乎無法建構出一個令人嚮往的、可欲的未來。本研究使用因果層次分析(Causal Layered Analysis, CLA)與 STEEP 分析來解構電影主題與青年可欲的未來。同時利用以上兩種分析法探討在 STEEP 各領域中，青年所嚮往的未來及其因果層次；反之，亦探討科幻電影所呈現的分析結果。透過創新的觀點，本研究比較伊朗籍與臺灣籍學生對於科幻電影與個人可欲未來之觀點，研究結果有益於未來學研究與媒體研究中的多領域研究。

關鍵字：因果層次分析;STEEP 分析;科幻電影;青年;可欲的未來;未來圖像;伊朗;臺灣

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#### Abstract:

This research seeks similarities and differences between science fiction film futures and the preferred futures of youth. Ten high-grossing blockbuster science fiction films were reviewed through interviews with fourteen university graduates in Iran and Taiwan. The findings indicate that most blockbuster science fiction films show dark and dystopian futures that are very different from the futures youth prefer. Moreover, few futures themes were also found in these movies that could be developed to a preferable future. Causal Layered Analysis (CLA) and STEEP Analysis were used to deconstruct both movie themes and youth preferred futures. Simultaneously use of these two methods revealed what futures youth want in every Causal layer underneath the STEEP areas and what science fiction films provide in contrast. The findings of this novel comparative study between the youth of Iran and Taiwan and their views of science fiction films and preferred futures can assist other multi-disciplinary research in the fields of Futures Studies and Media Studies.

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# INDEX

<b>Foreword .....</b>	<b>1</b>
Why Science Fiction and Why Futures? .....	1
A Long Journey Towards the Futures .....	3
Why Futures Studies and Why Taiwan? .....	8
Taiwan, a Gate to the Futures .....	9
Why a Dissertation About Science Fiction, Preferable Future, and Youth? .....	11
<b>Chapter 1 - Introduction and purpose of the study .....</b>	<b>13</b>
Science Fiction.....	14
Definition of science fiction and main characteristics .....	14
Classification of science fiction works.....	15
Beginning of science fiction film production and sub-genres.....	17
Iran and Taiwan, some differences and similarities .....	19
Futures studies, youth, and their images of the futures .....	23
Science fiction films and youth's images of the futures.....	25
The objective of the study and Research Questions .....	26
Significance of designing the present case study .....	27
The scope of Science Fiction films in this research .....	28
The scope of the study sample in this research.....	29
<b>Chapter 2 - Literature Review .....</b>	<b>31</b>
Futures studies and science fiction films .....	32
Science fiction films in Iran.....	34
Science fiction films in Taiwan .....	37
Common Images of the Future Shown in Science Fiction Films from the perspective of Authors and Critics .....	40
Common Images of the Future Shown in Science Fiction from the perspective of Youth in Iran.....	47
Common Images of the Future Shown in Science Fiction from the perspective of Youth in Taiwan .....	50

Summary About Common Futures Images in Science Fiction Films .....	53
Preferred futures of the youth in Iran .....	54
Preferred Futures of the Youth in Taiwan .....	60
Comparison between preferred futures and fears of youth in Iran and Taiwan .....	66
Comparison between futures images in science fiction films and preferred futures of youth in Iran and Taiwan .....	68
The Coverage of Existing Literature and Need for New Research .....	70
Hypothesis and Anticipation of the Possible Findings .....	71
<b>Chapter 3 - Methodology .....</b>	<b>73</b>
Main Steps of the Research .....	75
Step 1: Comprehensive Literature Review.....	75
Step 2: STEEP analysis of data from Literature Review for each Research Question ....	76
Step 3: Designing interview questions .....	76
Step 4: Selecting the science fiction films.....	79
Step 5: Selecting the study sample .....	81
Step 6: Watching films and preparing for the interview .....	83
Step 7: Conducting the interviews and documenting the data .....	83
Step 8: Thematic Analysis and categorizing the data.....	84
Step 9: Sorting the themes in the database tables.....	85
Step 10: STEEP Analysis towards the answers to the R.Q. 1,2 and 3 .....	86
Step 11: CLA of STEEP aspects for R.Q. 1 .....	86
Step 12: Examining the Hypothesis and anticipated results for R.Q. 1 .....	87
Step 13: Comparison CLA of STEEP aspects for R.Q. 2 and 3.....	87
Step 14: Examining the Hypothesis and anticipated results for R.Q. 2 and 3.....	87
Step 15: Thematic Analysis of answers to the R.Q. 2 and 3 for finding answer to R.Q. 4 .....	87
Step 16: Comparison CLA scenarios of films futures and youth preferred futures .....	88
Step 17: Conclusion of findings .....	88
The challenge to this research.....	88



<b>Chapter 4 - Results and Discussions.....</b>	<b>89</b>
Science Fiction Films Futures Society and People.....	90
Aliens.....	98
Diversity .....	100
Science Fiction Films Futures Technology .....	101
Science Fiction Films Futures Environment.....	111
Relocating.....	117
Science Fiction Films Futures Economics.....	121
Science Fiction Films Futures Politics .....	125
Science Fiction Films Futures Fears.....	130
Science fiction films futures Survival Solution.....	134
Science Fiction Film's Messages.....	138
Science fiction films futures Myth .....	139
Metaphors for the Futures in Science Fiction Films and Preferred Future.....	144
Science fiction films futures' Metaphors .....	144
Preferred Futures' Metaphors.....	146
<b>Chapter 5 - Analysis and Deepening .....</b>	<b>147</b>
Analysis to Answer the Research Questions .....	147
Research Question 1, Common Images of Futures in Science Fiction Films .....	148
Analysis and CLA on Common Futures Images of Society and People.....	148
Analysis and CLA on Common Futures Images of Technology .....	149
Analysis and CLA on Common Futures Images of Environment.....	150
Analysis and CLA on Common Futures Images of Economy .....	151
Analysis and CLA on Common Futures Images of Politics .....	152
Analysis of Common Futures Fears and Warnings.....	153
Analysis of Common Science Fiction Solutions for Better Futures .....	154
Analysis of Common Futures Myths .....	154
Summary of the Analysis of Common Images of Futures in Science Fiction Films .....	155

Examining the hypothesis for the Research Question 1 .....	156
Research Question 2 and 3, Comparison between Science Fiction Films Futures, Preferred Futures of Youth in Iran, and Preferred Futures of Youth in Taiwan .....	156
Comparative Analysis and CLA on Science fiction films futures Society and Youth Preferred Society .....	156
Comparative Analysis and CLA on Science fiction films futures Technology and Youth Preferred Technology .....	158
Comparative Analysis and CLA on Science fiction films futures Environment and Youth Preferred Environment .....	159
Comparative Analysis and CLA on Science fiction films futures Economics and Youth Preferred Economics .....	160
Comparative Analysis and CLA on Science fiction films futures Politics and Youth Preferred Politics .....	162
Comparative Analysis of Science fiction films futures Myths and Youth Believed Myths .....	163
Comparative Analysis of Science Fiction Films Futures Metaphors and Youth Preferred Future Metaphors .....	163
Summary of Comparative Analysis of Science Fiction Films Futures, Preferred Futures of Youth in Iran, and Preferred Futures of Youth in Taiwan .....	164
Examining the hypothesis for the Research Question 2.....	167
Examining the hypothesis for the Research Question 3.....	167
Research Question 4, futures images that might show preferred futures worlds to be considered in writing and directing of science fiction films.....	167
Causal Layered Analysis Scenario of Science Fiction Films Futures compare to Preferred Futures of Youth .....	169
CLA Scenario of Science Fiction Films Futures.....	170
CLA Scenario of Youth Preferred Futures.....	173
<b>Chapter 6 - Conclusion .....</b>	<b>177</b>
<b>References .....</b>	<b>180</b>
<b>Appendices .....</b>	<b>168</b>

APPENDIX I: Futures images in science fiction films by perspective of authors and critics .....	191
APPENDIX II: Futures images in science fiction films by perspective of youth in Iran, extracted from literature review .....	191
APPENDIX III: Futures images in science fiction films by perspective of youth in Taiwan, extracted from literature review .....	192
APPENDIX IV: Preferred futures of youth in Iran, extracted from literature review ...	192
APPENDIX V: Preferred futures of youth in Taiwan, extracted from literature review .....	193
APPENDIX VI: 50 highest-grossing blockbuster science fiction films produced after 2000.....	194



## **List of Tables and Figures**

Table 1-1. Sub-genres of Sci-fi films .....	18
Table 1-2. Summary comparison between Iran and Taiwan .....	22
Table 2-1. Most common futures images in Sci-fi films by critics and youth .....	54
Table 2-2. Common main focuses and differences of the youth in preferred futures .....	67
Table 2-3. Common main focuses and differences of the youth in futures fears.....	67
Table 2-4. Comparison of common Sci-fi films film futures and preferred futures of youth .	69
Table 3-1. Criteria for selecting Sci-fi films for study .....	79
Table 3-2. Major criteria for selecting the research sample .....	82
Table 3-3. The list of Participants in this research .....	83
Table 3-4. Phases of Thematic Analysis .....	85
Table 4-1. Futures Social Themes in Sci-fi films and preference of the youth.....	90
Table 4-2. Aliens in the films and Preferred future .....	98
Table 4-3. Preferred Diversity in the futures society.....	100
Table 4-4. Futures Technological Themes in Sci-fi films and preference of the youth .....	102
Table 4-5. Futures Environmental Themes in Sci-fi films and preference of the youth .....	112
Table 4-6. Relocating preferences to live in the future .....	118
Table 4-7. Futures Economic Themes in Sci-fi films and preference of the youth .....	121
Table 4-8. Futures Political Themes in Sci-fi films and preference of the youth .....	126
Table 4-9. The most frequently shown futures fears in Sci-fi films.....	130
Table 4-10. Frequently shown survival solutions in Sci-fi films .....	135
Table 4-11. Messages received by participants from the Sci-fi films .....	139
Table 4-12. Futures Superheroes in Sci-fi films and real superheroes of youth .....	140
Table 4-13. Metaphors for the futures in the Sci-fi films.....	145
Table 4-14. Metaphors for the preferred futures of youth .....	146
Table 5-1. CLA for common social futures in Sci-fi films .....	149
Table 5-2. CLA for common technological futures in Sci-fi films .....	150
Table 5-3. CLA for common environmental futures in Sci-fi films .....	151

Table 5-4. CLA for common economic futures in Sci-fi films .....	152
Table 5-5. CLA for common political futures in Sci-fi films .....	153
Table 5-6. Comparative CLA - Social futures (films and youth preferred futures .....	157
Table 5-7. Comparative CLA - Technological futures in films and youth preferred futures. ....	158
Table 5-8. Comparative CLA - Environmental futures in films and youth preferred futures ....	160
Table 5-9. Comparative CLA - Economic futures in films and youth preferred futures .....	161
Table 5-10. Comparative CLA - Political futures in films and youth preferred futures .....	162
Table 5-11. Concluding table for answers to three research questions together .....	166
Table 5-12. Major themes for designing the preferable futures in Sci-fi films .....	168
Table 5-13. CLA Scenarios for Sci-fi Films Futures and Preferred Futures of Youth .....	169
Figure 1. Ali Montazami in Egypt .....	1
Figure 2. The movie of <i>King Kong</i> and TV Series of <i>The Six Million Dollar Man</i> .....	2
Figure 3. Lamborghini Countach .....	4
Figure 4. The concept of Natural Manufacturing Process by Ali Montazami .....	6
Figure 5. “biome” conceptual process of growing seed to body of car by Mercedes Benz.....	6
Figure 6. A collage of some designs of Ali Montazami .....	7
Figure 7. A scene from short film <i>The Universe</i> .....	11
Figure 1-1. A poster for this research thesis by Ali Montazami .....	13
Figure 1-2. Two examples of futures images by the youth, from Chen and Hoffman .....	24
Figure 2-1. Landing on Moon in the film <i>A Trip to the Moon</i> .....	31
Figure 2-2. Prisoners in the Department of Containment from the film <i>Minority Report</i> .....	33
Figure 2-3. Sci-fi short films of <i>Aliens Reaction</i> and <i>Mission 411</i> .....	35
Figure 2-4. Flying UFO above Taipei City in the film <i>Mars Men</i> .....	38
Figure 2-5. The film <i>Paradoxical</i> with the core concept of time traveling.....	38
Figure 2-6. The film <i>Lucy</i> .....	38
Figure 2-7. Tony Stark is presenting his newly invented destructive weapon in <i>Iron Man</i> ....	46
Figure 2-8. David is looking at many copies of himself - <i>A.I. Artificial Intelligence</i> .....	49

Figure 2-9. Time Machine in the film <i>Back to the Future III</i> .....	52
Figure 3-1. Science Lab of Wakanda in the film <i>Black Panter</i> .....	73
Figure 3-2. Flowchart of the research process .....	74
Figure 3-3. Official posters for ten films which reviewed in this research .....	81
Figure 4-1. Jake is explaining his findings after spying the Na'vi's home tree in <i>Avatar</i> .....	89
Figure 4-2. High-Tech and traditional lifestyle in Wakanda .....	97
Figure 4-3. Some examples of Killing Machines in Sci-fi films.....	104
Figure 4-4. Norm beside his Na'vi-human hybrid avatar in film <i>Avatar</i> .....	108
Figure 4-5. No plant in all scenes showing the Earth in the film <i>Avatar</i> .....	113
Figure 4-6. Parker is showing Unobtainium in the film <i>Avatar</i> .....	123
Figure 4-7. President Snow in film <i>The Hunger Games</i> .....	127
Figure 4-8. Selecting tributes in the film <i>The Hunger Games</i> .....	131
Figure 4-9. Klaue is stealing Vibranium from the museum in the film <i>Black Panther</i> .....	133
Figure 4-10. Iron Man sacrifices himself for saving the Earth in the film <i>Endgame</i> .....	141
Figure 5-1. Uses AI for data analysis in the film <i>Iron Man 3</i> .....	147
Figure 5-2. Metaphor: The Killing Machines .....	170
Figure 5-3. Metaphor: Nightingale in the Flowers Garden with THORNS .....	173

## Foreword

One of the main drivers for bringing some research projects into practice is personal interests and personal purposes. The present thesis research also follows the passion of its author and as a result of his personal and professional life journey. As a 46 years old designer and mechanical engineer who always had a passion for designing and innovating new futures and different worlds, at this stage of my life journey, I ended up studying futures studies in Taiwan and graduate with the present dissertation around science fiction films and futures images. For sure conducting this research thesis was not only a result of my previous passions in science fiction films and the future but also as a pathway towards my futures journey. Here I explain the journey that brought me to this point to finish my Master's program with the present research.



**Figure 1.** Ali Montazami in Egypt (1976-1980)

### Why Science Fiction and Why Futures?

In my first outlines for writing this foreword, science fiction and futures were two separated headlines, but in fact, these two concepts always were connected to each other for me and were inseparable. Therefore, I explain that how these two concepts came into existence in my mind and connected to each other. The first memory that I remember from my childhood, maybe at the age of around three, is a science fiction scene, but not on TV or theater screen; this science fiction scene was through my toys and an image of a UFO that I used to play with at that age. However, the inspiration by science fiction elements was not limited to the toys for me. As a child, during four years of my childhood, from when I was two, I used to live in Egypt, since my father was an expatriate from *Iran Air* in Cairo, and we moved from Iran to Egypt in 1976. Living in Egypt and visiting the mysterious *Giza* (Figure 1), *Great Sphinx*, huge pyramids,

Egyptian statues, and ancient murals, almost every week, and having enough time to think and imagine, helped the fantasy world to be created in my childish mind.

As a continuing challenge, my creativity and fantasy imagination were also always being judged by my brain's logic at the same very beginning ages of my life. Even as a young child, I knew that all these fantasies in my mind are just imagination and do not exist in the real world. I remember an apparent memory from when I was around four or five is the film of *King Kong* (1976), see Figure 2, which was showing on an Egyptian TV channel, but I hadn't allowed to watch that. My father didn't allow me to watch that film and he said: "you will be scared". At that age as a child, I tried to convince my father by saying, "Baba, I know this is just a movie, I know such monster doesn't exist, I won't scare," but he didn't accept and changed the channel and kept me in a great regret of missing to watch *King Kong* for many years afterward. Indeed, there is no blame for what my father did because he did what a kind and caring father would do to protect his children. However, even if he believed me, it is hard to expect that many adults believe that a four-year child could distinguish the fantasy and reality and do logical thinking. Honestly, I do not remember many films from my childhood in Egypt, but apart from *King Kong*, I only remember *The Six Million Dollar Man* TV series (Figure 2), which used to be broadcasted from an Egyptian TV channel in 1979. Remembering just these two films from my early years could reveal many things about my childhood's attention spots. I knew that all these were fantasy, but on the other hand, I was interested in thinking about what if such things happen in real-life and how?



**Figure 2.** The movie of *King Kong* (1976) and TV Series of *The Six Million Dollar Man* (1974 – 1978), both with the themes of science fiction and fantasy



Thinking about how the fantasy in my mind and the movies might come true, finally led me to understand the concepts of the future and technology in my early years of life. Thinking about the future and technology at my childhood began with this logic that, if these imaginary things are not or cannot be existed today, maybe in the future all these could be possible. I assume that the question of how was the most important question from my childhood, and I should appreciate my parents for never giving up and banning this questioning mind, even by experiencing the massive cost of my curiosity. All of my expensive electric toys, such as electric helicopters and cars or robots, used to become the victims of my curiosity just after few days or few hours of playing. The reason for destroying my mechanical toys was the keen on knowing how these are working and what is inside them, as my parents remember. Maybe from the beginning, the will of creating was much stronger than the joy of consuming.

### **A Long Journey Towards the Futures**

Thinking about the future and creating new worlds was always the mainstream of my dreaming. By practicing painting, after going back to Iran and starting school, I found the opportunity to draw some of my dreams. Besides painting, I began to illustrate my innovative concepts about futuristic technology and products at the age of 10. Around the same period, I was inspired by a picture of Lamborghini Countach (Design of 1985, see Figure 3) in a magazine which was the starting point of my car design that last for many years after and become my goal for my future career when I was in High school age. Before and after studying Mechanical Engineering at Tabriz University, designing concept cars, graphic design, product design, design of futuristic technologies, and architecture design were my main hobbies and even as my young age freelancer occupation and services to the clients. My dream was to bring my ideas for new cars and products and the future worlds into existence. Choosing Mechanical Engineering, the field of Production and Manufacturing, to study was also a result of my passion for creating futuristic products developing advanced technologies. However, I become familiar with the university discipline of Industrial Design and Transportation Design late after starting my engineering course, but at that time, I had to graduate in engineering rather than changing my education to Industrial Design due to the employment condition in Iran at that years. The practice of designing cars and products and also concepts for future lifestyles continued even after starting my engineering occupation at car manufacturing companies in Iran.



**Figure 3.** Lamborghini Countach (Design of 1985), source: [www.wallpaperup.com](http://www.wallpaperup.com)

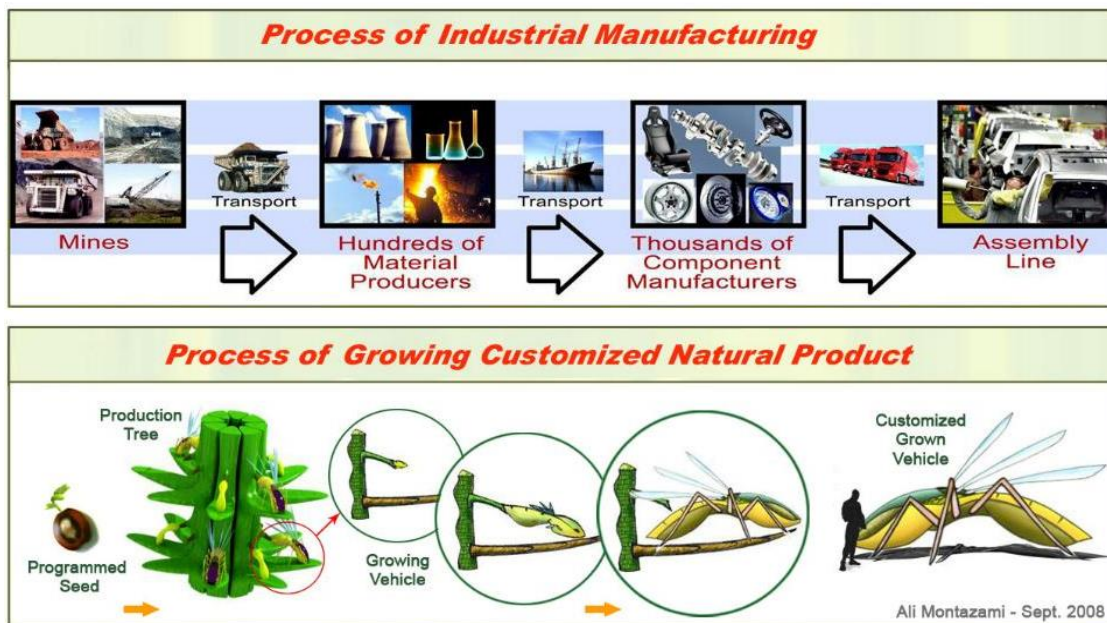
Designing the original products and cars and also inventing new products, and developing advanced and futuristic technologies were not very active in Iran. Therefore I had to find my path to make my dreams come true overseas. My provided design concepts to design companies overseas became attractive to them, but those companies' collaboration policies didn't allow overseas cooperation, especially with Iran, because of financial barriers. Citizens in Iran are disconnected from international banking systems. Maybe expressing that I received my Visa Card first time ever in Taiwan shows Iranian citizens' worldwide financial disconnection. Because of this barrier, I didn't succeed in starting an overseas design collaboration. Therefore watching that similar concepts of mine are being produced by others in different countries one after the other, was a huge regret. However, seeing that my ideas are feasible enough to be produced by leading industries, had made remarkable confidence in my concepts and designs. Another choice to approach my dreams was to study Industrial Design or Transportation Design abroad, but after searching several options, it didn't happen due to financial limitations. I didn't give up and decided to continue learning design and computer 3D modeling from whatever sources I could access, including the internet, which was newly accessible for the public in Iran from 1999, and in parallel to search and try other possible ways to actualize my dreams.

In parallel to self-taught learning of design and providing design services to clients as freelancers, I also decided to start my professional engineering career in Iran's car manufacturing industry. As a graduated mechanical engineer, I started my first engineering career as Research and Development Expert in 2002. My primary duties were designing parts for car speakers and writing the manufacturing procedures and other engineering tasks. As possible existing job having some shares with my creativity and design passions and as a potential path towards my preferred future design career and managing the living costs, I continued to work as an engineer in the car manufacturing industry for all later occupations of mine in Iran. My strenuous efforts at work brought me the opportunity to be in charge of various operations at factories and companies. This also helped me learn several fields such as part

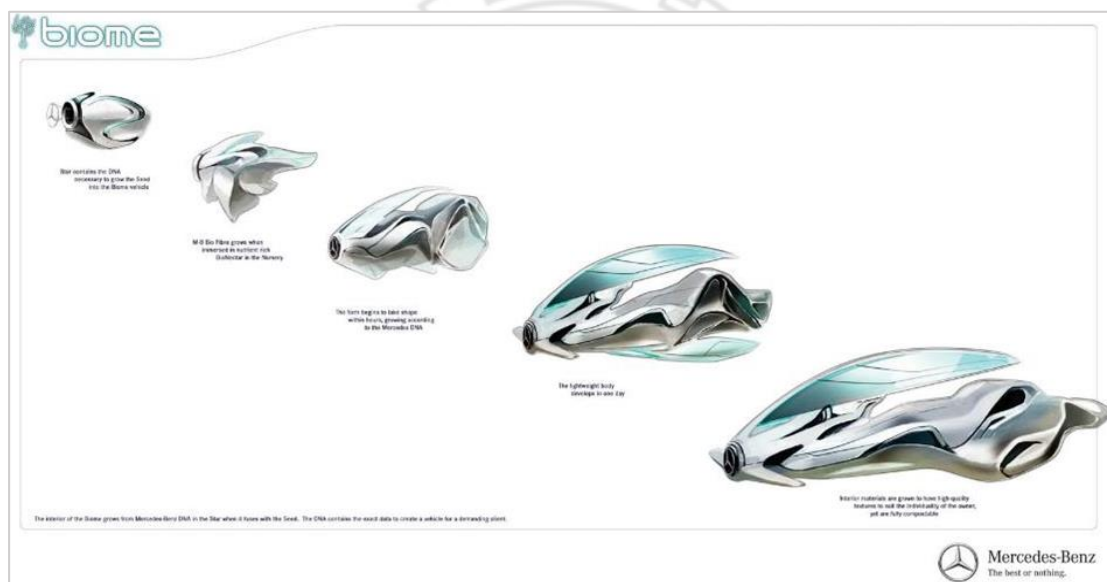
design, system management, team management, process engineering, product engineering, occupational health and safety management, ergonomics, production system, consulting, business development, total delivered cost, and many other fields. On the other hand, I used to receive promotions at work from Research and Development Expert at a car electronic parts manufacturer, Douran Electronic Co., in 2002 to General Manager at Renault-Nissan in Iran, 2015.

As the last period of my twenty-year engineering career, working at Renault Iran was an opportunity to try my chance to approach Renault's design position. I managed to make contact with Renault Design central department in France, in 2007, by sending them one of my designs, a concept car including style design and fourteen functional concepts in car safety, comfortability, warning systems, and driving control concepts. Renault Design Department showed interest in my concept car and ideas. They informed me that they sent my concepts to Advanced Engineering Department to study and evaluate development. However, I think I was not lucky because in 2008, all Research and Development budgets at Renault turned to zero to manage the financial crisis of Europe. Nevertheless, I continued to provide my futuristic concepts to Renault Design and Engineering.

In 2008 I sent my proposal concept of “Growing Customized Natural Products” (Figure 4) to Renault Design and Engineering central departments. This concept proposes an environmentally friendly and natural production system as an alternative way to the industrial manufacturing system. In this proposal method, various kinds of products can be produced by modification of DNA of the seed. Then seed grows to the target product. This production method could reduce many negative environmental impacts of the current manufacturing system, which has negative environmental impacts from extracting mineral materials to final assembly and many other advantages. Not receiving any response in reply to my proposal from Renault's top management made me think that maybe a car manufacturer usually is not interested in such technologies and or developing such technology is too expensive and far to be achieved. Or perhaps the future policy of Renault doesn't include such fields of technology. But surprisingly, two years after, in December 2010, for another time, I experienced watching a similar concept of mine to be produced by others, while I couldn't develop that. In December 2010, for the first time in the history of manufacturing, a major carmaker, Mercedes Benz, presented a similar concept of producing the car's body by growing the genetically modified seeds (Daimler, 2012), see Figure 5. The name of the concept car, showing this new method, was “biome” and presented in Los Angeles Car Show in December 2010, and the idea, as well as the process, were so similar to what I had already proposed.



**Figure 4.** The concept of Natural Manufacturing Process as an alternative to the Industrial Manufacturing Process, designed by Ali Montazami in September 2008



**Figure 5.** "biome" conceptual process of growing seed to body of car by Mercedes Benz, presented in Los Angeles Car Show, December 2010

Years after, in 2013, my connection to Renault Design recovered. I have also connected to Renault Creativity and Innovation Department, which invited me to Renault Technocentre, France, in 2013 after becoming interested in my design and technology concepts. After that, besides my work as Department Manager of Renault Production System (SPR) in Iran, I had some collaborations with Renault Innovation, especially in upgrading the procedures of creativity and innovation of Renault. To make my dream of being a car designer come true, I had to have academic knowledge and hold a Transportation Design degree from the top design colleges. Still, because of the financial barriers, I never managed to go abroad to study



Transportation Design. On the other hand, by consulting design directors at Renault Design in 2013, I understood that designer position is only for young graduated designers who are around 23 years old and already have received design degree from top design colleges, while I was 39 and didn't have a design degree.

However, my passion and goal for the future was not only to become a car designer but also an inventor of new products and technology. Therefore, I continued my overseas collaboration with Renault Innovation Department and planned to prepare for future opportunities. I can say that some progress happened in approaching my goal, but it was prolonged due to the administrative procedures and career path structures in such a giant company, especially to job mobility from Iran to France. In 2017, in my 42, I had a high-level job position as a General Manager at Renault Iran, a Renault-Nissan-Mitsubishi Alliance branch, living together with my loved wife, Mona Kaveh Ahangari, and owning almost everything for a comfortable life. All these had been achieved as a result of many years of hard work and facing complex challenges. I was proud and grateful for having such achievements and life conditions, but a huge part of me was still not actualized. Considering my age and the fact that less time was left to realize my goals, I had to decide whether to continue the same path or find another way.



**Figure 6.** A collage of some designs of Ali Montazami including: Peugeot Endless Concept Car (November 2004), Renault Iran Coupe Concept Car (March 2013), Renault Tower Concept (September 2008), Polygon Girl (1996), Antelope Cave-style Painting (2001), Ferrari Letters Poster (1996), Jaguar Statue (1996), The Universe Short Film (2021, Post-production), and MiniMAX Concept Car (June 2007)

## **Why Futures Studies and Why Taiwan?**

During all my past, I tried to find ways to actualize my inner creator. Creating things never was only a passion to me, it was like my breathing, and I couldn't live without that. Always I used to make changes and innovations at work and in my personal life. In my engineering and management career, almost all departments that I was in charge were being founded and organized by myself with creating all procedures and requirements. But, all these innovations were not enough to satisfy my inner creator. It was like breathing with a blocked nose and closed mouth whole the time. Several attempts to put aside such a passion and continue a routine life were failed as my inner creator was always much stronger to accept that this is what it is.

My passion for creating things that do not exist automatically was linked to the future and imagination of possible futures. In 2015 I heard from an Industrial Designer friend, Mohammad Ghezel, that a specific university major is existed named Futures Studies. It was so exciting to me knowing that there is a discipline focused on issues connected to the possible futures. To understand more about this discipline, I enrolled in an online course of "Applied Introductory to the Art and Science of Futures Studies" from World Federation of Futures Studies in 2016. This course was designed by Jennifer Gidley, the President of WFSF<sup>5</sup> at that time, and taught by Victor Vahidi Motti, who is now the Director of WFSF. After graduating from this course, I found futures studies very linked to my passions and a pathway to actualizing my plans of designing for creating more preferable futures for people.

I searched all available Master's programs worldwide and found the teaching program in the Graduate Institute of Futures Studies at Tamkang University, Taiwan, very fit with the topics that I needed to learn about futures. Confirmation of this Master's program by Victor Vahidi Motti, who had good knowledge about futures studies and teaching sources, ensured me to apply for this program in Taiwan. But, to change my path to futures studies, we had to make a dramatic decision with my wife to transform our future completely. The only way was to quit my job and close my eyes over all my previous achievements and future promotions at work. We both had to forget all the professional and social credits that we had in Iran and go to another part of the world that no one knows us, changing our lifestyle from a general manager style to student style and paying a lot of costs. We had to make a dramatic decision to give a chance to the dramatic changes happen in the future, and the sacrificial support of my wife, in addition to my strong confidence, made it happen.

Acceptance of my application to the Master's program of Futures Studies accompanied with a full scholarship of two-years' tuition by Tamkang University, based on my previous

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<sup>5</sup> WFSF: World Federation of Futures Studies, <https://wfsf.org/>

professional and innovative achievements, was a big help for us to make such a difficult decision with more confidence. Also, without the support of Professor Chen Kuo-Hua, who was the Director of GIFS in that period and the help of the administrative staff of Tamkang University, and the help of our family, such change never would happen. Finally, on the second of February 2017, I arrived in Taiwan for the first time in my life. Although I had traveled and lived abroad many times, coming to Taiwan was like being born in another world.

### **Taiwan, a Gate to the Futures**

In the beginning, moving to Taiwan was only because of studying Futures Studies. Moving to Taiwan was considered a temporary relocating by me and my wife to seek other possibilities about where to live permanently. As soon as I started studying the first courses of Futures Studies program at Tamkang University, I became sure that I have come to the right place. According to my multifunctional experiences at work and life, my gain from the classes and teaching of professors was multidimensional and fulfilling. In addition to learning from professors in the courses at Tamkang University, participating in the international futures conferences with the support of GIFS<sup>6</sup> was very helpful to learn more about the field and prepare the network with other futurists. Apart from all these, after the first semester, enrolment in a three-day workshop of “Futures Thinking Six Pillars (Inayatullah, 2008)” facilitating by futures studies and political scientist and UNESCO Futures Studies Chair, Sohail Inayatullah, was extremely helpful to learn and see a world-class futures studies workshop facilitating.

Since I was known by the industries in Iran, after my first semester, I received a request to teach and put Foresight workshops in Iran for the Ministry of Industry, Mine, and Trade. I also proposed the same lecture and workshop to Renault Iran, and it was accepted to teach the Managers and General Managers of Renault Iran in 2017 summer. I previously had many years of experience teaching and consulting for big Iranian manufacturers, especially during my work position as Renault Iran Consulting General Manager. Therefore, providing workshops and lectures to the highest level of Industry Management in Iran was not very new to me, but this time the content was different. As my internship course in GIFS, I provided several lectures, and I facilitated the workshops of futures thinking for these two organizations. The participants in my workshops were Directors from Ministry, Minister’s Vice President, who became the Minister one year later, and Renault Iran managers. Not sure, but I assume that I was the only student in GIFS that passed his internship course with providing futures thinking workshops at this level.

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<sup>6</sup> GIFS: Graduate Institute of Futures Studies

From my second semester, I also collaborated with Journal of Futures Studies as the Managing Editor Assistant which started by formatting the articles to make them ready to be published. After collaborating in few issues, my duties expanded to all tasks on articles after accepting the articles by the referees until publishing in the journal and website. The gifted opportunities and guidelines by the editors of JFS<sup>7</sup>, especially by Professor Jeanne Hoffman and Professor José Ramos, provided a space for me to upgrade some procedures and structures for JFS during my collaboration with this pioneering journal in Futures Studies. These successes in the field of futures studies are some examples that made me more confident about my decision to leave my comfort zone for starting a new life. My confidence about such a decision and coming to Taiwan also expanded by Taiwan's atmosphere and the kindness and supportiveness of people here, whether by the university's professors and staff or the people in the city.

My activities didn't limit to futures studies in Taiwan, and as I had come from a country with a rich and long history and culture, I received several requests and invitations to present lectures about Iran in Taiwan. It was the beginning of my cultural activities in Taiwan, but as soon as my wife joined me and she received her work permit from the Ministry of Culture, we also expanded our cultural activities to music performances. My wife is a musician and professional Daf<sup>8</sup> player and we had to live separately for the first year of my student residency according to the regulations of Taiwan. Daf and Iranian traditional music were totally new for the people of Taiwan. After many performances and teaching Daf by Mona in Taiwan, we decided to establish our music band to develop our cultural activities and services. On the other hand, due to my interest in producing science fiction films to put my designs and futuristic ideas in my films, I decided to make my first short film. Connecting to Taipei Film Commission to receive some learnings about filmmaking and using online courses worldwide, and watching plenty of filmmaking videos online helped me write my first film script based on my previous ideas.

As the Director, Writer, Producer, Production Designer, Visual Effects Artist, and Editor, in January 2020, I shot the film with the collaboration of my wife as Camera Woman, Producer, and direct assistant to me in all tasks. Several friends also helped in some functions as Co-producer or supporter. At the time of writing this thesis, this short film, named *The Universe* (Figure 7), is in the post-production phase. Stepping up to filmmaking besides our previous cultural activities in Taiwan was a step forward to develop our Arts and Cultural Group and

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<sup>7</sup> JFS: Journal of Futures Studies <https://jfsdigital.org/>

<sup>8</sup> Daf: An Iranian Traditional Percussion music instrument



establish “Mastaneh Productions Studio” with expanded productions from music and cultural lectures to music videos and films.

The progress in developing our cultural activities and starting filmmaking in Taiwan brought me more hope about making my dreams come true, especially about actualizing my very old dream of producing science fiction films and putting my ideas about futures lifestyles and the future worlds inside. Learning Futures Studies program also gifted me much expanded perspective about futures and life. It helped me to focus on the other aspects of life, in addition to technology, for imagine the possible futures. Step by step, the initial plan of considering here as a temporary place to live is changing to a new plan to consider Taiwan as our base for producing our products and to continue living among its generous people.



**Figure 7.** A scene from short film *The Universe* (2021, Post-production), produced, directed and starred by Ali Montazami

### **Why a Dissertation About Science Fiction, Preferable Future, and Youth?**

In the Introduction Chapter, I will explain this research's scope, the reasons, research questions, and significance of conducting this research. Here I describe the initial personal ideas, experiences, and goals which led me to conduct the present study about futures images in science fiction films and preferred futures of youth. In fact, this dissertation is not only a final thesis to accomplish my study in Futures Studies program, but also this is a guiding point to show the directions for my recently started science fiction filmmaking work. It is like a dream that my lifelong passions of creating preferable futures for people through my innovative ideas

and also making science fiction films, both came across in this point of graduation thesis research.

Shaping this research title emerged from my personal experiences and learning more through this research for my future plan of making science fiction films. I personally experienced that most high-grossing blockbuster science fiction films are dystopian, and very few images of preferable futures are shown in such popular movies. I believed that illustrating a preferable future in science fiction films and even fictional futures could give some understanding and ideas about possible preferable futures among the public and youth, who are collectively the creators of the futures. Also, it could encourage the public to imagine other possible preferable futures. I am also very keen on showing the solutions and proposals about how such preferable futures might be created. Based on my own experience of watching science fiction films, I rarely see preferable futures and or the solutions to develop preferable futures. Even for preventing future disasters, I have seen very few solutions in the films, and almost all movies are focused on warning rather than preventive solutions.

Studying futures studies and this dissertation was an excellent opportunity for me to research more through the literature and collect other audiences' perspectives about this personal observation. According to the places that I grow up and live now, Iran and Taiwan, and I have access to the audience, I decided to focus on both youths of Iran and Taiwan. Therefore, I designed this research with the concentration of these areas of focus:

- Futures images in science fiction films
- The perspective of literature about these images
- The perspective of youth audiences in Iran and Taiwan about these images
- Preferred futures of youth in science fiction films

After finishing the research at the time of writing this foreword, I am delighted that I received the guidelines from my advisors, Professor Sohail Inayatullah as my supervisor, Professor Chen Kuo-Hua as my second supervisor, and Professor Jeanne Hoffman as my Thesis advisor. Also glad to had the cooperation of fourteen knowledgeable young people in Iran and Taiwan. All these gifted me a more precise direction towards making my future science fiction films. This dissertation's findings will help me about what and how to put preferable futures in my films and the proposal solutions to create those futures.

# Chapter 1

## Introduction and Purpose of the Study



**Figure 1-1.** A poster for this research thesis, designed by Ali Montazami showing some heroes of science fiction films, youth of Iran, youth of Taiwan, and the cities of Taipei, Tehran and Persepolis

As reviewed in Foreword, the main driver to bring this dissertation to existence was my personal questions about futures images in science fiction films and my aim to make science fiction films by showing the preferable futures and possible solutions to create those futures. In the Introduction Chapter, I will explain this research's scope, the reasons for choosing that scope, the research questions, and the significance of conducting this research. This research's main focus is on futures images in science fiction films and images of the preferred futures among the youth of Iran and Taiwan.

Before going to the literature review, following areas that are related to this research and their significance and connection to each other will be introduced:

- A brief about science fiction, characteristics, and subgenres of science fiction films
- A brief comparison between Iran and Taiwan, about their demography, economy, major international and domestic issues, and their film industry
- The significance of the subject of youth and their images of the futures in futures studies research
- The significance and influence of science fiction films on youth's image of the futures
- The objective of the study and Research Questions
- Significance of designing the present case study
- The scope of science fiction films in this research
- The scope of study sample in this research
- Limitation for the research

Other linked areas with this research and also more data about research questions will be reviewed and collected in the Literature Review Chapter. Before moving to Methodology Chapter, the hypothesis and anticipation of this research's possible findings will be reviewed at the end of the Literature Review Chapter. Methodology Chapter explains the mixed qualitative and quantitative research method and the list of questions for the interviews and the details of scope, sampling, analysis, and other points related to this research method. The chapter of Results and Discussion reveals the findings of this research and interviews in separated tables for each interview question and several quote samples mentioned by the participants in this research. Analysis and Deepening Chapter brings all findings together to analyze for clarifying the answers to the research questions of this research and going deep in CLA layers for both futures images in science fiction films and preferred futures images of youth. The analysis methodology of Causal Layered Analysis-CLA (Inayatullah, 1998) will be introduced in Methodology Chapter in detail. The last chapter of this dissertation tries to conclude all findings of this research and the author's perspectives.

## **Science Fiction**

### **Definition of science fiction and main characteristics**

Before introducing other topics connected to this research, we first review the definition of science fiction, its characteristics, and sub-genres of science fiction films. About the definition of science fiction, we cannot refer to a standard definition that everyone agrees and “many critics have offered definitions of science fiction, and the resulting critical discourse is a divergent and contested field” (Roberts, 2016). The writers, researchers, and scholars who have done several works in this field have provided a wide variety of definitions. For example, Isaac Asimov, a very well-known science fiction writer of 19<sup>th</sup> century, defines science fiction as the “branch of literature which deals with the reaction of human beings to changes in science and technology”(Asimov, 1975). James Gunn, the author of *Road to Science Fiction* series, also refers to science fiction as a branch of literature which deals with change, but rather than humans reaction, Gunn refers to the impact of change on humans by his definition that “science fiction is the branch of literature that deals with the effects of change on people in the real world as it can be projected into the past, the future, or to distant places” he continues in his definition that the major changes in science fiction are scientific or technological changes and the impact is to put communities and sometimes entire humanity in danger (Gunn, 2002).

*The Encyclopedia of Science Fiction* has collected several definitions about science fiction by well-known researchers and authors in this field, such as one of the earliest definitions for

science fiction which is provided in 1926 by Hugo Gernsback, the founder of the pioneering science fiction magazine, *Amazing Stories*. Gernsback refers to Jules Verne, H. G. Wells, and Edgar Allan Poe's stories as role model examples for science fiction writing. He clarifies that a science fiction story needs to be charming romance intermingled with scientific fact and prophetic vision, makes tremendously interesting reading by amazing tales, always instructive, supplying knowledge, and all these in a very palatable form (Clute & Nicholls, 1995). J. O. Bailey in *Pilgrims through Space and Time* (1947) defines science fiction as "a piece of scientific fiction is a narrative of an imaginary invention or discovery in the natural sciences and consequent adventures and experiences . . . It must be a scientific discovery - something that the author at least rationalizes as possible to science" (Clute & Nicholls, 1995). In 1972 Darko Suvin defined science fiction as "a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment" (Clute & Nicholls, 1995). Arthur C. Clarke, the co-writer of the film *2001: A Space Odyssey* (1968), is one of the most influential films of all time. He defines the distinct points of science fiction, and fantasy as "science fiction is something that could happen—but you usually wouldn't want it to. Fantasy is something that couldn't happen—though you often only wish that it could" (Clarke, 2000).

In most of the provided definitions for science fiction, the characteristics such as: being a branch of narrative literature; being about change; being scientific; to include technological elements; to contain fiction and imagination, and being about human beings are most common. In addition to the short definitions of science fiction, such as the examples that have been introduced above, some other scholars and critics provide wider definitions that also introduce the characteristics and elements for science fiction works. For example, Orson Scott Card, the Hugo Award and the Nebula Award winner for his science fiction novels, outlines five types of stories which can be defined as science fiction stories. He refers to the stories that set in the future; all stories set in the historical past that contradict known facts of history; all stories set in other worlds; all stories supposedly set on Earth, but before recorded history and contradicting the known archaeological record; and all stories that contradict some known or supposed law of nature (Card, 2010).

### **Classification of science fiction works**

In addition to the overall definitions of science fiction, such as the introduced definitions above, there are some classifications of science fiction work with different definitions. However, not



every science fiction scholar and author agrees to divide science fiction into types and or sub-genres. For example:

*Sf's community of writers, readers, and editors resist defining genres and sub-genres. In 1999, long-time Analog editor Stanley Schmidt, heir to John W. Campbell's job, remarked: Lately I've been saying I'd like the term 'Hard SF' to go away. Too many people use it to mean something much narrower than what I mean by it . . . science fiction is simply fiction in which some element of speculation plays such an essential and integral role that it can't be removed without making the story collapse, and in which the author has made a reasonable effort to make the speculative element as plausible as possible. Anything that doesn't meet those requirements is not science fiction at all, as far as I'm concerned, so there's no need for a separate term like 'Hard SF' to distinguish it from 'other' kinds of sf (James & Mendlesohn, 2013, p. 186).*

Despite some science fiction communities' disagreement, an overall classification of science fiction works is to divide these works into Hard Science Fiction and Soft Science Fiction. This classification is connected to the types of science as “hard” and “soft”. “Hardness of science means stringency, precision and unexceptional validity of the natural laws through mathematical formulation, whereas “soft” sciences do not have these properties” (Seising & Sanz, 2012, p. 1). Examples of “hard” science are physics and chemistry, which use empirical, experimental and quantifiable data operating through precise scientific methods. On the other hand, Examples of “soft” science are psychology, anthropology, and the social sciences which are based on conjectures and rely on qualitative data and analysis (Seising & Sanz, 2012, p. 1). Therefore, according to this science classification, Hard Science Fiction refers to all stories that contain elements from physics, mathematics, astronomy and space traveling, chemistry, genetics, computer science, robotics, and all fields of engineering and natural science. According to the definition of hard science, the story of hard science fiction is more feasible and logical. And according to the definition of soft science, soft science fiction works are all stories that contain elements from sociology, psychology, anthropology, and all fields of social science. Science fiction films such as *2001: A Space Odyssey* (1968), *Blade Runner* (1982), and *The Martian* (2015) are examples of hard science fiction, as the core stories of them are about space science or artificial intelligence. The episodes of *Star Trek: The Next Generation* (1987–1994) and *Nineteen Eighty-Four: A Novel* (1949) by George Orwell are examples of soft science fiction, as the core focus of the story is the society and social issues.

Another type of overall classification of science fiction works is dividing them to “Utopian Science Fiction” and “Dystopian Science Fiction”. This classification is connected to the

definition of Utopia and Dystopia. The word utopia was first used in direct context by Sir Thomas More in his 1516 work *Utopia*, which referred to an ideal society (Curtright, 2015). According to this definition, every science fiction work which introduces an ideal, or in other words, a preferable society, classifies as a utopian science fiction work. In contrary to utopia, dystopia refers to a society that is not preferable to live in. Any social, political, economic and environmental situation that we don't want to experience in our society refers to a dystopian society, such as totalitarian government, poverty, illness, natural disaster, war, slavery, extinction of humanity or other species, etc. Stories that contain such elements as their environment and story set are considered dystopian science fiction. For example, *The Matrix* (1999), which introduces a society that humans are under slavery by machines, is a dystopian science fiction film and *Back to the Future* (1985) is a utopian science fiction film.

Another categorization of science fiction works is by their sub-genres and focused elements in their stories or visuals. This set of categorization will be introduced below after a review of the history of science fiction films.

### **Beginning of science fiction film production and sub-genres**

Science fiction novels and literature have existed before the invention of cinematograph and the film industry. Not all researchers agree about the beginning of the science fiction writing era and which ancient work can be named the first science fiction writing. Some literature has been introduced as the earliest science fiction work by various critics and authors. For example, *A True Story*, written in the 2<sup>nd</sup> century (Gunn, 1988); some of the stories from *The Arabian Nights*, written in 10<sup>th</sup> century (Irwin, 2003); *Theologus Autodidactus*, written in 13<sup>th</sup> century (Islamset-Muslim Scientists-Ibn Al nafis as a philosopher, January 17, 2021); *Somnium*, written in 1608 (Asimov, 1977); and *Frankenstein*, written in 1818 (Aldiss, 1975) are referred as earliest science fiction works.

The invention of the first cinematograph camera by Léon Bouly in 1892 (Auer & Ory, 1979) and developing cinematography and screening of the first film by the Lumière brothers, *Workers Leaving the Lumière Factory*, in 1895 (Fielding, 1983) is claimed as the starting point of the film industry. Only seven years after the first film screened by Lumière, another French filmmaker, Georges Méliès, produced the most claimed first science fiction film ever, according to *A Trip to the Moon* (1902) (Bignell, 2004). In the beginning, science fiction films used to be classified as B movie but the master piece of *2001: A Space Odyssey* (1968) brought science fiction films to the serious cinema genres (Cass, 2009).

Through the evolution of science fiction films from the first film in 1902 to the wide range variety of today, in addition to the introduced classification of science fiction films to Hard/Soft and or Utopian/Dystopian science fiction, a wide range of sub-genres and types have been defined for categorizing the science fiction novels and films. As mentioned above, some science fiction communities do not agree with the classification of these works to the genres or sub-genres. Also, the categories suggested as sub-genre are not standard or unified among all science fiction scholars and authors. Some sources have divided the types of science fiction films into very detailed types and introduced more than eighty sub-genres. To summarize the list of sub-genres to a list which can cover most of major themes in science fiction films, and to be more common between different sources, the author of this dissertation has adapted three sources together (Aldredge, 2020; Genres & sub genres, n.d.; A guide to science fiction subgenres, n.d.) to collect a list which is provided in (Table 1-1).

**Table 1-1.** Sub-genres of science fiction films

Source: Author by adaptation from Aldredge (2020); Genres & sub-genres (n.d); A guide to science fiction subgenres (n.d.)

Sub-genre	Example themes
Alternate History	"What if history had developed differently?"
Alternate Humanity & Alternate Universe	The universes different than our reality, parallel universes, animals speaking, humans as aliens
Apocalyptic	Humans struggle to survive after devastation, end of civilization
Post-Apocalyptic	A new society has risen from the ashes, usually less technological
Ecological disasters & Dying Earth	Destroyed environment, natural disasters, end of time, universe collapsed
Artificial Intelligence	Artificial minds and interaction between the human race and AI which sometimes is more intelligent than humans and sometimes has consciousness
Cyberpunk & Cybernetics	Cyber-world, futuristic computers and machines, cyborgs, robots, high tech, and low life
Steampunk	Primitive machines and past technologies usually for 19th century
Alien Invasion	Aliens invade earth and destroy humanity
First Contact	The initial meeting between humans and alien races
Space Opera Space Exploration	Large-scale fictional events in far spaces, vast panorama, space travel, scientific research on other planets
Superhero	Superheroes with superpower conducting their missions
Mutant	Mutant humans with extraordinary abilities
Time travel	Journey through time to the future or past
Mind/soul travel	Migration of mind and consciousness to other body, machine, or nobody like in the films <i>The Matrix</i> and <i>Avatar</i>
Cross-Genre	A mix of science fiction with other genres such as action, fantasy, comedy, war, romance, horror, erotic ...

Each single science fiction film may fall under several sub-genres rather than only one, as well as being classified in one or some of these higher-level categories of utopian, dystopian, hard science fiction, or soft science fiction. As mentioned before, none of the sub-genre lists is



agreed by all and also some sources may disagree to consider some of the sub-genres introduced by other sources as science fiction at all. For example, the sub-genre of Superhero in (Table 1-1), which is the core theme for American comic books, such as *MARVEL*, is one of the types that many critics argue that this kind of movie is not science fiction. As an instance, (Robinson, 2017) states that "he's bulletproof, can fly, is super strong and fast, with X-ray heat vision, freezing breath, and super hearing. Superman's powers break every physics law with no explanation other than the fact that he's an alien. Clearly then, Superman must fall within the mysterious genre of fantasy." But on the other hand, some other critics are less strict about naming a work as a science fiction novel or film. For example, according to (Clute & Nicholls, 1995), an award-winner science fiction author and critics, Norman Spinrad, who has published more than twenty science fiction novels, emphasizes that "Science fiction is anything published as science fiction".

Apart from the American science fiction film industry, some other countries also produce science fiction films, but Hollywood is producing most science fiction films. The films selected for this research are among fifty highest-grossing blockbuster science fiction films produced after 2000. The reason of this scope will be explained at the end of the Introduction chapter. Also, science fiction films in Iran and Taiwan will be reviewed in the Literature Review chapter. Other countries also have a history of science fiction writing and filmmaking, but the world of science fiction is vast and is not the subject of this research to go through. However, comparing the popular mediums in Iran and Taiwan, Japanese comics, especially *Manga*, are much more popular in Taiwan (Wong, 2002). *Manga* are comics that originated in and developed in Japan late 19th century (Gravett, 2004). Despite not being introduced as a subgenre of science fiction but in many *Manga* comics, science fiction's characteristics have been used (Brenner, 2007). *Manga* and other mediums such as animations, TV programs, and series, and video games that may contain science fiction characters and being popular in Taiwan or Iran are not in this research scope. But, maybe further studies about futures images of youth in Iranian and Taiwanese through these other mediums also provide more data for youth studies and futures studies. In the next section, we briefly review some similarities and differences between Iran and Taiwan to continue introducing the topics connected to this research.

### **Iran and Taiwan, some differences and similarities**

Iran and Taiwan are Asian countries, one located in the Middle East and another in East Asia. The history of these two countries and their current condition regarding politics, culture, demographics, and economy has fundamental differences. Still, considering the historical

relations between the west and east of Asia along the centuries, especially via trademarks through *Silk Road* (Liu, 2010) and industrial development in both countries, they have similar elements.

According to (Population Pyramids, 2018) due to the latest census in 2017, Iran had 80,945,718 populations, with 18.1% at the age of 20 to 29 - the age for youth under study in this research - which has covered 14.5 million people. On the other hand, according to (National Development Council, 2018) in the same year, Taiwan with a population of 23,571,000 had 3,224,000 people at the age of 20 to 29 which had shaped 13.68% of the total population of Taiwan.

In terms of economy, the primary source of GDP of Iran, as an *energy superpower* country (Coşkun, 2009) is by exporting oil and natural gas, which shape 67% of whole exports of Iran. The other major exports are mineral materials, foods, and manufactured products (Ministry of Industry, Trade and Mine, 2018). The first place exporting product of Taiwan is electronic integrated circuits that take 29% of the whole export value (International Trade Bureau Global Information Network of Taiwan, 2018). Other major exports are Refined Petroleum, electronic products, and machinery. According to the latest statistics of World Bank (2018), the GDP of Iran in 2017 was 454 Billion US Dollar while according to latest published *Taiwan statistical data book*, the GDP of Taiwan in 2016 was 530.5 Billion US Dollar (National Development Council, 2018).

Regarding the major international issues of Iran, the current sanctions by the United States on trade and financial transactions of Iran (BBC WORLD SERVICE, 2019; CFR.org Editors, 2018; Tofighi, 2012) has made the deduction in exporting oil as well as receiving the payments for exported Oil and other products abroad. The international banks have been threatened by the United States government to be punished if they have transactions with Iran's government. Therefore they do not have financial transactions with Iranian banks. These sanctions impacted the GDP of Iran and consequently on the income of households and the quality of life for Iranian citizens.

On the other hand, Taiwan's major international political issue is the conflict with mainland China. Taiwan, also known as the Republic of China (ROC) and as Albert (2019) expresses:

*“Taiwan is an island off the southern coast of China that has been governed independently from mainland China since 1949. The People's Republic of China (PRC) views the island as a province, while in Taiwan—a territory with its own democratically elected government that is home to twenty-three million people—political leaders have differing views on the island's status and relations with the mainland”.*

Another issue that impacts the economy and job market of Taiwan is moving the factories of Taiwan to mainland China due to lower production costs there. This migration of factories has a negative impact on Taiwan's economy and encourages many youths of Taiwan to migrate to mainland China to work and live.

Since this research is connected to the films, we briefly review an overview of the film industry in Iran and Taiwan. Later in the Literature Review chapter, the science fiction film Industry in Iran and Taiwan will be reviewed. The film industry's history in Iran goes back to entering the first cinematograph camera in Iran in 1900 (Mehrabani, 1984). The early cinema was also inaugurated in 1900, in Tabriz's city in Iran (Film Museum Iran, n.d.). The first Iranian feature film named "Abi and Rabi" was a comedy and silent film produced in 1930 (Iranian movie Database-Abi and Rabi, n.d.), and the first Iranian sound feature film, named "Dokhtare Lor" produced in 1933 (Iranian movie Database-Dokhtare Lor, n.d.). The themes of produced films and the film industry of Iran were being influenced by various conditions of the society, including World War II, change of the dynasties, Islamic Revolution of 1979, and other political and economic transformations in Iran in each period. According to (Policymaking and Diversity of Genres in Iran Cinema, 2019), the Iranian film industry is not very genre-oriented. However, we could categorize most of the Iranian productions into Drama and Comedy genres. According to (The world record of Iranian cinema in 40 years, 2019), Iranian filmmakers have received many remarkable international film festival awards frequently including Academy Awards, Cannes, Berlin, and Venice International Film Festivals, and many other important international film festivals around the world. Film watching preferences are different regarding the education, age, and gender of the audiences in Iran, but according to (Kalantari & Nasim, 2013, P. 121; Mehr News Agency, 2013), drama, action, and comedy are the genres that the audience watch more than the other genres in Iran. Foreign films are rarely being screened in movie theatres, and when screening, some parts of films are being cut according to the regulations (Mehr News Agency, 2019). Therefore, Iranian audiences prefer to watch the original version of foreign films at home (Asr Iran, 2018) through the internet.

The film industry's birth in Taiwan was in 1901 when Taiwan was under Japanese rule, and the first film screened in Taiwan by Toyojirō Takamatsu, who the Japanese government sent to show films in Taiwan (Taiwan memory, n.d.). In 1907, Takamatsu also directed the first-ever film produced in Taiwan named "An Introduction to the Actual Condition of Taiwan" which was a documentary propaganda silent-film (Lee, 2012). The themes of produced films and the film industry of Taiwan, also similar to the film industry of Iran, were being influenced by various conditions of the society, including the Japanese rule, World War II, Republic of China

rule, industrial development, and other political and economic transformations in Taiwan in each period. Taiwanese filmmakers produce in diverse genres like sports, romance, horror, drama, and action (The 10 Best Taiwanese movies of 2019, 2021), but a common interest of most filmmakers is to focus on contemporary issues and to tell the stories of ordinary people (Programme, n.d.) which also covers the film watching preferences of the most Taiwanese audiences.

Despite several fundamental differences between Iran and Taiwan, one of the significant similarities between these two countries is that both are industrialized, and fields such as engineering disciplines are more popular for studying by youth due to their higher potential to find higher-income jobs. However, most of Taiwan's industrial products are for exporting, while Iranian factories' industrial products are mainly for the domestic market. Taiwan is one of the major oil importers from Iran, and electronic products are the major imports by Iran from Taiwan. However, the United States' sanctions impacted the volume of these exchanges between Iran and Taiwan. (Table 1-2) provides a summary of the comparison made in this section.

**Table 1-2.** Summary comparison between Iran and Taiwan

Item	Iran	Taiwan
Population (2017)	81 Million	23.5 Million
Youth Population (20-29 Year)	14.5 M (18%)	3.2 M (~14%)
Major Economy Source	Oil & Natural Gas	Electronics & Refined Petroleum
GDP	454 Billion USD (2017)	530.5 Billion USD (2016)
Major Trade together	Oil to Taiwan	Electronics to Iran
Major Overseas Issue	USA Sanctions	Mainland China and UN
Popular Job for youth	Engineering & Industrial	Engineering & Industrial
Start of film screening	1900	1901
First long film production	1930 <i>Abi and Rabi</i> (Comedy silent film)	1907 <i>An Introduction to the Actual Condition of Taiwan</i> (Documentary silent film)
Major film production genre and audience interest	Drama and Comedy	Drama and Documentary

## **Futures studies, youth, and their images of the futures**

“Because we see the future of society in youth” (Hoerl, 2002) and “the capacity of youth to create images of the future which is powerful enough to guide and motivate positive social changes” (Kurth-Schai, 1988), youth’s images about the futures and its impact on the society have become important subjects in futures studies. Countless pieces of research have been done about youth and their images of the futures. Here are few examples out of many research done around youth’s images of the futures:

*Youth futures* by Gidley and Inayatullah (2002) is a book about Youth futures through comparative research and transformative visions, including searching for answers to the questions such as how young people see the future? Are they optimistic or pessimistic? Do their views vary from culture to culture? Are young people actively engaged in creating their desired futures, or are they passively receiving the future? What effect has globalization on youth culture? How is the future taught in schools?, etc. Chen (2019) focuses on evaluating the possibilities for encouraging sustainability-consciousness among Taiwan's youth through higher education and probes students’ images of their preferred future environments. Hoffman (2019) investigates the preferred images of the environment in 2060 by collecting the images of the futures from a cross-cultural cohort of undergraduate students at Tamkang University, Taiwan through using a combination of survey, imaging through drawing, and Causal Layered Analysis (CLA). Kurth-Schai (1988) studies youth's roles in society, including analyzing their images of the futures and their acts based on their images of the futures. Eckersley (1997) studies the young people's relationship with the future and distinguishing their images about the futures in three categories of modern, postmodern, and transformational. Ono (2005) researches societal factors impacting images of the future of youth in Japan. Schreiner, Henriksen and Kirkeby Hansen (2005) studies empowering the youth to meet futures’ challenges in political, economic, scientific and ethical domains by focusing of climate change issue.

Another youth future study is done by Katz-Wise (2017), who studied future perspectives among transgender youth and their families. Kuhmonen (2016) seeks to find the answer for how the Finish youth dream and imagine the futures of rural areas considering various aspects such as nature, safety, societal involvement, self-made life, opportunities for entrepreneurship, etc. Hicks (1996) studies how students envision their preferable futures. Hicks and Holden (2007) with the title of “Remembering the future” studies about what children think about the future and explores alternative futures, particularly at the need for a futures perspective in education. Kaboli and Tapio (2018) describe the procedure of exploring the images of the future of a group of young adults from different cultural backgrounds who are Bachelor's and Master’s degree

students in Finland. Chen and Hoffman (2017) explore the images of the future among over 600 international undergraduate university students in Taiwan to describes how gamification is being used to redesign the futures core curriculum at Tamkang University. Ono (2003) conducted a survey among two groups of university students in Taiwan and the U.S. to look into various aspects of the students' futures images and explore the relationship between their images and their understanding of the present.

Liu and Lin (2018) explored 96 undergraduate students' views about environmental futures that are preferred or desirable for them through a survey at one reputable public university in Taiwan. Demneh (2015) conducted interview research among 17 university graduated youth about their images about Iran's probable futures, including their own preferred futures and fears. Chen (2016) studied diverse future metaphors used by 854 Taiwanese high school students with the values and meanings that lie underneath them. Saeedy, Amiri, Zolfagharzadeh, and Eyvazi (2017) conducted a survey research among 352 students of the University of Tehran, including 149 males and 203 females about life satisfaction and images of their preferred futures. Hoffman (2019) studied the preferred images of the environment in 2060 held by a cross-cultural cohort of 77 undergraduate international students at Tamkang University in Taiwan.

These are very few examples of many pieces of research which have been done about youth and their images of the futures around the world, and all these emphasize that:

- Youth are the main contributors in imagining and building futures of the society
- Youth's images about the futures and its impact on society are essential subjects in futures studies' research

Therefore, a key insight in designing the present thesis research is such importance of futures' images of the youth and the importance of these research in the field of futures studies.



**Figure 1-2.** Two examples of futures images by the youth from Chen and Hoffman (2017, p. 57) and Hoffman (2019, p. 70)

## **Science fiction films and youth's images of the futures**

According to von Stackelberg and Jones (2014), “science fiction books, graphic novels, films, and television continue to shape popular views of the future” and also “the works of H.G. Wells, Isaac Asimov, Ray Bradbury, and other science fiction writers created not just their own visions of the future but inspired several generations of readers to create a world based at least in part on these visions”. This is an example of the influence of science fiction films on futures’ vision of people.

The impact of images from science fiction films even goes beyond influencing the images of the future among the public and makes their understanding and assumptions about life, world, and facts such as science itself, either the assumptions of the present time or the future, especially by the young generation. For example, Helga Nowotny, the chair of the European Research Advisory Board, writes that “the past few years has seen an increasing proliferation of images and symbols via hi-tech-driven media entertainment that is deliberately designed and intended to meet the public imagination about science but all too often creates misunderstandings regarding the nature of science and leads to a blurring between fact and fiction” (Barnett, 2006) and “a single viewing of a science fiction film can negatively impact student ideas regarding scientific phenomena” (Barnett, 2006). On the other hand, regarding the same assumptions and understanding of science, Laprise reports that the students’ interest in, and understanding of, science and technology enhance by watching and analyzing science fiction films (Laprise, 2010, p45). Therefore, the impacts of science fiction films on images of the futures and understanding the world by students would be positive and negative.

The other example of positive impact and use of science fiction is to utilize science fiction films for developing of business scenarios (Bell, Fletcher, Greenhill, Griffiths, & McLean, 2013) and also as Toni Ahlqvist emphasizes in “Chasing Black Swans through Science Fiction” (Ahlqvist, 2015), some weak signals of emerging issues could be found in science fiction films and writings. In fact, today, science fiction films are not only as the entertainment and have expanded the impact and influence on daily life and images of the future by people as Tomas Lombardo state that “for many people science fiction has become a total way of life—and a way of experiencing and creating the future” (Lombardo, 2015, p.6).

According to another research by Chen (2016), most of the students answered that “the future is like a Sci-Fi movie” to the question of “To me the future is like ...” in a survey research (P. 4). Montazerghaem and Faghani (2009, P. 151), after analyzing the responses of Iranian university graduated youth to the interviews about science fiction films, emphasizes that the youth use science fiction to understand the world around them, and their worldview is

significantly under the influence of science fiction genre. Especially, Males and graduated from technical disciplines believe the future images in science fiction films much more than females and none technical disciplines graduates (Montazerghaem & Faghani, 2009, P. 154). As a summary, all these emphasize the following listed high level of influence of science fiction among the public:

- Science fiction books and films shape popular views of the future
- Images from science fiction films even make popular understanding and assumptions about life and science
- The youth use science fiction to understand the world around them, and their worldview is extremely under the influence of the science fiction genre
- Many young students see the future as something like a science fiction movie
- The impacts of science fiction films on images of the futures and understanding the world by students would be both positive and or negative
- science fiction images inspired several generations to create a world based on some of these visions

Such importance and influence of science fiction films on futures' vision of people and its high potential of building the futures were also key insights in designing the present thesis research.

### **The objective of the study and Research Questions**

This research aims to find the differences and similarities between the images of the futures from Science Fiction films and the images of preferred futures from the youth in Iran and Taiwan. Also, to compare the preferred images of the futures between Iranian and Taiwanese youth through science fiction films. Another objective of this research is connected to the author's science fiction filmmaking journey and finding directions in designing his future science fiction films' contents. The significance of conducting this research will be explained in the next section. Finding answers to the following research questions will help to reach the research objectives of this dissertation:

1. What are the common images of the future shown in Science Fiction films from the perspective of youth in Iran and Taiwan?
2. What are the differences and similarities between these Science Fiction films' futures and the futures that the youth of Iran and Taiwan want to live in?
3. What are the differences and similarities between the images of preferred futures by the youth in Iran and Taiwan through science fiction films?



4. What kinds of futures images can be the images of a preferable future in science fiction films?<sup>9</sup>

### **Significance of designing the present case study**

Regarding the areas reviewed above and their connection and influence on each other as well as their role in shaping the future, a comparative case study of Iranian and Taiwanese youth images of the future through science fiction films has been designed to be conducted. Here we review the significance of the present case study through the brief of previously reviewed areas:

Futures studies and science fiction films are sharing a same task of generating and studying the images about the futures and sharing these images with the public. The applied research emphasizes the influence of science fiction films on futures' vision of people, especially among the young generation and students. Science fiction books, novels, films, and television continue to shape popular views of the future (von Stackelberg & Jones, 2014) and even make understanding and assumptions about life, the world, the present time, and the future, among public, especially the young generation.

As reviewed above, the high potential of realization of futures visions shown in science fiction films in the real society, and the fact that they “inspire several generations to create a world based on these visions” (von Stackelberg & Jones, 2014) have been emphasized by several pieces of research. “For many people science fiction has become a total way of life—and a way of experiencing and creating the future” (Lombardo, 2015, p.6), this is why “Science fiction is not just about debating the consequences of scientific progress, it is also about creating utopian or at least eutopian (the good not perfect) societies of the future” (Milojevic & Inayatullah, 2003, p.493).

“We see the future of society in youth” (Hoerl, 2002); youth has the capacity of creating images of the future which is powerful enough to guide and motivate positive social changes (Kurth-Schai, 1988); “understanding the images of the future of young people provides a beneficial source of information not only about their probable future actions but also about their current motivations, decisions and choices” (Kaboli & Tapio, 2018). Such significant outcomes of previous research over youth and futures encouraged the author of this paper to shape the present research, which will study the futures images of youth in Iran and Taiwan.

The author of this research was born and grown in Iran and now is living in Taiwan. This brought the opportunity to make a comparison case study between youth perspectives in these

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<sup>9</sup> This research question is linked to the authors filmmaking aims and as a guideline about the contents to include in his films which will be in science fiction genre and the futures

countries from west and east of Asia. This comparison will show how different or similar their attitudes about the future images in science fiction films and the preferred futures they want to live in. The findings of this comparison may help further research works about building the preferred futures for all, and provide some data about sharing preferred images from different areas of Asia.

Another significance of this research is connected to the author's science fiction filmmaking journey, as explained in the Foreword. Learning about science fiction films, futures images, and the preferred futures of youth and collecting and analyzing the findings of this dissertation's research questions is another objective of this research. Therefore, another significance of conducting this research is to find directions by the author for designing the contents of his futures films.

The following points provide a summary of the explained significance of the current study:

1. The shared task of science fiction films and futures studies and significance of study about science fiction through futures studies research
2. Science fiction shapes popular view, especially youth's view of the future
3. A high potential of realization of futures visions through science fiction films in reality
4. The capacity of youth in creating images of future and to build those futures
5. Importance of hearing the voice of youth and their perspectives about this significant futures imagination genre
6. Need for collecting more data about the youth's preferable futures, especially Iranians who rarely were the subject of preferable futures studies
7. Comparing the perspectives of young generations from West and East of Asia
8. Finding the directions by the author for designing the contents of his futures films

## **The scope of Science Fiction films in this research**

The scope of this research is western science fiction films, especially Hollywood films in the 21<sup>st</sup> century. These have been chosen for the following reasons:

1. Popularity: The public most knows the Hollywood science fiction films as Hollywood produces most science fiction films, and they benefit the worldwide Box Office network to be shown in most countries. Thanks to their advanced visual effects and professional casting, these Hollywood films have succeeded in attracting huge portion of youth audiences.
2. Focus of the research: According to Ivana Milojevic and Sohail Inayatullah (Milojevic & Inayatullah, 2003), Western science fiction contrasts with non-western while the main focus of western science fiction films is on technological advancement, but non-western science fiction and futures thinking has focuses including spiritual and perfect self.

Therefore, including all types of science fiction will force this research out of focus.

3. Age of study sample: The study sample for this research are youth between 20 to 30 years old. Therefore, the contemporary images of the future showing to the public by the science fiction films produces after year 2000, are mostly seen by this age group.

### **The scope of the study sample in this research**

The university graduated or students of Iran and Taiwan who like and usually watch science fiction films, between the age of 20 to 30, will be targeted to collect and compare their perspectives. There are several reasons for targeting this group as the sample for this research. As already mentioned, the youth are the major contributors in building the futures, and the findings of this research might be useful for further youth studies through social science and futures research. This research can also collect some more data about the youth's preferable futures, especially Iranians, who rarely were the subject of studying their preferable futures. The reason for selecting university students or graduated youth is that according to the reviewed previous studies, people with higher education watch science fiction films more than the less educated people (Kalantari & Nasim, 2013, P. 121).

Targeting the university students or 20 to 30 years old university graduates for this case study, is to meet the age range for this youth study. As explained above, Iran and Taiwan's youth are more accessible for the author as his motherland is Iran, and he is living in Taiwan at present. Selecting these two groups provides the opportunity to compare the young generations' perspectives from two territories from the west and east of Asia, which have some significant differences and some similarities. The findings of this research might show that how their countries' differences - in terms of demography, economy, international and domestic issues, policies, film industry, and available options to watch science fiction films - and also similarities such as contemporary industrialized situation, might influence the future's images that they see through a same science fiction film. Whether such differences and similarities influenced different preferred futures by them, and whether they preferred futures refer most to the global scale or local.

Following is a summary list of the reasons for choosing the university graduated or students of Iran and Taiwan:

1. Youth are the major contributors in building the futures
2. To collect further data for youth studies
3. To collect some data about the youth's preferable futures
4. People with higher education watch science fiction films more
5. To meet the age range as this is a research about youth

6. The access of the author to youth in Iran and Taiwan
7. Comparing the perspectives of young generations from west and east of Asia with some significant differences but some similarities



## Chapter 2

### Literature Review



**Figure 2-1.** The scene of landing on Moon in the film *A Trip to the Moon* (1902), which is frequently claimed as the first science fiction film according to Bignell, 2004

As explained in the section about science fiction in the Introduction chapter, it is frequently claimed that the era of Science fiction films has started since 1902 with a silent black and white film of “*A Trip to the Moon*” (Bignell, 2004) - see Figure 2-1. The movies produced in this genre made attractions to people specially in the last century while showing the possible futures that people might never have thought about or providing ideas that what the future might be like. These reflections of science fiction films caused raising new discussions, critics, and writings about each movie and about the genre’s orientations and spreading messages. In this chapter, the existing literature around this research topic has been reviewed to find answers to the research questions. Another goal of reviewing the literature is to find some guidelines for designing the research interviews' questions.

This chapter follows multiple purposes such as seeking the connection and exchanges between science fiction and futures studied; understanding the attitudes towards Science fiction in Iran and Taiwan; finding answers to the research questions through the literature; examining the existing literature to cover the answers to the research questions, to assume the hypothesis and anticipating the possible findings. The following listed subjects will be reviewed in this chapter:

- Futures studies and science fiction films
- Science fiction films in Iran
- Science fiction films in Taiwan
- Common images of the future shown in science fiction films from the perspective of authors and critics
- Common images of the future shown in science fiction from the perspective of Youth in Iran
- Common images of the future shown in science fiction from the perspective of Youth in Taiwan
- Preferred futures of the youth in Iran
- Preferred futures of the youth in Taiwan
- Comparison between preferred futures of youth in Iran and Taiwan
- Comparison between common science fiction futures images and preferred futures of youth in Iran and Taiwan
- Hypothesis and anticipation of the possible findings
- The coverage of existing literature and the need for a new research

For the first question, which is about the common images of the future shown in science fiction films, the literature has been reviewed in three directions. At the first stage, the literature about the authors' perspectives and critics has been reviewed, then the literature about the perspective of youth in Iran. After that, the literature about the perspective of youth in Taiwan has been reviewed.

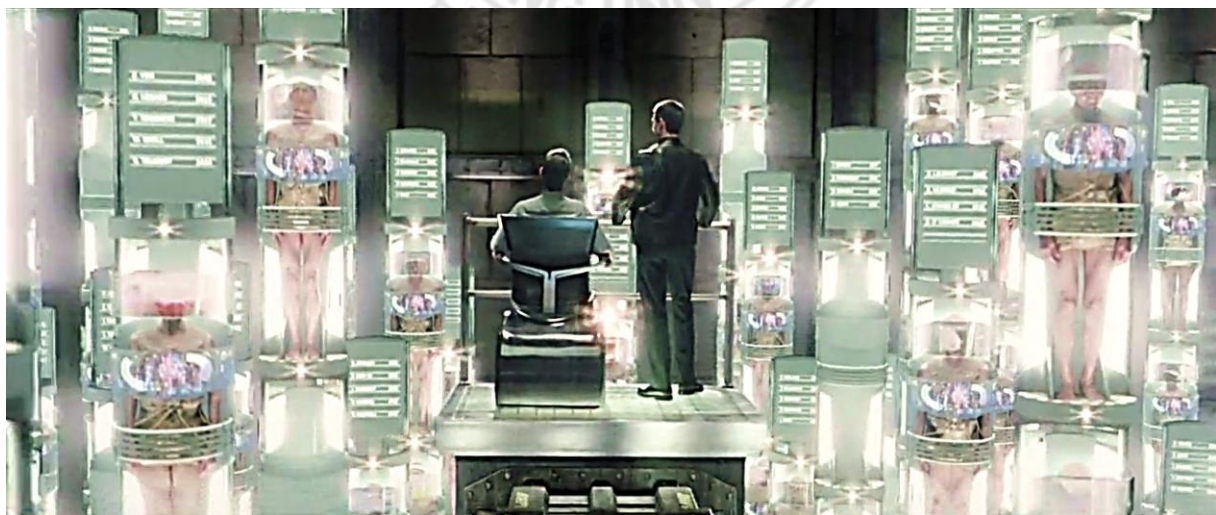
## **Futures studies and science fiction films**

Science fiction is also a subject that has been studied by several pieces of research in futures studies. Both science fiction and futures studies, study, generate and spread the images of possible futures among the public which has the potential to lead the social changes in the future, since the images of today will make the reality of the future. Wendell Bell in his book "Foundations of Futures Studies" (Bell, 2004) emphasizes that the Study of Images of the Future is one of the major tasks of Futures Studies and as well a basic concern of futurists. Furthermore, the major part of all futures studies methodologies such as Scenario Planning is about creating the images of the futures whether preferable or non-preferable. Therefore, studying and creating the images of future in futures studies is a major part of this discipline and on the other hand, creating and showing the images about future is a major theme of the most science fiction novels and films.

Science fiction films, which are the visual type of science fiction novels, are not only being using as a way to show the imagination and images of possible futures but also had a significant influence on the public as Tomas Lombardo states that “Science fiction is clearly the most visible and influential contemporary form of futurist thinking in the modern world” (von Stackelberg & McDowell, 2015). Futures images in science fiction films are visual and are even more powerful than futures visioning in either academic journals and books or popular magazines (Milojevic, 2005, p. 61). Therefore, many artists such as car designers, architects, and product designers have insights from science fiction films for their designs. Also, in the engineering and technology area, many ideas for new technologies and products showing in science fiction films inspire inventors to create new products and lifestyles.

As another connection between futures studies and science fiction, futures studies influence some science fiction films, since some futures techniques and professional futurists are being used in making science fiction films such as “2002 *Minority Report*” (von Stackelberg, 2015). For comparing the communication way of futures studies professionals and science fiction filmmakers with the public, von Stackelberg emphasizes that:

*“While foresight professionals may have a more comprehensive and holistic understanding of how to vision, forecast, assess, and shape the future, it is the science fiction storytellers who have the most effective approach for communicating their visions of the future” and “The disproportionate influence of science fiction is a testament to the power of storytelling”. (von Stackelberg, 2014)*



**Figure 2-2.** The scene of the prisoners in the Department of Containment from the film *Minority Report* (2002). According to von Stackelberg and McDowell (2015), *Minority Report* is one of the films that produced by using some foresight techniques and with the cooperation of professional futurists. “Writer Douglas Coupland produced a highly tongue-in-cheek 100-page document of the future in 2050 specifically for the futurists and designers gathered together for *Minority Report* that was highly simulative for the group” (von Stackelberg & McDowell, 2015, p. 38).



For this research also, science fiction films and research in futures studies will come across as the areas of the study. The following points present a summary insight about the connection and the exchanges between futures studies and science fiction:

- Science fiction is one of the subjects studying in futures studies research works
- Science Fiction and Futures Studies have shared tasks of studying, generating, and narrating the images of the possible futures
- Futures images in science fiction films are visual and more powerful than futures visioning in academic journals of futures studies
- Many artists, designers, and technology developer engineers receive inspirations from science fiction films for their creations
- Some futures techniques and professional futurists are being used in making science fiction films
- Foresight professionals have a more comprehensive and holistic way of visioning the futures
- Science fiction storytellers and filmmakers have the most effective approach for communicating their visions of the future and influencing the public

### **Science fiction films in Iran**

As this research is about the futures images of youth in Iran and Taiwan through science fiction films, we also review here the situation of screening, production, public interest, and literature of science fiction films in Iran and Taiwan.

Regarding the production of science fiction films in Iran, according to (Rahmani, 2015) there are very few filmmakers, about five directors, who produce such films on a small scale and with their personal budget. As an instance, one of the Iranian science fiction film directors and producers that Rahmani (2015) introduces is Ali Pourahmad, but the short films that he has directed are produced in the United States rather than in Iran. Ali Pourahmad is also a visual effects supervisor, and such a crucial skill helped him to produce his films with a professional quality of visual effects, see Figure 2-3. As Rahmani (2015) explains, the reason for such very few productions of science fiction films in Iran is the lack of support from the film organizations and also the required high budget to produce science fiction films, especially as the quality of visual and special effects, which are very costly, plays an important role in the success of such films. Iranian filmmakers mostly produce Drama and Comedy genre movies (Policymaking and Diversity of Genres in Iran Cinema, 2019,) which also have succeeded in receiving several international awards, and their productions cover domestic screening and television demands as well. Then while the required budget for producing science fiction films is usually very high

and the producers already have success and demand in other genres, they don't produce science fiction films.



**Figure 2-3.** Science fiction short films of *Aliens Reaction* (2021, Post-production) and *Mission 411* (2015) as examples of the short films directed and produced by Ali Pourahmad who is an Iranian science fiction film director and Visual Effects supervisor. None of the short films of Pourahmad are produced by the investment of Iranian production studios and his co-producers are American production studios

According to the low production of science fiction films in Iran, which can say is almost nothing, the only science fiction films possible to be shown in Iranian movie theaters are foreign films. However, foreign films also rarely could be screened in Iranian movie theaters. For instance, in 2018, only 11 foreign films succeeded in being screened (Javan Online News, 2019). There are several reasons for such a situation. For example, the government aims to protect domestic film producers (Hamshahri Online, 2018) while there are not enough movie theaters for even screening domestic produced films (Asr Iran, 2018). Another reason is that many foreign films could not receive permission to be shown in movie theaters or television because of the governmental regulations regarding the protection of culture and ethics of the society against possible negative impacts (Mehr News Agency, 2019); also, there are no representatives or branches of foreign studios or producers existed in Iran to have rights for screening their movies (Asr Iran, 2018).

In addition to all previous reasons, there is another important reason which is the preference of Iranian audiences that results less foreign films being screened in Iran. There are very few audiences of foreign films in movie theaters compare to Iranian films because of home easy access to foreign films via the internet, and also because they prefer to watch original films on the internet rather than watching edited screening films. Almost all foreign films, after receiving

permission to go to the screening process, will be edited before showing in cinema or television to match the screening permission regulations (Mehr News Agency, 2019). So by editing the films and cutting the parts that are not match with the governmental screening regulation, some changes happen to the story and rhyme of the film. Therefore, most audiences prefer to watch foreign films, including science fiction on the internet, where they could watch the original version (Asr Iran, 2018). The condition of showing foreign films on television channels is less limited because, in television broadcasting, they do not face limited movie theaters compared to cinema screening limitations. Therefore more foreign films are being shown on Television, however, showing science fiction films on Iranian television channels is much fewer than the other genres. Furthermore, most science fiction films are being produced by Hollywood with some characteristics that might not be matched with the film showing permission regulation in Iran.

Regarding the public interest in science fiction films and literature, according to (Mirjamali, 2015, P. 80) the fans of cinema put such films in the *B movies* class, which means the less important kind of films. Even some people wondering that how one matured adult person might be interested in science fiction and enjoys watching the fighting scenes of aliens and monsters, as this is the definition of science fiction for many people (Adibzadeh, 2020). For many people also the definition of science fiction films is only limited to space and spaceships (Rahmati, 2014). According to (Kalantari & Nasim, 2013, P. 121), science fiction films are in the lower-ranked genres regarding the interest and frequency of being watched by Iranians. However, people with higher education watch science fiction more than the less educated people. The findings of Montazerghaem and Faghani (2009, P. 143) also reflect that females are not interested in science fiction films. Demneh's (2015) also emphasizes the low interest of females in science fiction films, not only based on responses by them in the interviews but also as many female candidates refused to attend the interview about science fiction films. Mirjamali (2015, P. 98) claims that even no science fiction novel is being written by Iran authors.

Bakhsheshi and Zare (2020) also claim that the reasons for the less publication and the less interest in science fiction literature and films in Iran could be listed as below:

1. As a cultural framework and expectation, the public expects every kind of literature to have a weight and structure similar to the glorious historical structure of Persian literature through the past centuries
2. Science fiction is born from scientific growing societies, while in Iran, science was not at the center of growth; therefore, imagination and dealing with the future of science and technology is not very familiar to the public
3. Fiction and imagination means delusion and something useless and wrong in Iran's

public culture, and people give the credit only to the reality that they can understand and believe

4. The imagination of children doesn't grow during the study at school; thus, they are not used to do imagination and or be interested in fictional novels and films

Ignorance of fiction and imagination in Iran (Montazerghaem & Faghani, 2009) has caused not only lack of the production of science fiction films and literature (Moviemag, 2019, P. 142) but also a reluctance to reading and watching science fiction, and also, totally merging of science fiction with fantasy in bookstores experiencing a very low market (Shahir, 2014). In the following section, the situation of science fiction films in Taiwan will also be reviewed, and afterward, the situation of science fiction films in Iran and Taiwan will be compared.

### **Science fiction films in Taiwan**

Taiwan also is not a major science fiction film producer in the world, but several science fiction films, short films, and TV series are produced by Taiwanese producers such as *Cities of Last Things* (Wi, 2018), *On Children* (Chen, 2018), *Paradoxical* (Tsai, 2017), *CODE* (United Pictures, 2016), *Legion X* (Shiao, 2007), *Gui si* (Su, 2006), *Dragon Ball the Magic Begins* (Chen, 1991) and *Kid across time and space* (Zhang, 1987). Also, Taiwanese producers have joined in several science fiction film co-production with other countries, such as in films: *Assassin's Creed* (Kurzels, 2016), *Lucy* (Besson, 2014), *Travelers* (Sakamoto, 2013), *Future X-Cops* (Wong, 2010), *The King of Fighters* (Chan, 2010), *Mars Men* (Chen, 1976). In addition to originally produced science fiction films by Taiwanese film producers and the co-produced projects, Taiwan has been the location for shooting several foreign science fiction films. Considering these activities, Taiwan has more contribution in the field of science fiction filmmaking in the world compare to Iran.

According to the lower rate of producing science fiction films by Taiwan compare to filmmakers of the United States, People Republic of China, and Hong Kong, the majority of science fiction films for screening in movie theaters in Taiwan and television channels are foreign films. Most of the science fiction films screening in Taiwan are American, especially Hollywood films, but unlike Iran, the restrictions and limitations regarding showing foreign and science fiction films in Taiwan are much lighter. In general, "foreign science fiction, both Hollywood sci-fi films, and Japanese comics/animations are really available and wildly popular among the general public in Taiwan" (Lin, 2005). Also, the audiences in Taiwan have multiple choices to watch original science fiction films, including in movie theaters, or on television

channels, and or on the internet, while most of the audience in Iran watch science fiction on the internet.



**Figure 2-4.** The scene of flying UFO above Taipei City in the film *Mars Men* (1976)



**Figure 2-5.** A scene from the film *Paradoxical* (2017) with the core concept of time traveling



**Figure 2-6.** A scene from the film *Lucy* (2014) which has been shot in Taipei and was a coproduction film between the countries of France, Germany, Taiwan, Canada, USA, and UK – IMDB: (Lucy, 2014, July 25)



The public interest in science fiction films and literature in Taiwan is higher than in Iran, and also Chinese Science Fiction literature is on a growing trend. According to (Zheng, 2018) “in Taiwan, the acceptance of young science fiction readers is getting higher and higher” and also a new literature category is created as "Science Fiction for Youth" which combines science fiction and young adult novel. But on the other hand, according to (Lee, 2008, P. 127), American science fiction films are in the three lower Box Office genres in Taiwan among the genres of drama, romance, thriller, action, science fiction, comedy, family, horror, and adventure. These figures are different in other East Asian countries. Similar to Iran, in Taiwan also “males tend to be more interested than females in science fiction and contemporary fiction” (Huang, 2018). This pattern is also confirmed by other research, which has found that among university students, male students watch science fiction films, especially military science fiction, more than female (Xu, 2011). The pattern of higher interest of male in science fiction compare to female, also is observable in the younger generation, since (Wang, 2017, P. 214) emphasizes that in research about visual preferences among 69 elementary school children, boys indicated the greatest degree of preference for the science fictional style in contrast to girls that selected science fiction style in the lower level of interest”. Chang (2014, P. 89) also reveals the result of her research that “men are more interested in science fiction and there are very few women liking science fiction” after interviewing seven science fiction fans in Taiwan. Although Chinese science fiction literature is in growing trend in Taiwan, many science fiction literary works from early to present in Taiwan may not be classified in the strict definition of science fiction literature but more referred to as fantasy literature (Ma, 2012). Chang (2014, P. 100) also emphasizes that most people in Taiwan often confuse science fiction with fantasy.

A summary comparison between the situation of science fiction in Iran and Taiwan stands for:

1. There is almost no science fiction film production in Iran, but Taiwanese filmmakers have produced several science fiction films, short films, and TV series and are continuing to produce, however, not as the major science fiction filmmakers in the world.
2. Audiences in Iran almost only use the internet as the source for watching science fiction and most foreign films, while the audiences in Taiwan have more options such as TV and movie theaters in addition to the internet.
3. Chinese science fiction literature in Taiwan is in a growing trend while Persian science fiction is less grown.
4. The interest of the public in Taiwan toward science fiction films is more than Iranians. However, the rate of watching American science fiction films is among lower interesting genres.

5. In both Iran and Taiwan, science fiction is mostly confused and categorized with fantasy.
6. In both Iran and Taiwan, males tend to be more interested than females in science fiction films and literature.

### **Common Images of the Future Shown in Science Fiction Films from the perspective of Authors and Critics**

*The more science fiction I read the more I saw that downbeat, negative, dystopian futures were dominant” and “Yet the collective message from science fiction seemed to be that the future was dark and dismal.” (Slaughter, 2004, p.2)*

About the term of science fiction and the types of science fiction films, brief information is provided in the Introduction chapter. This section is a part of literature reviews with the aim of finding the answers to the first Research Question through the literature by the authors and critics. The literature about the perspective of youth in Iran and Taiwan will also be reviewed in the next sections. The findings of this literature review might re-emphasize this statement of Richard Slaughter about the darkness of futures images in science fiction films, and also will provide more detail about how the society, technology, environment, economy, and politics are being shown in science fiction films.

“For anyone living in the late twentieth and early twenty-first centuries, science fiction cinema is one of the few art forms that attempt to predict the future of human nature and civilization—a future filled with space travel, nanotechnology, genetic engineering, and widespread surveillance” (Sanders, 2008, p. 153). For examples of most influential science fiction films, Sanders (2008, p. 153) refers to films of Ridley Scott’s *Blade Runner* (1982) and *Alien* (1979), George Lucas’s *Star Wars* (1977–2005), the Wachowskis’ *The Matrix* (1999), and Stanley Kubrick’s *Dr. Strangelove* (1963) and *A Clockwork Orange* (1971). Telotte (2001, p. 197) defines the science fiction genre as the genre of borders since the films commonly classified as science fiction repeatedly visualize the boundary situation. For example, “the robot stands as a border figure between the human and the machine; the rocket, spaceship, or flying saucer is a tool for traversing the boundaries of space; the scientist, such as *The Fly*’s (1986) Seth Brundle, holds the key to other knowledge, perhaps even other states of being.” Hurley (2008, p. 349) states that the films about the future often include a number of repeated elements such as “flying cars, skyscrapers, and elaborate costumes (the women are often highly sexualized) that are immediate indicators to the viewer that this is the future.

Other futuristic codes in the film about the future also include decaying large cities, or sterile enclosed cities, deserts, lots of garbage, and very few animals, with the exception of rats. Trees



are rare. There is often the assumption of being post-apocalyptic, whether by nuclear war or an ecological disaster. Society is often a mass of busyness with many people and flying machines moving at great speed. Women and non-white men almost always play a minor supporting role in the film's story and in the depicted societies (if the women have a larger role is usually as a sexy fighting machine). Non-human nature, women and non-white human Others in Hollywood cinema often have the roles of form the background to the white male protagonist's story arc". Hurley (2008, p. 353) also refers to Milojevic's perspective in *Educational Futures Dominant and Contesting Visions* as "what we often think of as futuristic—the hyper-urbanism, lack of non-human nature, focus on personal cars (earth bound or flying), corporate and technological dominance, fetishized clothing on women—are images that reflect, and are legitimized, by the hegemonic worldview of today".

Apart from the various concepts showing in science fiction films, "the contemporary film images of the future are contributing to the dominant single view of the future. A view that limits the future to a Western high-tech, white, heterosexual, patriarchal, militaristic, dark blandness where a small number of the rich and powerful men are in control" (Hurley, 2008, p. 346). According to (Hurley, 2008, p. 353), this hegemonic approach to the future by filmmakers, in collaboration with experts is mostly concentrated on "high-tech assumptions with too many gizmos and too little attention to social aspects of the envisioned community". In terms of politics and economy, "the worldview is clearly one of supporting American dominance of the world, patriarchy, militarism, and late-capitalism" (Hurley, 2008, p. 353).

Technology and science aspects are playing a centric role in science fiction films. Telotte (2001, p. 200) introduces common iconographic elements of science fiction, which commonly are technological elements including robots, spaceships, futuristic cities, time and matter transporters. "Most science fiction films thus accept the idea that perfection is possible, but critique the idea that "perfection" is desirable through technological means" (Kirby, 2007, p. 84). According to (Hurley, 2008, p. 352) "Technology in films of the future is somewhat of a contradiction. On the one hand, the filmmakers and audience celebrate technology and adore the wizardry that is accomplished with special effects.

On the other hand, many of the films can be interpreted as cautionary tales of what will happen if we do not begin to address our relationship with technology, and what it is doing to us and to nature". Genetic Engineering technologies also appear as frequently shown in science fiction films. "The dominant image of the science fiction film throughout the 1980s and much of the 1990s has been that of the replicated human, the image of ourselves caught up in a world of technological reproduction, one whose very limitless capacity for mimesis promises to

deliver all things to us, while also threatening to deliver us to a kind of thing-ness, to reduce us to near irrelevance – indistinguishable from our many copies or clones” (Telotte, 2001, p. 30). Also as an often shown the application of genetic engineering in science fiction films, (Kirby, 2007, p. 102) states that “Most often, films depict the military or government as the institution taking advantage of untapped potential in order to create super soldiers, including *Universal Soldier* (1992), *Judge Dredd* (1995), and *Soldier* (1998).

What is meant to be a transformation from man to superman is often graphically portrayed in these films as a genetic change from man to monster as in *Hollow Man* (2000), *Spiderman* (2002), *Hulk* (2003), and *Resident Evil: Apocalypse* (2004).” Artificial Intelligence and humanoid robots also have been appeared in many science fiction films. According to (Telotte, 2001, p. 161), “Since the early 1980s, the figure of the robot, android, replicant, or cyborg has contributed what is probably the single most dominant image to the American science fiction film.” The films of *Blade Runner* (1982), *Android* (1982), the two *Terminator* films (1984, 1991), *D.A.R.Y.L.* (1985), *Making Mr. Right* (1987), the three *Robo-Cop* films (1987, 1990, 1993), *Cherry 2000* (1987), and *Eve of Destruction* (1991) are the examples cited by Telotte (2001, p. 161) among many others. “These films speak immediately of a growing cultural concern with what might be described as an industry of human synthesis, one involving the creation and transplanting of artificial organs, the development of mechanical prostheses, the manipulation of human genetics, the widespread availability of cosmetic surgery, the introduction of industrial robots into the workplace, and especially the development of artificial intelligence” (Telotte, 2001, p. 161).

Regarding the attitude of the authors and filmmakers of science fiction genre, Harari (2018) states that science fiction tends to confuse intelligence with consciousness. For example, “the basic plot of almost all movies and novels about AI revolves around the magical moment when a computer or a robot gains consciousness. ... either the human hero falls in love with the robot, or the robot tries to kill all the humans” (Harari, 2018). This emphasizes the norm of giving the characteristics of a conscious person to robots rather than only artificial intelligence. In science fiction films, nature is frequently shown as the victim of developing technology. As an instant (Hurley, 2008, p. 352) emphasizes that in most futures images in Hollywood films, nature is dominated by technology or technology that has completely destroyed most of nature through war, nuclear explosions, or pollution. “In some films, technology has replaced landscape with an entirely built and controlled urban environment where nature is rendered invisible, and where technology itself has become landscape, and “nature is displaced by technology” (Hurley, 2008, p. 352).

Shari Laprise also states that “In science fiction films, science and technology are typically portrayed as destructive” (Laprise, 2010, p. 45), which spread a message that technology also ends with destroying humanity and our life. Also (Bould, Butler, Roberts, & Vint, 2009, p. 58) claims that “it is common for science fiction to use the figure of the scientist to critique the dangers of ambition and to challenge the notion of “progress”. Obviously, the warning of ending up to a dystopian future by continuing our current direction of developing and application of technology is visible in most science fiction films, as (Kirby, 2010, p. 67) states “cautionary message shared by much of science fiction cinema by warning against excessive trust in technology”.

In comparison to technology, social aspects are extremely less concentrated in science fiction films. Going deeper into some social elements in science fiction films, “Science fiction has always been nearly all white, just as until recently, it’s been nearly all male” (Milojevic, 2003, p. 493) and according to (Suvin, 1988) in *Positions and Presuppositions in Science Fiction*, science fiction films dramatically miss the role of family, woman and spiritual. A major cause of These assumptions probably is because “science fiction has largely become framed by one culture” (Milojevic, 2003, p. 505). According to (Carrasco, Ordaz, & López, 2015, p. 73) the confrontation of the male hero is very large in many science fiction movies, and the male leading character occupies the privileged term of the binary system.

Bould (2012) states that the general pattern in science fiction for female characters is to not be scientists but objects of enquiry and experimentation, their personhood denied, their bodies subjected to cruel tortures. Also, “the fear of female sexuality is frequently suggested in these films, especially in those in which there is an association between the monster and women’s reproductive functions” (Carrasco, Ordaz, & López, 2015, p. 73). In general, according to (Telotte, 2001, p. 46), science fiction films do overt linking biology and sexuality to women and technology to men.

Apart from different approaches to the genders in science fiction films, different races also are being appeared in science fiction films through unequal levels. Science fiction has always been nearly all white (Milojevic, 2003, p. 493; Hurley, 2008, p. 352) and “Non-whites are rarely represented in science fiction films—and when they are it in a less privileged position. For example, the various people of color remaining on Earth in *Blade Runner* are there because they do not fit the criteria for moving Off-world. Or the more obviously racist statements in the *Star Wars*: Episode One-The Phantom Menace where the Downs include Tatooinines, an ‘uncivilised’ community of people who are depicted as Muslim Arabs (Milojevic, & Inayatullah, 2003), and the Afro-Caribbean sounding Gungans who are a cowardly and

lackadaisical group (King, Krzywinska, & Wood, 2000). The Afro-Caribbean caricature is also maintained in *The Fifth Element* in a ganja smoking, dreadlocked airport worker” (Hurley, 2008, p. 352). As (Carrington, 2016, p. 16) emphasizes, every writer who brings up Blackness in speculative fiction is always tacitly wrestling with the Whiteness of science fiction. The privileged position of aliens is not better than non-whites usually. In most science fiction works, aliens appear as the Earth invaders and hostile, as a result of “parodied old fear of the “unknown” alien in more contemporary movies (*Men in Black*, *Mars Attack!* etc.)” (Carrasco, Ordaz, & López, 2015, p. 74).

According to several references, science fiction films are mostly concentrated on showing dystopian future despite the impact that they have in people’s imagination and creation of the futures. Ivana Milojevic emphasizes that “Science fiction is not just about debating the consequences of scientific progress. It is also about creating utopian or at least eutopian (the good not perfect) societies of the future” (Milojevic, 2003, p.493). In another review over science fiction films, Vivian Sobchack writes, “one of the most common themes in science fiction films is that humans are their own worst enemy” (Sobchack, 1988). “In the 50’s and 60’s, a whole world of science fiction imagery promised a shining, silvery future” but “In the 70s, 80s, and 90s the utopian aspirations of the 50s and 60s turned dystopian,... Cinema brought us *Soylent Green*, *Mad Max*, *Blade Runner*, and *Gattaca*, the appropriately named cyberpunk fiction of William Gibson and others, presented bleak futures” and “as we have seen, today’s youth in the West has to look forward to a future that has been painted as almost inevitably less healthy and less wealthy” (Montuori, 2010).

To make a pattern for creating the images of the future in science fiction films, *Metropolis* (1926) had a huge impact. As according to Sanders (2008, p. 169), Roger Ebert emphasizes that: “Generally considered the first great science-fiction film, *Metropolis* (1926) fixed for the rest of the century the image of a futuristic city as a hell of scientific progress and human despair. From this film, in various ways, descended not only *Dark City* but *Blade Runner*, *The Fifth Element*, *Alphaville*, *Escape from L.A.*, *Gattaca*, and *Batman*’s Gotham City. The laboratory of its evil genius, Rotwang, created the visual look of mad scientists for decades to come, especially after it was mirrored in *Bride of Frankenstein* (1935). And the device of the ‘false Maria,’ the robot who looks like a human being, inspired the ‘Replicants’ of *Blade Runner*. Even Rotwang’s artificial hand was given homage in *Dr. Strangelove*”.

After collecting the results of interview with youth in Australia, Jane Page stated that “these negative descriptions draw closely and repeatedly on conventionalised, often stereotypical, science fiction imagery of the future. The young people interviewed have directly based their

frameworks for analysis on the negative visions of the future which are so commonly encountered in science fiction film and literature. Films like *Terminator*, *Robo-Cop*, *Total Recall*, *Strange Days* and countless others project a vision of a terminally alienated and dehumanised future which has been ravaged by the effects of environmental and technological destruction” (Page, 2000, p. 11) and as an impact of futures images of science fiction films, Page reports through this interview research that the views of older children are frequently locked within a received framework of conventional, dystopian science fiction images (Hicks & Holden, 2007, p. 27).

Regarding the influence of highly frightening dystopian future images in most of science fiction films, Burns classifies science fiction films with horror films and emphasizes that both genre focus on fear (Burns, 2009). About the similarity of horror films and science fiction films, (Booker, 2006, p. 148) states that “Interestingly, one of the most common distinctions made by critics between the horror film and the science fiction film is that the former usually involves violence and terror visited upon a few individuals in a small enclosed space, while the latter often involves cataclyms that threaten to destroy a large city or even an entire society or planet”. The domination of negative images of the futures in most of science fiction literature and films is also emphasized by (Maikämper & Pätsch, 2015, p. 296) as “most of Sci-Fi works refer to a dystopian future”.

Reviewing the categorized themes of fictional and non-fictional writings about the future by (Slaughter, 1998, p. 997) is the last reviewed literature before drawing the summary of this section of futures images in science fiction films. “The following themes are commonly found in fictional and non-fictional writing about the future: 1. Technology has a dominant role, often being the mainspring of social and cultural innovation; 2. Power and control are vested in large organizations, usually trans-national corporations; 3. The Western worldview prevails, and most others are either reduced to remnants or eliminated altogether by a dominant hegemony of techno-economic interests; 4. The global environment has deteriorated significantly; 5. There is some kind of ‘escape route’ for humanity; either ‘inward’ i.e. immersion in the virtual worlds made possible by new information technologies or an external escape to new habitats, or new worlds; 6. Change continues to accelerate in every area of life, so that impermanence, instability and uncertainty are rife. There is a sense of the continued breakdown of traditional structures and a pervasive sense of meaninglessness” (Slaughter, 1998, p. 997).



**Figure 2-7.** Tony Stark is presenting his newly invented destructive weapon in *Iron Man* (2008). Maybe this single image could reflect several themes mentioned by authors and critics about most commonly shown images in science fiction films such as American political and capitalistic dominance of the world; militarism; high-tech and science linked to Western white men with a destructive purpose of use; nature is being destroyed by technology; a small number of the rich are in control etc.

As the summary of literature review about the futures images in science fiction films from the perspective of authors and critics, the following list provides the most frequent images categorized in STEEP model (Fleisher & Bensoussan, 2003) as well as an overall reflection. The table of full list is available in Appendix I for further information and studies. The perspectives of youth in Iran and Taiwan will also be reviewed in the following sections and will be added to this list to have a wider view about the most common futures images showing in science fiction films.

### ***Social***

- Western white male future with missing the role of women, family, and other diversities
- Science and technology linked to men who sometimes represented as mad scientists
- A small number of the rich are in control
- Humanoid AI and aliens mostly linked to the negativity
- Breakdown of traditional structures

### ***Technological***

- The dominant role of Technology and mostly negative outcome for humanity and nature
- Military centered use of technology
- Highly futuristic and advanced technologies such as robots, AI, and flying cars etc.
- Futuristic and overpopulated cities full of skyscrapers and industrial environment
- Space technology and traveling or living in outer space
- Time-traveling
- Genetically manipulating humans and all species and producing monsters

### ***Environmental***

- Nature is dominated and being destroyed, polluted, or displaced by technology
- Disappearing the green nature and animals, and to be replaced by deserts
- Hyper-urbanism and decaying large cities full of garbage
- Ecological disasters

### ***Economic***

- The dominance of American capitalism over the world
- The hegemony of techno-economic interests, late-capitalism, and large corporations
- Few developed countries

### ***Political***

- American dominance over the world
- Militarism and war between nations and different species

### ***Overall reflection***

In addition to common futures' images listed above through STEEP categories, some overall themes of science fiction films that authors and critics also mentioned are:

- Technology centric with lower attention to social aspects
- A single view of the future, and mostly limited to western culture
- Focusing on fears about a dystopian future where humans are their own worst enemy

To continue reviewing the future images in science fiction films, the following two parts of the literature review are concentrated on existing research about common images of the future shown in Science Fiction from the perspective of youth in Iran and Taiwan.

## **Common Images of the Future Shown in Science Fiction from the perspective of Youth in Iran**

By searching the perspective of youth in Iran regarding futures images in science fiction films, or by searching any other phrase containing science fiction and Iran, rather than finding the results about the perspective of youth around images in science fiction films, the most finding results will be about “why people in Iran have low interest in science fiction?” which has been already reviewed in the section of science fiction films in Iran. There are very rare research and reports existing about the perspective of people around science fiction films, and the only citable found research is (Montazerghaem & Faghani, 2009). However, Montazerghaem and Faghani (2009) also are not focused on the perspective of Iranian youth about futures images in science fiction films, but some reflections could be extracted in this regard.



Before reviewing the findings of Montazerghaem and Faghani (2009), we also look at a summary provided by the National Network of Schools (Roshd), an Education Ministry-affiliated organization, about the subjects showing in science fiction films. Roshd (2020) doesn't provide the direct reflections of the public, but a summary mixed from the perspectives of the author and public. Roshd (2020) emphasizes that science fiction films are related to all fields of science and technology, but the following themes are more concentrated in science fiction films:

1. Space traveling: traveling to different planets and facing up with aliens
2. Time traveling to future and past
3. Medical outstanding advancements which enable human to a bit manipulate the creation
4. The future of human's life which is strongly attached and dominated by human made tools, especially artificial intelligence and humanoid robots.

As it is obvious in the presented summary, Roshd (2020) only concentrates on the science and technology aspect of science fiction films, and this may reflect that the most expectation or understanding about science fiction in Iran is about the technological aspect of science fiction rather than other aspects such as social, environmental, etc.

Montazerghaem and Faghani (2009) is the only research found which reflects the perspective of Iranian youth about science fiction. The researcher also claims that no other research had been done about the public's perspective about science fiction films so far (Montazerghaem & Faghani, 2009, p. 141). However, even this only existing research is focused on the impact of gender and the university study major of youth on their interest in watching science fiction films and their understanding of this genre rather than their perspective about futures images in the films.

A total of twenty-eight educated male and female youth, between 20 to 30 years old, were interviewed, and the four science fiction films of *The Matrix* (1999), *2001: A Space Odyssey* (1968), *A.I. Artificial Intelligence* (2001), *Fantastic Four* (2005) where the samples to watch and reflect by the interviewees (Montazerghaem & Faghani, 2009, p. 144). The findings of (Montazerghaem & Faghani, 2009, p. 143) reflect that females don't have an interest in science fiction films. This finding, not only reflected by female interviewees during the interviews but also observed during the sampling process that out of 27 candidates who didn't accept to participate in the science fiction film interview, 20 persons were female. On the other hand, most of male candidates showed interest in watching science fiction films (Montazerghaem & Faghani, 2009, p. 147).

Females, in contrast with males, mostly had only noticed the emotional scenes in these films (Montazerghaem & Faghani, 2009, p. 155). Montazerghaem and Faghani (2009) don't provide

a list of elements that interviewees have seen in the films, but out of sample quotes from interviewees, these elements could be extracted: prediction of the future, the ruling political powers in the world, the savior of the apocalypse, various scientific knowledge and imagination, unrealistic and unbelievable fiction, artificial intelligence, genetic engineering, spaceships, technologic developments, entering to the domain of God's creation, flying cars, robots, creating another world, political purposes, losing personal privacy, strict control and observing people, slavery of people by dominant powers, exaggerating the military power of United States, and dark frustrating future. Male interviewees, especially the engineering and medical majors graduated ones, believed the positive social and emotional impacts of science fiction films, but females and graduates from social science and art believed that these films have an impact of losing hope and feeling depressed toward the future (Montazerghaem & Faghani, 2009, p. 157).



**Figure 2-8.** David is looking at many copies of himself and a female variant Darlene, ready to be shipped, in the film *A.I. Artificial Intelligence* (2001). According to the answers by interviewees in (Montazerghaem & Faghani, 2009), Artificial Intelligence is a major theme in many science fiction films

The most images and elements that the youth of Iran have seen in science fiction films, extracted from Montazerghaem and Faghani (2009), and also Roshd (2020) are summarized in the following list through STEEP categories<sup>10</sup>, and for further information and studies, the table of full list is available in Appendix II:

<sup>10</sup> The aspects of Environment and Economy have been reflected neither in the results of (Montazerghaem, 2009) nor in Roshd (2020)

### ***Social***

- The apocalypse and the savior superhero
- Slavery of people by dominant powers and strict control and suppression over them
- Losing personal privacy

### ***Technological***

- Imagination of the future technologies such as robots, AI, medical advancements, and flying cars etc.
- Space technology, space travel, and facing up with aliens
- Worldbuilding, whether real or virtual and also entering to the creative domain of God
- Genetically manipulation of humans and all species
- Time traveling to future and or past

### ***Political***

- Ruling political powers and their domineering purposes
- Exaggerating the military power of the United States

### ***Overall reflection***

In addition to common futures' images listed above through social, technological, and political categories, here are some overall themes of science fiction films extracted from the answers of Iranian youth (Montazerghaem & Faghani, 2009):

- Being too much technology-centric and less attention to the other aspects
- Tend to predict the future
- Showing unrealistic and unbelievable future
- Dark and frustrating future which imposes hopelessness towards our future

As mentioned above, even the only found and reviewed research (Montazerghaem & Faghani, 2009) is not directly focused on the perspective of Iranian youth about science fiction films futures' images; therefore, this current thesis research would be the first research for this purpose.

## **Common Images of the Future Shown in Science Fiction from the perspective of Youth in Taiwan**

Searching about the perspective of youth in Taiwan regarding futures images in science fiction films, or searching any other phrase containing Science fiction and Taiwan, the most results come up are about Chinese Science Fiction literature and also about the interest of the public in the science fiction genre rather than Taiwan public perspective about futures shown in science fiction films. The condition of science fiction in Taiwan and public interest in science fiction

films have been reviewed in previous sections, and here we review the perspectives futures images in science fiction films in Taiwan. A master graduation thesis of (Chang, 2014) by Wei-Hsin Chang in Graduate Institute of Futures Studies at Tamkang University, Taiwan, has been found as the only research exploring the perspective of the public in this regard. However, Chang (2014) is not focused on the perspective of the youth only, but the perspective of seven science fiction fans between the ages of 20 to 45.

Chang (2014, p. 64) quotes an interviewee who states that “science fiction films only focus on what they (filmmakers) think is important or very important” but “they often do not focus on some other issues that may cause remarkable changes” (Chang, 2014, p. 79). Another interviewee thinks that science fiction films have been stuck in the present by expressing that “science fiction movies are showing the general concepts of the present time rather than the transformed future” (Chang, 2014, p. 50). But another interviewee believes that science fiction films connect present time to the future by explaining that “Many elements in these movies are related to our current science, science fiction movies can let us know a lot of not existing things, the things that are too likely to happen in the future” (Chang, 2014, p. 52).

Another interviewee thinks that science fiction films are mostly focused on warnings about the future as he emphasizes that “Science fiction movies meant to let people understand beforehand what may happen, and let everyone have an idea about future, and also to warn everyone about possible crises in the future” (Chang, 2014, p. 46). Such perspective is repeated by another interviewee expressing that science fiction films warn us that “look, if we do it, the world will be destroyed” (Chang, 2014, p. 50). In the same direction of warning about the future, another interviewee emphasizes that “science fiction films show many natural disasters which all seem to be created by humans” and she believes these natural disasters are likely to happen in the near future (Chang, 2014, p. 64). About what is shown in science fiction films and believing it, an interviewee says that “some films such as *Star Wars* show somethings such as traveling to million light-years away which I can’t even imagine it will come true, but some other films such as *Back to the futures* show time machine (Figure 2-9) which is more believable to me” (Chang, 2014, p. 57).

Technology has been referred to as the core element in science fiction films by the interviewees (Chang, 2014, p. 108), for example, interviewees to distinguish the difference between science fiction and fantasy, referred to technology as a core factor in science fiction which is less or none in fantasy (Chang, 2014, p. 100). As a reason for concentrating of science fiction films on technology, (Chang, 2014, p. 42) emphasizes that science fiction films are the product of Western civilization, and the period of development of United States relying on

technological development and visioning the future of technology such as robots, flying ships, and outer space.



**Figure 2-9.** Time Machine in the film *Back to the Future III* (1990). According to the answers of interviewees in (Chang, 2014), Time Traveling is one of the major themes in science fiction films

Interviewees emphasize that another topic that is being shown in science fiction films is social and economic issues. For example, an interviewee says, “I think the current science fiction films are irony, as the irony gap between the rich and the poor” (Chang, 2014, p. 49). Considering alien and humanoid AI robot as the possible social issues of the future, the most interviewees refer to these elements as very frequently shown in science fiction films. An interviewee says that “science fiction movies often show things like aliens and robots” (Chang, 2014, p. 42) and another interviewee refer to aliens and the space as the most attractive elements in science fiction films to him while he believes in possibility of existing the aliens (Chang, 2014, p. 63) while the most of interviewees see the aliens showing negative in most of science fiction films (Chang, 2014, p. 100).

Some interviewees believe that financial profit is the main if not the only purpose of science fiction filmmakers. For example, an interviewee says, “the important thing for filmmakers is having successful box office” (Chang, 2014, p. 49), and another interviewee describes that the way of making financial benefit from science fiction films is that the filmmakers include the subjects that are beyond our imagination which will grab our attention, and also they try to put the preferred things that the audience want to see in the film to encourage more audiences to watch the film. This interviewee adds that by such purpose and concentrating on financial benefit as the main axis, the content and depth of the film will be placed less important and focused (Chang, 2014, p. 51). A beyond-imagination element in science fiction films is

unknown space visualized by visual effects and cool pictures that (Chang, 2014, p. 49) emphasize as what most people in Taiwan believe what science fiction is about.

The most images and elements that the youth of Taiwan have seen in science fiction films, extracted from (Chang, 2014) are summarized in the following list through STEEP categories<sup>11</sup>, and for further information and studies, the table of full list is available in Appendix III:

#### ***Social***

- Sever inequality in the society
- Aliens and humanoid AI as future's citizens where robots are usually human's enemy

#### ***Technological***

- Futuristic and advanced technologies such as robots, humanoid AI, cyborgs, advanced computers, and information technology
- Space technology, space-traveling especially with the speed of light in many films
- Genetically manipulation of humans and all species
- Time-traveling

#### ***Environmental***

- Ecological disasters
- Nature is dominated and being destroyed by technology
- Humans as the main cause of environmental disasters

#### ***Economic***

- The gap between the rich and the poor

#### ***Overall reflection***

In addition to common futures' images listed above through social, technological, environmental, and economic categories, here are some overall themes of science fiction films extracted from the answers of Taiwanese youth (Chang, 2014):

- Financial profit is the first purpose of science fiction filmmakers. Then they only show the elements that will grab the attention of the audience
- The second purpose is warning about possible disasters made by human in the future
- Less attention to provide preventive solutions
- Being extremely technology-centric and showing technology as the main driver of changes

### **Summary About Common Futures Images in Science Fiction Films**

Despite the different situations of science fiction in Iran and Taiwan, the reviewed perspectives of youth in Iran and Taiwan about common futures' images in science fiction films are similar to each other and also agree with the reviews from critics and scholars. A brief summary of the

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<sup>11</sup> The Political aspect has not been reflected in the results of (Chang, 2014)

common images of the future in science fiction films which are extracted from the literature review, including the perspectives of Iranian youth, Taiwanese youth, and critics are listed in (Table 2-1):

**Table 2-1.** Most common futures images in science fiction films by collective perspectives of critics, the youth of Iran, and youth of Taiwan

1-	Centric and destructive role of technology
2-	A single and dystopian view of the future with the negative future image in all aspects
3-	Humans, their own worst enemies
4-	Limited to only western culture and white male future missing all other diversities
5-	Humanoid AI and aliens as new citizens and mostly as enemies to the humanity
6-	Fear and warning centric rather than providing solutions
7-	People under severe inequality, slavery, strict control, and suppression
8-	Highly futuristic and advanced technologies including humanoid AI, cyborgs, space technology, time-traveling, flying cars, genetically manipulations, replicated humans, futuristic and overpopulated cities, industrial environments, etc.
9-	Building new worlds, whether real worlds or virtual
10-	Ecological disasters and disappearing green nature and animals
11-	The hegemony of American capitalism through large corporations where a small number of the rich are in control of the world
12-	Militarism and war

For the second research question, which is about the similarities and differences between Science Fiction films' futures and the preferred futures of the youth of Iran and Taiwan, first, in the following section, the preferred futures of youth in Iran have been reviewed, then the preferred futures of youth in Taiwan, and afterward these two sets of preferred futures are compared to each other.

## Preferred futures of the youth in Iran

By searching about preferred futures of youth in Iran, most finding are about the necessity of futures studies in the field of youth rather than applied research and reporting results about preferable futures of youth or even futures images among the Iranian youth. Mostly the “youth” has been mentioned as a powerful force to create the preferred future, but the preferred futures which are made by the governmental organizations and or Institutions are not shaped by the ideas and contribution of youth in drawing them. However, there is an expectation that the youth create these futures, despite not being involved in drawing that. No Persian nor English research or report has been found for “Preferred Futures of Iranian Youth” and any variation of this phrase. A few research works have been found that have included preferred futures of Iranian youth in a part of their study, although their topics are about other subjects such as probable



futures of Iran from the perspective of Iranian youth (Demneh, 2015), quality of life from the point of view of Iranian youth (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017), factors affecting happiness by a cross-sectional study in the Iranian youth (Mehrdadi, Sadeghian, Direkvand-Moghadam, & Hashemian, 2016) and the desire of migrating among young Iranians (Demneh, & Kazemi, 2018). (Demneh, 2015, p. 2) also emphasizes that his research is the only one that studied futures images from the perspective of youth in Iran.

Demneh (2015) interviewed 17 university graduated youth about their images about probable futures of Iran, including their own preferred future and fears. (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017) conducted a life satisfaction survey among 352 students of the University of Tehran, including 149 males and 203 females (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 11). (Mehrdadi, Sadeghian, Direkvand-Moghadam, & Hashemian, 2016) conducted a cross-sectional study to identify the factors influencing happiness among 500 young 15-29-year-old persons, including 272 men and 228 women, in Liām, Iran, during 2014. Demneh and Kazemi (2018) interviewed 23 youth about their desire to migrate and the drivers to that.

Regarding the social and individual preferred factors in the future, different interviewed youth by (Demneh, 2015) have expressed the following responses. “I wish to have the current happy and healthy family in the future too” and “I want to live with a partner and have a really desirable shared life together” and “marriage and building a family is a very crucial will in our society” (Demneh, 2015, p. 126). “To me, the future means a peaceful life with a person that I really love” (Demneh, 2015, p. 127). “Iran is a child lover society, and everyone likes his/her children achieve the goals that he/she missed to achieve in life” (Demneh, 2015, p. 128). “I wish to prepare for my child whatever I couldn’t achieve in my childhood” (Demneh, 2015, p. 127). “I like to teach my values and believes to my children” (Demneh, 2015, p. 129). “This is very important to me to have a peaceful life and end it happily” (Demneh, 2015, p. 127). Some participants saw their preferred futures through the windows of religion, nationality and ethnicity as their most important futures drivers and attractions of the future. Some participants also showed collective preferences rather than just individual. For example, a participant expressed that she likes “everyone to be happy” (Demneh, 2015, p. 128), and another participant preferred people care about each other rather than only self-centered preferences (Demneh, 2015, p. 127).

Another participant also saw himself as a part of society which impacts everyone so stated that he prefers to live in a future society “where everyone has right to express his/her believes and be respected rather than to be insulted because of their thoughts” (Demneh, 2015, p. 127).

Regarding these collective changes in the society, an interviewee wished that the boys<sup>12</sup> and girls have an easier healthy relationship by removing the current barriers and to have less gender-centric atmospheres in Iran (Demneh, 2015, p. 127). To extract preferred social elements of Iranian youth, another study examined the factors for quality of life and mental health such as self-satisfaction, life-satisfaction, and well-being, which are criteria of the World Health Organizations' in the definition of mental health, as well as positive emotions like joy, peace, and happiness among Iranian youth (Mehrdadi1, Sadeghian, Direkvand-Moghadam, & Hashemian, 2016, p. 1).

According to (Mehrdadi1, Sadeghian, Direkvand-Moghadam, & Hashemian, 2016) participants' responses about the characteristics of an ideal society and desired future in terms of social elements included peace of mind and optimism, equality, justice, peace and security, pluralism, and respect for each other (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 8) and also a society rich with spiritual peace, progress and prosperity, full of knowledge and ethics, diversity and where the plural ideas are respected, growth and self-actualization are achieved, and citizens' satisfaction is met (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 11).

Regarding the social and individual disliked and biggest fears of the future, Iranian youth referred to the attitudes of most people who only care of themselves and not the other people in the society; "abusing the other people for only self-success purposes without respect and collective mindset"; "inequality towards women"; "barriers for the healthy relationship between boys and girls and gender-centric atmospheres"; "losing family or family members" as biggest fear; and "the fear of treating the society with them as a useless person at their elderly ages"; "missing the goals and living purposeless"; "losing control on issues"; "running out of the plan and losing time and opportunity to accomplish the planned works"; "losing whatever already owned" (Demneh, 2015, pp. 126-130).

Regarding the preferred technological factors in the future, different interviewed youth by Demneh (2015) have referred to "sustainable development" and "trusting technology as it shows our way is towards a better future" (P. 127). The biggest fear of the youth was about the impact of the postindustrial and information technology era, especially on their children (P. 164).

Regarding the preferred environmental factors and a preferred place to live in the future, an interviewee emphasized that her utopian future environment is where nature is respected and

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<sup>12</sup> Interviewees in (Demneh, 2015) are above 20 years old university graduated youth, but in some parts referred to as boys and girls.

has the desired climate and clean air, not crowded and free from traffic jams (Demneh, 2015, p. 127) but other interviewees explained their tendency to migrate to other countries and the reason of this decision rather than describing the key preferred factors for the environment that they prefer to live in the future. According to (Demneh, & Kazemi, 2018) which is research about the migration of Iranian youth shows three main drivers of these migrations:

1. The dystopian image of the origin
2. Following a pandemic pattern of the migration
3. The attraction of the destination

According to the result of interviews, among these three, the dystopian images of the present and the future of Iran were the most referred reason as the driver to leave the country by the youth (Demneh, & Kazemi, 2018). Very few responses of youth in two research of (Demneh, 2015) and (Demneh, & Kazemi, 2018) refer to utopian image or attraction of destination such as “going for continue university study” (Demneh, 2015, p. 126), but the majority of the respondents refer to the dystopian present and or future image of the country. For example, participants in the interviews express that “the talented and genius people face a lot of problems inside the country and they have to leave Iran” (Demneh, 2015, p. 126); “whole the time seems I am looking forward to hearing bad news here”; “I love to do invention and make innovation, but I cannot do here”; “I want to migrate because of the future of my children”; “no matter to migrate where, anywhere that we don’t hear the news of embezzlement or such things”; “I don’t want to live in a country having water rationing”; “our village was green ten years ago, but now is almost dry” (Demneh, & Kazemi, 2018); “if I go to another country for any purpose, I prefer to come back to Iran, but I am not sure if I back” (Demneh, 2015, p. 126-130).

These none preferred situation of the present and the pessimistic mental images of the future have caused frustration among the youth. Therefore many of them intend to migrate to another country to obtain the chance of making their ideal future and also to prevent their imagined dystopian future (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 11); (Demneh, 2015). As an official report showing the impact of such intention among Iranian youth, in 2006, the International Monetary Fund ranked Iran as the highest in brain drain among 91 developing and developed countries, with an estimated 150,000 to 180,000 educated people exiting per year (Demneh, & Kazemi, 2018).

In addition to the dystopian images about the present and future of Iran, the interviewed youth referred to other global environmental fears and disliked futures such as crowded cities with traffic jams, lack of water and drought, regional water wars, pollution, diseases, and illness, destroyed nature and explosion of the Earth (Demneh, 2015, p. 127, 128).

Regarding the preferred economic factors of the future participants in the research of (Demneh, 2015) wished “disappearing the poverty from the world”, “financial success as the best event in their lives”, “financial success an important part of their utopia”, “reducing the wealth gap between social classes” (Demneh, 2015, p. 129). In another research, participant youths responded that the characteristics of an ideal society and desired future in terms of the economy could be easy wealth, no poverty, economic development, and equality (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 8). To describe the pattern of preferable future of Iranian youth and its connection to the economy, (Demneh, 2015, p. 164) describes that their utopia is based on an image of developed industrial countries and very relied on materialism, and for them, happiness is the outcome of economic welfare and occupational success.

Regarding the economic disliked present and futures of Iran, the youth emphasized that “the main purpose of everyone is earning money”, “the biggest challenge for all is economy”, “economy is at the center and the most important matter”, “people are suffering by poverty”, “there is a big economic gap between social classes”, “I want to go somewhere that to not hear the news of embezzlement daily” (Demneh, 2015, pp. 127-129), “many people say that Iran is the best place for becoming rich, but by fraud” and suffering from the inflation while saving money by hardworking to buy a car but suddenly the prices become double (Demneh, & Kazemi, 2018). All these are some examples of the economic situation that the Iranian youth don’t like to have in their future.

Regarding the probable, preferred, and none preferred political futures of Iran, very few statements emphasized by the youth such as “10 years later the economists with own the future”, “politicians will be the owner of the future”, “I like to change the political structure” (Demneh, 2015, pp. 127-130), “whole the time, I have a fear of attack by ISIS and or war” (Demneh, & Kazemi, 2018). Also, as findings of (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 8), youths expressed that the characteristics of an ideal society and desired future in terms of political situation could be freedom, equality, justice, peace, pluralism, and security.

Investigating the image of preferred futures’ myth or hero could provide an opportunity to understand the image of the youth about an ideal human or their own ideal-self in the future. Demneh (2015, p. 173) states that the Iranian youth prefers the heroes who are from a kind of ordinary people living similar to themselves and around them, but also oriented into a right pathway and respect their social and humanitarian responsibilities.

Before drawing a summary list from preferred futures elements of the Iranian youth, this is important to know that all the researchers of reviewed studies in this section discovered that the Iranian youth have stuck in the past and present struggles with their frustrations and fears of

losing what they have got hardly rather than thinking about what different and preferable future might unfold. Iranian youth don't have a right definition of preferable futures (Demneh, 2015, p. 167). They don't think that they can also imagine "what is better to happen?" rather than only thinking about "what will happen?" or "how it will happen?" (Demneh, 2015, p. 134). While the satisfaction and quality of life of Iranian youth is low according to (Saeedy, Amiri, Zolfagharzadeh, & Eyvazi, 2017, p. 9) and negatively has affected their images of the future (P. 11), their image of the future is not positive and not optimistic (P. 1), and they cannot disconnect from their regrets and lacks to imagine the possibility of a different and preferred future.

The elements of the preferred future of youth in Iran, which are found through reviewed literature, have summarized in the following list, and for further information and studies the table of full list is available in Appendix IV:

#### ***Social and Individual Preferred futures***

- Health and Happiness for all such as physical and mental health and happiness for all
- Family wellbeing such as happiness for all members, love marriage, and children's success
- Personal life wellbeing such as peaceful life, Life-satisfaction, positive feelings, growth and prosperity; self-actualization, and to end life happily
- Values to be respected such as maintaining religious, national and ethnic values, rights to express believes, thoughts to be respected, and pluralism
- Healthy relationships and society such as people caring and respecting each other, healthy communication between boys and girls, equality, spiritual peace, ethics, security, justice, and diversity

#### ***Technological Preferred futures***

- Sustainable development
- Trust in technology to find ways to make a better future

#### ***Environmental Preferred futures and place to live***

- To respect and protect the nature
- Desired climate and clean environment
- Not a crowded place and no traffic jams
- To migrate to another country

#### ***Economic Preferred futures***

- Disappearing the poverty from the world and reducing the wealth gaps
- The economic development of society, equality in opportunities, and economic welfare
- Personal financial and occupational success

#### ***Political and Governance Preferred futures***

- Preferred values such as freedom, equality, justice, peace, and security

- Pluralism
- Talents to be supported

Apart from the preferred futures of Iranian youth, the reviewed literature also provided some data about their futures' fears and disliked futures as follows:

### ***Future fears and disliked futures by youth in Iran***

- Unethical manners of people with each other such as selfishness, self-centered and not caring each other, and barriers to healthy relationships
- Inequality towards women and elderlies
- Failure in progress and accomplishing personal planned tasks
- Fear of losing such as losing family members, control on issues, goals and living purposeless, time and opportunities, health, and whatever already owned
- The impact of the information technology era on their children
- Destroyed nature, pollution, and lack of water
- Financial gain centric minds and goals
- Poverty and social/economic gaps
- Fail to achieve financial goals and sacrificing life for financial challenges
- War and attack by ISIS.

### **Preferred Futures of the Youth in Taiwan**

In this part, some research done about the preferred futures of youth in Taiwan will be reviewed. *Youth futures* by Gidley and Inayatullah (2002) is a book about Youth futures through comparative research and transformative visions, which includes some visions of preferred futures of Taiwanese students. Chen (2019) focuses on evaluating the possibilities for encouraging sustainability-consciousness among the youth of Taiwan through higher education and probes students' images of their preferred future environments. Hoffman (2019) investigates the preferred images of the environment in 2060 by collecting the images of the futures from a cross-cultural cohort of undergraduate students at Tamkang University, Taiwan, through using a combination of survey, imaging through drawing, and Causal Layered Analysis (CLA). (Ono, 2003) conducted a survey among two groups of university students in Taiwan and the U.S. to look into various aspects of futures images of the students and to explore the relationship between their images and their understanding of the present. Liu and Lin (2018) explored 96 undergraduate students' views about environmental futures that are preferred or desirable for them through a survey at one reputable public university in Taiwan. (Chen. 2016)

studied diverse future metaphors used by 854 Taiwanese high school students with the values and meanings that lie underneath them. (Hoffman, 2019) studied the preferred images of the environment in 2060 held by a cross-cultural cohort of 77 undergraduate international students at Tamkang University in Taiwan.

Regarding the social and individual preferred factors in the future, (Chen, 2016) states that the students prefer the elements such as an open and global environment, broad and diversified friendship, leisure and travel over work, family and relationships, and most importantly, a multicultural and sharing world (Chen, 2016, p. 178). Gidley and Inayatullah (2002, p. 232) provide the preferred scenarios of university students which about preferred social and individual aspect, the students preferred images included “each citizen being super-rich and owning a personal airplane”, “travel and individual rights”, quality of life to be crucial as wealth issues, spiritual future, and community/organic future. (Ono, 2003) provides a list of values seen in the preferred futures of Taiwanese students. (Ono, 2003, p. 750) have categorized the preferred values in five categories of Environment, Personal conditions, Attitude towards others, Technology, and Social conditions. Among the list of (Ono, 2003, p. 750) the preferred values of Taiwanese students which are linked to social and individual aspect include equality, equity, forgiveness, freedom, honor, human rights, justice, love, no hunger, no more illness, peace, public order, the realization of ideals, social welfare, individual and social stability, to achieve comfortable life, to achieve contented life, to have a good and honest heart, good marriage, to be healthy, to have knowledge and education, to live in the spirit of soul, to have self-consciousness and self-esteem, to be smart, contact with other races in space, living with aliens, bondage to other people, cooperation with others, to respect family ethics and morality, to have happy family, keeping strong family tie, respect filial duty, friendship and respect for others.

Regarding the social and individual dislikes and fears of the future we can refer to (Ono, 2003) research. (Ono, 2003, p. 752) provides undesirable things seen in the most negative image of the future by Taiwanese students in five categories of Environment, Personal conditions, Attitude towards others, Technology, Social conditions. Among the list of (Ono, 2003, p. 752) the none preferred values of Taiwanese students which are linked to social and individual disliked and fears of future include crime for fun, few babies, and aging society, to be controlled by criminal gangs, hunger and starving, illness, not having the choice, no freedom, no safety, poverty, social disorder, having violence in society, to die painfully, to die in the war, feeling of uselessness, to be greedy, pursuing fame and gain forever, to be arrogant, to be cold and detached from the others, detached family, having evil heart, mistrust to each other, no



confidence in each other, no friendship, racial discrimination, to be ruthless and sacrificing other people for one's selfish.

Regarding the preferred technological factors in the future by Taiwanese youth, (Ono, 2003, p. 750) emphasizes that the most positive image of the technology in the future by Taiwanese students include technology for Convenience, Biotechnology to cure diseases and to improve human's physical strength, Limited development of weapons, to develop Solar power. Also, few students preferred a future with No technology (Ono, 2003, p. 750). Gidley and Inayatullah (2002, p. 233) also state that one of the applications of technology preferred by some Taiwanese students is to link people globally. Technology and environment usually appear to have close connection and impact on each other, here also finding of several research studies showed that these two aspects are connected to each other in the futures images by Taiwanese youth. For example, the finding of (Hoffman, 2019, pp. 63, 66) states that "students are confident that progress in technology and science would be a major factor in 'solving' climate change" and achievement to their desired futures and also students believe that technology is the key reason to ensure the future would be better than the present (Hoffman, 2019, p. 67). Many students refer to various kinds of green and environmentally friendly technology to protect or recovering the environment. For example, their preferred technologies include: clean and safe energy sources (e.g. solar panels on top of building roofs, windmills in the city, wind farms and solar panel farms) and energy-efficient buildings (e.g. plant walls); recycling centers in the city; vehicles or transport systems that are considered environmentally friendly such as eco-cars that use solar energy or water for fuel; no carbon cars; electric cars and in general technology helping nature (Liu & Lin, 2018). Apart from the environmental friendly technologies, students preferred technology development to have flying vehicles, driverless vehicles, underground transport systems, high-speed rail, worker robots and dome city in their future (Hoffman, 2019).

Regarding the technological disliked and fears of the future (Ono, 2003, p. 752) provides the most values found in the negative image of the future by Taiwanese students, which include living in an artificial world, full computerized world, being controlled by high tech, don't eat and just take medicine, live in a virtual world, not having a limit to technology, over-use of gene technology, treasuring only technology and ignoring culture and humanism.

Regarding the preferred environmental factors and a preferred place to live in the future, we review here the findings of some research done to receive the perspective of Taiwanese students. Chen (2019, p. 84) emphasizes that after the field experience in the classroom, perceptions of the students changed regarding what past generations have done to replace natural environments and plant and animal habitats with the drastic expansion of highways,

skyscrapers, and urban metropolitan area. For example, different students criticized that “compared to the precious natural resources we have in Taiwan, Taipei 101, the tallest building, is nothing to be proud of. There are a lot of things that are more worth pursuing than high-tech and wealth” (Chen, 2019, p. 92) and “we have to explore alternative and renewable resources on the condition that the natural environment will not be harmed” (Chen, 2019, p. 93) and “technological advancement will never catch up with humans’ powers of environmental destruction” (Chen, 2019, p. 91) and “after knowing that livestock farming is seriously harming water resources and increasing risk of global warming, I am willing to eat less meat and hopefully the government policy will adapt to changes”.

Most of the students also preferred nature-based classrooms with more participation and more opportunities for their voices to be heard (Chen, 2019, p. 93). ‘Nature-based partnership learning’ is the preferred future for the young students, and they like to see, feel and know the environment around them, and also they wish to co-create futures with the nature surrounding them (Chen, 2019, p. 93). Liu and Lin (2018, p. 1) have conducted a survey study among 96 students from one reputable public university in Taiwan and have revealed a number of topics that characterized their preferred environmental futures.

According to (Liu & Lin, 2018, pp. 6, 7), the elements referred for a preferred environment in the future for Taiwanese students included green technology; minimize the negative impact of human activities on the environment; to conserve the natural resources; the city has clean and safe energy sources (e.g. solar panels on top of building roofs) and energy-efficient buildings (e.g. plant walls); environmentally friendly technology and products which explained in preferred technologies part; having plenty of parks and open space; more trees and flowers and natural environment; fewer high-rise buildings; greater environmental awareness.

By another research (Gidley & Inayatullah, 2002, p. 233) a softer, slower, organic future where farming is crucial also was an image for the preferred future. The preferred environmental factors extracted from the positive image of the future by Taiwanese students in the survey research of (Ono, 2003, p. 750) included Beautiful scenery; Ecological balance; Harmonious coexistence of humans and other lives, New energy, Use and protection of the earth’s resources. In another survey research by (Hoffman, 2019) among 77 Taiwanese and international undergraduate university students in Taiwan to investigate the preferred images of the environment in 2060, analysis of the images showed five broad categories: Altered City; Technology Improvements; Environmental Quality; Relocation (Hoffman, 2019, p. 69).

According to (Hoffman, 2019, p. 69) the majority of students envisioned their preferred future as an altered city landscape, which is reviewed in the preferred technology section in this

literature review, and the second-highest number of responses fell under the category of 'environmental quality. The preferred environmental qualities that are frequently referred to by the students included: Clean air and water; Trees and plants everywhere; Forests, mountains, and lakes; Blue skies; and Abundant food resources (Hoffman, 2019, p. 70). Through the category of Relocation, some students referred to relocate to Mars, space, and floating islands.

Chen (2016, p. 185) also emphasizes that Taiwanese youth eagerly expect to live or work overseas. As an overall finding, the participants show more concern for the current state of the environment rather than the future (Hoffman, 2019, p. 66). However, Taiwanese students were less concerned compared to other nationalities, especially the students from Pacific Islands (Hoffman, 2019, p. 67). As mentioned before, according to Hoffman (2019, pp. 63, 66), another finding of this research is the confidence of the student about finding solutions by progress in technology and science for 'solving' climate change" and achievement to their desired futures.

For finding environmental dislikes and fears of future for Taiwanese youth, we review some findings here. Chen (2019) expresses the worry of students about consuming the future. For example, students express that "if we and generations to come do not adopt a radical rethinking of the way we live, our society is doomed" (Chen, 2019, p. 94). Also, (Ono, 2003, p. 752) lists the undesirable things seen in the most negative images of Taiwanese students about future of the environment as: badly damaged natural environment, badly polluted earth, depleting natural resources, dried up environment, lack of air and water in future.

About the preferred economic factors, among the values that Ono (2003, p. 750) lists for the most positive image of the future by Taiwanese students, these factors are most related: having a good career, being under little economic pressure, to have enough money, economic growth of the society, personal and social/economic stability, and no hunger. (Ono, 2003, p. 752) also lists undesirable things seen in the most negative image of the future by Taiwanese students which these factors are most related to undesired economic futures to them: Economic crisis, Hunger and starving, Poverty, and Recession.

Regarding the preferred political future for Taiwanese youth, we review here some research. According to Chen (2016, p. 185), Taiwanese youth eagerly expect to have more open-minded young or female leaders in power. Gidley and Inayatullah (2002, p. 232) express some preferred futures visions and scenarios by Taiwanese students, including globalized Taiwan, The China/Taiwan issue would be resolved by both entering a supranational federation where nation no longer matters, identity would be increasingly global rather than territorial. Among the values listed by Ono (2003, p. 750) about a most positive image of the future by Taiwanese students, these factors are most related to preferred political futures: Good foreign relationship,

International recognition of Taiwan, Military might of Taiwan, No autocracy and monopolization, Peace between Taiwan and China, Taiwan's sovereignty, Equality, Equity, Freedom, Human rights, Justice, Peace, Public order, Realization of ideals, Stability, Limited development of weapons. Ono (2003, p. 749) expresses that the values of "Good foreign relationship" and "Taiwan sovereignty" are mostly driven by the sensitive political and military tension between Taiwan and mainland China.

The findings of Ono (2003, p. 752) also reveals the undesired political futures factors for Taiwanese youth such as: hegemony, to be controlled by criminal gangs, no country, no freedom, no safety, to be ruled by advantageous people and or aliens, and or other species, social disorder, unstoppable terrorism, war and violence.

The elements of the preferred future of youth in Taiwan which are found through reviewed literature, have been summarized in the following list, and for further information and studies, a table of full list is available in Appendix V:

#### ***Social and Individual Preferred futures***

- Local, international and space relationship and friendships in peace, very collaborative and with bondage and loving each other
- Family wellbeing such as happiness, good marriage, strong family tie and respect
- Personal life wellbeing and quality such as health, comfortability, traveling, growth and individual achievements, self-consciousness, and self-esteem
- Values to be respected such as equality, equity, freedom, human rights, justice, honesty, realization of ideals

#### ***Technological Preferred futures***

- Technology for convenient life such as driverless vehicles, high-speed rail, flying vehicles, and worker robots
- Technology for health, curing diseases, and improving humans' abilities
- Technology for protecting nature such as producing green energy, electric or solar energy cars, energy-efficient buildings, and recycling centers
- To develop peace and connectivity

#### ***Environmental Preferred futures and place to live***

- Minimized negative impact of human on environment and humans' improved environmental awareness and harmony with other species
- Protected species and nature with more trees, flowers, renewable natural resources, and highly ecological balanced environments
- To live in a city that is clean, beautiful, full of natural resources, with plenty of parks surrounded by forests, mountains, and lakes
- To Relocate to Mars or Floating Islands, and or to live overseas

### ***Economic Preferred futures***

- Economic stability and growth of the society, with no hunger and poverty
- A good career with economic stability and less financial pressure
- Super rich citizen

### ***Political and Governance Preferred futures***

- Globalized and internationally recognized Taiwan with its sovereignty and high military might but good foreign relationships
- Peace between Taiwan and China and entering to a supranational era where nationality does not matter anymore
- Open-Minded Youth and Female Leaders in Power
- A government supporting the values such as equality, freedom, human rights, justice, peace, realization of ideals, and listening the voices etc.

Apart to the preferred futures of Taiwanese youth, the reviewed literature also provided some data about their futures' fears and disliked futures as follows:

### ***Future fears and disliked futures by youth in Taiwan***

- Unsecure and unsafe society with crimes for fun, to be controlled by criminal gangs, not having choice violence in society
- Detached bondages through families and society and replacement of friendship and trust by ruthless and sacrificing other people for personal benefits
- A society with counter-values such as social disorder, monopolization, no freedom, hegemony, autocracy, and selfishness
- Damaged nature and finishing natural resources by the expansion of the cities, pollution, climate change, humans' lifestyle, and technology
- Aging society with few babies
- Losing personal life wellbeing elements such as health, confidence, and financial stability
- Economic crisis, hunger and poverty
- Libertine Technology development which destroyed the culture and humanity and imposed living in an artificial world ruling by technology
- Development of weapons and living or dying in war and unstoppable terrorism
- To be ruled by aliens

## **Comparison between preferred futures and fears of youth in Iran and Taiwan**

Reviewed literature shows significant similarities but also some differences between preferred futures of youth in Iran and Taiwan. The following tables show the most common focus of

youth of Iran and Taiwan and also some different focus when talking about their preferred futures (Table 2-2) and their fears (Table 2-3) about the future. The column of “Common main focuses” in both tables shows the focused elements in common. As an instant, family and relationships, trusting in technology, respecting and recovering nature, and freedom are some examples of common areas of focus by both groups in their preferred futures (Table 2-2). In the same column of “Common main focuses” in (Table 2-3), unethical manners by people, destroyed nature, poverty, and war are some other examples of their common futures fears.

**Table 2-2.** Common main focuses and differences of the youth from Iran and Taiwan in preferred futures

	Common main focuses	Main differences	
		Only youth in Iran	Only youth in Taiwan
Social Preference	Wellbeing qualities; Family and relationships; Diversity; Spiritual peace	Children’s future	Traveling Overseas/space relationships
Technological Preferences	Trusting on technology for bringing wellbeing and making better future	Less focuses on technological issues	Technology for convenience Green technology
Environmental Preferences	Respecting and recovering the nature	Migration for the life betterment	Relocating for exploring purposes
Economical Preferences	Personally and social/economic growth		
Political Preferences	Freedom; Democratic values; Supporting the talents	Personal life’s preferences	Taiwan and territorial preferences
Overall attitude towards preferred futures	Having both the personal and collective futures visions	Lack of a clear definition about preferable future; have stuck in the past; struggling with regrets and negatively of the present and low quality of life	Optimistic preferable futures vision

**Table 2-3.** Common main focuses and differences of the youth from Iran and Taiwan in futures fears

	Common main focuses	Main differences	
		Only youth in Iran	Only youth in Taiwan
Social Fear	Losing what they have Unethical manners Social counter-values	Inequality towards women	Aging society
Technological Fears		Impact of IT on children’s future	Losing natural life Development of the weapons Libertine technology
Environmental Fears	Destroyed nature and finished natural resources		
Economical Fears	Poverty Personal financial failures Economy centric society		
Political Fears	War	Attack by ISIS	Being ruled by others

Two other columns under “Main differences” show the areas that are more focused by one group while not mentioned by the other group. As an instant, in social preferred futures, Iranian youth had focused on their children’s future while this area was not mentioned by Taiwanese youth (Table 2-2). On the other hand, in the same table and row, Taiwanese youth had focused on traveling and broad relationships globally and also with the aliens, while these areas are not focused on by Iranian youth. At the bottom of (Table 2-2), the row of “Overall attitude towards preferred futures” shows that what are the common and different attitudes of youth in Iran and Taiwan towards the preferred future. For example, both groups not only focused on personal preferences and fears, but also focused on preferred futures for society and others. On the other hand, a significant difference, which is shown in the same row, is revealing their different vision about the future, which is optimistic for Taiwanese but pessimistic for Iranians. For example, according to Demneh (2015, p. 167), the youth of Iran have stuck in the past, and they are struggling with their regrets, and their vision about the future is affected by the negatively of their past and present condition and also their low quality of life. Therefore, they do not have a clear definition of preferable future.

In contrast with the Iranian pessimistic vision of the future, Taiwanese youth have a more optimistic vision about their preferred future. According to the reviewed literature and the lists of preferred futures by both groups, Taiwanese youth believe in the realization of their preferred futures more than Iranian youth.

### **Comparison between futures images in science fiction films and preferred futures of youth in Iran and Taiwan**

Here we compare the common futures images in Science Fiction films and the preferred futures of youth in Iran and Taiwan to find answer for the second research question through literature review before conducting the research. To find the similarities and differences, (Table 2-1) which had listed the most common futures images in science fiction films, has been compared to the preferred futures of youth in Iran and Taiwan which have been extracted from literature and listed in previous sections. The result of this comparison is shown in (Tables 2-4).

According to (Table 2-4), most of the futures images showing in science fiction films are opposite to the preferred futures of both Iranian and Taiwanese youths. For example, in science fiction films, technology has a centric and destructive role, but the youth of Iran concentrated on social issues for their preferred future with a lower concentration on technology, and youth of Taiwan preferred positive application of technology in contrast with the destructive role of technology in science fiction films. Future view in science fiction films is mostly dystopian,



while both youth groups Prefer Positive futures. Humans are their own worst enemies in science fiction films, but in the preferred futures of youth, humans are very collaborative and take caring of each other and the environment. The only science fiction image sets that are not opposed to the preferred futures of the youth are “futuristic technologies” and “building new worlds”. However, these two sets of images also are not fully preferred by the youth, but with some conditions. Iranian youth prefer technology for sustainable development rather than just having access to advanced technology. On the other hand, Taiwanese youth prefer the application of technology for convenience, health, protecting nature, and for developing global peace rather than just having access to advanced technology.

**Table 2-4.** Comparison between the most common futures images in science fiction films and preferred futures of youth in Iran and Taiwan

Most common futures images in science fiction films	Compare to preferred futures of youth in Iran and Taiwan	
	Iran	Taiwan
1- Centric and destructive role of technology	Focus on social aspects more than technology	Focus on positive application of technology
2- A single and dystopian view of the future	Positive futures	
3- Humans, their own worst enemies	Collaborative and take caring of each other and the environment	
4- Limited to only Western culture, white male future missing all other diversities	Diverse society	Not in their preferred futures elements
5- Humanoid AI and aliens as new citizens and mostly as enemies to the humanity	Not in their preferred futures elements	AI as worker robot Friendship with aliens
6- Fear and warning centric rather than providing solutions		
7- People under severe inequality, slavery, strict control and suppression	Freedom for all	
8- Highly futuristic technologies including AI, cyborgs, space technology, etc.	Technology for sustainable development	Technology for convenience, health, protect nature, and peace
9- Building new real or virtual worlds	To Relocate in other countries	To Relocate in Mars or in other countries
10-Ecological disasters and disappearing green nature and animals	Respected and protected nature To live in a clean environment	
11-The hegemony of American capitalism through large corporations where a small number of the rich are in control of the world	Not in their preferred futures elements	
12-Militarism and war	Global friendship and peace	

## **The Coverage of Existing Literature and Need for New Research**

Indeed, by reviewing the literature, the issues such as what kind of images are spreading into public by science fiction films and some impacts of science fiction films could be found but fewer articles and information from the voice of public and youth. Comparing the number of literature found for the perspective of the authors and critics with the number of literature that existed for the perspective of youth in Iran and Taiwan about images in science fiction films can show us that less data is available about the perspective of youth. On the other hand, the perspective of these two groups of youth about like or dislike the images of the futures in science fiction films to be their futures is not studied. Therefore, there is no data about the differences or similarities between the images shown in these films and their own preferred images of the future. About the preferred futures of both groups, some research has been done which reviewed above, but data about preferred futures of youth in Iran are fewer than available data about Taiwanese youth. However, the results of studies about preferred futures of youth in Taiwan also is subject to change based on different time and generation and sample groups. Also, another lack of information is that no study has been done to compare the preferred futures of youth in Iran and Taiwan. To summarize, the following points emphasize the lack of data and the need of designing and conducting new research around the topic of this thesis:

1. Very rare research works have been done to collect the perspective of youth about futures images in science fiction films
2. Very few studies have been done about the preferred futures of youth in Iran
3. Some studies have been done about preferred futures of youth in Taiwan, but the results are subjected to be changed by different times and generations or sampling groups
4. No research has been done to compare the science fiction films futures and the preferred futures of youth in Iran or Taiwan
5. No research has been done to compare preferred futures of youth in Iran and Taiwan

The present planned research has the aim to collect more data about the perspective of youth regarding the futures images in science fiction films and also the elements in these films that are preferable or not preferable for the youth to have in their own futures. Also, this research will provide data for conducting a comparison between the preferred futures of youth in Iran and Taiwan for the first time.

## Hypothesis and Anticipation of the Possible Findings

By concerning the findings through literature review and the provides lists, tables and comparisons around research questions of this dissertation, the following possible finding can be expected after accomplishing the present research:

### 1. Most common images of the future shown in Science Fiction films:

The hypothesis about the answer to this question stands for a dark and dystopian future as the most common futures showing in blockbuster science fiction films. The findings of this research might confirm that in these films, the future is dark and dystopian where technology has dominated the society and is destroying nature, under control of big American corporations, while people are under severe suppression of cruel governments who also are under war with each other and all these have destroyed the Earth and humans are searching to find ways to escape to space, but the aliens appear and make the situation worst, finally a white American comes and saves the whole world.

### 2. Differences and similarities between these Science Fiction films' futures and preferred futures of youth in Iran and Taiwan:

The findings of this research might confirm a hypothesis that none of the common futures images shown in science fiction films are preferred by youth in Iran and Taiwan except for some futuristic technologies and the new imaginary worlds. However, youth may only prefer advanced technologies that have positive impacts, including peace and protecting nature.

### 3. Differences and similarities between the preferred futures of youth in Iran and Taiwan through science fiction films:

The findings of this research might confirm a hypothesis that there are significant similarities between preferred futures of youth in Iran and Taiwan, but also very few differences. The preferred futures of both groups might include all wellbeing elements, family, relationships, peace, all democratic values, protecting nature, technology for the betterment of humanity, good economic conditions, for self and others. The common fears and disliked futures of both groups might include all kinds of loss, social counter-values, poverty, destroyed nature, financial failures, and war. On the other hand, there might be some differences between their focused areas in preferred futures. For example, Iranian youth might focus more on the future of their children and family, migration, personal life, and with less optimism than Taiwanese youth. Also, Taiwanese youth might focus more on traveling, overseas and space relationships, technology, and the future of Taiwan compare to the Iranian youth.

By designing a new research, not only the anticipated possible findings will be examined, but also some new data will be added to the existing data in this field, as well as some specific comparisons and data that have not been collected by other research works, will be collected for the first time.



## Chapter 3

### Methodology



**Figure 3-1.** Science Lab of Wakanda in the film *Black Panther* (2018). According to the findings in literature review chapter, science and to be the scientist are linked to the males, in almost all science fiction films, but *Black Panther* is one of the few films that shows women as scientists and technology leaders.

The methodology of this research has been designed according to reach the objectives of this dissertation. The major objective of this research is to find the differences and similarities between the images of the futures from Science Fiction films and the images of preferred futures from the youth in Iran and Taiwan. Also, to compare the preferred images of the futures between Iranian and Taiwanese youth through science fiction films. Another objective of this research is connected to the author's science fiction filmmaking journey and finding directions in designing the contents of his future science fiction films. In this chapter, the methodology that will help the author to achieve the objectives of this research will be explained.

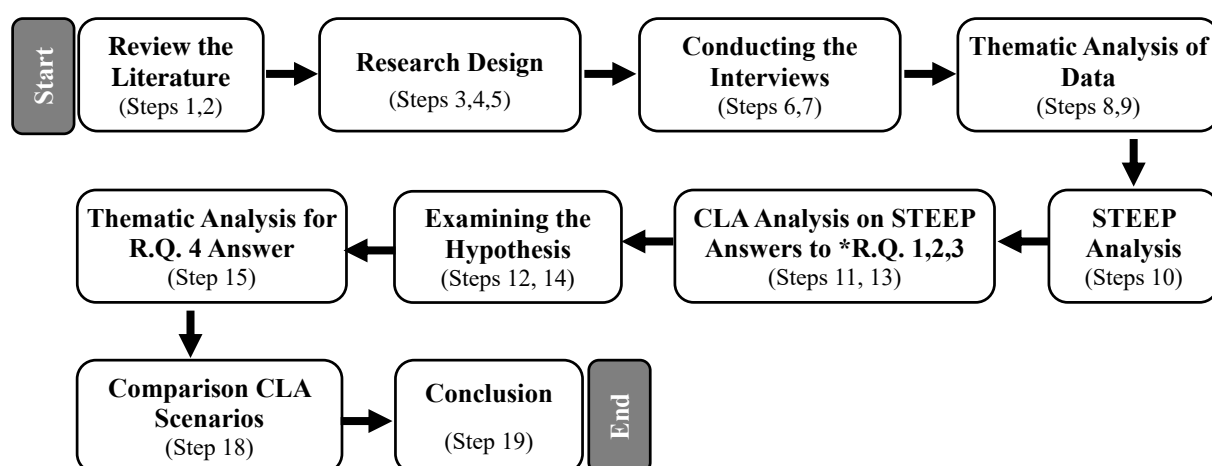
Before explaining the methodology, the list of research questions is being reminded below, since these questions will lead the flow of research and final analysis:

1. What are the common images of the future shown in Science Fiction films from the perspective of youth in Iran and Taiwan?
2. What are the differences and similarities between these Science Fiction films' futures and the futures that the youth of Iran and Taiwan want to live in?
3. What are the differences and similarities between the images of preferred futures by the

youth in Iran and Taiwan through science fiction films?

4. What kinds of futures images can be the images of a preferable future in science fiction films?<sup>13</sup>

The qualitative research interview approach (Kvale, 1996) was applied as the core research method for this study. The reason for selecting the qualitative research method is for the possibility to go deep into the different perspectives of participants who were from different countries and different genders. The subject of preferred futures of the participants also was another primary reason to use qualitative research. The author aimed to give participants the freedom to talk about the images they saw in the films and their preferences about those images while answering the questions, without limiting them to select only some predefined choices. The method of Thematic Analysis (Boyatzis, 1998; Braun & Clarke, 2006) has been used to sort the collected data from interviews for preparing them for the next steps of the analysis. The other methods which will be used both as guidelines for designing the interview questions and also for analyzing the findings are STEEP Analysis (Fleisher & Bensoussan, 2003) and Causal Layers Analysis-CLA (Inayatullah, 1998). In the end, also the method of CLA scenario building will be used to conclude all previous analyses and comparisons. The mentioned methods will be explained below while explaining the detail of each step of the methodology of this research. The following flowchart (Figure 3-2) presents a summary of the process, and the detail of the process is provided in each step below:



**Figure 3-2:** Flowchart of the research process (\*R.Q.: Research Question)

<sup>13</sup> This research question is linked to the authors filmmaking aims and as a guideline about the contents to include in his films which will be in science fiction genre and the futures

## **Main Steps of the Research**

- Step 1: Comprehensive Literature Review to find data related to Research Questions
- Step 2: STEEP analysis of data from Literature Review to collect answers to the Research Questions (as anticipation to final results and hypothesis)
- Step 3: Designing interview questions
- Step 4: Selecting the science fiction films for being watched by the participants
- Step 5: Selecting the study sample among university-educated youth in Iran and Taiwan
- Step 6: Watching assigned films by participants and preparing for the interview
- Step 7: Conducting the interview sessions and documenting the data
- Step 8: Thematic Analysis and categorizing the data into most referred themes for each interview question
- Step 9: Sorting the themes in the database table of each interview question, according to the frequency, nationality and gender of respondents, and other parameters
- Step 10: STEEP Analysis of the sorted themes and databases to find answers for Research Questions of this thesis
- Step 11: CLA Deepening Analysis of findings separately for each aspect of STEEP for Research Question 1
- Step 12: Examining the Hypothesis and anticipated results for Research Question 1
- Step 13: Comparison CLA Deepening Analysis of findings separately for each aspect of STEEP for Research Question 2 and 3
- Step 14: Examining the Hypothesis and anticipated results for Research Questions 2 and 3
- Step 15: Thematic Analysis of answers to the Research Questions 2 and 3 for finding the answer to the Research Question 4
- Step 16: Comparison CLA scenario of films futures and youth preferred futures
- Step 17: Conclusion of findings

The detail of every step and applied methods for this research are explained following.

### **Step 1: Comprehensive Literature Review**

The literature review has been designed upon three main Research Questions of this dissertation. The literature review aimed to collect data from other sources and references to draw a hypothesis and anticipate probable findings of this research before conducting new



research to compare with the final results. For this reason, the subjects related to the research questions and the objective of this research have been reviewed and data used for the next step, STEEP analysis of existing data.

### **Step 2: STEEP analysis of data from Literature Review for each Research Question**

To prepare for a possible detailed comparison of existing data with the final results of this research and also to draw the hypotheses, all data from the literature review, separately about each Research Question, have been categorized through STEEP Analysis method (Fleisher & Bensoussan, 2003) in the aspects of social, technological, environmental, economic, and political. After STEEP analysis of data, also the summarized conclusions have been made for the existing answers to each research question.

### **Step 3: Designing interview questions**

According to the mentioned reasons, interview research approach with open-ended and semi-constructed questions, in “Traveler” (Kvale, 1996) style, has been used as the core research method for this study to provide more opportunities to explore the ideas of interviewees and cover the areas that might not be recognized by the researcher before the interviews. To meet the objective of the research, the questions for the interviews have been designed considering following main approaches:

1. To cover Research Questions of this Thesis, including futures images in the films, and preferences of interviewees of Iran and Taiwan
2. To use the finding in the Literature Reviews as help, but not as a block to designing interview questions (The findings about science fiction futures and preferred futures of youth in Iran and Taiwan)
3. To cover STEEP for the aim of collecting comprehensive data about futures images in Social, Technological, Environmental, Economic, and Political aspects
4. To collect data for each layer of CLA (Litany, Systemic, Worldview, and Metaphor), for analysis and deepening purpose

Causal Layers Analysis-CLA (Inayatullah, 1998) is an analysis methodology that is being used widely in the world for futures studies and social research studies both for drawing futures scenarios and also analyze the issues in four layers of Litany, Systemic, Worldview, and Metaphor. Inayatullah (1998, p. 820) by emphasizing that “futures studies should be seen as layered, as deep and shallow”, explains four layers of CLA as: “The first level is the ‘litany’- quantitative trends, problems, often exaggerated, often used for political purposes

(overpopulation, eg) usually presented by the news media ... The second level (Systemic) is concerned with social causes, including economic, cultural, political and historical factors ... The role of the state and other actors and interests is often explored at this level ... The third deeper level is concerned with structure and the discourse/worldview that supports and legitimates it ... The fourth layer of analysis is at the level of metaphor or myth. These are the deep stories, the collective archetypes, the unconscious dimensions of the problem or the paradox”

To provide the possibility of collecting data for all layers of CLA through the interviews, the questions of the interview have been designed for collecting data about: (1) the most visible and obvious elements -*Litany*- about futures images in the films (2) the structural and systemic elements of the futures in the films (3) the beliefs in the future society showing in the films (4) Myth and Metaphor of the futures showing in the films.

To provide possibility of applying STEEP analysis over the findings, the interview questions have been designed in a way that covers all aspects of Social, Technological, Environmental, Economic, and Political about the futures in the films and preferences of the youth. The first question is about futures images in the films about society, people, and social elements; second question is about most shown kind of technology and the purpose and application of technology; third question is about the environment that they saw in the films and compare with their preferred future environment, as well as if they prefer to relocate to other country or even other planet to live; forth question is about economic elements in the films; fifth question is about political elements in the films; sixth question is about the biggest fear of the futures that they saw in the films; seventh question is about whether they saw any survival solution in the films; eighth question asks about the main message that the participants received from the films that they watched for the interview; ninth question focused on futures myth and superheroes in the films and their characteristics as well as comparing them with a real superhero that the participants see as a superhero in the future; tenth question is about the metaphors of the futures that they saw in those films; and eleventh question is about the metaphor for the future that they prefer to live in.

A vision of 30 years later is targeted in the questions about preferred futures of respondents to both giving them enough time distance from present time to imagine the changes in the future easier and also to let them consider the next generations who may not be born yet such as their future children.

The list of interview questions is provided below, but the author kept the freedom of asking further questions or rephrase the questions while interviewing. This is for the reason of easier

comprehension of both interviewee and interviewer and also for answering questions as “traveler” (Kvale, 1996) to extract wider information, as well as sometimes asking questions through “miner” style (Kvale, 1996) for digging deeply to the underneath layers of CLA while interviewing.

***Interview questions:***

1. How people of the future have been shown in the film? (feelings, living conditions, positivity, negativity, living quality, relationships, ...) Which social elements and conditions you liked or disliked to be in your future, around 30 years from now? How diverse was the society in the films? (different races, nationalities, genders, ...) What level of diversity you like or dislike for your future, from no diversity at all to a very high diverse society, and why? How have aliens been shown and their relations with humans? Do you prefer to have aliens in your future? Why yes and why not?
2. What were the most kind of technologies in the film and main purposes to use, and the main impacts of technology? Which kind of technology and purposes in the film have you preferred or not preferred for your own future in around 30 years? How AI/Robots shown in the film? do you prefer AI to have roles in your future?
3. How the environment and cities were shown in the films (any element and condition about Nature, Cities, World, Natural Resources, ...)? Which shown elements have you preferred or not to have in your own future? Where do you prefer to live in the future, sometime about 30 years later? (your home country, migration, earth, another planet, ...)
4. Have you seen any economic system in the film? What were the issues and conditions of people and groups in the film regarding the economy? Which economic elements in the film do you prefer for the future of the world and your own future?
5. Which kind of political or governing system and political issues have you seen in the film (whether local or global)? Which political conditions in the film you prefer and which don't you prefer for the future?
6. What were the biggest fears or warnings about the future shown in each of these two films?
7. What were the survival solutions shown or proposed in the films to prevent the disasters or unwanted future and or any solution to possibly overcome the challenges in the future?
8. What was the main message of each film? Do you agree with that or not?
9. What were the main characteristics introduced for the superheroes in the films? (their characteristics, values, mindset, and impacts) Which characteristics that you saw for them you think are crucial for a real superhero in your future, 30 years later?
10. What metaphor do you suggest about the future that is shown in each film?
11. What metaphor can describe the future that you prefer to live in 30 years from now?

#### Step 4: Selecting the science fiction films

To help the participants to remember futures images in science fiction films, 10 science fiction films, through the method that is explained below, have been selected for being watched by the participants before the interview. According to the reasons provided in the Introduction chapter in the section of “The scope of Science Fiction films”, the scope of this research is western science fiction films, especially Hollywood films in the 21st century. Also, other factors have been considered in selecting the films. The following table (Table 3-1) shows all considerations, reasons, and criteria for the selection of the films:

**Table 3-1.** Criteria for selecting the films by the consideration and the reasons

Consideration	Reason	Criteria for selecting the films
Popularity	Because of the higher influence of these films in society and youth as watched by many	Among 50 highest-grossing blockbuster Science Fiction Films <sup>14</sup>
The focus of the research	To keep the focus of research as Western and Eastern science fiction are very different	Select all films among either Western or Eastern Science Fiction, not from both
Contemporary to youth	To be more familiar to the participants and preferably, already watched by them	Films produced in 21 <sup>st</sup> Century
Diversity of the films	To extract common images showing in the most science fiction films	Several films in various sub-genres, and also covering STEEP and CLA layers
Most seen among the participants	For both reasons of popularity and also ease of interview	Films that are more familiar for the majority of participants and or already watched
Futures Images	Research is about futures images in the films	Science fiction films that show the future

By considering these six main criteria, ten films have been selected to be watched by the participants. Among Western/Eastern science fiction, Western science fiction has been chosen automatically regarding its higher popularity and worldwide mass distribution. Fifty highest-grossing blockbuster science fiction films produced after 2000 (IMDb, *Top lifetime grosses 2000-2020*) targeted to select among to have more possibility of covering various types of sub-genres. This research will have 14 participants, which will be explained in the sample selection section below, and each one will watch two films to possibly have the opportunity of comparison and also more films to be watched. Participants will watch the selected films before the interviews, but a priority for selecting films is to select films that have already been watched by them. Such criteria will facilitate the remembering of the scenes by the participants and also

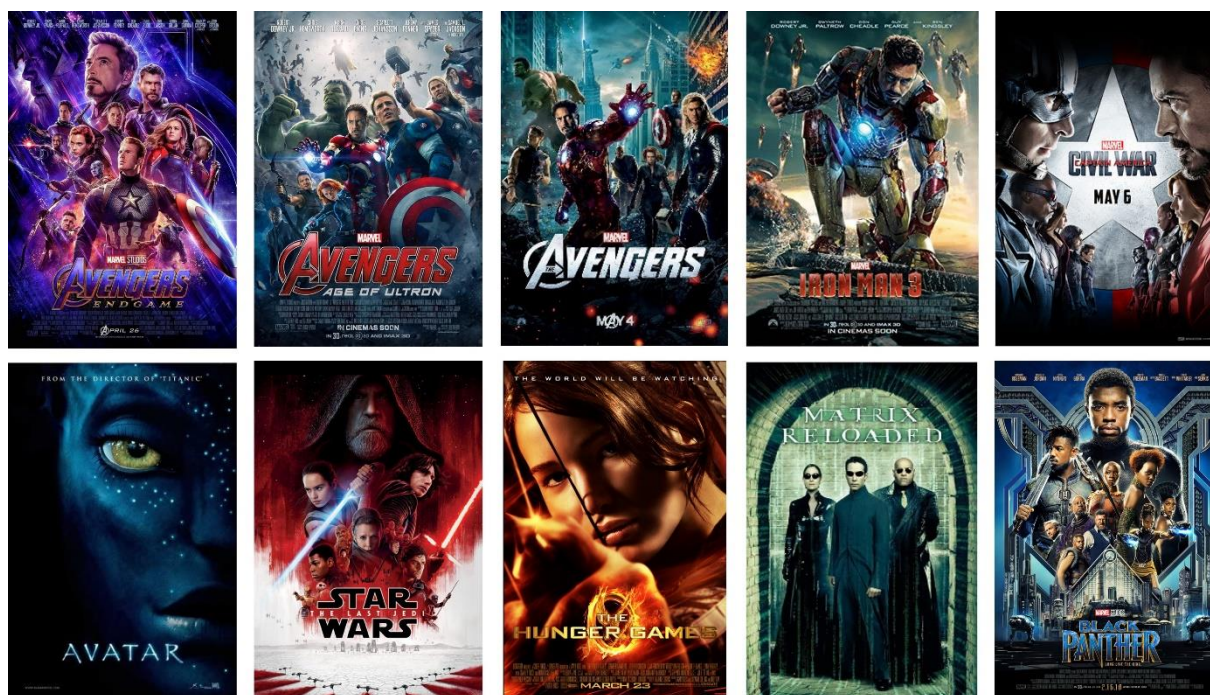
<sup>14</sup> Available in Appendix VI from [https://www.boxofficemojo.com/chart/ww\\_top\\_lifetime\\_gross/](https://www.boxofficemojo.com/chart/ww_top_lifetime_gross/)

can emphasize the popularity of films among participants. Therefore, lots of coordination has been done with each participant to select the films that they have already watched among total of 50 highest-grossing blockbuster science fiction films produced after 2000. Also, by applying all other criteria, finally, ten films that are listed below have been selected among 50:

1. *Avengers: "Endgame (2019)"*  
Sub-genres: Superhero, Alien Invasion, Time travel, Apocalyptic
2. *Avengers: "Age of Ultron (2015)"*  
Sub-genres: Superhero, AI, Cybernetics, Mutant, Apocalyptic
3. *Avengers (2012)*  
Sub-genres: Superhero, Alien Invasion
4. *Iron Man 3 (2013)*  
Sub-genres: Superhero, AI, Cyberpunk
5. *Captain America: "Civil Wars (2016)"*  
Sub-genres: Superhero, Cyberpunk, Mutant, AI
6. *Avatar (2009)*  
Sub-genres: First Contact, Alternate Universe, Mind/soul travel, Space Exploration, Cyberpunk
7. *Star Wars: "The Last Jedi (2017)"*  
Sub-genres: Space Opera, AI, Alien Invasion, Superhero
8. *The Hunger Games (2012)* and or other episodes  
Sub-genres: Cybernetics, Cross-Genre
9. *The Matrix Reloaded (2003)* or the original  
Sub-genres: AI, Mind/soul travel, Apocalyptic, Superhero
10. *Black Panther (2018)*  
Sub-genres: Superhero, Alternate History, Cybernetics

The sub-genres of each selected film are listed above, and it shows that most of the sixteen sub-genres of science fiction films (introduced in Table 1-1) can be covered by these ten films.

As explained in the Introduction chapter, some critics don't categorize MARVEL films or Superhero films in the science fiction genre, but despite such criticism, six films among ten selected films are MARVEL films. There are some reasons that several MARVEL films are on the list. The reasons go back to the film selection criteria, which are listed in Table 3-1. To meet the first consideration in Table 3-1, Popularity, the selected MARVEL films are in the first twelve highest-grossing blockbuster science fiction films in Box Office. The criticism of some critics that Superhero or MARVEL films are not science fiction, is not practical in this research as the indicator of being science fiction or not for this research is the definition by IMDB, Box Office, and producers. In addition, the criteria for selecting films for this research is not "to be a good or best science fiction films by the rating of critics", and as explained, highest-grossing is the criteria, due to their popularity and the rate of being watched by the public.



**Figure 3-3.** Official posters for ten films which reviewed in this research. The findings of this research emphasized that a major theme of most blockbuster science fiction films is war and fighting. This is also observable in some posters of these films.

### Step 5: Selecting the study sample

As explained in the Introduction chapter, according to the seven explained reasons the university graduated or students of Iran and Taiwan, who like and usually watch science fiction films, and are between the age of 20 to 30, are the targeted sample for this study. A mix of sampling methods used to reach the sample groups for this research in Taiwan and Iran. First, through “reliance on available subjects” (Babbie, 2010, p192) and “Snowball Sampling”, a pool of candidates has been listed, then the method of “purposive (judgmental) sampling” (Babbie, 2010, p193) has been applied on the pool, by considering a list of 10 criteria (see Table 3-2), to finally reach 14 most appropriate participants for this research. Seven respondents were selected from Iran, and seven respondents from Taiwan. About sample size, Baker and Edwards (2012, p. 2), who gathered and reviewed responses to the question of “How many qualitative interviews is enough?” from 14 renowned social scientists and five early career researchers, states that the answer is “it depends”. Therefore, maybe we cannot say that how many respondents are definitely enough for every type of interviews, but the guide for the sample size of respondents for each group of Iran and Taiwan in this research was an experimental study about the saturation of data for in-depth interviews which emphasizes that “a sample of six interviews may have been sufficient to enable the development of meaningful themes and useful interpretations” (Guest, Bunce, & Johnson, 2006, p. 78). To make sure about saturation of data,

the sample size has been set to 7 for each country, then 14 total respondents, by the author. (Table 3-2) shows the criteria for selecting the research sample.

**Table 3-2.** Major criteria for selecting the research sample

Criteria	Description
Iranian	Born, grown, and currently live in Iran for the interviewees from Iran
Taiwanese	Born, grown, and currently live Taiwan for interviewees from Taiwan
Balanced Groups	The same number of participants in each group of Iran and Taiwan
Educated	University student or university graduates
Youth	Age between 20 to 30
Gender Balance	Possibly balanced gender in both groups of Iran and Taiwan
Like Sci-fi	Like watching science fiction films, but not necessarily emphasized as Sci-fi fan
Watched the films	Has watched some of the 50 highest-grossing blockbuster science fiction films
English Level	Good level of comprehension and speaking English for Taiwanese respondents
Keen on Interview	Interested in interviewing about science fiction films and his/her preferred futures

Some characteristics need to be reminded here that are not the criteria of this sampling nor the focus of this research. However, adding them to sampling criteria for further studies might produce more comparative data. This research is not seeking the relation between the education field of respondents and their perspectives about their preferred futures through science fiction films. Possible diversity in education was preferable for sampling because of exploring among different perspective of youth with different backgrounds. Therefore, the study field which is shown in (Table 3-3) is for further information and an input for any further study. The only criteria about the age of respondents is to be between 20 to 30 to fall in category of youth and the other categorization of the ages such as how younger (closer to 20 years old) or how older (closer to 30 years old) were not the criteria of this sampling and result analysis. Categorizing ages to smaller ranges might be suggested for further studies which aim to compare perspectives of different ages together.

The list of participants in this research, including the Participant's code, nationality, gender, age, education, and the films assigned to each participant, are shown in (Table 3-3). Participant's codes which will be used to describe the findings show the nationality, gender, and number of each participant. For example, IM6 is the sixth (6) participant in the list who is an Iranian (I) male (M).



**Table 3-3.** The list of Participants

Participant's code	Country	Gender	Age	Education	Films Watched for Interview
IF1	Iran	Female	29	Media Production Sound Design	<i>Black Panther</i> (2018) <i>Avatar</i> (2009)
IF2	Iran	Female	25	Architecture	<i>Black Panther</i> (2018) <i>Avatar</i> (2009)
IF3	Iran	Female	27	Physics	<i>Captain America: Civil Wars</i> (2016) <i>The Hunger Games</i> (2012)
IM4	Iran	Male	26	Physics & Nano-Materials	<i>Avengers: Endgame</i> (2019) <i>The Matrix Reloaded</i> (2003)
IM5	Iran	Male	25	Architecture	<i>Black Panther</i> (2018) <i>The Matrix Reloaded</i> (2003)
IM6	Iran	Male	29	English Language	<i>Avengers: Endgame</i> (2019) <i>The Hunger Games</i> (2012)
IM7	Iran	Male	21	Architecture	<i>Avengers: Endgame</i> (2019) <i>Star Wars: The Last Jedi</i> (2017)
TF8	Taiwan	Female	24	Business Administration & Futures studies	<i>Black Panther</i> (2018) <i>Avatar</i> (2009)
TF9	Taiwan	Female	24	English Language	<i>Iron Man 3</i> (2013) <i>The Hunger Games</i> (2012)
TF10	Taiwan	Female	23	Japanese Language	<i>Avengers</i> (2012) <i>The Hunger Games</i> (2012)
TF11	Taiwan	Female	28	Chinese Literature & Cultural Studies	<i>Black Panther</i> (2018) <i>Star Wars: The Last Jedi</i> (2017)
TM12	Taiwan	Male	23	Industrial Design	<i>Avatar</i> (2009) <i>The Matrix Reloaded</i> (2003)
TM13	Taiwan	Male	21	Diplomacy and International Relations	<i>Avengers: Age of Ultron</i> (2015) <i>The Matrix Reloaded</i> (2003)
TM14	Taiwan	Male	27	Visual Communication Design & Futures Studies	<i>Captain America: Civil Wars</i> (2016) <i>Star Wars: The Last Jedi</i> (2017)

### Step 6: Watching films and preparing for the interview

Through coordination with each interviewee and explaining the whole process, the purpose of this research, and providing the themes of questions to them, two films have been assigned to each participant to be watched and prepare for the interview (see Table 3-3). Each interviewee watched these two assigned films. Even if they had watched the films in the past, they watched again for this interview. Two considerations have been taken while assigning films to the participants. The first consideration was that they had already watched the film, and second, balancing the dispatch of films among the participants in a way that each film to be watched by three participants averagely.

### Step 7: Conducting the interviews and documenting the data

After watching the films by the participants, 14 interview sessions have been arranged and conducted during 40 days from 27 August 2020 to 6 October 2020. Because of the distance between the living place of the author, Taiwan, and Iranian youth, all interviews with Iranian youth have been conducted online through the internet. For interviewing Taiwanese youth also most of the interviews were conducted online because of the pandemic of COVID-19 and health

considerations. Each interview took time between 50 to 75 minutes. Each interview session started with a warm-up talk and asking participants about their background in study, work, hobbies, and personality. After the opening talk, eleven questions, which are introduced above, have been asked from the participants, and their voices have been recorded for extracting data after each session.

The author managed to keep the balance of the conversations for both focusing on the topics and questions and also to let the participants provide more data and their perspectives freely about the questions. For some participants, the researcher had to ask more questions than the listed questions as they used to talk less. Some other participants were more comfortable to talk, but they used to talk about other subjects, such as filmmaking and or other films, rather than the defined topics and questions. For this group, the researcher had to bring them to the mainstream of the interview while keeping them still comfortable to talk. Because of two reasons, the author had to use confirmation questions several times during the interviews to make sure that he has understood that what interviewees mean by their explanations. One reason was that for interviewing of Taiwanese participants, the language was English and it was not the native language for neither the participants nor the author. The other reason was because of online interviewing and some problems with clearance of voice. After each session, all sentences of the participant during the interview session, were written down word by word from the recorded voice to be prepared for analysis.

#### **Step 8: Thematic Analysis and categorizing the data**

To start the analysis and extract the findings for each interview question, the first analysis method that applied is Thematic analysis. According to (Braun & Clarke, 2006, p. 79) “Thematic analysis is a method for identifying, analyzing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail”. By applying thematic analysis on the mass data which gathered from 16 hours of interviews with 14 respondents, the main themes have been extracted from the answers of participants to 11 each interview question. The methodology that is provided by Braun and Clarke (2006) has been used for extracting the main themes in this research. (Table 3-4) shows the phases used for defining final themes.

After conducting the interviews and writing down whole sentences, firstly, several times the whole written data have been reviewed and the main ideas inside the answers highlighted. In the second phase, the initial codes for data about each interview question have been created. Codes identify semantic content or latent features of data that refer to the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon (Boyatzis, 1998, p. 63; Braun & Clarke, 2006, p. 88). In the third phase of

Thematic Analysis, the codes were reviewed and combined to generate potential themes, and through the fourth phase, all potential themes were reviewed, reframed, combined, and broken down to a list of themes that each one carries a unique meaning distinguished from other themes. In the fifth phase, the final themes for the answers to each interview question have been shaped. The nature of themes in this research is descriptive expressions about the world seen in the selected science fiction films and also preferred futures of the respondents. The sixth phase of this analysis is done through the next step of the methodology of this dissertation (Step 9), to go forward finding the answers to the Research Questions and other analyses such as STEEP and CLA.

**Table 3-4.** Phases of thematic analysis. Source: (Braun & Clarke, 2006, p. 87)

Phase	Description of the process
1. Familiarizing with data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

### **Step 9: Sorting the themes in the database tables**

For preparing the data to be analyzed in the next steps, all extracted major themes from the Thematic Analysis of the answers have been sorted in the Microsoft Excel database. Although the core research method for this dissertation is qualitative, but for providing the opportunity to compare data between different nationalities and genders, the quantitative data also collected in the database. In the database, for each one of 11 questions, the following factors collected in the database:

1. The major themes inside the answers to each question
2. Name of films that the themes have been extracted from them
3. Code of the respondents
4. Nationality of the respondents
5. Gender of the respondents

6. The number of referring to each theme as “Seen in the Film”
7. The number of referring to each theme as “Preferred Future”
8. The number of referring to each theme as: “Not Preferred Future”

Through the database, various kinds of reporting became possible, including the sorting themes by the frequency of referring as seen in the film or preferred future or not preferred future, also the summation of the frequency of referred themes per nationality, gender, and film. The results of using the mentioned database are available in the Tables (4-1 to 4-14) in the Results and Discussion chapter.

### **Step 10: STEEP Analysis towards the answers to the R.Q.<sup>15</sup> 1,2 and 3**

In this step, all themes which were extracted from the answers to 11 questions of the interviews, have been analyzed Through STEEP sections separately. The aim of using the STEEP analysis model was to have a comprehensive analysis of the findings to understand the perspective of respondents in all aspects of Social, Technological, Environmental, Economic, and Political, both about the common futures images in the film and for the preference of respondents to have such elements in their own futures. This process of STEEP analysis has been done separately for three research question of R.Q.1 (Common futures Images in science fiction films), R.Q.2 (Difference and Similarities between science fiction futures and youth preferred futures), and R.Q.3 (Differences and Similarities between youth preferred futures in Iran and Taiwan). The results of these series of analyses have been provided in the Analysis chapter.

### **Step 11: CLA of STEEP aspects for R.Q. 1**

After each section of STEEP analysis for the findings of Research Question 1, one CLA analysis has been done separately to analyze each layer of futures images showing in science fiction films. Five CLA Deepening Analysis have been done over the findings for R.Q.1 (Common futures Images in science fiction films) as Social CLA analysis, Technological CLA analysis, Environmental CLA analysis, Economic CLA analysis, and Political CLA analysis. The aim of applying CLA analysis on each STEEP aspect of R.Q.1 is to understand, for example, which kind of social systems are being presented by the most blockbuster science fiction films, or the people in science fiction films have which kinds of environmental worldview, so on.

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<sup>15</sup> R.Q.: Research Question

### **Step 12: Examining the Hypothesis and anticipated results for R.Q. 1**

After STEEP and CLA analysis of the findings for the Research Question 1, the results of analysis compared to the Hypothesis and anticipated results that before conduction the research had been drawn from Literature Review, to examine the differences and similarities between new findings by this research and data from other research works.

### **Step 13: Comparison CLA of STEEP aspects for R.Q. 2 and 3**

Similar to the CLA analysis explained in Step 11, other CLA analysis charts also have been done to compare the layers of Litany, Systemic, Worldview, and Metaphor between the images of the futures shown in the films and the preferred futures of youth in each STEEP aspect separately. As the results have shown significant similarity between the preferred futures of youth in Iran and Taiwan, one CLA column has been drawn for both groups, but the few differences have been highlighted in CLA tables. Five comparative CLA Deepening Analysis have been done over the findings for Research Questions 2 and 3 as Social comparison CLA analysis, Technological comparison CLA analysis, Environmental comparison CLA analysis, Economic comparison CLA analysis, and Political comparison CLA analysis. The aim of applying these CLA comparison analyses on each STEEP aspect is to compare each layer of CLA between futures images in the films and preferred futures of youth separately through different aspects of STEEP.

### **Step 14: Examining the Hypothesis and anticipated results for R.Q. 2 and 3**

After STEEP and CLA analysis of the findings for the Research Question 2 and 3, the results of analysis compared to the Hypothesis and anticipated results that before conduction the research had been drawn from Literature Review, to examine the differences and similarities between new findings by this research and data from other research works.

### **Step 15: Thematic Analysis of answers to R.Q. 2 and 3 for finding the answer to R.Q. 4**

The aim of Research Question 4 is to sum up all findings of this research to draw a guideline for the author about images that can present preferred futures of youth which that he may use in his science fiction writings and films. The answers to this question could be found in the findings and analysis to Research Question 2 and 3. After analysis and concluding the themes from youth preferred futures in science fiction films, nine major sets of themes which also have covered STEEP aspects and CLA layers have been extracted which are provided in

### **Step 16: Comparison CLA scenarios of films futures and youth preferred futures**

By merging and concluding all findings and CLA analysis in previous analysis steps, two CLA scenarios mapped to do Causal Layered Analysis (Inayatullah, 1998) of the common futures showing in blockbuster science fiction films and also the preferred futures of youth in Iran and Taiwan. After deepening in each scenario, a comparison analysis was done between these two CLA of film futures and preferred futures, for analyzing the differences and similarities of these two scenarios in each layer of Litany, Systemic, Worldview and Metaphor.

### **Step 17: Conclusion of findings**

The three main concluding tables to this research are Tables (5-11, 5-12, and 5-13). (Table 5-11) will present a concluding summary to the answers to three research questions of R.Q. 1, 2, and 3 together; (Table 5-12) is a conclusion to R.Q. 4; and (Table 5-13) is a comparative CLA scenario which compares the answers and Causal Layered Analysis of R.Q. 1, 2, and 3. In addition to these overall conclusion tables, a conclusion to the answer of each Research Question will be provided separately at the end of their analysis sections

### **The challenge to this research**

As explained in Step 7 above, the main barrier for this research was the language. Different languages of English, Chinese and Persian are used for literature reviews and the languages of English and Persian for the interviews. Different languages in literature review created a challenge of searching and translating the literature for the author. Different languages for the interviews with Taiwanese youth, created the challenges of understanding the questions by the participants and understanding their answers by the author.

However, these challenges are managed by the author. For the Chinese language of literature, Google Translate was a great help to understand the overall concepts of the literature and for the details, some Taiwanese friends helped to understand the meanings correctly. For the challenge of different language in the interviews with Taiwanese youth, first, in the selecting study sample, the students or graduates have been selected that have a good English level and second, during the interviews several times the author used confirmation questions and examples to make sure that he has understood the answers and also the participants understood the question. As an outcome of going through this challenge and solving it was providing access to some non-English sources by translating them into English. Through this research, data from Persian and Chinese literature, and also the perspective of non-English speaking youth of Iran and Taiwan has been translated to English which usually are not available in English to be used by the researchers.

## Chapter 4

### Results and Discussions



**Figure 4-1.** Jake is explaining his findings after spying the Na'vi's home tree in the film *Avatar* (2009). According to the answers of participants in the present research, Virtual World-building is one of the most seen application of technology in science fiction films

In this chapter, the answers of the participants to the interview questions are being described and discussed. As there is not enough space to put all answers by the participants in this chapter, the main extracted themes from the answers will be introduced and some example answers will be expressed as well as the preference of participants to have such theme in their own future or not. Interviewees have been asked to answer 11 questions about the most common futures images shown in two science fiction films that each one of them watched for this interview, and also to express whether they prefer such things in their futures or not.

The questions have been introduced in previous chapters but to remind before going to the reviewing of the answers, the first question is about futures images in the films about society, people, and social elements; second question is about most shown kind of technology and the purpose and application of technology; third question is about the environment that they saw in the films and compare with their preferred future environment, as well as if they prefer to relocate to other country or even other planet to live; forth question is about economic elements in the films; fifth question is about political elements in the films; sixth question is about the biggest fear of the futures that they saw in those two films; seventh question is about whether they saw any survival solution in the films; eighth question asks about the main message that two watched films are providing; ninth question focused on futures myth and superheroes in the films and their characteristics as well as comparing them with a real superhero that the

participants see as a superhero in the future; tenth question is about the metaphors about the futures that they saw in those films; and eleventh question is about the metaphor for the future that they prefer to live in.

## Science Fiction Films Futures Society and People

The first question was about the society and people shown in science fiction films. The participants have been asked to describe the social elements, the situation of people and their relationship and feelings which they saw in the watched films for this interview. Also, as aliens are the usual members of society in some films, the participants have been asked to describe about how the aliens have been shown and their relationship with the humans. Another focus of this question was about the diversity of the society in terms of nationalities, ethnicities, races, genders and other diversities that are shown in the films. To compare these images with the preferred future of participants, they have been asked to say whether they like to have such elements in their own future or not. The answers of 14 participants have been categorized in 29 major themes showing in Table (4-1).

**Table 4-1.** Futures Social Themes in the films and preference of the youth to have in their future

Futures Social Themes in the films	Seen in films by participants	IRAN		TAIWAN	
		Preferred	Not preferred	Preferred	Not preferred
People with no or low level of awareness and are just blind followers	13		✗		✗
Extremely dependent on superheroes, leaders and The Others	11		✗		✗
People just Passive and or just judging, not acting effectively	9		✗		✗
People Stuck in daily life and just passing the present	8		✗		✗
Having harmful conflict with each other and violence	8		✗		✗
Unhappy and depressed people	7		✗		✗
The film not concerned on social issues and or showing the condition of people	6		✗		✗
Keeping traditions and or historical values unchanged	6	✓	✗		
Not understanding each other and very self-centric	5		✗		✗
Equality (Gender, races, rights, gender preferences...)	5	✓		✓	
Disconnected individuals	5		✗		
Happy people	5	✓		✓	
Women in power	4	✓		✓	
People with High level of Awareness	3	✓			



Helping each other	3	✓	✓
Suffering by limited access to vital resources	3	✗	✗
Connected to each other and environment	3	✓	✓
Access of all to vital living resources for basic needs	2	✓	✓
Isolated societies	2	✗	
Healthy relationship and respecting the rights of each other	2	✓	✓
Trust each other	2	✓	✓
Upgrading the traditions and historical values and balancing the modern and traditional values	2	✓	✓
Highly competitive society	1	✗	
Understanding and accepting each other, discuss with tolerance and learn from each other without stereotype	1	✓	
Inequality and social gaps (Rich, poor, gender, race, ...)	1	✗	
Primitive lifestyle and values	1	✗	
Not Having life purpose, goal and direction	1	✗	
Seeking excellence and power over the others	1	✗	
Believe in God and praying	1		✓

The most frequently seen social theme by the participants in the selected science fiction films is “People shown in the films are only blind followers with very low level of awareness”. For example, a participant who watched *Endgame* (2019) and *The Matrix Reloaded* (2003) stated:

*The people inside Matrix was unaware of what is the reality; however they seem happier than the people out of the Matrix system, it seems always knowing less and unawareness gives more happiness, but I will select awareness if I have been asked” ... “in Endgame people seem are there just to follow the heroes blindly without awareness of what is going on and what they better to do (IM4).*

Another participant who watched *Black Panther* (2018) and *The Matrix Reloaded* (2003) answered:

*People out of Wakanda, are not aware of what is going on, also regular people inside Wakanda, not having a specific role in the film and seem just a crowd... not a preferred condition for my future ... but, in The Matrix, people in the real world, are aware but always in tension and fear and war, seems awareness have brought them suffering, war and not a comfortable life, but anyway, I will prefer to be aware of things around me ... (IM5).*

IF3, who watched *Civil Wars* (2016) and *The Hunger Games* (2012), emphasized:

*I don't like such highly unaware people in Civil Wars which only criticize the heroes and their leaders that why they have not acted perfectly, while I think these people even were not aware enough to do a good scape for not being killed by the invaded aliens ... In Civil Wars, people are unaware, they don't understand the cost of things, and they think that superhero must be perfect and every action for peace and growth must be perfect with no negative impacts .... (IF3).*

She also saw the similar elements in *The Hunger Games* and stated:

*Not having a deep understanding of what is happening, they take things as fun while other people are dying ... and they believe that the selected warriors to fight are fighting for pride, but don't understand what the real situation and feeling of warriors who came to fight by obligation is (IF3).*

The second major social theme was “People extremely dependent on superheroes, leaders and The Others” rather than acting and taking responsibility whether if they don't want or have been pushed back to not take the responsibility and just to rely on few superheroes. For example, TM12, who watched *Avatar* (2009) and *The Matrix Reloaded* (2003), answered:

*People in Endgame do not have a specific role in this world; they just wait for the superheroes to act and protect them; however, they also misunderstand things such as who is enemy and what is the role of superheroes (TM12).*

Another respondent, IM7, who watched *Endgame* (2019) and *The Last Jedi* (2017), answered:

*people in Endgame are just adapted to the world which is relied on superheroes, ... I see people who have just reached the coexistence with each other and not proactive and responsible ... I dislike such a person-centered world showing in these films, which is very relied on one or few heroes (IM7).*

He saw the same element in *The Last Jedi*:

*All classes and races in the film accepted that the girl (last Jedi, daughter of Luck Skywalker) is our savior, seems they are there just looking for a savior"(IM7).*

IM4 answered that

*In Avengers, both people and the governments are very dependent to the heroes rather*

*than taking proactive actions and major roles.*

Another participant about being dependent on superheroes in the film *Civil Wars* mentioned:

*People do not take responsibility; they just rely on superheroes and expect the superheroes to protect them, which is stupid (IF3).*

TM13, who watched *Age of Ultron* (2015) and *The Matrix Reloaded* (2003), expressed:

*I don't like such relying on superheroes like only expect that The One (Neo) saves the whole humanity in The Matrix and also everyone relying on superheroes in the Avengers.*

In addition to these most referred themes of “low awareness” and “extremely relying on superheroes”, the other social themes such as “People just Passive and or just judging, not acting effectively”; “People Stuck in daily life and just passing the present”; “Having harmful conflict with each other and violence”; “Unhappy and depressed people”; “Not understanding each other and very self-centric” and “Disconnected individuals” were the most referred themes in the answers which all were disliked by the respondents. For example, IM4, about passive people in the film *Endgame* expressed:

*People are not proactive, just passive, and it seems there are there only to follow or encourage and or just criticize the heroes ... they don't take useful and effective actions by themselves! (IM4)*

Another respondent, about the people who stuck in daily life in *Avengers*, stated that:

*People's lifestyle in the film Avengers is very similar to ours, and they seem to have control over their own life, but they have too confidence in Avengers and left every decision making, and protective act to the heroes, and people are just busy with working for passing a daily life (TF10).*

Also, about people in *Black Panther*, IF2 explained:

*Out of Wakanda which the majority of people are living, they are trapped in daily life like what we have today as well, but also inside Wakanda, I see that the most focus is on the superhero and royal families, and people seem do not have any purpose, goal and or direction, just passing days and nights. It's a question to me that, is there a meaning like job or income or promotion and progress in work and life in Wakanda? Not clear!*

*Seems a crowd of people without any purpose.”*

She also saw the same thing in *Avatar* among people living on Earth by emphasizing:

*On Earth, people seem walking on streets without any objective, and they are trapped in a closed cycle of daily life (IF2).*

About another theme, “Having harmful conflict with each other and violence”, TF8 mentioned:

*In Black Panther, the different classes of people think differently, even opposite, T'chala from royal family and Erik from low social-class people who had different past and education, they have different goals, and this brings them to fight with each other and also puts other people in war (TF8).*

And other participant expressed about *The Hunger Games*:

*People are strictly separated by Capitol's government, and also the games were in a way to make the people of each district more separated from other district and being hostile to each other because their children are being killed by the children of other districts in the games” (IM6).*

About people in *The Last Jedi*, TF11 stated:

*People are fighting together; also they are fighting with their own ego.*

About the other most seen them, “Unhappy and depressed people”, a participant emphasized:

*In The Last Jedi, people are not happy and most of them negative, I only see the Jedi is positive” (TM14).*

TF10 was another respondent among 7 participants who all pointed to the theme of unhappy people, and he expressed:

*In The Hunger Games, people of districts are sad and under very heavy stress struggling with hunger, and only have to focus on surviving.*

“Not understanding each other and very self-centric” was another social theme that participants pointed. For example, IM6 mentioned about *Endgame* that:

*People have very low respect for each other, and they don't put a value on each other,*

And IF3 explained about *The Hunger Games* that:

*Emotions like love and respect towards each other were gone, and they have a cold relationship, for example when the boy wanted to give the bread to the girl, just threw it rather than giving to her, and or the mother of the girls had run away when their father passed away ... no talking, no smiling ... also the people of Capitol didn't understand other people, and they just look at things as fun. They don't have deep connections and understanding each other (IF3).*

TM14 also mentioned that:

*In Civil Wars, people don't understand each other and only think about their own points of view and personal issues. This is about both superheroes and ordinary people.*

“Disconnected individuals” also was a major social theme in watched science fiction films which was disliked by participants. About *Endgame*, IM7 explained:

*I see individualism in the way of separated individuals from each other, like unique cells, and their connection is like separated gears that just contact each other to accomplish a specific task for the system, and if they do not work as efficient gears, they will be eliminated automatically from the system (society) (IM7).*

In addition to the mentioned themes, which carried the negativity and were disliked by the participants, some other social themes in the films also appeared which were preferred by the respondents, such as “Equality”; “Happy people”; “Keeping traditions and or historical values unchanged”; “Women in power” etc.

For example, about the Equality in *Avatar*, IF1 mentioned:

*They see themselves as equal to each other and also to nature; they don't see excellence over each other or nature, which gave them a kind of freedom and peaceful feeling.*

IF2 also about *Black Panther* mentioned:

*In Wakanda, I see gender equality and the collaboration of men and women without excellency over each other.*

About Happy People in the films, IF1 mentioned that:

*People in Wakaanda are happy while outside are not. It's completely obvious even with the style of shooting and cold colors outside of Wakanda, while inside Wakanda, the colors and warm lights give a happier feeling.*

She also mentioned people in *Avatar* film as:

*People in Pandora are happy while humans are not (IF1).*

Another respondent mentioned:

*In The Hunger Games, in contrast to the Districts, Capitol people are happier and have more time so they could focus on fashion, good food, entertainment, and enjoying life, but indeed, all the people of Capitol were not bad, there were still some kind people, but most of them seem pretty stupid (TF10).*

And IM4 mentioned people in *The Matrix* film as:

*The people who are inside The Matrix program feel more happy and joyful compare to people who came out from The Matrix; it's because they are unaware and just passing their lives.*

As seen in these example quotes, most of the participants who mentioned that they saw happy people in the films also emphasized that only a small part of people was happy, comparing the population of Wakanda and the rest of Earth in *Avatar*, Pandora, and Earth in *Black Panther*, and Capitol and other Districts in *The Hunger Games*. For the film *Civil Wars* also IM14 saw happy people as he stated:

*In Civil Wars, most people seem to be happy and living their lives (IM14).*

About “Keeping traditions and or historical values unchanged”, IF2 mentioned:

*The people of Wakanda, even with the advanced technology, they had chosen to live in a traditional way and maintain their traditions such as when they went to choose the next king” (see Figure 4-2),*

And TF11 mentioned:

*There was a high contrast between traditions and high-tech in Wakanda, but they kept the balance.*

Also, IF1 mentioned about living in a traditional way in Wakanda that:

*I don't know do they want to show that in the future we will go back to a primitive kind of life like our ancestors or they want to show that this kind of life is better for humanity.*



**Figure 4-2.** People in Wakanda despite owning the modern technology and advanced civilization, still tend to keep the traditions such as nominating the new King through traditional custom in the film *Black Panther* (2018)

About another preferred image in the films, which was “Women in power” and mostly seen in *Black Panther* by the participants, TF8 mentioned:

*It's very rare to see that black people are the main character in American movies and especially black women in power. In most films, only men are in charge of science and technology, but this film is exceptional as we see women in charge of the army and science.*

In the films such as *Endgame*, *Age of Ultron*, *Iron Man 3*, *Black Panther*, and *The Last Jedi*, some participants mentioned that the films were not focused on showing peoples’ life and social issues. For example, IM6 mentioned:

*In Endgame, almost nothing is shown about ordinary people; it was just focused on superheroes and aliens,*

And IM7 mentioned:

*In The Last Jedi, there is no data about people to tell you what I saw about social issues ... I just see people who are adapted and used to relying on a superhero. The film is not focused on people.*

About *Black Panther*, IM5 mentioned that:

*The film is not very focused on ordinary people; the focus was on heroes and the main characters, not people.*

Also, TF9 emphasized that

*I can't talk about the social elements in Iron Man 3; the film doesn't show such things.*

### ***Aliens***

As aliens appear in many science fiction films, despite their existence is not proven yet, the researcher asked the participants to express their feeling about if they prefer to have aliens in their future or not, and why. Also, the respondents have been asked to say what they saw about how the films are showing the aliens. The result is shown in Table (4-2).

**Table 4-2.** Aliens in the films and Preferred future

			IRAN		TAIWAN	
	Aliens in the films and Preferred future	Total	Female	Male	Female	Male
How Aliens are shown in film?	Aliens as friend and or not to be the enemy to humans	8				
	Aliens as invaders and or hostile to humans	7				
	Aliens very similar to humans having almost same needs and wills	2				
	Aliens very similar to AI and machines	1				
Do you prefer Aliens in your future?	Having aliens in our future society but peacefully	10	1	4	4	1
	No alien in my future	3	2			1
Why society to have aliens?	having diversity and growth in society and culture	3		2	1	
	Learning from them and extending my perspective and knowledge	4		1	2	1
	Will impact the relationship of humans to be better	1	1			
	It's so exciting	1		1		
Why society to NOT have aliens?	We still do not have capacity for that culturally	2	1	1		
	Human's security and freedom will be at risk	2			1	1

About how the films show aliens, the participants mentioned seven times that the aliens were shown as invaders and or hostile to the humans who were in the films *Endgame*, *Avengers*, and *The Last Jedi*. On the opposite, the participants also saw that aliens have been shown as friend and or not enemy to humans eight times which are from the films *Endgame*, *Avengers*, *The Last Jedi*, and *Avatar*. As appear in the results, in three films, the aliens shown both enemy and friend to the humans. In *Avatar* also aliens showed not being enemy to humans at the beginning, but after starting the fight by humans, aliens had to defend and fight back. Some participants also mentioned that aliens had been shown similar to humans and or AI robots in the films.

For example, TM12 mentioned that:

*In Endgame, the aliens were mostly enemies from the space, to invade earth, destroy the*



*earth, very direct towards their goal and aggressive ... but superhero aliens trying to defend humans and the earth friendly ... so both enemy aliens and friend aliens to humanity were shown in the Endgame*

He also mentioned aliens in *Avatar*:

*They (Aliens) just wanted to protect their culture and planet... they were not a threat to humans originally but defended themselves after attack by humans (TM12).*

IM4 mentioned:

*In Endgame, the hostile aliens did not have specific hatred towards humans and earth; they come to fulfill a universal duty, but however, appeared as the enemy to humanity as a result, ... but also other aliens were friends and defenders of the earth and humanity,*

He also mentioned about aliens in *Endgame* that:

*Aliens' life and goals seem very similar to humankind lives but in another universe ... they seek power, comfortable life, and similar aims ... it seems that the same humans have done makeup like alien-look and live on another earth with different architecture (IM4).*

For the question of whether they prefer to live with aliens in the future, 10 participants out of 14 mentioned that they prefer to have aliens in their future society. But a significant difference between the answers by participants from Iran and Taiwan was that, female respondents from Taiwan and male respondents from Iran were more interested in having aliens in the future, while the male respondents from Taiwan and female respondents from Iran mostly preferred a future without aliens. For the reason that why they like to have aliens in society, the main theme of answers referred to: Learning from aliens and extending my perspective and knowledge; Having diversity and growth in society and culture; Positive impact into the human to human relationship; and to be excited to live with aliens. And for the answer to why you don't prefer aliens in the future, a female respondent from Iran mentioned that we still are not ready for that and do not have capacity for that culturally, as we may take them as slaves or lower class citizens, while a male respondent from Taiwan and a female respondent from Iran forecasted the risk for the security and freedom of humans by having aliens in the future. A reason that why one of Iranian females didn't prefer to have aliens in humans' society might be interesting to mention here as IF1 emphasizes:

*I am not very sure about it yet ... on the one hand, it is exciting to think we may live with*

*some aliens, but on the other hand, considering the present situation of mistreating between different races and humans, although all are from the same kind, humans, I think if aliens also to be added to this society, there will be a bigger disaster ... we will have social movement such as "Black lives matter" every day and at the end, humans will take the aliens as the lower class citizens, and these non-humans will be like African children who are the victim of extracting diamond from their territories (IF1).*

### **Diversity**

As diversity in society also is an important social element, the participants have been asked about their preferred range of diversity in the future society that they want to live in. the result is shown in Table (4-3).

**Table 4-3.** Preferred Diversity in the future's society

			IRAN		TAIWAN	
Preferred Diversity in the future's society		Total	Female	Male	Female	Male
Do you prefer a diverse society or not?	I prefer Few diversity	4	1	1	1	1
	I prefer a Highly diverse society from every angle but peaceful	10	2	3	3	2
Why do you prefer diverse society?	High diversity for learning from other cultures, experiencing new things, and to expand my perspectives	8	2	1	3	2
	High diversity because of Growing the society through the values of humanity	3	2	1		
	High diversity because Freedom is a result of a diverse society	1		1		
Why do you prefer less Diversity?	Less diversity because of protecting the culture	1				1
	Because high diverse society will put my freedom and security and healthy relationships at risk	3	1	1	1	

None of the participants mentioned that they don't prefer diversity at all, but four participants preferred few diversity, and 10 participants preferred high diverse society. The answers by Iranian and Taiwanese and also males and females were balanced and didn't show a significant difference. It can be said that most of the participants prefer high diverse society. Among the answers to why high diverse society, the majority mentioned that they prefer high diversity because they can learn from other cultures and to experience new things, and to expand their knowledge and perspective. The most referred theme by the three participants, one male from Taiwan and one male and one female from Iran, who preferred few diversity, was because of protecting their freedom, security, and healthy relationships, which they thought will be at risk in high diverse society. The answers of these three participants were completely opposite

to the answer by a male Iranian respondent, IM5, who belied that freedom is an outcome of a diverse society by emphasizing that:

*Yes, I prefer high diversity ... because I think the freedom is much more in a place that has more diversity because everything is at its own place and everyone's rights are respected, and they are freer, then I will have more freedom there (IM5).*

To have an overview of the results for the questions about social elements and people in the films and preferred futures society, according to Table (4-1), none of the first seven most seen themes in the films was preferable by the youth. Also, among the other social themes seen in the films, 9 themes were disliked by the youth of Iran or Taiwan and or both. Then, a total of 16 themes out of 29 themes were disliked. Especially considering the first 7 most seen themes which were none preferred, it can show that in the best seller science fiction films, the focus is on showing none preferred and dystopian society where the people have low level of awareness and blind followers of superheroes with the passive and not responsibility taking attitude while not feeling happy and struggling with harmful conflicts with each other.

The preferred themes such as Happy people, Women in power, People with a High level of Awareness and helpful to each other are seen in just a few films such as *Avatar* and *Black Panther*, while even such images are about few people in Wakanda and aliens in Pandora. There is not a significant difference between “liked” social themes by youth in Iran and Taiwan, except that more social themes were being extracted by Iranian youth from the films. The majority of 10 out of 14 participants preferred to live in a society with aliens, while the female respondents from Taiwan and male respondents from Iran were more interested in having aliens in the future. Similar to the preferable society having aliens, the majority of 10 participants out of 14 preferred to live in a highly diverse society with different races, nationalities, languages, genders, and religions. None of the participants preferred to live in a zero-diverse society, and there was no significant difference between the answers by female and male or Iranian and Taiwanese respondents.

## **Science Fiction Films Futures Technology**

The second question was about the technology shown in science fiction films and the opinion of participants about their preference to have such technologies in their future or not. The participants have been asked to describe the most focused kind of technologies and especially the application and purpose of using those technologies in the films which they watched for this interview. Also, any impact of technology on other aspects such as social, environmental,

economic, and political, which may have been shown in the films are requested to be highlighted by the participants. The answers of 14 participants have been categorized in 33 major themes which are shown in Table (4-4).

**Table 4-4.** Themes about technological and purposes to use technology in the films and preference of the youth to have in their future

Futures Technology Themes in the films	Seen in films by participants	IRAN		TAIWAN	
		Preferred	Not preferred	Preferred	Not preferred
Killing machines, and military purposes	26		✗		✗
AI Technology	18				
Highly futuristic Technology and Science	18	✓	✗	✓	✗
AI as software (not humanoid or independent) assisting human in analysis and solving problems	18	✓		✓	
Enhancement of human capabilities by technology	13	✓	✗	✓	
Humanoid AI and Robots as servants to humans (None independent)	12	✓		✓	
Observation, Controlling and dominating the people	11	✓	✗		✗
Destroying nature, world and or whole the humanity	11		✗		✗
Creating new worlds, physically or virtually and VR	10	✓		✓	
Cyborg Technology in body	9	✓	✗	✓	
Space technology and traveling through galaxies	8	✓		✓	
Primitive lifestyle with almost no technology	8	✓	✗		
Saving the time via doing things faster by technology (High speed train, automation, ...)	6	✓	✗	✓	
Making more convenient, easy and enjoyable life	5	✓		✓	
Exclusive use of technology (Technology not for all, just for few)	5		✗		✗
AI as independent individuals in society	5	✓	✗	✓	✗
Medical and healthcare	4	✓		✓	
Lost humans' control over Technology	4		✗		✗
Transferring consciousness to other body	4	✓		✓	
Entertainment and gaming	4				
Experiencing new things, lives, perspectives	4	✓		✓	
Education and mentally growth	4	✓		✓	
AI has overcome the humans	4		✗		✗
Connectivity of all people together and access to the big data	3	✓		✓	
Flying Vehicles	3	✓	✗	✓	
Personal flying suit	3				✗

Time Machine and Traveling through Time	2	✓	
Green technology, renewable energy and recovering the nature by technology	2	✓	✓
Financial profits	2	✗	
Genetic manipulation and cloning	2		✗
Magic rather than technology	1		
Nano technology	1		
Research and discovery	1	✓	

The most frequently seen technology and its application in the films was the theme of “Killing machines, and military purposes” (see Figure 4-3), which have been seen 26 times, significantly higher than other technology themes in the films. In fact, there were 14 participants and each one watched 2 films out of 10 selected films for the interview, and in all films they saw this theme. However, this most seen purpose of technology was not a preferred purpose in the futures of the participants. For example, a participant mentioned:

*The most technology I see in Endgame is advanced weapons, also flying suits could be used as a weapon against people, these technologies make us hopeless about defeating ourselves (TM12),*

And another respondent mentioned that in *Endgame*:

*Advanced weapons are the most used technology which is being used to protect the earth and humanity against the aliens ... the most focus of technology in the film is on military purposes ... not a preferred purpose for technology in my future (IM6).*

TF10 expressed about *Avengers* that:

*Obviously, weapons are most focused technology,*

And IM5 emphasized that in *Black Panther*:

*The technology developed by Wakanda has evil potential and is just for wars rather than peaceful purposes.*

TM14 has seen the technology in *Civil Wars* “mostly is using for war and fighting”. Another participant also mentioned the main purpose of technology in *Civil Wars* that:

*It is only for military purposes and for war and controlling people ... I didn't see any use of technology for a better life for people (IF3),*

And TF8 also stated that in *Black Panther*:

*Their technology seems is healing people but mostly focused on warfare ... also, it depends on who uses the technology with what intention.*



**Figure 4-3.** Some examples of Killing Machines (weapons) and military or fighting purpose of using technology in science fictions films of *Black Panther* (2018), *Avatar* (2009), *The Hunger Games* (2012), *Endgame* (2019), and *The Last Jedi* (2017)

About *Avatar*, IF1 answered the question of what you see as the main purpose of using technology in the field as:

*Weapons! Most focus is on military and defense purposes, very less focus on using technology for comfort life of people (IF1),*

And IM7, in addition to expressing the most focused purpose of using technology in *Endgame*, explains why such films have focused on such purpose rather than other uses of technology as:

*Mostly military purposes for technology ... as the film brings in the concept of power, so there will be a gap between who has the power and who has not, therefore there will be war and parties of Good and Evil, then the flow of the story goes towards the success of Good over Evil. Then the technology and other aspects in the story support the*

*journey of the story, and this is why the purpose of using technology is mostly military ... these films don't show how to control such power to not have harmful impacts! (IM7).*

IF2 has made a generalization and expressed:

*Most sci-fi films are war-centered, and they concentrate on the fighting of the groups together.*

The second most seen kind of technology in the films was “AI Technology”. To have AI in the films was not neither preferred nor non-preferred, but participants’ perspective about different applications of AI was significantly different to each other. Totally four different themes of application or impact of AI have seen by the participants, including AI software (not humanoid or independent) assisting human in analysis and solving problems; Humanoid AI and Robots as servants to humans (not independent); AI as independent individuals in the society; and AI has overcome the humans.

All participants who have seen AI as only a software assisting humans in analyzing the issues and solving the problems have preferred to have such application of AI in their future. The perspective and attitude were the same towards the second most seen application of AI as Humanoid Robots, which serves humans. All participants who recognized such application in science fiction films, preferred the futures where humanoid robots serve people, but if they won't be independent and decision-maker, and just to be under the control of humans. About the third kind of application of AI, which was independent AI individuals living in the society among humans, the opinions were completely different.

Among 14, 8 participants didn't prefer to have independent AI in their future, while 6 participants preferred to have it. There was no significant difference between the preferences of Taiwanese/Iranians or male/female participants to compare. The last theme about AI, which has been seen in the films, was “AI has overcome the humans” that as expected all participants who saw this impact of AI in the films, have disliked this impact in their future. As examples of the answers about AI, participants mentioned the following answers such as TM12 who liked the purpose of using AI system by *Iron Man 3* in *Endgame* and expressed that:

*I prefer Analytic technology to solve problems, also to understand beyond the earth and not only for convenient life purposes (TM12),*

And another respondent also liked the purpose of using AI system by Iron Man in *Endgame* and expressed that:

*The film is very focused on the high-tech and advanced science of Iron Man and his*

*inventions, including his AI with a very advanced processing technology ... I prefer to own such advanced technology for exploring science and discover new things as well as reducing needed time for processes like searching and finding proposal solutions (IM4).*

TF9 also referred to the focus of *Iron Man 3* on AI and the use of that by mentioning:

*The film mainly focused on AI, showing AI assisting humans and their activities while AI is not out of control ... if AI to be controlled by evil, it can destroy the civilization ... I like AI to put it to good use.*

Also, about *Black Panther*, a participant emphasized:

*AI was just under the order of the king and the owner; so the purpose depends on the purpose of the king. AI is only a tool in human's hands and couldn't analyses what is good and what is bad (IF2).*

About humanoid robots in *Endgame*, IM7 stated that:

*Robots make the process of every work easier; this is a preferable use of AI for me,*

And also about *Civil Wars*, IF3 mentioned that:

*The Android of Iron Man is completely under his control and obeys him, but the film shows that the Android of Iron Man (J.A.R.V.I.S) also is experiencing a self-discovery process and is finding some human emotions ... finding a kind of self-conciseness. Films introduce AI as positive stuff and also similar to humans (IF3).*

The theme of “AI has overcome the humans” only have been seen in two films of “*The Matrix*” and “*Age of Ultron*” by all 4 participants who watched these two films for this interview, and as expected, all four have disliked having such thing in their futures life.

After AI, the other theme of the answers about technology in the films was “Highly futuristic Technology and Science”. The preference of the participants towards this theme also was not similar to each other. 6 participants mentioned this theme in their answers, and 4 of them preferred such very advanced technologies in their futures while 2 other who both were female, one from Iran and another from Taiwan have not preferred. Among 4 participants who preferred advanced technology, 3 participants were Iranian, including two males and one female. This result shows that in this small group of participants, Iranian males have more interest in advanced technology while Taiwanese females are less interested.



IF2, who was a female from Iran and has not preferred highly advanced technology in her future, mentioned:

*The advanced technology like what we see in Wakanda is really frightening me,*

And the second respondent who disliked such very advanced technology was a female from Taiwan, TF8, and expressed that:

*Such very advanced and futuristic technology like in Wakanda makes life so convenient with all facilities accessible for people, then people will not put extra efforts and will just pass an easy life ... this is so boring to me, I don't like such a preplanned work ... I want to explore new things and find new things, not passing a life that everything is prepared in advance (TF8).*

The other most seen application of technology in films was the theme of "Enhancement of human capabilities by technology". Among 11 respondents who saw this application of technology, ten persons preferred to have this technology in their future, but one Iranian female, IF2, disliked this application and explained:

*I prefer not to have such abilities by people. I prefer people to be in such a natural style. It Will be very frightening that you not be aware of what extra abilities other people might have, and they will have advantages over the other people (IF2).*

The other two most seen themes of "Observation, Controlling and dominating the people" and "Destroying nature, world and or whole the humanity" which each one has been seen for 11 times in the films, were disliked by all participants whose answers contained these themes. For example, IM4 mentioned:

*Another purpose of using technology in Endgame is for controlling people. For example, the flying ships are for monitoring and observing people. It is for protection and security and peace too ... but sometimes works to keep the safety of humans and sometimes in the opposite way ... (IM4)*

And IF3 explained about *The Hunger Games* and the purpose of using technology in this film:

*... using advanced technology is only by few people of Capitol not for all districts, and they use this technology to control people of other districts who are just workforces like machines ... (IF3).*

Another participant referred to the disappeared nature in *The Matrix* and mentioned:

*There is no future, no nature, everything is destroyed, and we messed up with the technology that we have created ourselves (IM5).*

“Creating new worlds, physically or virtually and VR”, “Space technology and traveling through galaxies”, “Making life more convenient, automated, enjoyable”, “Medical and healthcare”, “Transferring consciousness to other body,” and some other fewer seen applications of the technology were preferred by the participants who extracted such themes while “Exclusive use of technology (Technology not for all)” and “Lost humans' control over Technology” were other disliked most seen application of technology in the films. Among preferred themes, “Transferring consciousness to other body” have been seen only four times because it was only in *Avatar* (see Figure 4-4), but the significance was that all 4 participants who watched *Avatar* for the interview had preferred such technology for their futures.



**Figure 4-4.** Norm beside his Na'vi-human hybrid avatar in film *Avatar* (2009). All four participants who watched *Avatar*, mentioned that they like to have the experience of transferring the consciousness to another body in their future

For example, participants mentioned that:

*I liked transferring consciousness into another body because I like to experience new perspectives from another eye... also, this technology can be useful for researching in dangerous places and also on other planets (IF2). I dream of transferring into a new body to live in a pure natural environment like Pandora ... I dream of transferring into*

*a new body to live in a pure natural environment like Pandora (TF8). We can transfer our conciseness into other species to reduce danger for our original body to increase our safety (TM12).*

The other mostly seen technology themes in the films such as “Cyborg Technology in body”, “Primitive lifestyle with almost no technology”, “Saving the time via doing things faster by technology (High-speed train, automation etc.)” has received a mix of preferred and not preferred opinion by the participants. Cyborg technology in the body has been preferred by 8 participants, mostly Iranian males and Taiwanese females, while disliked by 3 Iranian youth, including two females and one male. “Primitive lifestyle with almost no technology” was preferred by one Iranian respondent and not preferred by three other Iranian respondents. “Saving the time via doing things faster by technology” while being preferred by 7 participants from Iran and Taiwan, was unwanted by a female Iranian youth, IF2, who mentioned:

*I don't prefer very fast transportation and in general, a fast life. I prefer to consider and calculate the time for each act.*

In addition to the kinds of technology and purposes seen in the films, participants shared their opinions about the nature of technology as:

*Almost all advanced technologies shown in the films were preferred to me if to be used in a peaceful way. I prefer a comfortable life, even no problem to me if they take my privacy but give me comfort and ease of doing things (IF1),*

While the other participant was not such confident and optimistic about technology and mentioned that:

*I dislike the whole technology of humans in both films of Avatar and Black Panther, except the transferring into a new body (TF8).*

TM12 also felt a bit uncomfortable with such advanced technologies, especially high-tech weapons and flying suits, and stated:

*These technologies make us hopeless to defeat ourselves,*

And IF1 again emphasizes her confidence in technology by clarifying her belief that there is still the possibility to use technology in a positive way if see how Na’vi people in Pandora are using their kind of technology by expressing:

*In Pandora, Na’vi people are using a kind of natural technology like a network to*

*connect to each other and nature in a positive way, while humans are using technology in a negative way (IF1).*

Another respondent, TF10, expressed her belief in the neutrality of technology by stating:

*Technology is not good or bad; I think Positive or negative use of technology depends on people's intention; for example, Iron Man is using technology to protect humanity and innocents, but bad people also use the same technology to reach their evil goals.*

Other respondents also emphasized that:

*Technology is fine, but the impact depends on who uses it with what purpose" (TF9),*

And:

*Usually, the use of technology that we see in these films is destructive, but the reason is the evil purposes of people who use technology and not the nature of technology itself ... however, most of the things that we see in these science fiction films are magic rather than technology! (TM12).*

For having an overview on the results of answers to the question of most seen technology and purpose of technology in films and examining which ones were preferred by the youth of Iran and Taiwan, in fact, the result was not as direct and completely separable into two lists of preferred, and none preferred. Because several themes were both preferred and none preferred at the same time. The themes of technology and its application were so diverse, covering various kinds of purposes. The kind of technology and purpose which have seen in all films and more than other themes was "Killing machines and military purposes," which appeared as a none preferred use of technology in the future by the participants.

By the opinion of the author, most science fiction films also can be categorized in War Genre according to the majority of using weapons and battles in such films. The other major areas that we can categorize the extracted themes inside can be AI; better and easier life for humans; domination purposes; destructive impacts; exploring new things, discovery, creation, and making changes. A bit more than half of the respondents preferred to keep AI in the level of software and or humanoid robot, but without independence and decision-making function, while 6 out of 14 participants preferred AI to take part in their future as an individual person like humans. Comparing the result of technology questions and social question shows that participants prefer aliens in futures society more than independent AI. As some of the participants imagined that aliens are very similar to humans, they might think that dealing with

aliens who are a kind of natural species with limited abilities will be easier than dealing with AI, which usually is imagined as very advanced and more capable than humans.

The themes connected to the better and easier life for humans were mostly preferred, but as an unexpected result for the researcher, few participants also put some of these themes such as “Enhancement of human’s capabilities”, “Saving the time via doing things faster” and “Highly futuristic Technology” in their none preferred futures elements. Regarding preference to have highly futuristic technology, the results show that, for this small group of 14 youth, Iranian males have more interest in advanced technology while Taiwanese females are less interested, but the quantity of sample is very low to take it as a serious result for this research. All the themes connected to domination purposes and destructive impacts were disliked by the participants to have in their future, as was expected. Most of the participants believed in the neutrality of technology and the matter that the negativity or positivity is not connected to the technology itself but to the purpose and intention of the user. The researcher of this thesis agrees that technology appears to be neutral on many occasions, but some developed technologies also have developed as only destructive and evil technologies like mass killing weapons.

### **Science Fiction Films Futures Environment**

The third question was about the environment shown in science fiction films and the opinion of participants about their preference to have such environmental elements in their future or not. The participants have been asked to describe the environment that they saw in the science fiction films which they watched for this interview. They have been asked to consider any element of the environment including nature, cities, the whole planet, natural resources etc. To compare these images with the preferred future of participants, they have been asked to say whether they like to have such elements in their own future or not. About the environment and place that the participants may prefer to live in the future, they also have been asked to say if they prefer to relocate to another place, whether another country or another planet or any other place rather than their current place or country or not. In contrast with the high diversity of answer themes for the seen Social and Technological elements in the films, the Environmental themes were limited to only 7 different themes shown in (Table 4-5).

The theme that is extracted from most of the answers was “Disappearing green nature and natural resources,” whether by technology, war, or other impacts, especially generated by humans. This theme has been seen 15 times in the watched science fiction films. From the opinion of the participants, all watched films carry this theme, and as expected, none of the participants preferred to have such a theme in their future. The next extracted theme is “Similar

to the present time” which is mostly mentioned about Marvel films. Such an environment also was not preferable in the future that participants imagined for themselves.

**Table 4-5.** Themes about the most environmental elements in the films and preference of the youth to have in their future

Futures Environment Themes in the films	Seen in films by participants	Total Preferred	IRAN		TAIWAN	
			Preferred	Not preferred	Preferred	Not preferred
Disappearing the green nature and natural resources (by technology, war or other impacts)	15			✗		✗
Similar to the present time	11			✗		✗
Fully natural environment, free of technology	11	1		✗	✓	
Environment is not concerned in this film	7			✗		✗
Balance and harmony between nature and modern environment	5	10	✓		✓	
Destroying the earth	4			✗		
To protect the nature	3	3	✓		✓	

The next most seen theme was “Fully natural environment, free of technology,” which have been seen only in *Avatar* and *Black Panther* and a scene of *The Last Jedi* from the perspective of participants. An important point about this theme is that, despite the high frequency of seen by participants, it only comes from 2 films out of 10 watched films. Then the theme of “Disappearing green nature” still is far more frequently seen in science fiction films compare to green nature. Living in such a fully green nature with almost no technology was only preferred by one female participant from Taiwan. For the five films out of 10 watched films including *Endgame*, *Avengers*, *Age of Ultron*, *Civil Wars*, and *Iron Man 3*, participants mentioned that the environment is not concerned in these films. All these participants disliked such neglect about environmental issues in mentioned films. The next frequently seen environmental theme in the films was “Balance and harmony between nature and modern environment”. Similar to the theme of “Fully natural environment, free of technology,” which limited only to two films, this frequently seen theme was only extracted from answers about the environment in one film, *Black Panther*, and obviously, the environment in Wakanda and not the rest of Earth. Despite showing such a theme in one film, this theme received the highest rate of the preferred theme in the future of participants.



Not only the 5 participants who saw this theme in Wakanda preferred to live in such an environment, but also this theme was extracted from the description of the preferred environment to live by the other 5 participants. Therefore, a total of 10 participants preferred to live in a balanced nature-technology environment in their future. Followings are some example answers by the participants to the question of “what environment you saw in the films? Do you prefer to live in such an environment in your future?”



**Figure 4-5.** In all scenes of *Avatar* (2009) showing the Earth, no single tree or plant is appearing. “Disappearing the green nature and natural resources” was the most seen environmental theme in science fiction films according to the answers of respondents in this research

The theme of “Disappearing green nature and natural resources” extracted from some answers such as:

*...both inside the world of The Matrix and also outside of that, the environment is a very mechanical and dark atmosphere, none of these are preferred for me, I like to have nature in my future... (IM4)*

And by IF3, who very disliked the lifestyle of people of Capitol in *The Hunger Games*:

*In The Hunger Games, people of Capitol are overusing the natural resources for fashion and or for just entertainment purposes; it will destroy nature finally, they don't understand that what damages they are making to nature and how long it will take for nature to reproduce the resources ... I am very concerned about the environment, even I changed my direction from my loved dream to be a fashion designer when I understood that how harmful is the fashion to nature and our environment (IF3).*

Also, the mentioned theme of disappearing green nature has extracted from other answers such as:

*According to the original planet and environment of Star Wars, in The Last Jedi also the majority part of the environment is sandy and dusty and not green nature ... well, this is not the environment that I prefer to live in” (TF11)*

And by the same respondent, TF11, who believed that the high-tech cities such as Wakanda would harm nature:

*A high-tech city is attractive, but it costs a lot (losing nature).*

The same theme also extracted from the answer of other respondents who mentioned:

*When the film Avatar shows the environment on earth, there are just tall buildings and minimalistic design, such as the room of Jake, very dark and no sign of green environment ... very dark (TM12),*

And by TF8, who compared the environment on Pandora and Earth with her expression:

*In Avatar, aliens were treated friendly with nature and they were connected to it, but humans only wanted to take resources for their profit and they destroy nature ... Humans used the resources of earth very fast, then they try to take the resources from other planets too ... (TF8).*

The theme of the environment in the film is “Similar to the present time” extracted from the 11 answers such as:

*The environment and cities in Civil Wars are similar to our current environment and cities ... something like big cities, like New York or Tokyo” (TM14). The environment in Avengers is just like the society of today, modern city, mostly buildings rather than green cities” (TF10). It seemed that natural resources were finishing in the environment of Endgame ... very similar to the current cities but under war and people were being killed by aliens ... (IM6).*

The theme of “fully natural environment and free of technology” in the films, extracted from 11 answers similar to following examples. This them extracted only from answers about the environment in three films of Avatar, Black Panther, and The Hunger Games. IF3 answered about the environment in The Hunger Games that:



*Natural resources are available and not in crisis, even better than now! It seemed that there is no problem of climate change anymore ... every environmental issue were solved and nature is survived with many animals in ... I think they limited access of people to the natural resources and this was why nature survived. I liked that pure survived nature ... but if in a better way rather than cut the access of many people to resources and put them in poor and hunger situation ... (IF3)*

And about her preference to live in such a fully natural environment, she continued that:

*I don't like this zero-technology environment ... yes, there is a green environment, but I prefer to live in a modern city while at the country there be green nature near to the city (IF3).*

IF2 and IF1 mentioned that:

*The environment on earth was the dark side of our world and very dirty and sad ... but the environment of Pandora was spiritual and pure natural (IF2), Pandora the nature was so pure and free of any kind of technology ... everything was connected together, connection and harmony with nature ... but for my future ... I like a comfortable life with the access to facilities of comfort life (IF1).*

All 14 participants enjoyed watching the pure environment in these three films but they have not preferred to live in such a fully natural environment without access to technology and modern facilities except TF8, who mentioned that “I like to live in a purely natural place like Pandora”. To make sure that what level of natural environment she preferred to live in, she has been asked by the researcher to confirm that, between Pandora and Wakanda, which one is much preferable for her, and TF8 replied that “for sure Pandora. I can explore and discover new things in a Pandora-like environment but in a Wakanda-like environment, everything is planned and prepared already and I will have to just use the technology and do work like machines and no new things to discover. This will be very boring”.

After the theme of “fully natural environment and free of technology”, the theme of “Environment is not concerned in this film” was extracted from 7 answers such as expression of IF3 who mentioned that:

*Civil Wars is not so much focused on nature and environmental issues; the environment is mostly similar to the current situation. Even not showing what happened to global warming. I don't like films that they don't have environmental concerns ... I am very concerned about the environment, even I changed my direction from my loved dream to be a fashion designer when I understood that how harmful is the fashion to nature and*

*our environment ... (IF3)*

TF9 also mentioned:

*I don't see any focus on the environment in Iron Man 3; it just shows modern society, technology and AI ... not focus on the environment ... city is similar to today*

And IM4 also mentioned that *Endgame* didn't focus on the environment by emphasizing that:

*No specific conflict about nature is shown in the film, no focus on the environment, just similar to the current situation of the world (IM4).*

“Balance and harmony between nature and modern environment” was another theme extracted from the answers about the environment in the films, but only the answers about the environment in *Wakanda, Black Panther*. For example, TF11 mentioned that:

*There is a strange balance between high-tech and traditions, a balance between nature and modern technology in Wakanda (TF11)*

And to answer about whether she likes to live in an environment similar to *Wakanda*, she answered:

*I like the balance of environment and technology, no pollution in the ocean and nature ... cultural and natural elements are very crucial to me ... I like a city with long streets to walk on and feel the spirit of the city ... and natural places around it to hike (TF11).*

TF8, who had loved to live in a Pandora-like environment in *Avatar* rather than a *Wakanda*-like environment, described the environment in *Wakanda* as:

*Wakanda is green and environmentally friendly, not destroying the environment by their lifestyle and technology, they made a balance between environment and development of technology ... but out of Wakanda, the environment is destroying.*

IM5 described that:

*Big contrast between human-made and natural environment ... there was a balance between technology and nature, but the human-made environment has an evil potential but the natural side is more safe and secure ...*

Five other participants who the film of *Black Panther* was not on their watch-list for this research, they hadn't seen a nature-technology balanced environment in other films, but while talking about their preferred environment, they mentioned that they prefer to live in a nature-technology balanced environment. For example, a respondent mentioned that:

*I prefer a 50/50 natural and modern environment together to have a balance for living there. Convenience by technology but in natural atmosphere, I like to live in a natural environment but with access to electricity and internet and medical resources, generally convenience by technology (TM12)*

And IM6 explained about the place that he likes to live in and the natural or technological features of that as:

*I like pure nature and live in places rich in nature, a house in a green environment and inspired from nature and used natural materials in its architecture ... also I want to have access to technologies to ease the daily works and bring comfort ... for example, I like technology helps in home cleaning and cooking ... healthcare technology and curing fatal diseases, transportation ease, having a flying car for myself, also technology helps to recover the nature and green energy (IM6).*

## **Relocating**

The participants talked about the environment that they saw in the films and compared that with the environment that they prefer to live, as some examples mentioned above, but also, they have been asked that apart from the preferred environmental elements that they mentioned, where they prefer to live in the future, somewhere around 30 years later? They have been asked to imagine any relocation, including migration to another country, and or to live on another planet, or any other place and or staying in their home country and current place. Ten major themes were extracted from the answers of 14 participants, which are shown in (Table 4-6).

Many answers had carried several themes, as their preference was not fixed to only one option, especially for participants from Iran, for example some participants who mentioned that they want to migrate to other country, they also mentioned that they are interested in living on other planet, some others also mentioned not to leave earth or others also mentioned they prefer to migrate but also stay in their home country if it turns better. The most frequently theme extracted from the answers was "To migrate to another country". 8 participants, including 2 Taiwanese and 6 Iranian, preferred to migrate into another country, but 3 participants from Iran

also preferred to stay in Iran, in case that the situation becomes better than the present time. Five participants preferred to stay on earth and not leave it to live on another planet. The same number of participants, 5 youth including 3 Iranian and 2 Taiwanese, interested in living on other planet. Some other themes such as “to change living place frequently”, “stable country regarding economy and security”, “in a frequently changing environment”, and “Virtual Environment” also extracted from the answers of the participants.

**Table 4-6.** Relocating preferences to live in the future

Relocating in the future	Total Preferred	IRAN		TAIWAN	
		Female	Male	Female	Male
To migrate to another country	8	2	4	2	
Not to leave earth	5	2	1	2	
Like to live on other planet	5	1	2	1	1
Stay in my country if situation turns better	3		3		
To change living place frequently	3		2		1
Stable country regarding economy and security	1	1			
In a frequently changing environment	1		1		
Virtual Environment	1		1		

Here are some examples of answers by the participants about relocating in the future. TF9 had preferred to migrate but not leaving the Earth by expressing that:

*I prefer to stay on earth, maybe to live in another country ... I lived in Scotland and I found out that I love there (TF9).*

Another respondent, TM13, hadn't chosen a specific place to live but to explore several places as he mentioned:

*I don't know ... I'm willing to explore.*

TM12 mentioned:

*I really Like to give a try to live on another planet... I prefer a place which is not crowded.*

The answer of TF11 had carried two themes of “Not to leave earth” and “To migrate to another country” as she emphasized that:

*I want to stay on earth, not another planet... I prefer to live in another country than Taiwan ... somewhere like European cities, for example, Istanbul which has both old and new parts together; traditional and modern balanced ... I like a city with long streets*

*to walk on and feel the spirit of the city, feel people and culture ... Istanbul has two different parts, one Asian and another European with a beautiful balance of old and new (TF11).*

The answer of IM5 has carried several themes including “My country if turns better”, “To migrate to another country”, “To change living place frequently” and “Like to live on another planet” by his response that:

*In case that Iran becomes a better place to live and more opportunities for me, I prefer to live here ... If not, I may have to migrate to another country. I also prefer not to be stuck in a fixed place permanently. I prefer to have a homeland but freelance to go and live in different places, including other planets, temporarily and come back to my homeland (IM5).*

IM4 mentioned that:

*I like living on another planet in case of existence of a favorite environment to me ... I like to live in a place like European villages, I mean not a simple village like ours in Iran with low facilities ... I have not lived in Europe but as I saw in TV programs and the Internet, European villages are both natural and less crowded and far from industrial areas but have good living facilities.*

The answer of IF3 also carries several themes as she answered:

*My intention is to leave Iran and make a robust living condition in another country, but I don't want to leave like scape out and break the bridges and cannot come back anymore ... no country is selected, just a safe country in the social and economic situation, ... also I want to take my family there in the future. ... I always had a good feeling about Amsterdam, especially the bicycle riding lifestyle that they have, maybe somewhere like that ... I don't have a dream of living on another planet, but like to visit there.*

IM6 answered that:

*... no difference where to live, the most important is the freedom conditions and relation between people, it will be the best society to live ... I prefer to live on earth ... I like to stay in Iran, but if conditions don't turn better, I have to migrate*

IF2 described the place that she likes to live in as:

*I prefer living in a country like Canada ... A city similar to Tehran but with green energy*

*vehicles and cleaner. Tehran is a good city to live in just need to be less crowded and without pollution; also more green areas... the level of technology in this city is enough for me ... I don't like living in small cities without facilities and technology.*

IF1 described her preferred place to live as:

*A big place with a lot of people, having easy access and traveling possibility to other countries, whether Earth or on another planet*

And IM7 mentioned several themes in his answer as:

*I like to live in whole the world, not a specific fixed place only ... I like to move and flow on ... Exploring the universe and galaxy ... even not stable environment but similar to complex systems and games environment which our decisions change our future world and everything changes, a very different and various world. I want to experience other aspects of the world that we don't see now, such as seeing frequencies and understanding other concepts.*

As an overview of the results of this section, we can say that most of science fiction films show an environment that nature is destroyed or natural resources are finishing by misuse of humans or destructive use of technology, or by war. This environmental theme has been seen in all ten watched films. Obviously, none of the participants preferred to have such a frequently and most shown environment in their future. The participants disliked the attitudes of humans in treating the environment and natural resources and using them very fast with no limitation and just for profit and entertainment, without thinking about the consequences of such acts. Also, in several science fiction films, especially in Marvel and superhero films, the environment is similar to the present time, which also was not preferable for the participants. These superhero series of films have less or no consideration about the environmental issues, which was not liked by the participants as most of them preferred to see the future of the environment and the solutions to climate change and what happened to it in the future. Showing a fully natural environment and free of technology is very rare in science fiction films, and when shown, such green and pure nature whether is on aliens' planet or a very small area on Earth. The most preferred environment to live in the future from the participants' perspective, was a nature-technology balanced environment, but such a preferred environment very rarely can find in science fiction films, as participants saw this only in one film out of 10 selected films. There was no significant difference between the environmental preferences of the youth from Iran and Taiwan.

In contrast with similarities in environmental preferences between the two groups, the results show significant differences between the relocation preferences of participants from Iran and Taiwan. The results of this research confirmed the previous research reviewed in the literature review about the massive preference of Iranian youth to migrate to another country. Six Iranian participants among 7 mentioned that they have the intention to leave Iran, but also 3 of them emphasize they may stay in Iran if the situation turns better. Among 7 participants from Taiwan, only two females had the intention to migrate to another country and others preferred whether to stay in Taiwan or explore the world but not very serious about leaving Taiwan. Generally, as it can be recognized from (Table 4-6) and example answers of the participants, the Iranian youths explained more about the relocation question with more options. Most of the examples of preferred places to live in both Iran and Taiwan were cities or villages in Europe. Less than half of the participants liked to live on other planets, but most of them interested in visiting another planet as a tourist.

### Science Fiction Films Futures Economics

The fourth question was about the economic system and issues shown in science fiction films. The participants have been asked to describe any economic situation or elements or the condition of society and people regarding the economy and financial issues that they have seen in the films which they watched for this interview. To compare these images with the preferred future of participants, they have been asked to say whether they like to have such economic elements in their own future or not. The extracted themes from the answers are limited to only four themes showing in (Table 4-7).

**Table 4-7.** Themes about the economic systems and elements in the films and preference of the youth to have in their future

Futures Economic Themes in the films	Seen in films by participants	IRAN		TAIWAN	
		Preferred	Not preferred	Preferred	Not preferred
No economic elements are shown in the film	16				
Big wealth and social gap	4		✗		✗
Big Corporations monopoly and domination	2		✗		
Not very familiar with economic systems	Mentioned by all participants				

The most frequently extracted theme from the answers of participants was “No economic elements are shown in the film”. The other most extracted theme was “Big wealth and social gap” which all were seen in *The Hunger Games* and obviously not preferred theme for four

participants who saw that in the film. From the answers of two female participants from Iran, the theme of “Big Corporations monopoly and domination” was extracted. These two participants didn’t like to live a future that is ruling by big corporations. A theme that extracted from the answer of all participants from Iran and Taiwan was “Not very familiar with economic systems”.

Here we review some of the answers by the participants, for example TF9 mentioned about the economic situation that she saw in *The Hunger Games* that:

*The resources were taking off from the people in districts that was not close to Capitol and people struggling with hunger and poverty*

Other participants emphasized that:

*In The Hunger Games, people of districts are sad and under very heavy stress struggling with hunger and only have to focus on surviving ... they cannot control their own life because of brutal government and militaries everywhere ... in contrast to the Districts, Capitol people, are happier and have more time so they could focus on fashion, good food, entertainment and enjoying life ... (TF10), I see very low respect to each other and not put value on each other by people, the majority were poor; slave and in a very bad situation, only minority of Capitol had a good life (IM6), big gaps between social classes ... people of district was under pressure of poverty and lack of food ... people of Capitol just look at things as fun, and they have access to all resources (IF3).*

The theme of “Big Corporations monopoly and domination” extracted from the answers by IF1 and IF2, the two female respondents from Iran who watched *Avatar*, as they answered:

*Humans are using the technology of Avatar in a negative way, rather than connecting to Na’vi people peacefully, they use it to spy and destroy them, as the whole budget is from a corporation and they want financial profit at any cost. I don’t like big corporations and their monopoly and domination on our lives ... My favorite future is where that there are no big corporates anymore” (IF1) see Figure 4-6. Humans in Avatar had power over people of Pandora ... I don’t like some people use power in every relations and see themselves on top of others because you have a sort of power ... such as power that people from Earth got from the corporation planned to extract mineral materials in Pandora ... People who have power, many of them become cruel to others” (IF2).*





**Figure 4-6.** Parker is showing Unobtainium in film *Avatar* (2009) and says that “this is why we are here”. Humans are on Pandora to extract and take this precious mineral material to the earth for the corporations that invested and sent the troops to Pandora for this reason only.

As mentioned above, participants saw few economic considerations by the films but in their answers they mostly explained about the economic situation that they preferred for their future and their dreamed occupations. For example:

*I prefer 50% time working and other time to enjoy the life, or working at home and link to company online and less transportation need” (TM12), My life to be my work as well, to live my work, not to have obligation to go somewhere to work while it is not a part of my living. To create and to be a creator. Work everywhere and even do differently (IM7), I dream to work as fashion designer and stablish a famous brand, also having good income, but the preference is with the work that I enjoy rather than income (IM6).*

TM13 mentioned the economic system in *Star Trek* as his preferred system by expressing:

*I like Star Trek future ... fundamental necessities are all met (the initial needs for life is available for all) people don't work for survival, they work because they like to work and learn and explore things and discovering new worlds, for betterment of their skills.*

About preferable economic conditions in their future, other respondents also answered as follows:

*For my work to serve my clients, I prefer pear to pear contact in a personal level and help them rather than just mass number of people hear my voice from speaker without direct interactive pear to pear contact with me, or provide training online and with apps. However, maybe this pear to pear won't be economic in the future. People spend money willingly for the things that they could get without leaving their homes ... however, my*

*preference is the traditional pear to pear work (IF1),*

I like to work in content creating and research, I like work for both purpose of interest and income, a part of success feeling depends on the income you gain ... To be successful or not must depend on person's efforts, having more stable situation to make life progress and growth, not like today struggling with the financial situation and high inflation and sanctions and Internet barriers with no hope that these will be solved ... I think Canada has such system (IF2),

*Less spending of budgets by the governments on technology and instead spend on other needs of society such as humanity and culture ... (I prefer) an economic system which covers both elements of freedom and equality. To gain based on done efforts, not based on capital and wealth brings more wealth. I prefer to not stuck in a situation just because of income, I prefer to do works and job that the outcome to be positive for all around me (IM5).*

IM5 liked that in the society people work to deliver benefits to each other, then through this cycle everyone gains benefit and resources and maybe money won't have the meaning anymore. Other respondents responded that:

*I like my ideal work to make me happy ... not the most part of work to be for earning money. I am not fan of luxury properties ... but clothes are important to me, ha ha (TF11),*

*I like a lot of welfare, I also want to pay and support these welfares ... like to work and to have challenges. Work from home or workplace both are fine for me. I would like to do the work that I am interested in but also receive payment for my efforts in that work whether from employer or government, but related to my work and efforts gives me encouragement (TF9),*

*Circular economy is my preferred system, means make, use, reuse, remake, recycle and again make, and cycle again) (TM14),*

*Not luxury but having the required living facilities for my family, specially security, health, entertainments, education. I will ignore a work that I may love but doesn't cover my living expenses and or not in line with my values. For example, I had put away my beloved work of fashion design because of my values to protect the environment. I don't like to just be like a robot working for economic growth of the country like what we have in China, everything is sacrificed for such economic system including the environment, security, freedom (IF3).*

To have an overview on the answers about economic systems and situation in the films and comparing to the preference of the respondent youths in this research, few films concentrate on showing economic systems or issues except the gap between poor and rich. Most of participants, including both groups from Iran and Taiwan, had few information about economic systems and how the economy of society works, then they mostly focused on preferred economic situation that they preferred for their future, which usually is not seen in science fiction films. The priority of majority of both Taiwanese and Iranian participants was work for joy and or self-actualization rather than income.

### **Science Fiction Films Futures Politics**

The fifth question was about the politics in the science fiction films. The participants have been asked to describe any political or governing system and the way of ruling the society, whether local or global, as well as any political issue they see in the films which they watched for this interview. To compare these images with the preferred future of participants, they have been asked to say whether they like to have such elements in their own future or not. Totally 14 themes extracted from the answers of participants which are shown in (Table 4-8)

The most frequently political themes seen in the films all had negative weight and not preferred by the participants according to their perspectives, such as: Totalitarian domination whether local or global; War and conflict between nations or groups of people; Loosing freedom of taking decision for our own life; Kingdom and traditional governing way; Not concentrated on political conditions; Inequality and gaps in access to the resources; High level of observation and control over people. Some positive and preferred political themes were being extracted from the answers of participants too, but only for two films out of 10. For example, the themes of “Freedom and Democracy”, “Equality in implementation of human rights and law for all”, and “To make harmony between people, environment and nations” only by one participant and for one film, *Avatar*, and not about the humans’ society but aliens’. One other participant also mentioned her preferred themes of “United but independent countries” and “Bringing peace globally and locally rather than war” that she saw in *Civil Wars* by mentioning the way of governing by United States and the role of United Nations (UN).

**Table 4-8.** Themes about the political systems and elements in the films and preference of the youth to have in their future

		IRAN		TAIWAN	
Futures Political Themes in the films	Seen in films by participants	Preferred	Not preferred	Preferred	Not preferred
Totalitarian domination whether local or global	8		✗		✗
War and conflict between nations or groups of people	7		✗		✗
Loosing freedom of taking decision for our own life	6		✗		✗
Kingdom and traditional governing way	6		✗		✗
Not concentrated on political conditions	5				
Inequality and gaps in access to the resources	5		✗		✗
High level of observation and control over people	4		✗		✗
everyone and every country is seeking power and military advantages	2		✗		
Equality in implementation of human rights and law for all	2	✓		✓	
Sacrificing the environment for political purposes	1				✗
Freedom and Democracy	1	✓			
To make harmony between people, environment and nations	1	✓			
United but independent countries	1	✓			
Bringing peace globally and locally rather than war	1	✓			

The theme of “Totalitarian domination whether local or global” extracted from answers about the political conditions that the participants saw in the films of *The Hunger Games*, *Black Panther*, *The Matrix*, and *Avatar*. For example, IF1 criticized the totalitarian kind of government or kingdom in both films of *Avatar* and *Black Panther* and stated that:

*There is an absolute power without questioning it in hands of the king or chef of the tribe ... absolutely disliked by me (IF1).*

TF10 described the political condition in *The Hunger Games* as:

*A person or a government control people and took the freedom of people to decide about their lives and whatever they must do ... I like to have democracy ... a Democratic Republic government, for example, Taiwan governmental system is pretty OK for me*

IM6 explained about *The Hunger Games* that:

*There is dictatorship and authoritarian power over people by the central government*

and the president,

And IF3 criticized the global government in *The Hunger Games* as:

*This is the dark end of globalism ... repression of people by the dominant party of the country or the world ... the strong governments usually don't understand that they have responsibility ... I don't like a global government ruling the whole world, but the world divided to the countries like now with a governing system such as USA.*

IM5 explained about *The Matrix* that:

*This is completely "Conspiracy theory", people are serving the system and produce power for it ... people are under a totalitarian domination but by AI ... I prefer a decentralization of power, even smaller than countries and splitting the power among all individuals.*



**Figure 4-7.** President Snow in film *The Hunger Games* is an example for future's totalitarian governments and political systems showing in many science fiction films, according to the answers of participants in present research

The other most frequently theme which extracted from the answers was “War and conflict between nations or groups of people”. IF2 after watching *Black Panther* and *Avatar* explained:

*Most of science fiction films are war-centered and they concentrate on fighting of the groups together ... as an Iranian young person, the future that I want is a future without war, we are really tired of these things. What if all people live together peacefully?!”*

“Losing freedom of taking decision for our own life” was another theme extracted from the answers. Participants answered that:

*In The Hunger Games, people cannot control their own life because of brutal*

*government and militaries everywhere, they are controlling people and are observing them everywhere ..."* (TF10), *People are strictly separated by the Capitol's government and they didn't have control on their own life ... also the games were in a way to make the people of each district hate each other* (IM6).

IM6 continued by explaining the political conditions that he wants for his future as:

*I want to have freedom, for example, to possibly could decide about what to wear personally and not be limited by the rules that limit many freedoms ... I want to be happy, going parties and dance ... about governing, a a... I don't want a global government ... local governments but the law to be respected by all with no exceptions. I mean no one can ignore the law whether if he/she is a rich or powerful person or leader of the government. Everyone to be under the same equally implemented law* (IM6).

After asking him that doesn't he think that the law also could make limitation and it might be applied only for the benefit of some parties rather than all people, IM6 answered:

*The law needs to be compatible with the humanity values like freedom and democracy and to be created by the expert lawyers who have a holistic view while drafting the law. Also possible to be flexible in time and possible to be changed by the will of majority of people in the society* (IM6).

The theme of "Kingdom and traditional governing way" also have been seen by participants in the films of *Black Panther*, *Avatar* and *The Last Jedi*. As they mentioned that:

*I don't know why in many films showing the future, there is a turn back to the past! ...for example, selecting king in Black Panther, both regarding the kingdom way of government and the ceremonies, both are old fashioned ... they obey their king. The only place that they questioning the king is when he is about to take responsibility, by combat between candidates. They had chance that their kings always were good ... maybe in these science fiction films they want to show primitive societies or to say that the life was better in the past ... this is not right that our past was better than now, if we go and read the history"* (IF1).

*The Kingdome governing way in The Last Jedi "is a classic story type showing the hereditary succession on kingdom or receiving power or being the Jedi from father to son or daughter ... we see the same in The Last Jedi"* (IM7).

*The Kingdome of Wakanda shows "a traditional political system ... a good Government is a government who makes people happy and improve their comfort of their lives and wellbeing"* (TF8).

TF9 disliked Kingdome style of governance and mentioned:

*I like to have a vote in my own administration area ... don't like to have a King or Queen*

“Inequality and gaps in access to the resources” was another theme frequently extracted from the answers. For example, IF3 mentioned:

*In The Hunger Games the access of people to resources was limited, almost no access. They just had electricity and TV but not even a proper bathroom or something to eat in contrast with the people of Capitol*

She (IF3) didn't like such limitation to access to resources whether for punishment or protecting the nature. She believed there are better ways to protect the nature.

TM12 also disliked the imposed social gap and exclusive access to the resources by only some parties in society:

*Government should reduce the social gap between rich and poor and makes balanced access to the resources ... government to listen more to people and use their ideas for solving problems.*

To have an overview on the answers about politic systems and issues in the films and comparing to the preference of the respondent youths in this research, this is very rare to see preferred political system or condition in science fiction films. Almost all frequently political themes seen in the films were none preferred by both participants from Iran and Taiwan. The participants didn't want the political systems and issues that they saw in the films such as totalitarian governments, promoting and distributing war and conflicts, limiting the freedom of people, Kingdom and traditional governing way, imposing social gaps and limitations for the access to the resources, high level of observation and control over people, concentrating on seeking power and military advantages, and a global government. On the other hand, they preferred political systems that are the listener to the people, do provide freedom and democracy, do spread peace and protect peaceful life and connections, do reduce the limitations, do generate law and regulations compatible with humanity values, do respect and implement the law equally for all, do share power with people, do concentrate on progressing the happiness, comfort and wellbeing of people, do give right of voting to people, do reduce the social gap between rich and poor, do provide balanced access to the resources.

## Science Fiction Films Futures Fears

The sixth question was about the fears about the future in science fiction films. The participants have been asked to describe the biggest fears or the warnings that may have been shown in the films which they watched for this interview. This question was designed to examine that what are the main concern of science fiction films about future and the major warnings that they do provide. Totally 16 different themes of futures fears extracted from the answers of 14 participants which are shown in (Table 4-9)

**Table 4-9.** The most frequently shown futures fears in science fiction films

Themes of Futures Fears in the films	Seen in films by participants
Slavery of people under dominant power and severe repression	8
Extinction of humans	6
We destroy ourselves by our own made Technology	6
People just serving the system like machines	6
Our advanced technology and valuable resources will fall in evil hands	4
Losing humanity ethics and values	4
Our heaven is in threat by the outers	3
To be in war forever	3
Aliens invade or conquer the earth	2
No savior will be remained	2
Powerful minority dominates the majority	2
The majority of people live in poverty	2
Transformation of Saviors and powerful leaders to unstoppable evils and destroyers	2
Apocalypse is already happened and we are living in it unconsciously	2
Disappearing the minority by the majority	1
Totalitarian world government as the last stage of globalization	1

The theme of “Slavery of people under dominant power and Severe repression” was the most frequently seen futures fear in the films. The answers about the films of *Avengers*, *Black Panther*, *The Matrix*, and *The Hunger Games* carried this theme. “Extinction of humans” was the second most frequently seen them which have been seen in *Endgame*, *The Matrix* and *The Last Jedi* from the perspective of participants. The films of *Age of Ultron*, *Iron Man 3*, *The Matrix*, *The Last Jedi*, and *Avatar* have carried the theme of “We destroy ourselves by our own made Technology”. The other theme was “People just serving the system like machines”, and here the system referred to both human ruling system or AI ruling system like in the *The Matrix*.

This recent theme has been seen in the films of *Black Panther*, *The Matrix*, *The Hunger Games*, and *Avatar*. The other fear showing by science fiction films is “Our advanced technology and valuable resources will fall in evil hands” as participants saw this theme in



*Black Panther*, *Iron Man 3*, *The Hunger Games*, and *The Last Jedi*. Other fears that participants saw in the films were: Losing humanity ethics and values; Our heaven is in threat by the outers; To be in war forever; Aliens invade or conquer the earth; No savior will be remained; Powerful minority dominates the majority; The majority of people live in poverty; Transformation of Savors and powerful leaders to unstoppable evils and destroyers; Apocalypse is already happened and we are living in it unconsciously; Disappearing the minority by the majority; Totalitarian world government as the last stage of the globalization.

Here are some examples of the answers by participants which carry mentioned futures themes. For example, about *The Hunger Games* participants mentioned:

*People don't have control on their life, their lives are controlled by the government, they live like slaves (TF10). Severe repression of people by the dominant party in the film of The Hunger Games of the world, they are under slavery and hard punishment and paying cost by life of their children because of their rebellion against the Capitol to do not do it again (IF3). see Figure 4-8.*



**Figure 4-8.** Selecting tributes as representative of District 12 for the 74<sup>th</sup> annual Hunger Games in Capitol city in film *The Hunger Games* (2012). “Slavery of people under dominant power and severe repression” was the most seen futures’ fear in science fiction films by the participants in the present research

IF2 mentioned that *Avatar* is showing the fear of war forever:

*If we continue our attitude of conquering other's territories and properties, the consequence is to live in war forever.*

TM13 referred to the fear of destroy ourselves by our own made Technology in *Age of Ultron*:

*Technology is out of control ... we over reached our capabilities, we messed up*

*something that we don't understand ... here is the human's invention which is too dangerous, are we leading to our own destruction?!*

And TM12 saw the same fear in *Avatar*:

*Not only we are destroying our nature and living place but also we are doing it very quickly and easily by such high-tech weapons showing in Avatar ... Easily destroy the planet and humanity by high-tech weapons.*

TM14 also mentioned:

*I see fear of genetic technology, AI, empire, totalitarianism, and plans for making mass destructive weapons like big laser in The Last Jedi which destroys a whole planet.*

IF3 saw the fear of transforming the saviors and powerful leaders to unstoppable evils and destroyers in *Civil Wars*:

*There would be risk if the great powers such as superheroes or powerful countries who are friends now, they become enemies and destroy the world by their fighting together, similar to these superheroes who are fighting together and make destructions ... Whatever stronger these leaders become, they will carry more destructive potential ... There would be always conspiracy to ruin the relationship of countries with each other and to set a world war. Making powerful protectors have the other dark side and risk of destroying the world. because they are humans and they make mistakes sometimes and they make the wrong decisions and do the wrong actions. If they become so powerful, then their mistakes will be fatal (IF3).*

IM4 saw the fear of Extinction of humans in *Endgame* as he responded:

*The fear that they show is destroying the humanity and earth by aliens*

Also IM7 saw the same fear in *The Last Jedi* and *Avengers*:

*We have been taught that whatever has a beginning, will have an end... and now we are at the middle, so the extinction is ahead and these films are warning that ... they show that even the superheroes will be disappeared if extinction happens (everything will be ended) then they have the same fear too. The reason that they show for the extinction in The Last Jedi is that there is no more Jedi (the savior).*

Some other respondents saw the fear of losing our advanced technology and valuable sources to the evil hands:

*Black Panther is showing a fear that evil hands take our valuable resources and advanced technology and weapons under their control and evil use” (IM5),*

And in Iron Man 3:

*Technology to be controlled by bad people or manipulate the AI by them for their evil purposes” (TF9).*

TF8 about the fear in *Black Panther* emphasized that:

*My fear was both about if share or if not share, both is dangerous ... doubt and not knowing what is right and what is wrong, in such serious level and impacts*



**Figure 4-9.** Klaue is stealing Vibranium from the museum in film *Black Panther* (2018). Vibranium is a fictional high-tech material, only existing in Wakanda, and the concept of the film is whether to share this material and Wakanda’s advanced technology with the world or not. The theme of “Our advanced technology and valuable resources will fall in evil hands” was one of the most seen fear of the future in science fiction films by the participants

The fear of “Losing humanity ethics and values” was seen in the films of *Black Panther*, *Avatar* and *The Matrix*:

*In both Black Panther and Avatar, people will be lonely and isolated, and they will have fixation to anything, and this will make them stony-hearted. Technology has a major role in this flow” (IF1). What it means of being human? Which ones are human? Are those inside The Matrix, or out of that, the real people? This impose the fear of losing our humanity in times of crises” (TM13).*

IF3 saw a fear and warning of a dark end for globalization in *The Hunger Games*:

*The Hunger Games shows the accomplishment of globalism. If we make a totalitarianism power for the world, and eliminate all other governments and public*

*institutions, there would be a dead-end and no way to overcome such a big power and have freedom. we will be slaves and no justice will remain.*

In the questions about politics, environment, social and economy, some respondents answered that they didn't recognize such elements in some of the watched films, but for the question of futures' fear in the films, none of the participants claimed that they don't see any fear about the future in these films. By their perspective, each one of the films in this research carries not one but several fears and warnings about the future. In addition to mentioned "War Genre", in the section about technology, as another genre that most of science fiction films can be categorized in, the new term of "Futures Warnings Genre" or "Futures Fears Genre" can be proposed as a genre that can introduce almost all the science fiction films. There are 16 different themes of fear extracted from the answer of participant, but all can be summarized in the fear of suffering or ending without savior or hope. The significant point of this fear is that according to the answers of participants, the major reason for such suffering of humans or ending the humanity is the behavior of humans themselves and very few external reasons such as aliens are involved in creating such disasters. The next section is about seeking for finding solutions in science fiction films for these futures fears and warnings about possible disasters ahead.

### **Science fiction films futures Survival Solution**

The seventh question was about the survival solutions that science fiction films provide to prevent the disasters or unwanted future and or any solution to possibly overcome the challenges of the future. This question is a complementary question for the sixth question which was about the fears of the future, to examine that how many of science fiction films also provide the possible solutions beside the warnings. Totally 16 different themes of solutions extracted from the answers of 14 participants which are shown in (Table 4-10)

Before going through the extracted themes, this fact needs to be remember that all extracted themes from the answers to this question and all other questions of the interview with participants, are from the perspective of the participants. It means that for example, maybe the solution themes that are extracted from the participants' answers, are not the same as the solutions that the filmmakers planned to provide. The first most frequently solution theme extracted from the answers was "People to be united and understand each other and accept their differences" which have been seen in *Endgame*, *Avengers*, *The Hunger Games*, and *The Last Jedi*. The second frequently seen solution theme was "Just rely on superheroes and or supreme leaders" which was seen in *Endgame*, *Age of Ultron*, *Black Panther*, *The Matrix*, and

*The Last Jedi*. “Sacrifice yourself for saving others and humanity” was another theme for a survival solution which was seen in *Endgame*, *Age of Ultron*, and *The Hunger Games*. The other solution theme which extracted from the answers about *The Matrix* and *The Last Jedi* was “The One will come to save you and humanity”.

Participants also saw another solution themes such as trusting the goodness of human for achieving to the goals; to stop dominating and conquering the lands or properties of each other; to be connected with each other and worldwide rather than being disconnection and isolated; to grow our awareness and to be conscious about ourselves and the world around us; never give up and always stand against cruelty, even if it is much stronger than us; to be positive and grow love and generosity and to put aside the negativities such as anger and hatred; never lose hope; to trust technology and change the negative use of it to positive ways; to restore again the traditions and the old ways of living. The themes such as trust USA; and just run away also were extracted from the answer of participants. Two participants also mentioned that they don’t see any solution in the film, one participant about *The Last Jedi* and another participant about *Black Panther*.

**Table 4-10.** Frequently shown survival solutions in science fiction films

Futures Survival Solutions Themes in the films	Seen in films by participants
People to be united and understand each other and accept their differences	7
Just rely on superheroes and or supreme leaders	6
Sacrifice yourself for saving others and humanity	4
The One will come to save you and humanity	3
Trust the goodness of human and take it as power of achieving the goal	3
Stop dominating and conquering	3
To be connected and not isolated (To make bridge rather than wall)	3
Grow your awareness and consciousness	3
Never give up to cruelty, even against the ones extremely powerful than you	3
No solution shown	2
Put away negativity such as hatred and anger and grow the positivity such as love and generosity	2
Always keep hope	2
Trust technology, and change the negative use to positive	2
Trust USA	1
Just Run away	1
Change the way of life to traditional way	1

Here are some examples of the answers that the solution themes have been extracted from. The theme of “People to be united and understand each other and accept their differences” was extracted from 7 answers such as the answer by IM4, who referred to hope and solidarity in *Endgame* as the provided solution:

*The solution that is shown in Endgame is hope and solidarity of people together and cooperation together, and also to sacrifice yourself for others, ... In Endgame shows that when superheroes become united they can change the impossible to possible (IM6),*

In Avengers the way of success is to be united and collaborate towards a same goal (TF10),

*The Hunger Games shows that the way of changing the cruel system and bad influences is to be united and fight against it all together (TF9),*

*To be united together and understand each other even with different races and ethnicities or religions showed as solution in The Hunger Games” (IF3),*

*in The Last Jedi the way of living better is love each other and be friend and united, free yourself from anger and hatred, show your goodness and kindness and generosity, and change things to the traditional way (TF11).*

Here are the answers that the theme of “The One will come to save you and humanity” has been extracted from them. This theme is opposite to the first most frequently seen theme of to be united, and is concentrated on a power somewhere else rather than people. For example:

*The Matrix shows that there is a savior who will save the humanity someday, and all people should help that one savior ... no one except "The One" can save the world and humanity (IM4),*

And again about *The Matrix*:

*Wait for "The One", one person first must wake you up, then if you are the one, you may save the world ...other people all are helping the one and whole responsibility and expectation is for the one (IM5),*

Also in *The Last Jedi*:

*It says still there is hope, just because still there would be a Last Jedi (IM7).*

The theme of “To be connected and not isolated” extracted from answers such as the answer by IF3 about *Black Panther*:

*keep connected to each other, but carefully and wisely, and listen to other people, whatever the consequence might be, do not disconnect!*

“Grow your awareness and consciousness” was another theme extracted from answers such as:

*Civil Wars shows that for understanding possible conspiracies and misleading movements, the best way is to be aware and keep grow our awareness, whether the leaders and or the government or people, all need to have awareness ... we need to understand the benefit of things for the society and do not expect that everything to be perfect ... we may eliminate something that is not perfect but we will lose its other benefits ... I mean for example the heroes who made some mistakes. We need to understand what is useful for the society ... we may destroy something because its not perfect, but we change the situation much worse! (IF3).*

“Trust the goodness of human and take it as power of achieving the goal” was another theme extracted from answers such as:

*The solution showed in Black Panther is to trust the goodness of humans in. If you have a good intention, you can proceed your goal (IF1). In The Hunger Games important thing is to do by your heart and feelings, and also to be united together ... (TF10). In The Last Jedi solution is to show your goodness and kindness and generosity ... (TF11).*

“Stop dominating and conquering” also was a solution theme mentioned by participants. IF2 and TM12 mentioned about Avatar that:

*The only way to have better future is that people to stop to conquering territories of others and their properties (IF2), Stop fighting with aliens and other races and to maintain their culture and being respectful to each other in Avatar is the survival solution (TM12).*

“Never give up to cruelty, even against the ones extremely powerful than you” extracted from the answers such as:

*Avatar shows, don't give up against cruel party even if they are much stronger than you (IF1). Not giving up and continue fighting in The Hunger Games (IM6). Not to be influenced and given up to the cruel system in The Hunger Games ... and keep up your humanity (IF3).*

IF3 also mentioned another solution in *Civil Wars* as:

*It says just trust USA, ha ha, this is the main solution! Not so wrong by the way! ha ha.*



About the solution in *The Last Jedi* TM14 and IM5 mentioned:

*No specific solution is shown I think, a a a just run away while being united together (TM14). No solution showed unfortunately. It makes me unhappy as providing solution is the less important thing to do in such films. Instead of proposing solution, they show magic" about the lack of survival solution in Black Panther (IM5).*

To have an overview about the result of providing humanity survival solutions in science fiction films, according to the themes extracted from the answers by participants, most of films show some sort of solutions, whether providing solution is the aim of filmmakers or the participants see some solutions inside the films apart the aim of filmmakers. Some participants believe that science fiction films don't provide solutions for the warnings, but most of participants has recognized some solutions in the films. Some extracted solution themes are encouraging people to be proactive and to take action and some impose being passive. For example, the solutions such as being united, sacrifice yourself, trust the goodness of human and act based on that, stop domination, to be connected, grow your awareness, never give up, grow the positivity, to use technology in a positive way are the solutions that propose being active. On the other hand, the themes such as just rely on superheroes, wait for The One, and just Run away spread a passive attitude. Can't say that whether the active solutions or passive themes are most shown in the films as the result is mixed by both kinds in most of the films.

### **Science Fiction Film's Messages**

The eighth question was about the main message of each science fiction film that the participant has watched for this interview. The purpose of this question was both to understand that which issues are more concentrated by science fiction films and also the view point of each participant in his/her interpret of the films which they watched for this interview. The difference between the message of the films, which are shown in (Table 4-11), and the survival solutions, shown in (Table 4-10), is that the solutions are the proposal of the acts to fight or prevent to the futures' fear and the warning of the films, but the messages of the films are more general and are providing some concepts which are not necessarily connected to the fears and futures' warnings but the concentration of the film to tell the audience. For sure, same as futures' fears and survival solutions, these mentioned messages of the films are according to the perspective of the participants and maybe different to the aim of filmmakers to tell. Totally 21 film messages mentioned by the participants which are shown in (Table 4-11). The respondents also have been asked to clarify that whether they agree or not to the concept of the message.



**Table 4-11.** Messages received by participants from the films

Main message of the film	Film	Participant Code	Agree/ Disagree
Technology is not the best solution	<i>Endgame</i>	TM12	Agree
Relying on superheroes and or supreme leaders is not a solution	<i>Endgame</i> <i>Civil Wars</i>	TM12 TM14	Agree
Make your right decisions at the present, even if you could go to the past you cannot correct your mistakes	<i>Endgame</i> <i>The Matrix</i>	IM6 IM5	Agree
Prepare for the future	<i>Black Panther</i>	IM5	
Future is not very safe	<i>Black Panther</i>	IM5	
The isolated utopias couldn't last for ever	<i>Black Panther</i>	IM5 TF11	Agree
USA is still great and center of the world	<i>Civil Wars</i>	IF3	Agree
Accept the dark side of positive things and don't eliminate them for few negative results (superheroes, technology, good leaders, ...)	<i>Civil Wars</i>	IF3	Agree
There is always limitation and incomplete situation even for superheroes	<i>Civil Wars</i>	IF3	Agree
Simple life without advanced technology is better for humanity	<i>Avatar</i>	IF1	Disagree
Respect the rights of others, not only other humans but also all other species	<i>Avatar</i>	TM12	Agree
Still there is hope	<i>Last Jedi</i>	IM7	
We serve machines rather than they serve us	<i>The Matrix</i>	IM4	Agree
Our current path is a wrong path to a wrong direction	<i>The Matrix</i>	IM5	
We messed up our future with the technology that we have created ourselves	<i>The Matrix</i>	IM5	
Chose the positive use of technology	<i>Iron Man 3</i>	TF9	Agree
Peace	<i>Last Jedi</i>	TF11	Agree
There is hierarchy but there is a way to climb up the pyramid	<i>The Hunger Games</i>	TF9	Agree
Warning about globalism and the dark side of that	<i>The Hunger Games</i>	IF3	Agree
Sometimes people just want a good show rather than knowing the reality	<i>The Hunger Games</i>	TF10	Agree
Not important that what bad and difficult is the conditions, the important thing is to fight to succeed	<i>The Hunger Games</i>	IM6	Agree

The rate of agreement to the extracted messages is high and almost all participants agree that the messages that they received from the films are right. This result brings up an idea that the audience seek for the messages that they consider right in the films apart the aim of filmmaker. As listed in (Table 4-11), each respondent realized different message from same film and it's obvious that each participant concentrated on different elements based on their personal perspectives.

## Science fiction films futures Myth

The ninth question was about the futures myth, or in another word, the superheroes of the future in science fiction films that participants watched for this interview. The participants have been

asked to describe what kind of superheroes and their main characteristics they saw in the films. Also they have been asked to clarify that which characteristics that they see for these superheroes are the same characteristics and values that they prefer for a real superhero in the future. As listed in (Table 4-12), totally 18 themes of superhero characteristics extracted from the answers of the participants and 11 of those characteristics appeared to be preferred by them for a real superhero in the future.

**Table 4-12.** The themes for frequently shown characteristics for superheroes in the films and perspective of youth about necessity for real superhero of future

Futures Super Heroes Characteristics in the films	Seen in films by participants	Crucial for a real superhero
Similar to humans but super high abilities	14	
Self-sacrifice	9	✓
Master mind and positive creator	8	✓
Not born as superhero	6	
Brave and self-confident	6	✓
Super Warrior	6	
Protect whole humanity	5	✓
Extremely high physical power	5	
Having also dark side	5	
To complete abilities and united with the superhero team	5	✓
Responsibility taker	4	✓
Great leader towards goodness	3	✓
Independent	3	✓
Protect their own people only	2	
Keeping their own specific values and justice	2	✓
Never give up	2	
Stands against injustice and cruel powers	2	✓
To be rich	1	✓

The most seen characteristic by the participants was “Human-kind but super high abilities” which meant that superheroes have super power and greater abilities compare to humans but they are similar to humans in terms of having feelings, fear, love and other emotions. Despite the high quantity of shown in the films from the perspective of participants, this characteristic was not selected as a crucial factor for a real superhero by the respondents that recognized this characteristic. This characteristic theme extracted from answers such as:

*... a touch of humanity is given to these superheroes in Black Panther and Avatar, which are not similar to Superman who was powerful and used to fight for people without caring his life and without fear; but here superhero is a regular person having feelings*

*of fear and love and other emotions and feeling, but because of the responsibility that they accepted, and loving their community, they have to put away such feelings and do fight. Sometimes they have to stand against their own kind because of a better future for all. Recent films' heroes, they have more humanity side, not like an alien that we cannot imagine or understand them, these are more tangible (IF1),*

*In The Last Jedi, none of positive and or negative heroes are complete person. They are human with all fears and mistakes and doubts and need to learn (TM14),*

*In Endgame “superheroes have a human level lifestyle too, even depression, like Thor who became fat, reminds us Maradona who became addicted and came back again (IM7).*

The second mostly seen characteristic was “Self-sacrificing” for the betterment or protect people and environment. Seven respondents who recognized this characteristic also emphasized that as a crucial factor for a real superhero. As an instance, IM4 explained about superheroes in *Endgame* that:

*The first and greatest factor must be self-sacrificing for a superhero ... When he/she is self-sacrifice, it means that all the other positive factors are already achieved such as awareness, loyalty, humanity ... each one of these heroes sacrifices him/herself in a certain way. In both 2012 and Endgame, this is Iron Man who does sacrifice himself for humanity, (IM4) (see Figure 4-10).*



**Figure 4-10.** Iron Man sacrifices himself for saving the earth and humans in film *Endgame* (2019).

The third most seen theme of superhero characteristic was “Master mind and positive creator” which referred to the several factors such as being extremely creative, intelligent, could interpret and understand and analyses every kind of issues, having diverse perspectives, having

questions in mind, bringing new solutions with no or less harmful impacts, better than other people. This characteristic also mentioned as a crucial value for a real superhero by seven participants who discovered it in the film.

TF10 referred to Iron Man in *Avengers* and explained:

*Iron Man is smart and gives the best ideas and solutions when the team is trapped in a crisis", and also "Tony Stark in Iron Man 3 is a creative guy ... he lives on the technology that he created and developing" (TF9).*

About superheroes in *Endgame*:

*An important characteristic is to be Master Minds, means to have ideas and concepts, understanding more than others, also having questions in mind and having the answers. He or she could interpret and analyses the matters (IM7). T'Challa in Black Panther is a superhero who has diverse thinking skills and has got several perspectives, this is a way that a superhero should think (TF8). Neo in The Matrix had learning abilities, and also ability to grow and make huge progress in skills and abilities. He had unique mental ability and power (IM4).*

Fourth most seen characteristics were “Not born as superhero”, “Brave and self-confident” and “Super Warrior”. Six participants mentioned that most of superheroes in the films are not hero at the beginning but somethings happen to them to become superhero, for example Hulk, Captain America, Spiderman gained the superhero power by chemical changes in their body and also some other heroes such as Iron Man use the technology to be powerful and do heroic acts, and or some other go through life challenges and enlightenments to become a hero such as Jake in *Avatar*. However, this factor was acceptable but not a crucial preferred factor in opinion of participants for a real superhero.

The other characteristic, to be brave and self-confident, also has been seen for 6 times by 4 participants in different films and also mentioned as a crucial factor for a real superhero. The characteristic of Super Warrior, despite of frequently seen as a characteristic for a superhero in several films, it was not mentioned as crucial factor for a real superhero. The other frequently seen characteristics which also were mentioned crucial for a superhero are: “Protect whole humanity”, “To complete abilities and united with superhero team”, “Responsibility taker”, “Independent”, “Keeping their own specific values and justice”, “Stands against injustice and cruel powers”, and “To be rich”. Other characteristics in (Table 10-2) also were the frequently seen factors for the superheroes in the films but not crucial values for a real superhero from the perspective of the participants.

As example for the answers which carry these mentioned superhero characteristics, IF1 referred to the transformation of regular people to superhero in *Black Panther* and *Avatar* and mentioned:

*Important point in this film is that the superhero has not born with such powers. They accept some abilities to accomplish something like betterment of life of themselves, their tribes, their surrounding and their kind. Then it makes changes and transform them to a hero (IF1).*

TM12 also referred to transformation of Jake in *Avatar*:

*The character and also abilities of Jake transforming and turned from a useless person to hero when he understood that how the aliens are protecting their culture and planet. He inspired by the aliens and transformed.*

IM4 mentioned Neo in *The Matrix*:

*He transformed from a limited person and a hacker to a superhero.*

IF2 referred to the independency as a characteristic for superheroes that:

*The four female heroes in Wakanda were independent and free of the man-woman structures, and not fully under blind obedience to the king ... also they have been shown as a human rather than gender-centric definitions.*

TF10 referred to the team spirit of some superheroes in *Avenger* as:

*The team was balanced with the different abilities of superheroes who completed each other. Natasha always stick to the team and the goal, some other heroes wanted to quit but she was there always. She unites other superheroes together also ... She makes the team to be united.*

She also referred to the good leadership of Captain America in *Avengers*:

*Captain America is good at arranging the team and lead them to how do the things (TF10),*

And about characteristics of the superheroes in *Endgame*, IM6 explained:

*General and common characteristics are, to complete each other to do the duty, very united together; self-sacrifice, even putting priority to whole the world rather than only their own family. Also saving the humanity as their ultra-goal,*

And again about superheroes in *Endgame*:

*Their common mindset is to protect the earth and humans, but each of them has different character and abilities to complete each other. They all are better than humans in fighting, ha ha! (TM12),*

And specially about Iron Man in *Endgame*:

*Stark is rich and it helps him to do what he planned. I think a superhero also must be rich, ha ha! (IM4).*

As an overview on the results of this section, all participants managed to express their ideas about superheroes in the films easily and also to clarify what they prefer as a superhero in the future. Many of characteristics that they saw as common between the heroes, were being mentioned as preferred by them too. “Self-sacrificing” and “Master mind and positive creator” were mentioned as the most preferable and crucial factors for a real superhero by their perspectives. Some other most shown characteristics for the superheroes in the films such as “Human-kind but super high abilities”, “Super Warrior”, and “Extremely high physical power” were not mentioned as crucial for a real superhero but the participants accepted that a superhero may need to have such characteristics too. There were no significant differences between the preferences of youth from Iran and Taiwan or different genders.

## **Metaphors for the Futures in Science Fiction Films and Preferred Future**

The last question of the futures images in science fiction films, was about the metaphor that each participant may imagine for the future that is shown in each film which was watched for this interview. To go deeper into the metaphor level, and compare the futures showing in science fiction films and the preferable future of the youth in Iran and Taiwan, each participant also has been asked to name a metaphor for the future that she or he prefers to live in.

### **Science fiction films futures’ Metaphors**

Totally 27 metaphors introduced for the futures that 14 participants saw in 10 selected science fiction films. Each participant watched 2 films and introduced a metaphor for each one. (Table 4-13) shows the introduced metaphors for each film and clarifies that which participant introduced that metaphor, and whether such future is preferable for he/she or not.

The metaphors that different participants introduced for a unique film were different to each other regarding the perspective of each respondent and his/her interpretation about the film and the shown future in the film. Out of 27 metaphors, participants clarified only 7 as possible preferable metaphors for their future.

**Table 4-13.** Metaphors for the futures in the science fiction films

Film	Participant Code	Science fiction films futures' Metaphor	Preferable: ✓ Not preferred: ✗
<i>Endgame</i>	TM12	The Outer Space is a Black Hole	
	IM7	Business as Usual	✗
	IM4	The End	✗
	IM6	The Age of Robots	✗
<i>Age of Ultron</i>	TM13	We Create Our Own Demon	✗
<i>Avengers</i>	TF10	Technology is in human's DNA	✓
<i>Black Panther</i>	IF1	Everything Gonna be OK	✓
	IF2	The Post-modern Era	
	IM5	The Apocalyptic Atmosphere	✗
	TF8	More Blessed is in Giving Rather in Receiving	✓
	TF11	Together Alone	✗
<i>Iron Man 3</i>	TF9	Technology, the Double-Edged Sword!	
<i>Civil Wars</i>	TM14	The Fight Between The Snipe And The Clam Chinese: 鹬蚌相争	✗
	IF3	The Great America	
<i>Avatar</i>	TF8	Xanadu (The Secret, Far Away And Inaccessible Utopian Land In Mongolian Stories)	✓
	TM12	A World With More Eyes and Chains On Us	✗
	IF1	Everything Gonna Be OK	✓
<i>Last Jedi</i>	TM14	三顾茅庐: Paying Three Visits to The Thatched Cottage. Persian: تاسه نشه بازى نشه English: Third Time Lucky	
	TM14	Space Cowboys	
	TF11	World War	✗
	IM7	A Futuristic Picture Missing the Future Itself in It	✗
<i>The Hunger Games</i>	TF9	Climbable Pyramid	✓
	IM6	A Bitter and Dark World	✗
	IF3	When the Globalism Meets its Dark End	✗
<i>The Matrix</i>	TM13	To Remain Human	✓
	IM4	The World Fallen in sleep	✗
	IM5	Technology Replace the Humanity	✗

## Preferred Futures' Metaphors

All participants also have been asked to name a metaphor which could describe the future that they prefer to live in. Their preferred future's metaphors are listed in (Table 4-14).

**Table 4-14.** Metaphors for the preferred futures of youth of Iran and Taiwan

Preferred Futures' Metaphor	Participant's Code
Freedom from the Shackles of Money	IF1
Nightingale in the Flowers Garden	IF2
Connected Hearts and United Conscious Minds	IF3
Humanity First, Technology Next!	IM4 IM6
A place for everyone and everyone in his/her place	IM5
Tired of Ads? Go Premium!	IM7
The Farmers of the Green Lives	TF8
To Live a Meaningful Life and the Value of Me	TF9 TM13
The Garden of 1001 Types of Flowers in Love	TF10 TM12 TM14
Keep Switching the Plugs, Keep Connected on and on!	TF11

None of the metaphors for preferred futures was similar to the metaphors of science fiction films futures. Even some metaphors were opposite to metaphors of science fiction films futures. For example, the preferred future of "Nightingale in the Flowers Garden" was opposite to science fiction films futures of "A Bitter and Dark World" and "The Apocalyptic Atmosphere" and "The End"; the preferred futures of "Keep Switching the Plugs, Keep Connected on and on!" and "The Garden of 1001 Types of Flowers in Love" and "Connected Hearts and United Conscious Minds" were opposite to the science fiction films futures of "Together Alone" and "World War"; the preferred future of "Connected Hearts and United Conscious Minds" was also opposite to the science fiction future of "The World Fallen in sleep"; the preferred futures of "Humanity First, Technology Next!" was opposite to science fiction future of "Technology Replace the Humanity".

According to these findings from the (Table 4-13) and (Table 4-14), and also by comparing these lists together, it can be found that the science fiction films futures not only are not preferable for the youth in Iran and Taiwan, but also, these youth reject that futures and prefer to live in completely opposite kind of futures. Therefore, we can say that the most of blockbuster science fiction films futures are dystopian to the youth of Iran and Taiwan.



## Chapter 5

### Analysis and Deepening



**Figure 5-1.** A scene from the film *Iron Man 3* (2013). Tony Stark in this scene and several other scenes of Marvel films, uses AI for data analysis, which referred by several respondents in this research as the most preferable application of AI for them in the future rather to have humanoid AI

This chapter has two parts. In the first part, we will review all finding to find out the answers to the research questions of this research in detail as well as analysis the answers to each STEEP part of questions by Causal Layered Analysis – CLA - (Inayatullah, 1998). And at the second part, we will do a comparison Causal Layered Analysis between the science fiction films' futures and the preferred futures of youth in Iran and Taiwan.

### Analysis to Answer the Research Questions

In the following sections, the findings will be reviewed to collect the answers to each research question of this dissertation. Also, the findings in each STEEP aspect will be analyzed through CLA. The findings of this research will also be compared with the findings in the literature review chapter and the hypothesis after the summary part of each Research Question. To remember, here are the research questions which will be answered in this section:

1. What are the common images of the future shown in Science Fiction films from the perspective of youth in Iran and Taiwan?
2. What are the differences and similarities between these Science Fiction films' futures and the futures that the youth of Iran and Taiwan want to live in?
3. What are the differences and similarities between the images of preferred futures by the youth in Iran and Taiwan through science fiction films?
4. What kinds of futures images can be the images of a preferable future in science fiction films?

## Research Question 1, Common Images of Futures in Science Fiction Films

To answer to the first research question of this thesis, 11 questions have been asked from 14 youths from Iran and Taiwan through the one-to-one interview sessions. The interview questions were being designed to seek the perspective of the youth about the science fiction films futures images about Society and People; Technology; Environment; Economy; Politics; Futures Fears; Survival Solutions; Science Fiction Films Messages; Futures Myths; and Futures Metaphors.

### Analysis and CLA on Common Futures Images of Society and People

According to (Table 4-1) showing findings in the chapter of Results and Discussion, the society and social condition of people are mostly dystopian in blockbuster science fiction films. The focus of these films is on showing a none preferred where the people have a low level of awareness and blind followers and extremely dependent on superheroes with the passive and not responsibility-taking attitude while not feeling happy and do struggling with harmful conflicts with each other and violence. The preferred themes such as happy people, women in power, equality, aware and helpful people are seen in very few films such as *Avatar* and *Black Panther*, while even such utopian images are limited to small communities of people or the aliens. Aliens are being shown both as friends and as hostile to humans. However, the major role of friend aliens is to defend humans against the invader aliens. It can be seen in these science fiction films that the existence of aliens in the films is connected to the conflict with humans, whether as invaders or defenders. Some aliens are very similar to humans especially in terms of emotions, needs, and goals; it seems they are just human but with an alien-look makeup living on another planet.

(Table 5-1) is the Causal Layered Analysis of the answers to the social part of the Research Question 1. This table shows how each layer connects to other layers or causes the other layers in the science fiction films futures. For example, people believe that only the leaders or superheroes are responsible for protecting them and changing society into a better place to live for them (Worldview). Therefore, these people tend to have a passive attitude and only do judge the government, superheroes, and other people, rather than taking a progressive action (Litany). When the society is structured highly competitive (Systemic), people become self-centric, don't understand or help each other, and have a conflict with each other (Litany). Other elements listed under each layer in (Table 5-1) also have similar causal connections to each other. People in such society are like 100m sprint runners who run in their tracks, and their only goal is to pass each other, but after reaching the finish line, they just die, and their life ends (Metaphor).

This CLA Table is only focused on social elements of science fiction films futures, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-1.** CLA analysis of common social futures showing in science fiction films

Litany	Sad people, struggling with harmful conflicts with each other and violence Self-centric passive and just judging people who don't understand each other Few people help each other Some aliens are friend, some enemy
Systemic	The structure of society and workforce people to be disconnected and isolated individuals Stuck in daily life and just passing the present Highly competitive society Few women in power
Worldview	Let's survive today, tomorrow has not come yet Leaders and superheroes are responsible to make paradise for us The One will save us
Metaphor	100m sprint competition, then die!

### Analysis and CLA on Common Futures Images of Technology

According to (Table 4-4) showing findings in the chapter of Results and Discussion, the kinds of technology and its applications are so diverse, including various kinds of purposes and a mix of utopian and dystopian images of using technology. The most shown futures purposes of technology in these films can be categorized to: Military use and making killing machines; Artificial Intelligent; Betterment and ease of life for humans; Dominating and controlling purposes; Space technology; Destructive impacts; Exploring new things and discoveries; Creation and making changes. The most seen purpose of using technology in all films in this research, far more than other purposes, is military use and making killing machines, which turns the weight of using futures technology in science fiction films into a dystopian image; therefore, we may can also categorize most of science fiction films in War Genre. Futures Images of AI as the second most shown future's technology in science fiction films can be categorized to: AI as software and not humanoid or independent) assisting human in analysis and solving problems; Humanoid AI and Robots as servants to the humans but not independent; AI as independent individuals in the society; AI overcoming the humanity.

(Table 5-2) is the Causal Layered Analysis of the answers to the technological part of the Research Question 1. This table shows how each layer connects to other layers or causes the other layers in the science fiction films futures. For example, people believe that time is valuable like gold, and they have to live fast to make their time productive (Worldview); therefore, they use technology to develop their systems to work faster (Systemic). When technology is taken as the only way to make a better life and developments (Worldview), every enhancement of

capabilities of humans happens through technological development, and many citizens upgrade to cyborgs (Litany). Using technology for military purposes (Systemic) innovates more powerful weapons, and more people are being killed in the wars or by criminals (Litany). Other elements listed under each layer in (Table 5-2) also have similar causal connections to each other. In such a society, technology has the highest value and the most important thing and asset while everything else, such as humanity and nature, has lower values and importance (Metaphor Layer). This CLA Table is only focused on technological elements of science fiction films futures, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-2.** CLA analysis of common technological futures showing in science fiction films

Litany	Many people being killed by advanced weapons People seek convenient life using technology and AI The capabilities of humans are upgraded by technology People travel through galaxies and time Humanoid AI and Robots are living among humans
Systemic	Technology is using for military purposes, observation and controlling the people Developing advanced technology became purpose itself Automated and fast life Technology has Exclusive owners (Technology not for all, just for few) Technology just for profit and dominating Humans lost their control over technology
Worldview	Technology is the only way to make a better life Technology has solution for every kind of problems Time is gold, live fast!
Metaphor	Technology first, everything next!

### **Analysis and CLA on Common Futures Images of Environment**

According to (Table 4-5), showing findings in the chapter of Results and Discussion, most science fiction films show an environment that nature is destroyed or natural resources are finishing by misuse of humans or destructive use of technology or by war. Humans treat the environment in a destructive way, using natural resources very fast, mostly for financial profit, entertainment, and comfortable life, without thinking about the consequences of such acts. In several science fiction films, especially in Marvel and superhero films, the environment is similar to the present time, which may can't be considered as a utopian environment, if not to consider as dystopian. Superhero series of films have less or no consideration on the environmental issues. The solutions to climate change and surviving such a dying environment are very rarely shown in science fiction films. Showing a fully natural environment, whether free of technology or in balance with technology, is very rarely shown in science fiction films,

and when shown, such a utopian environment is on aliens' planet or in a very small area on Earth.

(Table 5-3) is the Causal Layered Analysis of the answers to the environmental part of the Research Question 1. This table shows how each layer connects to other layers or causes the other layers in the science fiction films futures. For example, according to answers by the participants, in most science fiction films, the natural resources are being finished (Litany), which is a result of using resources for financial profit purposes by humans (Systemic) and also misusing the natural resources without recovering them and without considering the consequences of such behavior (Systemic) which can be a result of this belief that nature can recover itself and doesn't need humans to take care of that (Worldview). Believing that money can save and recover everything (Worldview), can cause the overuse of natural resources for financial profits without considering the consequences (Systemic) but it causes many species to extinct (Litany) because for example, humans use their skin for fashion. Other elements listed under each layer in (Table 5-3) also have similar causal connections to each other. The attitude of people of such society is like people who burn their wooden homes to just enjoy watching the beauty of flames without thinking about where to live after (Metaphor). This CLA Table is only focused on environmental elements of science fiction films futures, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-3.** CLA analysis of common environmental futures showing in science fiction films

Litany	Green nature is disappeared Many species extinct Natural resources are finishing Earth is not a place to live anymore
Systemic	Misusing the natural resources without considering the consequences Using natural resources for financial profit purposes Developing technology with less consideration to the nature Technologic and automated lifestyle fully replaced the old lifestyle Business as usual
Worldview	Nature can recover itself Money can save and recover everything
Metaphor	To burn our wooden home to watch the firework

### **Analysis and CLA on Common Futures Images of Economy**

According to the (Table 4-7) showing finding in the chapter of Results and Discussion, few science fiction films concentrate on showing economic systems or issues in the future except showing the huge gap between poor and rich and poverty issues. The economic condition of the majority of society is quite dystopian. Most of the participants in this research, including both

groups from Iran and Taiwan, had few information about economic systems, then they mostly focused on explaining their preferred economic situation for their future, which usually is not seen in science fiction films. Analyzing the preferences of the youth is the subject for the second and third research questions, which will be reviewed in the next parts.

(Table 5-4) is the Causal Layered Analysis of the answers to the economic part of the Research Question 1. This table shows the elements seen in the science fiction films divided through CLA layers. For example, most of the participants in this research mentioned that people are in poverty in science fiction films which locates in the Litany layer and is a consequence of deeper CLA layers in science fiction films futures such as economy centric society in the Systemic layer, where the economy and financial condition of each person extremely define the quality of his or her life and impose a huge poor-rich gap in the society (Litany). By looking over the listed elements in each layer here, this science fiction future world is like a body that money is its blood, and without that, or when the money is not enough, society dies (Metaphor). This CLA Table (Table 5-4) is only focused on economic elements of science fiction films futures; therefore only the economic elements are listed in the table for the reason of analyzing the economic part of Research Question 1. The merged Causal Layered Analysis in (Table 5-13) will show the other consequences of economic elements.

**Table 5-4.** CLA analysis of common economic futures showing in science fiction films

Litany	Poverty People struggle with financial issues to survive Few rich people Huge poor rich gap
Systemic	Economy centric society To make every aspect of life dependent on money Big Corporations' monopoly and domination
Worldview	American capitalistic mindset Financial expansionism Money, the most important asset! More money, better life!
Metaphor	Blood-Coin

### **Analysis and CLA on Common Futures Images of Politics**

According to the (Table 4-8) showing finding in the chapter of Results and Discussion, this is very rare to see a preferable political system or condition in science fiction films. Almost all frequently political futures images showing in science fictions have the negative weight such as: Totalitarian domination, whether local or global; Promoting and distributing war and conflicts; Extremely limiting the freedom of people; imposing social gaps and limitations for

the access to the resources; High level of observation and control over people; Concentrating on seeking power and military advantages by governments or groups and individuals. A remarkable number of science fiction films also do not concentrate on showing recognizable futures political images.

(Table 5-5) is the Causal Layered Analysis of the answers to the political part of the Research Question 1. This table shows how each layer connects to other layers or causes the other layers in the science fiction films futures. For example, totalitarian government (Systemic) causes people to lose their freedom (Litany) and seeking power and military advantages by the governments over the others (Systemic) causes wars of nations (Litany). Almost all elements in Litany and Systemic layers are the results of a belief that we must conquer and keep control of the others to not be conquered and lose our freedom (Worldview). In such a science fiction society everyone, whether the governments or the individuals, put all their efforts to keep their power and advantages over the others, whatever it may cost (Metaphor). This CLA Table (Table 5-5) is only focused on political elements of science fiction films futures, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-5.** CLA analysis of common political futures showing in science fiction films

Litany	Nations and groups of people are under war together People lost their freedom and lived like slaves People cannot make a decision for their lives Few people have easy access to the resources Groups and individuals fight to access the resources
Systemic	Totalitarian government Global government taking the independence of all nations Access to the resources is programmed and limited to few in power Advanced systems of controlling and observation of people Seeking power and military advantages by all nations
Worldview	Militaristic and expansionist
Metaphor	To keep the power at any cost

### Analysis of Common Futures Fears and Warnings

According to the findings of this research in the literature review and also findings in (Table 4-9) in the chapter of Results and Discussion, all selected blockbuster science fiction films contain plenty of futures warnings and images of the fears and dystopian futures. By considering the rate of concentration of science fiction films on futures fears, two genres of “Futures Warnings Genre” and “Futures Fears Genre” can be another category of science fiction films. The findings of this research also support Burns’ (2009) suggestion to classify science fiction films with Horror films. The most warned fears of the futures are: Slavery and repression of people under

dominant power and or totalitarian government; Extinction of humanity; Destructive technology; People just as machines; Evil takes control; Losing humanity values; Losing whatever we have; In war forever; Alien invasion; No savior left; Poverty; Savior turns to evil. All these futures fears may can be summarized into two general concepts of suffering the majority of humans and or ending without any savior or solution. The significant point of these warnings is that the major reason for such suffering and ending is the behavior of humans themselves and very few external reasons such as aliens are involved in creating such dystopian futures.

### **Analysis of Common Science Fiction Solutions for Better Futures**

According to (Table 4-10) showing the finding in the chapter of Results and Discussion, some participants in this research believed that science fiction films don't suggest solutions for preventing or transforming the unwanted future to preferred futures, but most of the participants has recognized some solutions in the films, whether suggesting the solutions was the aim of filmmakers or the participants see some solutions inside the films apart from the aim of filmmakers. The suggested solution can be classified into two major categories of "To be proactive and to taking action", and "To be just passive. It can't be said that whether the proactive solutions are the most suggested solutions by science fiction films or to be just passive.

The most suggestions in the proactive category are: To be united; Sacrifice yourself; Trust the goodness of humanity and act based on that; Stop domination; To be connected; Grow your awareness; Never give up; Grow the positivity; To use technology in a positive way. The most suggested solutions in the passive category are: Just rely on superheroes; Wait for The One; Just Runaway. To examine the covering of futures fears in the films by suggested solutions, by comparing the list of fears and solutions - see (Table 4-9) and (Table 4-10) - there are links between these two sets as both fears and solutions conduct the story of the film together. The findings of this research can't say that how efficient or effective are the suggested solutions in solving the problems, but most of the solutions are appearing as the solvent rather than preventive.

### **Analysis of Common Futures Myths**

The characteristics of science fiction films futures myths and or superheroes that listed in (Table 4-11) in the chapter of Results and Discussion, which may can also be considered as futures superhuman models, can be classified in three major categories: Super mental abilities; Superphysical abilities; Heroic acts and attitudes. In this set of 3 categories, humanity values



and emotions are classified in mental abilities and characteristics. Heroic acts and attitudes of each superhero play a centric role and super mental and physical abilities come up as facilitators for such acts. Superheroes in most of science fiction films are humans or human-like aliens which many of them were not a hero from the beginning, but some process in the story, whether biological transformations or evolution in their consciousness, makes them become a superhero. As human or human-like aliens, most of the superheroes have the emotions like other regular people. Their major heroic acts in the films are fighting and saving humans and the earth against the aliens or evil humans. In recent superhero science fiction films, heroes appear in the teams and completing each other rather than fighting individuals, but the heroes with higher mental abilities are in charge of the leadership of the superhero team. To be a warrior shown as a crucial factor for superheroes in the films but self-sacrificing is the most important and distinguishing point of superheroes in the films.

### **Summary of the Analysis of Common Images of Futures in Science Fiction Films**

As a summary for the answer to the first research question of this thesis, the futures images shown in blockbuster science fiction films are both utopian and dystopian but according to the perspective of the youth of Iran and Taiwan, a huge majority of the images of the future are dystopian. In these films future is where people are not happy and do struggling with harmful conflicts with each other, poverty, war, and violence, under the dominant and strict observation of totalitarian governments, heading toward extinction. The significant point is that the major reason for such suffering and ending is not external from aliens but the behavior of humans themselves, including developing and use of technology in destructive ways, mostly focusing on the warship and destroying their motherland, earth, by misusing the resources without considering the harmful consequences and without taking the responsibility of their acts. Aliens also take part in several science fiction films and their existence in the films is connected to the conflict with humans, whether as invaders or as defenders. The major role of friend aliens is to defend humans against the invader aliens. Aliens are very similar to humans in terms of emotions, needs and goals, whether as the invader or defender. Most of the human superheroes are not a hero from the beginning but through some biological or mental evolutions become superheroes and take responsibility of saving humanity by their heroic acts and self-sacrificing through a team effort with other superheroes. Rarely we can find a suggested solution in science fiction films to prevent the disasters of the future or about how to set up a better society, but instead, plenty of warnings and futures fears. The utopian images of the future are rarely shown in science fiction films, and when these are shown, such utopias are usually on aliens' planet or in a very small area on Earth.

In previous sections, a CLA analysis provided for each STEEP aspect of science fiction films futures, and after reviewing answers to the second and third Research Questions, a collective CLA combining all STEEP aspects together will be analyzed through (Table 5-13).

### **Examining the hypothesis for the Research Question 1**

The findings of this research totally agree on the hypothesis to Research Question 1, which stood for a dark and dystopian future in most science fiction films. As the findings to the literature review, a table of twelve summarized elements about futures images in science fiction films (Table 2-1) was provided at the end of the literature review. The research findings, after conducting the interviews and analysis, agree with the majority of showing all elements listed in (Table 2-1) in blockbuster science fiction films. However, the findings of this research have provided more data about common futures images in science fiction films in addition to the findings through literature review.

### **Research Question 2 and 3, Comparison between Science Fiction Films Futures, Preferred Futures of Youth in Iran, and Preferred Futures of Youth in Taiwan**

This section provides the answers found from the results to the second and third research questions of this research. As described in Results Chapter, to answer the second research question of this thesis, every participant has been asked to clarify his or her preference regarding the futures images that they answered through 11 questions of the interview. Therefore, all 14 youths from Iran and Taiwan explained that which futures images in the aspects of social, technology, environment, economics, politics and superheroes, that they saw in the films, were also preferred for them to have in their own futures. Participants also named a metaphor for the future shown in each film and also a metaphor for their preferred future, to provide more data for this comparison. Also, the differences between the images of the preferred futures of the youth of Iran and youth of Taiwan are explained in this section.

### **Comparative Analysis and CLA on Science fiction films futures Society and Youth Preferred Society**

The result of this research shows that the majority of the futures social elements and the society of the future showing in Blockbuster science fiction films, which are described in answer to the first research question, are not preferred by the youth of Iran and Taiwan. The participants clarified that preferable social elements such as Happy people, Women in power, People with a high level of awareness and helpful to each other, which have been seen in 2 of 10 selected

films in this research, can be found very rarely in science fiction films. The majority of youth in this research preferred to live in a society with aliens and in a society with high diversity in races, nationalities, languages, genders and religions. The answer of all participants was “No” when they have been asked if they prefer to live in a society with no diversity at all.

To answer the third research question, there is no significant difference between the futures social themes liked by youth in Iran and Taiwan except that more social themes were being extracted from the films by the youth from Iran. Also, there was no significant difference between the preference of Iranian and Taiwanese youth in living in a diverse society, but, about living with aliens, the female respondents from Taiwan and male respondents from Iran were more interested.

The contrast that explained about the social futures showing in science fiction films and preferred social futures of youth in Iran and Taiwan, is obvious in the following Comparative CLA (Table 5-6). In this comparative CLA, the elements of preferred social futures of youth, which are extracted from Tables (4-1), (4-2), and (4-3) in the Results chapter, are also divided into CLA layers. The contrast between films futures and preferred futures of youth is obvious by comparing each CLA layer of science fiction films futures with CLA layer of youth Preferred futures. This CLA Table is only focused on social elements, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-6.** Comparative CLA analysis between social futures in films and preferred by youth

	Science fiction films futures	Youth Preferred futures
Litany	Sad people, struggling with harmful conflicts with each other and violence Self-centric passive and just judging people who don't understand each other Few people help each other Some aliens are friend, some enemy	Happy people, highly conscious, respecting the rights of each other and helping, trusting, understanding, accepting the differences, loving and connected to each other Races, religions and other diversities are living peacefully and connected together <b>Mostly Iranian Males and Taiwanese Females:</b> Aliens live among humans with peaceful collaborations
Systemic	The structure of society and workforce people to be disconnected and isolated individuals stuck in daily life and just passing the present Highly competitive society Few women in power	Free access to basic resources for all as a natural fact Connected, collaborative and diverse society Access of all to vital living resources equally More women in power
Worldview	Let's survive today, tomorrow has not come yet Leaders and superheroes are responsible to make a paradise for us The One will save us	Never give up, there is always a solution Each individual has a share to shape the world, I am The One, everyone is The One More bless is in giving rather in receiving
Metaphor	100m sprint competition, then die!	The Garden of 1001 Types of Flowers in Love

### **Comparative Analysis and CLA on Science fiction films futures Technology and Youth Preferred Technology**

The kinds of technology and the purpose of using technology in science fiction films are very diverse, and going through the question of preferable technology and purpose provided different results about preferences of the youth. Several themes which were mentioned as preferred by some participants, also mentioned as none preferred by others. But, all youth from Iran and Taiwan disliked the themes of the application of technology which were connected to the destructive impacts and domination purposes. The themes connected to the better and easier life for humans were mostly preferred but few participants also mentioned some of these themes such as “Enhancement of human’s capabilities”, “Saving the time via doing things faster” and “Highly futuristic Technology” as none preferred to them. Most of the youth preferred to keep AI in the level of software and or humanoid robot, but not as an independent decision-maker, while less than half preferred AI as an individual person like humans. It seems AI is less welcome to the society of the future by the youth compared to the aliens.

To answer the third research question, the differences in preferred technological applications were based on personal preferences of participants and the pattern doesn’t suggest a difference between Taiwanese and Iranians preferred technological futures, but, only for having the highly advanced futuristic technology, the pattern shows that the Iranian males are more interested and Taiwanese females less interested.

The contrast that explained about the technological futures showing in science fiction films and preferred technological futures of youth in Iran and Taiwan, is obvious in the following Comparative CLA (Table 5-7). In this comparative CLA, the elements of preferred technological futures of youth, which are extracted from (Table 4-4) in the Results chapter, are also divided in CLA layers. The contrast between films futures and preferred futures of youth are obvious by comparing each CLA layer of science fiction films futures with CLA layer of youth Preferred futures. This CLA Table (Table 5-7) is only focused on technological elements, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-7.** Comparative CLA analysis between technological futures in films and preferred by the youth

	<b>Science fiction films futures</b>	<b>Youth Preferred futures</b>
Litany	Many people being killed by advanced weapons People seek convenient life using technology and AI The capabilities of humans are upgraded by technology People travel through galaxies and time	People and nations live in peace and secured AI helps people for the analysis things and finding solutions to solve their problems Tour to other planets while the earth is our beautiful home

	Humanoid AI and Robots are living among humans	
Systemic	Technology is using for military purposes, observation and controlling the people Developing advanced technology became purpose itself Automated and fast life Technology has Exclusive owners (Technology not for all, just for few) Technology just for profit and dominating Humans lost their control over technology	Technology is using for the betterment of life for all and also to protect the nature Access to technology is not limited to a few rich or dominant party but accessed by all AI is developed in the assisting software level to help to provide options to humans in solving problems (Not as a humanoid citizen) <b>Mostly Iranian Males:</b> Technology is highly developed to enhance the capabilities of humans
Worldview	Technology is the only way to make a better life Technology has solution for every kind of problems Time is gold, live fast!	Technology is just a tool and a tool for creating a better world for all Technology is a double-edged sword Trust the goodness of humanity as the best solution maker
Metaphor	Technology first, everything next!	Humanity first!

### Comparative Analysis and CLA on Science fiction films futures Environment and Youth Preferred Environment

The rate of disliked environmental futures images in science fiction films was quite high in this research. Most science fiction films show an environment that nature is destroyed or natural resources are finishing that none of the Iranian nor Taiwanese youth preferred to have such the most shown science fiction environment in their future. The participants disliked the attitudes of humans in treating the environment and natural resources and using them very fast with no limitation and just for profit and entertainment, without thinking about the consequences of such acts. Some youth of Iran and Taiwan didn't like the ignorance of some science fiction films to show the futures environment the solutions for environmental issues such as climate change. Both Iranian and Taiwanese youth preferred to live in a nature-technology balanced environment in their future, which such preferred environment can be found very rarely in science fiction films. Most of the examples of preferred places to live by both Iran and Taiwan were cities or villages in Europe. Less than half of the participants liked to live on another planet but most of them interested in visiting other planets as a tourist.

To answer the third research question, there was no significant difference between the environmental preferences and dislikes by the youth from Iran and Taiwan, but there was a remarkable difference regarding relocation to another place than the home country. The majority of Iranian youths, 6 of 7, had the intention to migrate to another country, while only 2 Taiwanese females out of 7 respondents had the intention to migrate from Taiwan. Generally, Iranian youth were more interested in relocating, whether to another country, fictional environments, virtual environments and or another planet. The result of this research agrees

with the previous research mentioned in the literature review about the massive preference of Iranian youth to immigrate.

The contrast that explained about the environmental futures showing in science fiction films and preferred environmental futures of youth in Iran and Taiwan, is obvious in the following Comparative CLA (Table 5-8). In this comparative CLA, the elements of preferred environmental futures of youth, which are extracted from (Table 4-5) and (Table 4-6) in the Results chapter, also are divided into CLA layers. The contrast between films futures and preferred futures of youth is obvious by comparing each CLA layer of science fiction films futures with each CLA layer of youth Preferred futures. This CLA Table is only focused on environmental elements, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-8.** Comparative CLA analysis between environmental futures in films and preferred by the youth

	Science fiction films futures	Youth Preferred futures
Litany	Green nature is disappeared Many species extinct Natural resources are finishing Earth is not a place to live anymore	Green nature covered the earth with all various types of species Cities are clean and a mix of modern structures and green nature People travel to visit other planets while the earth is their base to live
Systemic	Misusing the natural resources without considering the consequences Using natural resources for financial profit purposes Developing technology with less consideration to the nature Technologic and automated lifestyle fully replaced the old lifestyle Business as usual	The structure of cities is made through nature-technology balanced orientation Human's lifestyle is connected to the environment and nature Humans control their use of natural resources wisely to protect the environment
Worldview	Nature can recover itself Money can save and recover everything	Natural resources can finish without replacement Human is connected to the nature and can't live without that
Metaphor	To burn our wooden home to watch the firework	There is no Planet B!

### **Comparative Analysis and CLA on Science fiction films futures Economics and Youth Preferred Economics**

Few science fiction films concentrate on showing futures economic systems or issues except showing the big poor-rich gap and poverty for the majority of the society. Therefore, none of the economic conditions and elements in selected science fiction films were preferred by the youth of Iran and Taiwan. The economic situation that they preferred for their future is rarely can be found in science fiction films. All participants preferred a stable financial situation and

the majority of both Taiwanese and Iranian youth had put the priority on work for joy and self-actualization rather than income.

To answer the third research question, there were different preferences for the field of work or the level of financial situation, but all the differences were based on personal preferences and didn't suggest any pattern of difference between Taiwanese and Iranian preferred economic futures. Most of the participants, including Iranians and Taiwanese, had few information about economic systems and how the economy of society works.

The contrast that explained about the economic futures showing in science fiction films and preferred economic futures of youth in Iran and Taiwan, is obvious in the following Comparative CLA (Table 5-9). In this comparative CLA, the preferred economic futures of youth which are extracted from participants' explanation about their preferred economic conditions, both at the personal and social level, also are divided into CLA layers. The contrast between films futures and preferred futures of youth is obvious by comparing each CLA layer of science fiction films futures with each CLA layer of youth Preferred futures. This CLA Table is only focused on economic elements, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

**Table 5-9.** Comparative CLA analysis between economic futures in films and preferred by the youth

	<b>Science fiction films futures</b>	<b>Youth Preferred futures</b>
Litany	Poverty People struggle with financial issues to survive Few rich people Huge poor rich gap	All people living in a good level of life quality People enjoy living and working and does not struggle with low income issues The financial condition of each individual is stable and reliable
Systemic	Economy centric society To make every aspect of life dependent on money Big Corporations' monopoly and domination	The government prepared a free access to the basic resources for all Joy-love and self-actualization centered occupations systems rather than income centered The poor-rich gap is disappeared The economy of society is stable
Worldview	American capitalistic mindset Financial expansionism Money, the most important asset! More money, better life!	Wellbeing! Money-Life Balance Happiness, the real wealth! More bless is in giving rather in receiving
Metaphor	Blood-Coin	Freedom from the shackles of money

## Comparative Analysis and CLA on Science fiction films futures Politics and Youth Preferred Politics

A remarkable number of science fiction films do not concentrate on showing recognizable futures political images, but when they do, they just show a dystopian political situation. Therefore, almost all frequently political themes seen in the selected blockbuster science fiction films were none preferred by both participants from Iran and Taiwan. On the other hand, they preferred political systems that are the listener to the people, do provide freedom and democracy, do spread peace and protect peaceful life and connections, do reduce the limitations, do generate law and regulations compatible with humanity values, do respect and implement the law equally for all, do share power with people, do concentrate on progressing the happiness, comfort, and wellbeing of people, do give right of voting to people, do reduce the social gap between rich and poor, do provide a balanced access to the resources.

To answer the third research question, there was no significant difference between the political futures preferences and dislikes by the youth from Iran and Taiwan.

**Table 5-10.** Comparative CLA analysis between political futures in films and preferred by youth

	Science fiction films futures	Youth Preferred futures
Litany	Nations and groups of people are under war together People lost their freedom and live like slaves People cannot make decision for their lives Few people have easy access to the resources Groups and individuals fight to access the resources	People live in freedom and their rights is respected by the governments Nations and different groups of people are living peacefully and connected together The voice of public is listened by the governments and people have share in creating their future
Systemic	Totalitarian government Global government taking the independency of all nations Access to the resources is programmed and limited to few in power Advanced systems of controlling and observation of people Seeking power and military advantages by all nations	Shared democratic governance spreading freedom, equality, peace, humanity, concentrated on wellbeing and happiness of all domestically and internationally The structure of society and resource management of the governments have provided easy and equal access to the resources by people United Independent Connected Countries full of diversity and uniqueness with a high level of mutual understanding and consciousness internally and externally
Worldview	Militaristic and expansionist	An isolated heaven can't last forever We all are doing governance together Don't expect the Perfect, every good has a dark side; accept that too!
Metaphor	To keep the power at any cost	All together governing the world

The contrast that explained about the political futures showing in science fiction films and preferred political futures of youth in Iran and Taiwan, is obvious in the following Comparative



CLA (Table 5-10). In this comparative CLA, the preferred political futures of youth which are extracted from participants' explanation about the political conditions that they prefer in their future, also are divided into CLA layers. The contrast between films futures and preferred futures of youth is obvious by comparing each CLA layer of science fiction films futures with each CLA layer of youth Preferred futures. This CLA Table is only focused on political elements, but a combination of all STEEP aspects will be provided in (Table 5-13) Causal Layered Analysis.

### **Comparative Analysis of Science fiction films futures Myths and Youth Believed Myths**

Many characteristics of superheroes in the films that were extracted from their answers and listed in the results chapter were being preferred by the youth of Iran and Taiwan. "Self-sacrificing" and "Master mind and positive creator" were mentioned as the most preferable and crucial factors for a real superhero. Some other most shown characteristics for the superheroes in the films such as "Human-kind but super high abilities", "Super Warrior", and "Extremely high physical power" were not mentioned as crucial for a real superhero but the participants accepted that a superhero may need to have such characteristics too.

To answer the third research question, there were no significant differences between the preferred set of superhero characteristics by the youth from Iran and Taiwan.

### **Comparative Analysis of Science Fiction Films Futures Metaphors and Youth Preferred Future Metaphors**

The majority of science fiction films' futures metaphors are none preferable for the youth of Iran and Taiwan. When they have been asked to say a metaphor for their preferred future, not only none of their preferred metaphors was similar to the metaphors of science fiction films futures, but also most of them were opposed to the science fiction films futures. Therefore, this can emphasize that the youth of Iran and Taiwan, don't prefer to live in the futures showing in the majority of blockbuster science fiction films, but in completely opposite kinds of futures.

To answer the third research question, there was no pattern in the results to clarify the different type of preferred futures and metaphors between Taiwanese youth and Iranian youth, just each person discovered different metaphors from the films and also a different metaphor for his/her future, which was the result of personal preferences and perspectives rather than national.

### **Summary of Comparative Analysis of Science Fiction Films Futures, Preferred Futures of Youth in Iran, and Preferred Futures of Youth in Taiwan**

As the summary for answering the second research question of this thesis, futures images in science fiction films are very different than the images of the preferable futures of youth in Iran and Taiwan. The youth of Iran and Taiwan, not only don't prefer to live in the futures showing in the majority of blockbuster science fiction films, but also prefer some completely opposite kind of futures. They don't prefer to live in the futures that are being shown in most of science fiction films, where people are not happy and have harmful conflicts with each other and do struggle with poverty, war, isolation, and violence. They don't want to live under the dominant, strict observation and severe repression of totalitarian governments, whether such governments to be local or global. Or under the domination of big Corporations rule by the minority powerful people whose mindset is just about dominating and conquering and do take control of all resources. They don't want to live in a society that is heading toward extinction by the behavior of its people who overuse the resources without considering the harmful consequences and without taking responsibility for their acts.

They don't want to leave earth to another planet because the earth is dying, nature is destroyed, and natural resources are finishing. They don't want to live in a future where technology is there to kill people, whether massively or limitedly, and extend warfare or to be used to dominate and control people or to destroy nature. They don't want to see this powerful technology in the evil hands in their futures. Aliens also take place in several science fiction films, but the youth don't want to live in a future that is ruling by the aliens or being in daily conflict and combat with the aliens. Most of the Iranian and Taiwanese youth don't prefer to have independent AI as the citizens of their futures as they believe in the evil potential of these human-made powerful machines. They don't want to live in the future that the only solution is to passively just rely on and or follow the superheroes or waiting for "The One" without being proactive to prevent the disasters ahead. All these are what is being shown in the majority of blockbuster science fiction films, but the youth of Iran and Taiwan don't want to live in a future full of war and horror.

Talking about the other part of the second research question, which is seeking the similarities between the images of the future in science fiction films and the images of preferred futures of youth, there are some similarities but very few. The youth of Iran and Taiwan prefer to live in a society that is seen rarely in these films, such as a future that people are happy with a high level of awareness, respecting the rights of each other, helping, trusting, understanding, accepting, connected, and loving each other without stereotype. They prefer the rarely seen futures in the films where women are also in power and the governments spread equality and

freedom and listen to people. They like to have the technology for the betterment of peoples' life and sustainable growth and also helps to protect and resuscitate nature. They prefer to live in a nature-technology balanced environment which could be found very rarely in science fiction films. Many of science fiction films show other planets as the home for humans or aliens, which makes the youth interested in visiting other planets, but still, the majority of them like to stay on earth for living in the future. They welcome the friend aliens to their shared futures society having diversity at everything, including different races, nationalities, languages, genders, and religions. The youth accept to have superhuman models who are superconscious and creative and sacrifice themselves for humanity in the future, but they want themselves to be proactive, independent decision-makers and not the blind followers of such leader superheroes. As the final word, if we imagine the world of hole blockbuster science fiction films in the size of the Earth, the preferred futures images for the youth of Iran and Taiwan on this planet is only as small as Wakanda compare to the whole.

And as a summary for answering the third research question of this thesis, to compare the preferred futures of youth in Iran with the preferred futures of youth in Taiwan, through science fiction films, both Taiwanese and Iranian youth prefer the images of the future that described in the previous paragraph but, there are very few differences. The four distinguished differences are about living with aliens, highly advanced futuristic technology, concentration on social elements, and relocation. The two first differences are not upon nationality preferences but a mix of nationality and gender. About living with the aliens, the female respondents from Taiwan and male respondents from Iran are more interested than Taiwanese males and Iranian females. For having the highly advanced futuristic technology, the Iranian males are more interested and Taiwanese females less interested. As the third distinguished point, the results show that Iranian youth do concentrate on social elements more than Taiwanese youth. The most remarkable difference is about preferences and variety regarding relocation. The majority of Iranian youth have the intention to migrate to another country, while few Taiwanese youths have such intention to migrate from Taiwan. (Table 5-11) presents a concluding summary to the answers to three research questions of this research together.

Another concluding table for the answers to the research questions together will be presented through CLA Scenario in (Table 5-13). In previous sections, a CLA analysis was provided for each STEEP aspect of science fiction films futures and also for each STEEP aspect of preferred futures of youth. All these CLA analyses will be combined, covering all STEEP aspects together in (Table 5-13) which can show concluded answers to all three Research Questions together through four layers of CLA.

**Table 5-11.** Concluding table for answers to three research questions together:

RQ1: Common science fiction films futures, RQ.2: Compare film futures with youth preferred futures,

RQ.3: Compare preferred futures of youth in Iran and Taiwan

Most common futures themes in science fiction films	Compare to preferred futures of youth in Iran and Taiwan			
People with low awareness, Stuck in daily life, passive and blind followers, and dependent on superheroes	IR	M	I and other people to be highly conscious and responsible for my life	
		F		
	TW	M		
		F		
People unhappy, depressed, self-centric, and not understanding each other	IR	M	To live happily, respecting the rights of each other, helping, trusting, and understanding each other. Accepting the differences and diversity	
		F		
	TW	M		
		F		
Conflict and war between humans and aliens	IR	M	Peaceful Aliens live with humans	
		F	Less interested in living with aliens	
	TW	M	Peaceful Aliens live with humans	
		F		
Violence and harmful conflicts, War and Militarism	IR	M	United but Independent countries full of diversity. All nations, races, religions, and other diversities to live peacefully and connected together	
		F		
	TW	M		
		F		
Technology as the killing machine, destroying humanity, and for domination and military purposes	IR	M	Technology for all and for the betterment of all, sustainable growth, protecting the nature	
		F		
	TW	M		
		F		
Highly Futuristic Technology	IR	M	Highly advanced technology and high-tech lifestyle	
		F	Technology to make comfortable life,	
	TW	M	Transferring consciousness to other body as an experience	
		F	less technological lifestyle	
Valuable resources to be exclusive and usually in the devil hands	IR	M	Free access to basic resources for all but wisely use and protect them	
		F		
	TW	M		
		F		
AI everywhere, some as citizens, usually having conflict with humans	IR	M	AI as software or robot assisting human in solving problems (not as independent AI)	
		F		
	TW	M		
		F		
Poverty and big wealth gap and The hegemony of big corporations	IR	M	Not to have money concerns; to work for joy and self-actualization rather than for income and surviving	
		F		
	TW	M		
		F		
Disappearing the green nature Finishing the natural resources Earth is destroying Humans leave to other planets	IR	M	Migrate to another country	To live in Nature-technology balanced environment. To have harmony with nature and protect it. To have tours to other planets while the earth is our beautiful home
		F		
	TW	M	Explore the world	
		F		
Global or local totalitarian governments and slave people	IR	M	Having a shared and democratic governance system and concentrate on the wellbeing and happiness of all, both domestically and internationally. Freedom, equality, peace, for all by a shared government where women also are in power	
		F		
	TW	M		
		F		
Someone should make self-sacrifice to save the world	IR	M	The most important characteristic of a superhero is self-sacrificing for others. But all humans are sharing the responsibility like a community of superheroes	
		F		
	TW	M		
		F		

### **Examining the hypothesis for the Research Question 2**

The findings of this research agree with the hypothesis for the research question about differences and similarities between science fiction films' futures and preferred futures of youth in Iran and Taiwan. According to the hypothesis and also the results of this research, most of the futures images shown in science fiction films are different from the preferred futures of youth. But on the other hand, this research also revealed a few images in science fiction films that are preferred to the youth in Iran and Taiwan.

### **Examining the hypothesis for the Research Question 3**

The findings of this research agree on a part of the hypothesis for the third research question in general, but the findings show more data about the details of anticipated results. The findings of this research agree that there are significant similarities between preferred futures of youth in Iran and Taiwan, and very few differences. But, on the other hand, findings of this research showed that the differences between preferred futures of Iranian and Taiwanese youth are even fewer than what findings through literature review show, and also these differences are a mix of gender-nationality rather than only preferences by the nationality. For example, as reviewed in detail in previous sections of the Analysis Chapter and in the Results Chapter: Taiwanese females and Iranian males are more interested than aliens live among humans, while Iranian female and Taiwanese males are less interested; Iranian males are more interested in highly futuristic technology, while Taiwanese females are less interested.

### **Research Question 4, futures images that might show preferred futures worlds to be considered in writing and directing of science fiction films**

Conducting this research and the valuable findings are very important to the author not only as a Master's program graduation dissertation but also as an important guide to his future filmmaking journey. The findings of this research revealed to the author that which parts of the futures showing in science fiction films could be considered as preferred future for the youth, particularly in Iran and Taiwan, who are the main contributors in building their futures societies. He also found that some other preferred futures of the youth are not being shown in the films or are being shown very rarely. He also found out that his personal assumption was reasonable and compatible with the point of view of most critics, public and the youth, that the majority of the high-grossing blockbuster science fiction films are dystopian and very few images of preferable futures are being shown in such popular films, and also these films are warning oriented rather than being a solution provider.

The findings shown in the tables of Results Chapter (Tables 4-1 to 4-14), clarifies the most preferred futures images through science fiction films for the youth. The contents of these tables provide a wide range of data to be considered by the author of this research, who is also a writer, director, and producer of science fiction films. To summarize the analysis, the following major themes (Table 5-12) can be considered by the author in designing futures preferable images to be included in his scripts and films:

**Table 5-12.** Major themes to be used by the author of this research for designing preferable futures images in writing and directing his science fiction films

Happy people with a high level of awareness, respecting the rights of each other, helping, trusting, understanding, accepting, connected, and loving each other without stereotype
Shared futures societies with diversity at every angle including different races, nationalities, languages, genders, religions, perspectives, and on the other hand, maintaining the cultures, security, and freedom for all; Peaceful aliens also are welcome to this shared diverse society
Independent but united nations with democratic governments who spread local and global peace, equality, freedom, human rights, and listen to people
Nature-technology balanced environment where people are also connected to the environment and other species and take care about the environment, resources, and others as well as keeping the earth as our home while traveling through space
Technology for the betterment of peoples' lives, sustainable growth, protecting nature, connectivity, peace, joy, and gifting lives rather than taking them
Access to all resources by all and no exclusive access to vital resources, technology, opportunities in society, and other facilities for living, growing, and wellbeing
New worlds, environments, situations, products, perspectives, solutions, concepts, and ideas as opportunities to explore, experience, and imagine other possibilities in every aspect of life that we are familiar with or don't know about
All together to be the superhero, proactive and responsible for our present and future, and not to be just followers
Economy and financial issues turn from a major indicator of life quality into a facility to create the mentioned happy and shared society for all

In addition to these analyzed themes in (Table 5-12), the metaphors of youth for their preferred futures collected in (Table 4-14) could be used as a guideline for designing preferable futures images for science fiction scripts and films by the author of this dissertation.

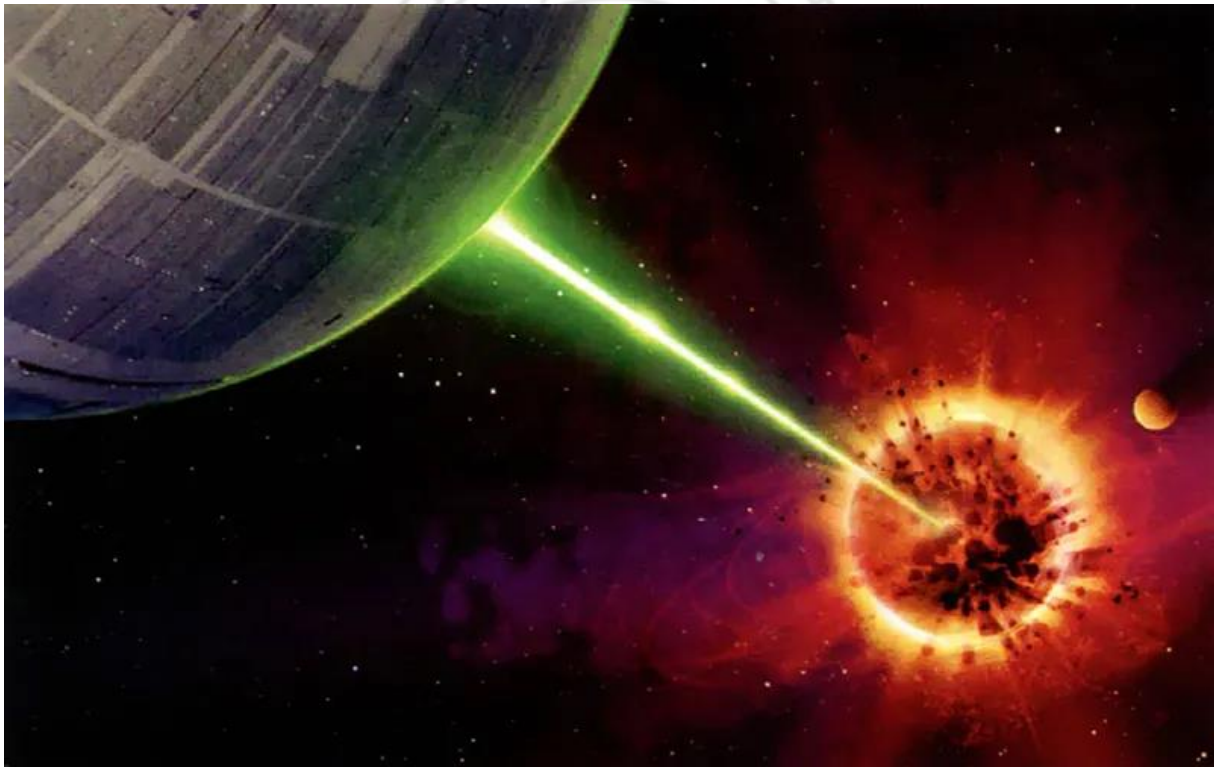
## Causal Layered Analysis Scenario of Science Fiction Films Futures compare to Preferred Futures of Youth

**Table 5-13.** Comparison CLA Deepening and Scenarios between the Science Fiction Films Futures and Preferred Futures of Youth in Iran and Taiwan

	Science fiction films futures	Youth Preferred Futures
<b>Litany</b>	<p>Unhappy self-centric people and nations disconnected, having harmful conflicts with each other; do struggle with poverty, isolation, cruel rulers, war, and violence; stuck in a daily routine to just meet the basic survival needs.</p> <p>Nature is destroyed; natural resources are finishing; heading toward extinction; searching for another planet to live there and destroy it again!</p> <p>Sometimes alien on top, sometimes AI, and sometimes humans, taking each other as slaves; War forever!</p>	<p>Happy people, highly conscious, living in freedom, respecting the rights of each other and helping, trusting, understanding, accepting the differences, loving and connected to each other universe-wide without stereotype.</p> <p>Tour to other planets while the earth is our beautiful home.</p> <p>Nations, races, religions, and other diversities are living peacefully and connected together.</p> <p><b>(mostly Iranian Males and Taiwanese Females prefer)</b> Aliens and humans live together in peace and with synergic collaboration</p>
<b>Systemic</b>	<p>Totalitarian governments doing restrict observation and repression, limiting freedom and access to vital resources, and sacrificing everything to keep power, dominance, and control over people.</p> <p>Monopole giant Corporations ruling by few rich.</p> <p>Nations are closed systems with few external exchanges, mainly focused on their own development and excellency over the other nations.</p> <p>Overuse of natural resources irresponsibly without renewing with no consideration on the consequences.</p> <p>Technology exclusively in hand of few and is developing for expanding the domination, observation, fast consuming the natural resources, financial profits, and military advantage over the other nations and groups</p>	<p>Shared democratic governance spreading freedom, equality, peace, humanity, concentrating on the wellbeing and happiness of all domestically and internationally.</p> <p>United Independent Connected Countries full of diversity and uniqueness with a high level of mutual understanding and consciousness internally and externally.</p> <p>Free access to basic resources for all as a natural fact.</p> <p>Joy-love and self-actualization-centered occupation systems.</p> <p>Nature-technology balanced environment connected with humans in a harmony of all together.</p> <p>Technology for all and do wisely use of this double-edged sword for the betterment of all and sustainable growth and to protecting the nature, while being conscious about the potential of using it for evil purposes.</p> <p><b>(mostly Iranian Males prefer)</b> Technology is highly developed to enhance the capabilities of humans</p> <p><b>(mostly Taiwanese Female prefer)</b> Nature-based and less technological lifestyle is possible for all too, and no one is forced to accept a high-tech lifestyle</p>
<b>Worldview</b>	<p>People's mindset: to survive</p> <p>Rulers' mindset: to dominate</p> <p>To conquer or to be conquered</p> <p>Each race, religion, nationality: We know the best, we are the best</p> <p>Nature will renew itself</p> <p>Leaders and superheroes are responsible for making a paradise for us</p> <p>The One will save us</p>	<p>An isolated heaven can't last forever</p> <p>More bless is in giving rather in receiving</p> <p>Each individual has a share in shaping the world; I am "The One", everyone is "The One"</p> <p>Trust the goodness of humanity</p> <p>Don't expect the Perfect, every good has a dark side; accept that too!</p> <p>Never give up; there is always a solution</p>
<b>Metaphor</b>	The Killing Machines	Nightingale in the Flowers Garden with THORNS

In previous sections of this chapter, each STEEP aspect for science fiction film futures and also each STEEP aspect for preferred futures of youth, has been analyzed separately in CLA charts, and here we go through a collective analysis of all STEEP aspects together in one CLA chart. CLA (Table 5-13) provides a comparative Causal Layered Analysis (Inayatullah, 1998) between common futures images showing in blockbuster science fiction films and the preferred futures of youth in Iran and Taiwan. According to the findings and comparison done in the previous sections in this chapter and results chapter, the preferred future of youth in Iran and Taiwan are remarkably similar to each other. The only significant differences between the preferred futures of youth were about living with aliens and the highly futuristic technology. Taiwanese females and Iranian males were more interested in living with aliens, and Iranian males were more interested in advanced and futuristic technology. Therefore, the analysis of preferred futures of youth of Iran and Taiwan will be done in one CLA column with distinguishing the two mentioned differences.

#### CLA Scenario of Science Fiction Films Futures



**Figure 5-2.** Metaphor: The Killing Machines, Image: “Death Star” super laser in Star Wars which can blow up the entire planet<sup>16</sup>

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<sup>16</sup> Source of the image: <https://reelrundown.com/movies/strongest-superweapons-in-star-wars>



Litany layer contains the reality and visible situation of the future that is mostly shown in science fiction films. According to the results of this research, these images are mostly dystopian and not preferred by the youth of Iran and Taiwan. In the most common future scenario of science fiction films, the majority of people are unhappy and depressed and struggling to survive under an apocalyptic atmosphere has made by cruel rulers, war, poverty, and in some scenarios, by aliens or robots. Because of such pressure, people are very disconnected and not only understand each other; they see others as competitors and threats. In some societies that are a bit advanced, again people are living with low awareness and stuck in daily life with no purpose or meaning. Different races and groups of people have conflict with each other and sometimes by expansion of diversity to aliens and robots, the situation become worst. Nature is destroyed by humans and natural resources are about to finish and to make earth as an unlivable planet, therefore a lot of remained resources spent for finding other home in the universe to possibly leave the earth and survive. The scenario changes time to time when aliens overcome humans, then humans overcome the aliens, then robots come and overcome all, and this cycle continues forever. These dystopian condition has some causes underneath. In the system layer, some systemic causes for these disliked futures images have been mapped.

Systemic causes of the explained future are various such as totalitarian governing systems, monopole giant Corporations, closed system nations, overusing the natural resources, and developing technology for domination and destructive purposes. Totalitarian governing systems, whether local or global government, spend all resources and power to maintain their domination and power; therefore, they limit the freedom of people and do severe repression on their reactions and apply the restrict observations on them. Also, by limiting the access of people to the vital living resources, these governments keep people dependent and obedient. Such rulers do not hesitate to sacrifice everything including the natural resources and all heritages of humanity for their dominant purpose. Such a ruling system causes sadness and conflicts between people who are explained in the litany layer. In addition to governing systems, some giant corporation which is not less powerful than governments, do the monopoly of the resources and market and consume all resources including the human resources just for one ultra-goal, financial profit. Such economic systems not only reinforce the difficult condition of regular people, but also consume the natural resources quickly to meet their goals.

The other systemic cause for the dystopian futures images in science fiction films is closed nations or groups which are very self-centric and only take care of their own excellency and development without caring what is happening to other nations or groups. Such groups of people, even when they have exchanges with the other nations or groups, their goal is to protect

their own advantage and profit rather than mutual growth. Most of the time, such nations are groups of humans having conflict and war together, and sometimes the groups of aliens or robots are also being added to this challenge. The interesting point is that the groups of aliens and robots also are imagined very similar to humans with the same ultra-goal of domination and conquering. Natural resources always become the victim of all challenges and acts mentioned above. Not only the governments and big corporations use the natural resources without considering the consequences, but also people, who are not aware enough, misuse the resources and destroy nature. The wars between human nations and also a human-alien-robot trio make the environmental condition even worst. All these mentioned groups also have a very powerful weapon - technology - in hand. The overuse of technology for military purposes and developing the killing machines in science fiction films, generates an image that, for the groups introduced here, the word of 'technology' is a synonym to the word 'weapon'. In such a future visualized by most science fiction films, the major purpose of developing technology is for expanding or maintaining dominance, the military advantage over the other nations and groups, and financial profit. Such high technology is usually in the hand of few people and not accessible for all.

The worldview layer describes the beliefs that cause the systems mentioned above and consequently the reality in the litany layer. Under the pressure of hard life and struggling with the conflicts and challenges mentioned in the litany layer, the core mindset of people become: just to survive, then they consciously or unconsciously treat in this way and see others as a threat for their survival. Then the conflicts between people rise more and more, and this loop continues and grows. On the other hand, the core mindset and purpose of the rulers is to dominate; therefore, they use whatever possible to expand and keep their domination and power. However, going deeper into the mindset of totalitarian rulers, again, the mean of "to survive" is underneath for many of them. The rulers keep their domination and control over the others because they have a fear of being taken down to a condition that again has to struggle with the daily challenge of surviving.

This fear also comes from another worldview which is shaped through history as long as the history of the existence of the species, including humans on earth. This worldview is: To conquer or be conquered. Another worldview which causes the conflicts between various diversities such as different races, religion, nationality, languages, genders, and generations is that every group thinks that they are the best in the world and they are doing right while the others do not. Such belief also causes the groups of people do not understand and accept each other, and most of the time, as seen in science fiction films, these groups, whether disconnect

with each other or fight with each other, or conquer each other, or direct their relationships in any way except understanding and loving each other. The other belief is that nature could renew itself. Therefore, people in science fiction films futures destroy nature and use natural resources without taking responsibility or considering the harmful consequences of these acts. The irresponsibility of people is not only limited to the overusing of natural resources; they are not responsible even for their own future. In many science fiction films, we see that only one or few superheroes save the world, and people are just there to be survived. People are very dependent on superheroes and took a passive attitude and just expect that their heroes must create a heaven for them or save them from disasters. Seeing those superheroes and the leader as only responsible causes people to just do judgment and critics rather than being proactive and do something to prevent the disasters. Sometimes in the futures of these films, all superheroes and powers of the world are compressed into only one savior who saves the world, lonely.

The best metaphor for common futures in science fiction films might be “The Killing Machines”, because all youth in this research recognized that war, weapons and military power were the centric topic in all selected films for this research and the main theme of these science fiction films is fear and terrifying of being killed (see Figure 5-2).

### CLA Scenario of Youth Preferred Futures



**Figure 5-3.** Metaphor: Nightingale in the Flowers Garden with THORNS  
(Design and painting: Ali Montazami)

In contrast with the litany layer of science fiction films futures, in the preferred futures of youth, people are happy and living in freedom. People respect the rights of each other and understand each other by accepting their differences. They trust in the goodness of each other and are connected to each other like the parts of one unique body helping each other loving not only whole humanity but also whole the world and whatever is there, including other species and nature. The deep connection of people and groups has made a peaceful life for all, including nations, races, religions, and other diversities. Such deep holistic connection has put the environment in a healthy condition, and despite the existence of discovered and prepared planets to live, people prefer to keep the earth as their permanent hope planet, but time by time, they travel to other worlds. Among the youth, Iranian males and Taiwanese females prefer to share the explained preferred future with the aliens and accept them as citizens to live with humans peacefully.

For creating the future, which is explained in the litany layer, the systemic causes of the preferred future of youth are dramatically different than the systemic causes of science fiction films futures. In opposite to totalitarian governing systems, the governing system in the preferred future is a shared democratic governance system. The aim of this system is not to rule the society but to facilitate the involvement of people in decision-making and governing the society. There is no line separating the government from the people, and all are mixed together. Such governing system spreads freedom, equality, peace, wellbeing, and happiness among itself. Among governing systems, because people and all also are inside the system and there is no “us and them”. The policy of this governing system is not the excellence just for us, but to collaborate with other countries and the world.

Despite the sharing of power and deep connection internally and externally, countries are independent and have kept their cultures, languages, diversities, and uniqueness. The mutual understanding and connection between nations have brought peaceful life and relationship for all. Access to resources to fulfill the basic needs is available for all as a natural fact after born, and people do not have to work to fulfill survival needs but for joy and self-actualization. The historical conflict between nature and technology has over, and people are living in a Nature-technology balanced environment where everything is connected with a high level of harmony. Fully natural environments also exist massively. Technology is not something separated from nature, and its development doesn't mean harming nature but protecting nature as a whole nature-technology system.

As the area of domination and conquer-conquered is over, the use of technology is concentrated on the wellbeing of all, including humans and all species. However, all are

conscious of the potential of using technology for evil purposes. People don't have to live in the same condition regarding the nature-technology balance level and advancement. They can choose how high-tech to be their lifestyle, and no one is forced to accept either high-tech or low-tech lifestyle; everything is by choice. Most of the Iranian males chose a highly advanced technologic lifestyle while Taiwanese females and other groups enjoy living less technologic lifestyles.

Such systems and the preferred world is shaped upon strong worldviews. Through the generations and experiencing plenty of historical examples, the evolution of humans' worldview has reached the point to believe that isolated heaven can't last forever. History is full of examples of empires and utopian civilizations that vanished. In the preferred future of Iranian and Taiwanese youth, people believe that they all need to thrive, as a whole, because they live in a shared world and push others down finally will cause decline, whatever the nation to be robust and fully armed. They also experienced that more blessing is in giving rather than in receiving. They show love and support and help to each other, and in this growing cycle of generosity, each person receives even more. They believe in themselves as each one is "The One" to make society a better place to live. They don't wait passively, expecting the superheroes or "The One" superhero to change their destiny. They believe that each of them is a part of the world and has a share in shaping it. In this way, they trust each other and humanity's goodness to take it as the light to find a better way while believing that they need to accept the dark side of every goodness. Considering this, they accept each other and all diversities on earth and the universe. Also, by accepting the undesirable side of goodness, they come to this belief that a preferred future is not somewhere that everything is desirable, and there will always be challenges, but they never give up because they believe that when a problem comes up, the solution is also around, the real challenge is to find that.

Maybe a metaphor that one of the female youth from Iran put for her preferred future, "Nightingale in the Flowers Garden, " could also fit other youth's preferred futures in this research. "Nightingale in Flowers Garden" is a metaphor that many people in Iran use to refer to an extremely utopian society. Writing about the singing, happiness, and falling in love by nightingale in a garden of flowers, is one of the Persian poetry metaphors to refer to the best feeling. This metaphor can show how good youth's preferred future is, but it needs a bit of change here to show how it may be possible. We sometimes expect a utopian future society thoroughly desirable. We sometimes expect people to be entirely perfect and as we like. This expectation maybe forces us never to find something preferable and or leads us to disconnections because we cannot accept the others. Nightingale in the Flowers Garden means

that everything is excellent, but we need to remember that flowers have thorns as well, and we need to accept that part also. Then in real-life, a metaphor for the preferred future of the youth of Iran and Taiwan might be “Nightingale in the Flowers Garden with THORNS” (see Figure 5-3).



## Chapter 6

### Conclusion

Forty-two years ago, as a four-year child while watching *The Six Million Dollar Man*, in mysterious Egypt, far from my hometown, I began to think about technology and the future; four decades later, by studying futures studies in green Taiwan, and far from my hometown, I learned how to think about *the futures* rather than *the future* and not only focus on advanced technology as a way to create better futures. Not to mention that my motherland, Iran, well prepared me for going through all these transformations.

This dissertation provided some outcomes as a multipurpose approach by bringing the youth, futures studies, and science fiction films together. The results of this research are coherent to the findings of other researchers that almost all blockbuster science fiction films show a dark and dystopian future. All studied science fiction films which were ranked number one to ranked number 40 of the worldwide 50 highest-grossing blockbuster science fiction films after 2000 (see Appendix VI), are warning-oriented rather than providing solutions to prevent disasters. The majority of futures images in blockbuster science fiction films are not preferred as a dreamed future by the youth of Iran and Taiwan, but these two groups showed attraction to very few images which usually were from the aliens' planet or a very small area on earth. It seems the filmmakers can also imagine very well that what might be a preferred future of the public. Findings validated that the preferred futures of youth in Iran and Taiwan are significantly similar.

This unique and first-time comparative study between the youth in Iran and Taiwan revealed the major preferred themes for the aspects of Social, Technological, Environmental, Economic, and Politics among these two groups. The major elements for the preferred future of both groups were quite similar and only a few differences. Iranian males showed more interest in the high-tech lifestyle, and all Taiwanese females and Iranian males showed interested in having aliens in the society. Such a small sample in this qualitative research cannot suggest a pattern for these different preferences, and quantitative research may be needed to support this finding. There are also several outcomes from this research for my futures journey. I am equipped with guidelines about the futures' images to use in my futures products, but also new windows opened to me to imagine the futures and everything connected to it. I have generated a massive database about preferable futures images by gathering data from 14 participants who all had a very pathfinder and creative mind. These were the outcomes of conducting qualitative research and in-depth interviews.



Causal Layers Analysis-CLA (Inayatullah, 1998) methodology is used 12 times in this research. Through using CLA, an inclusive perspective in different layers of Litany, Systemic, Worldview, and Metaphor, both for the futures shown in the highest-grossing blockbuster science fiction films and for the preferred futures of youth in Iran and Taiwan have been created. A specific technic that was used in the analysis of data was using CLA on each aspect of STEEP separately to analyze and understand the underneath causal layers of each aspect in detail. In addition to the detailed analysis of each aspect, two comprehensive scenarios have been mapped by applying CLA. One scenario showed the common futures in science fiction films, and another scenario showed a common preferred future of youth in Iran and Taiwan. In the common preferred future, also their few different preferences have been considered. The STEEP Analysis method (Fleisher & Bensoussan, 2003), which was a basement to design interview questions and analysis accompanying with CLA, powered this research to go deep into various aspects of life and society to understand the future that the youth may prefer, as well as various aspects in the futures showing in the films.

The finding of “The most blockbuster science fiction films are showing dark and dystopian future” is reliable and can be generalized to most science fiction films according to the consensus found in the responses of all respondents and the reviewed literature. The finding of “The futures showing in blockbuster science fiction films is not preferred future to the youth” is also reliable for the youth of Iran and Taiwan according to the contrast found in the literature and research analysis between youth's preferred futures and futures in science fiction films. Generalizing this finding to whole youth in the world might be possible, but no evidence from other youth has been gathered to judge, as it was not the scope of this research.

One of the limitations of this research was language as repeatedly described. My native language is Persian, the languages of literature was English, Chinese and Persian, the native language of Taiwanese participants was Chinese, and the language of this dissertation is English. This limitation caused less freedom in selecting Taiwanese participants and limited participants to those having good English speaking skills. Also, translating the Chinese and Persian literature and data from interviews to English caused a huge time consumption. The other limitation was sampling in Iran. As I live in Taiwan, I had to use Iranian friends' help to introduce some candidates for finding respondents in Iran. To conduct the interviews online instead of freely face-to-face sessions, because of my distance to Iran and also the situation of the pandemic COVID-19, was another limitation of this research.

As follow-up research works, several studies can be suggested. Specific research works about the preferred futures of youth in Iran and Taiwan will help gather more data in this field.



Both qualitative and quantitative research works can be helpful in this regard as with quantitative research, maybe some patterns about preferences of different genders and nationalities can be discovered, which couldn't be reliable because of the small sample size. Also, the influence of science fiction films in the vision of youth about probable and preferable futures can gather more data about how science fiction films may be used for not only creating positive visions and hope about the future but also to help in creating preferable futures.

For a story, "Having conflict is so important ... having conflict in every scene, guarantees that you will keep the audience's attention" Snyder (2013, p. 112), then to attract more audience, science fiction films show catastrophic futures with the worst conflicts they could imagine. But here is a question: youth want a future that sci-fi is not giving. Will youth become cynical as they age, or will science fiction films change?



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## APPENDIX I

### Futures images in science fiction films by perspective of authors and critics

Social	Almost all protagonists are white and male (especially Americans); minor roles for non-white people and women; Patriarchal society; science and technology linked to men; women object to scientific experiments; association between the monster and women's reproductive functions; women as a sexy fighting machine and highly sexualized; missing the role of family, woman and spiritual; very few cultural and ethnicity diversity; main credential role of nationality; Small number of the rich are in control; few countries developed; Fear of the aliens; linking negativity to aliens; aliens as Earth invaders and hostile; Intelligence confused with consciousness; humanoid robots as conscious citizen; humans fall in love with the robots; robots tries to kill and replace the humans' society; breakdown of traditional structures; sense of meaninglessness.
Technology and science	Dominant role of Technology; AI and humanoid robots; spaceships; personal cars; flying cars; skyscrapers; militarism; futuristic overpopulated cities; manipulation of human genetics; replicated humans; transformation of human to superman or monster; creating super soldiers; time and matter transporters; mad scientists and; Western high-tech; destructive image for technological development; technology destroys humanity; warning the ending up to a dystopian future if continuing our excessive trust in technology and current direction of technological development.
Environmental	Nature dominated by technology; technology destroyed the nature; pollution; nature is displaced by technology; technology itself has become landscape; Futuristic cities as a hell of scientific progress and human despair; Hyper-urbanism; decaying large cities; sterile enclosed cities; deserts; lots of garbage; lack of non-human nature; very few animals; rare trees; ecological disasters.
Economic	dominance of American capitalism over the world; hegemony of techno-economic interests and late-capitalism.
Political	American dominance over the world; hegemony of the large corporations; war and militarism; nuclear wars.
Overall	Technology and science aspects are playing a centric role while social aspects receive little attention in science fiction films. Portraying a single view of the future limited to western culture mostly, showing dystopian future which is inevitably less healthy and less wealthy where humans are their own worst enemy, focusing on fear similar to horror films but in a large scale and apocalyptic destiny of the humanity are the most frequently shown futures images in science fiction films.

## APPENDIX II

### Futures images in science fiction films by perspective of youth in Iran, extracted from literature review

Social	The savior of the apocalypse; strict control and observing the people; slavery of people by dominant powers; loosing personal privacy.
Technology and science	Concentration on technology development; various fields of science; Imagination of the future; artificial intelligence; robots; genetic manipulation; spaceships; flying cars; creating totally another world; entering to the creation domain of God.
Political	Showing the ruling political powers in the world and their political purposes; exaggerating the military power of United States.
Overall	As an overall theme for most of science fiction films, youth have addressed technology centric, prediction of the future, showing unrealistic and unbelievable fictions, dark and frustrating future which impose the losing of hope and feeling depressed toward the future.

## APPENDIX III

### Futures images in science fiction films by perspective of youth in Taiwan, extracted from literature review

Social	Sever inequality; aliens and humanoid AI robots as futures citizens; robots as human's enemy.
Technology and science	Robots and AI; spaceships; time machine; light speed transportation; advanced computers; information technology; cyborgs; genetic technology.
Environmental	Environmental disasters which are caused by human and developing technology; nature is destroyed by human.
Economic	The gap between the rich and the poor.
Overall	Technology is the most shown aspect in science fiction films and the most changes are happening because of technological advancements. Financial profit for the filmmaker is the first purpose of making science fiction films then, only the elements will be shown that could grab the attention of audience. Warning about possible disasters made by human in the future is the next but less important goal of these films.

## APPENDIX IV

### Preferred futures of youth in Iran, extracted from literature review

Social and Individual Preferred futures	Happy and healthy family; Successful love marriage and good shared life; Success and happiness of my children; Peaceful life; everyone to be happy; To maintain religion and nationality and ethnicity values; People care about each other; rights for all to express their believes; Thoughts to be respected; Free healthy communication between boys and girls; Life-satisfaction; well-being; Mental health; positive emotions like joy, peace and happiness; peace of mind and optimism; equality; justice; peace; security; pluralism; respect for each other; a society rich with spiritual peace; progress and prosperity; full of knowledge; full of ethics; diversity and where the plural ideas are respected; growth; self-actualization; citizens' satisfaction; To end life happily.
Social Fears and disliked futures	People only care of themselves and not the others; Abusing the other people for only self-success; Inequality towards women; Barriers for healthy relationship between boys and girls; Gender-centric atmospheres; Losing family or family members; Treating with elderlies as a useless person; Missing the goals and living purposeless; Losing control on issues; Losing time and opportunities; Failing in accomplishing the planned tasks; Losing whatever already owned; Being just self-centered; Diseases and illness.
Technology and science Preferred futures	Sustainable development; Trusting technology to find way to better future. Generally, very few concentrations on technology by the participants while talking about their preferred futures.
Technology Fears and disliked futures	The impact of the postindustrial and information technology era especially on their children
Environmental Preferred futures and place to live	The respected and protected nature; Desired climate; Clean air; Not crowded place; No traffic jams; Migrate to another country.
Environmental Fears and disliked futures	Water rationing and lack of water and drought; Dried environment; Regional water wars; Dystopian images about present and future of Iran; Crowded cities; Traffic jams; Pollution; Destroyed nature; Explosion of the Earth.
Economic Preferred futures	Disappearing the poverty from the world; Personal financial success; Reducing the wealth gap between social classes; Easy wealth, Economic development of society; Equality; Economic welfare; Occupational success.
Economic Fears and disliked futures	Financial gain as the objective for everyone; Economy as the biggest challenge in life; Economy at the center and the most important matter; Suffering by poverty, Big economic gap between social classes; Many embezzlement cases; To be fraud; Inflation; Fail to achieve financial goals; Sacrificing life for challenging with financial needs.

Political and Governance Preferred futures	Freedom; Equality; Justice; Peace; Pluralism; Security; Changing the political structure; Support the talents, innovators and inventors.
Political Fears and disliked futures	War; Attack by ISIS.
Myth and Metaphor	Ordinary people; Oriented into a right pathway; Respecting social and humanity responsibilities.
Overall points of researchers	Iranian youth have stuck in past and present struggling with their frustrations and fears of losing what they have got hardly rather than thinking about what different and preferable future might unfold. Iranian youth don't have a right definition about preferable futures and what is better to happen; Satisfaction and quality of life of Iranian youth is low; Negatively has affected their images of the future; They cannot disconnect from their regrets.

## APPENDIX V

### Preferred futures of youth in Taiwan, extracted from literature review

Social and Individual Preferred futures	An open and global environment; Broad and diversified friendship; Leisure and travel over work, Family and relationships; Multicultural and sharing world; Each citizen being super-rich; Owning a personal airplane; Travel; Individual rights; Quality of life to be crucial as wealth issues; Spiritual future; Community/organic future; Equality; Equity; Forgiveness; Freedom; Honor; Human Rights; Justice; Love; No Hunger; Health; Peace; Public Order; Realization of ideals; Social Welfare; Individual And Social Stability; Comfortable Life; Contented Life; To Have Good And Honest Heart; Good Marriage; Knowledge And Education; To Live In The Spirit of Soul; Self-Consciousness And Self-Esteem; To Be Smart; Contact With Other Races In Space; Living With Aliens; Bondage To Other People; Cooperation With Others; To Respect Family Ethics And Morality; Happy Family; Keeping Strong Family Tie; Respect Filial Duty; Respect For Others.
Social Fears and disliked futures	Crime For Fun; Few Babies And Aging Society; To Be Controlled By Criminal Gangs; Hunger And Starving; Illness; Not Having Choice; No Freedom; No Safety; Poverty; Social Disorder; Violence In Society; To Die Painfully; To Die In The War; Feeling Of Uselessness; To Be Greedy; Pursuing Fame And Gain Forever; To Be Arrogant; To Be Cold And Detached From The Others; Detached Family; Having Evil Heart; Mistrust To Each Other; No Confidence In Each Other; No Friendship; Racial Discrimination; To Be Ruthless And Sacrificing Other People For One's Selfish.
Technology and science Preferred futures	Technology for Convenience; Biotechnology to Cure Diseases and to Improve Human's Physical Strength; Limited Development of Weapons; To Develop Solar Power; To Link People Globally; Solving Climate Change Issue; Trust on Technology to Make Better Future; Green And Environmentally Friendly Technology; Protecting and Recovering The Environment; Clean And Safe Energy Sources (Solar Panels, Wind Farms); Energy-Efficient Buildings; Recycling Centers In The City; Vehicles and Transport Systems That Are Considered Environmentally Friendly; Eco-Cars Using Solar Energy Or Water; No Carbon Cars; Electric Cars; Flying Vehicles; Driverless Vehicles; Underground Transport Systems; High-Speed Rail; Worker Robots; Dome City; No Technology.
Technology Fears and disliked futures	Living In An Artificial or Virtual World; Full Computerized World; To Be Controlled By High Tech; Don't Eat And Just Take Medicine; Not Having Limit To Technology; Over-Use Of Gene Technology; Treasuring Only Technology And Ignoring Culture And Humanism; Development of Weapons.
Environmental Preferred futures and place to live	Renewable Resources; Protecting Natural Environment and the Earth's Resources; Green and Environmentally Friendly Technology; New Energy; Minimize The Negative Impact Of Human Activities On The Environment; To Conserve The Natural Resources; City With Clean And Safe Energy Sources And Energy-Efficient Buildings; Plenty Of Parks And Open Space; More Trees And Flowers And Natural Environment (Forests; Mountains And Lakes; Blue Skies and all kinds); Less High-Rise Buildings; Environmental Awareness; Organic Future; Farming to be Crucial; Beautiful Scenery; Ecological Balance; Harmonious Coexistence of Humans and Other Lives; Clean Air And Water; Abundant Food Resources; To See, Feel and Know the Environment; Co-

	Create Futures with The Nature Surrounding Us; Nature-Based Classrooms; Nature-Based Partnership Learning; Relocate to Mars; Live in Space; Live on Floating Islands; Live Overseas;
Environmental Fears and disliked futures	Badly Damaged Natural Environment; Badly Polluted Earth; Depleting Natural Resources; Dried Up Environment; Lack Of Air And Water In Future; Increasing Risk Of Global Warming; Replace Natural Environments and Plant and Animal Habitats With Drastic Expansion Of Highways; Skyscrapers; And Urban Metropolitan Area.
Economic Preferred futures	Good Career; Less Economic Pressure; Enough Money; Economic Growth Of The Society; Personal And Social Economic Stability; Leisure And Travel Over Work; Work Overseas; Each citizen being super-rich; Owning a personal airplane; No Hunger.
Economic Fears and disliked futures	Economic Crisis; Hunger; Starving; Poverty; Recession.
Political and Governance Preferred futures	More Open-Minded Young In Power; More Female Leaders In Power; Globalized Taiwan; The China/Taiwan Issue Would Be Resolved By Both Entering A Supranational Federation Where Nation Did Not Matter Anymore; Identity Would Be Increasingly Global Rather Than Territorial; Good Foreign Relationship; International Recognition Of Taiwan; Military Might Of Taiwan; No Autocracy And Monopolization; Peace Between Taiwan And China; Taiwan's Sovereignty; Equality; Equity; Freedom; Human Rights; Justice; Peace; Public Order; Realization of ideals; Stability; Limited Development Of Weapons; More Opportunities For Their Voices To Be Heard.
Political Fears and disliked futures	Hegemony; To Be Controlled By Criminal Gangs; No Country; No Freedom; No Safety; To Be Ruled By Advantageous People And Or Aliens And Or Other Species; Social Disorder; Unstoppable Terrorism; War And Violence.

## APPENDIX VI

### 50 highest-grossing blockbuster science fiction films produced after 2000

Source: (IMDb, Top lifetime grosses 2000-2020)

[https://www.boxofficemojo.com/chart/ww\\_top\\_lifetime\\_gross/](https://www.boxofficemojo.com/chart/ww_top_lifetime_gross/)

Rank	highest-grossing blockbuster science fiction films (after 2000)	Selected for research	Worldwide Lifetime Gross	Year
1	Avengers: Endgame	✓	\$2,797,800,564	2019
2	Avatar	✓	\$2,790,439,000	2009
3	Star Wars: Episode VII - The Force Awakens		\$2,068,224,036	2015
4	Avengers: Infinity War		\$2,048,359,754	2018
5	Jurassic World		\$1,670,400,637	2015
6	The Avengers	✓	\$1,518,812,988	2012
7	Avengers: Age of Ultron	✓	\$1,402,808,753	2015
8	Black Panther	✓	\$1,347,280,838	2018
9	Star Wars: Episode VIII - The Last Jedi	✓	\$1,332,540,187	2017
10	Jurassic World: Fallen Kingdom		\$1,308,469,277	2018
11	Iron Man 3	✓	\$1,214,811,252	2013
12	Captain America: Civil War	✓	\$1,153,329,473	2016
13	Aquaman		\$1,148,485,886	2018
14	Spider-Man: Far from Home		\$1,131,927,996	2019
15	Captain Marvel		\$1,128,276,090	2019
16	Transformers: Dark of the Moon		\$1,123,794,079	2011
17	Transformers: Age of Extinction		\$1,104,054,072	2014
18	The Dark Knight Rises		\$1,081,127,057	2012
19	Star Wars: The Rise of Skywalker		\$1,074,144,248	2019



20	Rogue One: A Star Wars Story		\$1,056,057,720	2016
21	The Dark Knight		\$1,005,436,299	2008
22	Spider-Man 3		\$894,983,373	2007
23	Spider-Man: Homecoming		\$880,166,924	2017
24	Batman v Superman: Dawn of Justice		\$873,637,528	2016
25	Star Wars: Episode III - Revenge of the Sith		\$868,390,560	2005
26	Inception		\$868,220,222	2010
27	The Hunger Games: Catching Fire	✓	\$865,011,746	2013
28	Guardians of the Galaxy Vol. 2		\$863,756,051	2017
29	Venom		\$856,085,151	2018
30	Thor: Ragnarok		\$853,977,591	2017
31	Transformers: Revenge of the Fallen		\$836,303,693	2009
32	Spider-Man		\$825,025,036	2002
33	Wonder Woman		\$821,847,012	2017
34	2012		\$791,217,826	2009
35	Spider-Man 2		\$788,976,453	2004
36	Guardians of the Galaxy		\$772,790,681	2014
37	The Amazing Spider-Man		\$757,930,663	2012
38	The Hunger Games: Mockingjay - Part 1		\$755,356,711	2014
39	X-Men: Days of Future Past		\$746,045,700	2014
40	The Matrix Reloaded	✓	\$741,847,697	2003
41	Gravity		\$723,192,705	2013
42	Captain America: The Winter Soldier		\$714,421,503	2014
43	Dawn of the Planet of the Apes		\$710,644,566	2014
44	Interstellar		\$710,525,276	2014
45	Transformers		\$709,709,780	2007
46	The Amazing Spider-Man 2		\$708,982,323	2014
47	The Wandering Earth		\$699,856,699	2019
48	The Hunger Games		\$694,394,724	2012
49	Doctor Strange		\$677,718,395	2016
50	Man of Steel (Superman)		\$668,045,518	2013