A Study on the Construction of the National Media Image of American Science Fiction Films in the New Century

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Abstract: As a significant genre of Hollywood blockbusters, science fiction films showcase the unbeatable technological prowess of the United States, serving as a vital avenue for international communication and the display of a powerful national image. Science fiction films have left a distinctive impression on audiences worldwide, portraying the United States as the global leader in technology, owing to the presence of real scientific research facilities, enigmatic scientific symbols, advanced research equipment, and extraordinary imagination within the genre. Since the turn of the century, American science fiction films have undergone a significant shift in their communication strategy, presenting a "hardcore Iron Man" national media image. This paper, employing agenda-setting theory and content analysis methodology, explores the specific pathways through which American science fiction films constructed the national media image from 2000 to 2019.

Keywords: new century American science fiction films, national media image, agenda setting

1. Introduction:

When people sit in front of the screen and watch Cooper in "Interstellar" piloting a spacecraft into a black hole, instantly traveling back in time within the confines of collapsing time; Theodore in "Her" traversing through a telephone line into a virtual emotional world created by artificial intelligence (AI); or Stark in "Iron Man" diving into an armored suit powered by a nuclear source, commanding an intelligent assistant named Jarvis to combat criminals aspiring to rule over humanity, they are deeply influenced by the visual magic presented on the screen. However, they may not consciously realize that what they are witnessing is nothing more than the result of countless post-production processed electrical signals. Simultaneously, they find themselves yearning for the elements of reality intertwined with far-advanced technological elements created in the movies.

American science fiction films took their initial steps in 1910 and have since evolved over a century. They have consistently maintained a leading position globally in terms of artistic value, technological and financial resources, and box office appeal. Although the majority of ordinary people have not personally experienced the strength of the United States in the field of science, American science fiction films have left a strong impression on audiences worldwide - the United States is the global leader in technology, thanks to the portrayal of real scientific research bases, mysterious scientific symbols, advanced research equipment, and extraordinary imagination within the genre.

Entering the 21st century, the Pew Global Attitudes Survey (2020) [1] revealed that some countries' views of the United States have been declining for the past 20 years, reaching their lowest point today. Following the "9/11" terrorist attacks, the United States has intensified its efforts to shape its national media image, aiming to mitigate the long-standing "hostility" towards the country worldwide and thereby enhance its national image. The U.S. national strategic communication adapts with the development of scientific capabilities and changes in national positioning, emphasizing "increased understanding and engagement with key audiences" and optimizing the environment favorable to U.S. interests through the coordination of "consistent programs, plans, themes, information, and products." [2] During this phase, blockbuster superhero films in American science fiction cinema gained popularity. Superheroes began to embody the qualities of ordinary individuals, emphasizing the defense of freedom and democracy. The display of hardcore technological prowess and the creation of superheroes have become two significant assets in American science fiction films as they attempt to solidify their position as a global hegemon. Moreover, by shaping the roles of various ethnicities and different regions, they subtly infiltrate and promote American ideals, aiming to evoke resonance across nations and borders worldwide.

2. The Construction and Dissemination of the U.S. National Media Image

2.1 National Media Image

Since the inception of nations, national images have evolved alongside diplomatic and practical activities among countries. [3] As time has progressed, national images have acquired new meanings. Scholar Duan Peng categorizes national images into three levels: the national physical image, national media image (virtual national image), and public cognitive image. In his book, he defines these as follows: [4]

National Physical Image: The objective manifestation of a nation's image primarily in the international sphere, representing an unjudged and unperceived original existence, reflecting the natural state of a nation's comprehensive strength.

National Media Image: The image of a nation shaped by international media through news reporting and discourse (i.e., international information flow). It represents how a particular country is portrayed by media and constitutes the overall evaluation or impression of that country by international public opinion.

Public Cognitive Image: External audiences' perceptions of a nation's image or the knowledge about a particular nation obtained through the media.

From this definition, it can be concluded that, based on the national physical image, mass media, through the construction and dissemination of the national media image, shapes the audience's perception of the nation. In other words, the national media image acts as a bridge between the national physical image and the cognitive image. [5] From an information dissemination perspective, the national media image essentially involves the construction and dissemination of information related to the national image. In this context, "information" specifically refers to the concrete content conveyed by the abstract symbol of the national image. Examining the entire communication process, including information production, flow, and consumption, the dissemination of the national image can be divided into three levels: the construction of the national media image, the dissemination of the national media image, and the cognitive image of the nation (comprising both the physical image and the media image). [6] It is worth noting that, upon reviewing the literature on national images, it is evident that the process is reverse in nature. Initially, the exploration of national images was rooted in the cognitive image of the nation, followed by the construction and dissemination of the national media image.

From the perspective of constructing the national media image, this image is shaped by the media. Therefore, in academia, the methods for constructing a national image through mass media are classified into three categories: self-construct, other-construct, and joint-construct. Liu Xiaoyan defines these three construction methods as follows: [7]

Self-Construct: The nation's media shapes its own national image, employing a method imbued with self-emotion and centered around its own will.

Other-Construct: Foreign media constructs the image of another country, representing a construction process driven by external will.

Joint-Construct: The national media of a country collaborates with international media to jointly shape the image of a nation.

Regarding the dissemination of the national media image, the agenda-setting of mass media plays an important role in shaping the public's perception of the national image. [7]

2.2 The Construction and Dissemination of the U.S. National Media Image

In various forms of media, including radio, newspapers, television, and film, the U.S. national media image consistently reflects the nation's position as a global superpower and an unbeatable force.

Song Ying, through an analysis of news texts from the Voice of America international broadcasts from 2002 to 2008, presents how the Voice of America shapes the U.S. media image and how this shaping process occurs. This work, from the perspective of constructing the U.S. national media image through radio news, provides valuable insights into the specific research content and can serve as a basis for horizontal comparisons in subsequent research, exploring the similarities and differences in how different media shape national images. Employing content analysis, literature research, and critical discourse analysis, the conclusion is drawn that during this period, the Voice of America's news and editorial texts constructed a multifaceted U.S. national media image characterized by advanced technology and a powerful military that is invincible. [8] Xiao Ying, in the study "Content Analysis of the Construction of the U.S. National Image in the People's Daily (2001-2017)", explores the basic model of constructing the U.S. national image and the patterns and issues revealed by this model. Using content analysis and case analysis with the People's Daily as the research object from September 2001 to September 2017, the study concludes that the United States is a major political power in the world and holds an absolute advantage in military and technology. [9] Wang Xinyu's research, focusing on influential American TV series broadcast in China, analyzes the U.S. political and economic image, the family and social image, and the cultural and religious image from three dimensions. It concludes that the United States is a "world government" and defends its status as an economic superpower globally. American society is diverse, with white Americans still in the dominant position, both economically and in terms of identity. Individualism is a core value in the United States, emphasizing self-control and opposing external factors such as authority, religion, state, and society that interfere with individual development. [10] In the study "Not Like 'Propaganda' Propaganda: Construction and Shaping of the U.S. National Image", by examining various dimensions, including political diplomacy, audiovisual media, and diverse subjects, it is pointed out that the United States, as a superpower, strives to dominate international discourse through agenda setting and storytelling, vigorously shaping its national image as a "beacon of democracy," a "global leader," and a "technological innovation powerhouse." [11] In Meng Xiangfei's research on "Hollywood Movies and the U.S. National Image," it is proposed that Hollywood movies serve as a fertile ground for global popular culture and deeply imbue a political imprint. The strong sense of enmity portrayed in these films consistently upholds American values and established order. Everything depicted in these movies propagates one viewpoint: the United States is magical and invincible. [12]

3. The Agenda-Setting of the National Media Image in Science Fiction Films

3.1 The Theoretical Origin of Agenda Setting

The origins of agenda-setting theory can be traced back to Walter Lippmann's concept of the "public opinion" in his book "Public Opinion." [12] Lippmann argued that the mediated environment created by the media is the primary means through which people perceive the world, challenging traditional views of the media. His ideas laid the groundwork for the formal development of agenda-setting theory. The formal introduction of agenda-setting theory can be attributed to the research conducted by McCombs and Shaw during the 1968 U.S. presidential election. Their research revealed a high degree of similarity between media and public attention. [13] The media's agenda and the public's agenda demonstrated a nearly perfect correlation. Mass media cannot dictate how people think, but it can influence what people think. [14]

Agenda setting has two layers: the media's emphasis on specific issues represents the first layer, and the attributes agenda-setting represents the second layer, where media assigns specific attributes and characteristics to particular issues. After the formal development of agenda-setting theory, scholars increasingly focused on the impact of the media on the attributes of issues and the shift of research from "winning audience attention" to "shaping audience cognition." [15] Gamson pointed out that attributes emphasize certain aspects of an object or issue. [16] Each object has multiple attributes, and the significance of different attributes varies. [17] Scholars have confirmed the significance of attribute agenda-setting by comparing media and public agenda attributes (essential aspects or characteristics of an object). [18] "Only countries with strong international agenda-setting capabilities can express their preferences and cognition in the international community through shaping and disseminating discourses. Only countries that dominate international agenda-setting can transform their preferences and cognition into (active or passive) consensus and actions and, therefore, defend or enhance their national interests." [19]

This paper will combine the first layer (object) agenda-setting and the second layer (attribute) agenda-setting theory to analyze the construction of the national media image in American science fiction films.

3.2 Research Design

First, different types of science fiction films imply that the issues set by the communicators vary, such as interstellar civilization issues, virtual world issues, and so on. In this paper, specific types of American science fiction films are considered as the object of agenda-setting. Scholar Jiang Xiaoyuan classified science fiction film themes into seven categories, including interstellar civilization, time travel, virtual worlds, and artificial intelligence, ethical dilemmas of biotechnology, survival environments, dystopias, and supernatural powers. [20] These seven science fiction types are treated as seven objects:

Table 1: Classification Codes for National Media Image Objects.

	Issue Code	Description
Science Fiction Films Issue	① Interstellar Civilization	Depictions and exploration of extraterrestrial civilizations, e.g., "Interstellar"
	② Time Travel	Themes related to time and space travel, multiple worlds, and parallel universes, e.g., "Inception"
	③ Virtual Worlds and Artificial Intelligence	Involving computers, networks, robots, creator-creation relationships, etc., e.g., "Her"
	④ Ethical Dilemmas of Biotechnology	Themes regarding genetic modification, cloning, and concerns about the misuse of biotechnology, e.g., "Ex Machina"
	⑤ Survival Environments	Including Earth's environment, doomsday scenarios, and disasters, e.g., "The Day After Tomorrow"
	⑥ Dystopias	Extremely scarce in material resources, highly authoritarian in spirit, ultimately led by rebels to confront centralized ruling class, e.g., "Blade Runner 2049"
	⑦ Supernatural Powers	Abilities that surpass the technological achievements of the present Earth, e.g., "Iron Man"

Within these seven objects, each presents multiple attributes that reflect different facets and qualities. In this paper, three broad levels of attributes are summarized through textual analysis and image analysis of a large number of science fiction movie texts: material attributes, behavioral attributes, and spiritual attributes. Material attributes refer to tangible representations of the national media image in science fiction movies, such as the portrayal of key symbols of the United States, including the national flag, national anthem, national leaders, national maps, national and city landmarks, the national institutional research system, and civil servants who represent American brand culture and identity. Behavioral attributes denote the behavioral motivations and objectives that the United States embodies in science fiction movies, such as representing the world in confronting evil forces on Earth or battling extraterrestrial civilizations. Spiritual attributes encompass the religious beliefs, values (freedom, democracy, adventure, personal heroism, etc.), and cultural and artistic elements conveyed in science fiction movies. The specific coding table is as follows:

Table 2: Classification of National Media Image Attributes Settings.

Attribute Categories	Attribute Codes	Description
Material Level	①National Image Symbols: a. American flag b. American national anthem c. Head of state d. American map e. National and city landmarks f. National institutions and public servants g. Representations of American brand culture and logos ②Military Power Symbols: a. Nuclear weapons b. Firearms and ammunition c. Aerospace vehicles d. Space stations e. Armed vehicles f. Military bases ③Protagonist Gender: a. Male b. Female c. Male and Female ④Science Fiction Colorful Characters: a. Astronauts b. Clones c. Extraterrestrial beings d. Scientists e. Mutants f. Robots	These are concrete images that appear in the movie frames, reflecting the national media image.
Behavioral Level	①Confronting Earthly Evil Forces ②Confronting Extraterrestrial (Cosmic) Civilizations ③Resisting Digital Life ④Pioneering Cosmic Civilizations ⑤Self-Reflection of Humanity	These represent the motivations and purposes of the main characters or the United States as portrayed in the movie.
Spiritual Level	①Religious Beliefs ②Values ③Culture and Arts	These convey American religious beliefs, values, and culture and arts in the film.

In addition, the coding table also includes a question about subjective impressions of the national media image: ① Positive, ② Negative, ③ Neutral, ④ None, to assess the relationships between various attribute elements and the portrayal of the American national media image.

Combining agenda-setting theory, this paper utilizes content analysis to examine the specific object (theme) emphasized in the American science fiction films between 2000 and 2019, the attributes of these themes, the specific attribute characteristics related to each object, and the significant correlations between attribute factors and the positive, negative, or neutral portrayal of the national media image.

In this paper, the top 30 American science fiction films on IMDB between 2000 and 2019 were selected as survey samples. In the selection process, audience ratings were the primary reference point, serving as an external indicator of influence. Films with higher ratings indicate greater audience acceptance and appreciation, resulting in more effective communication. To ensure the credibility and effectiveness of the survey, we had two different investigators, Investigator 1 and Investigator 2, fill out questionnaires for six randomly selected movies before the formal data collection process. Using the random function in Python, we selected six sample movies. The final movie numbers included for analysis were 4, 8, 12, 16, 23, and 28. Subsequently, two investigators independently completed the questionnaires, and the results of the two investigators were subjected to a single-sample t-test. The results showed a p-value of 0.01, indicating that, at the 1% level, there was no

significant difference between the results obtained by the two investigators in completing the questionnaires. Therefore, the questionnaire is considered to have a certain degree of credibility and validity.

4. Research Results: "Hardcore Iron Man" Saving the World, Protecting the Earth

Since the beginning of the new century, the United States' position as a "leader" has been fluctuating in the context of a multipolar world, especially after the "9/11 events." The influence of the "9/11 events" on science fiction films of the "post-9/11 era" is evident in various aspects of science fiction films.

Firstly, looking at the objects (types) set by American science fiction films, the statistics from 2000 to 2019 are shown in the chart below:
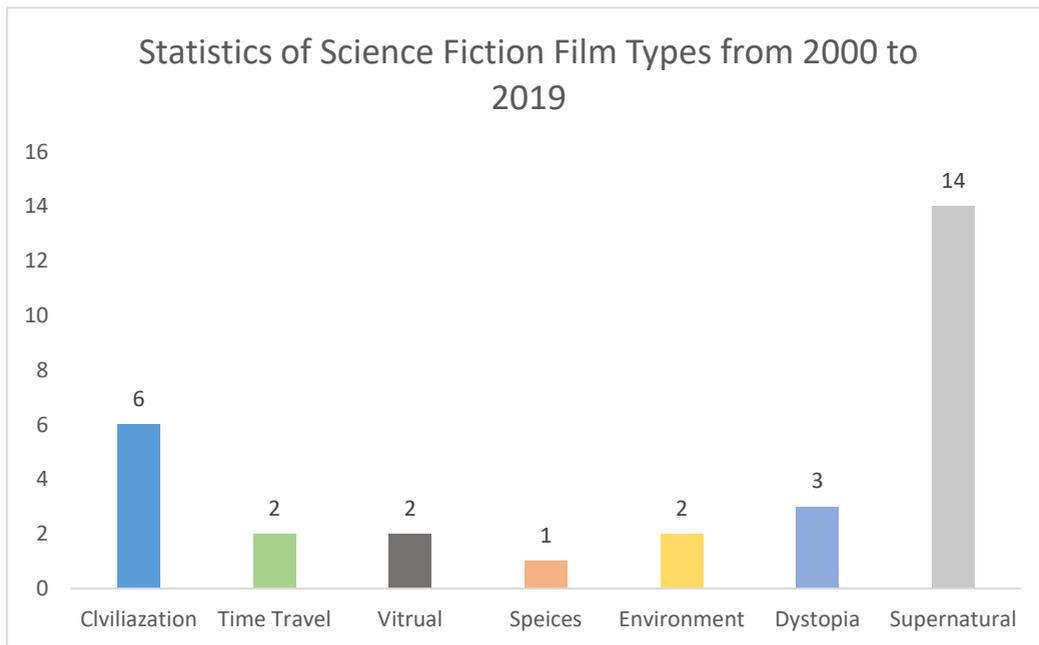

Chart 1: Statistics of Science Fiction Film Types from 2000 to 2019.

Among the top 30 selected science fiction films, 14 are of the supernatural power type, making up nearly 50%. Interstellar civilization ranks second, while other types are evenly distributed. In the first two decades of the new century, American science fiction films of various types have reached historical peaks, both in terms of box office and ratings. The average rating of the top 30 IMDB-rated films is as high as 8.12.

In addition to the well-known milestone films like "Avatar," "Inception," and "Interstellar," Marvel Cinematic Universe (MCU) and the DC Extended Universe (DCEU) played significant roles in this period. Marvel's first movie, "Iron Man," was released in the United States on May 2, 2008. Over the next ten years, there were a total of 23 films, including the Captain America series, Thor series, Spider-Man series, and more. The DC Extended Universe, another genre focusing on superheroes, released its first movie, "Man of Steel," in 2013, and seven films were released by 2019. Therefore, supernatural power films have become a new model and theme in American science fiction films as they entered the 21st century. As of November 2019, 10 of the top 25 global box office films were superhero films from Hollywood, USA. Faced with such dominant and influential superhero films that occupy a substantial share of the box office, the focus has shifted from the film industry or artistic aspects to America's strong output of its international image and cultural ideology.

Furthermore, many works began to pay more attention to terrorism. Movies such as "The Dark Knight" and "Blade Runner 2049" explore and depict terrorism. The "9/11" events also made people more sensitive to security and privacy issues, which is reflected in some science fiction films, such as "Resident Evil" and "Inception," which address security and privacy concerns. Secondly, the "9/11" events also led to a decrease in people's trust in the government. Movies like "Star Trek" criticize and depict the government. In general, the "9/11 events" had a profound impact on American science fiction films in the two decades that followed. These effects not only reflect the social atmosphere and cultural sentiments but also the concerns and reflections on contemporary social issues.

As for the second layer of agenda-setting, focusing on attribute issues, we categorize them into material, behavioral, and spiritual aspects. We then cross-reference these elements with the previously mentioned object settings.

Material Aspects: The protagonist's categories and military strength have relatively minor impacts on the object. On the other hand, the attributes of science fiction color characters and symbols of national identity and imagery are more pronounced.
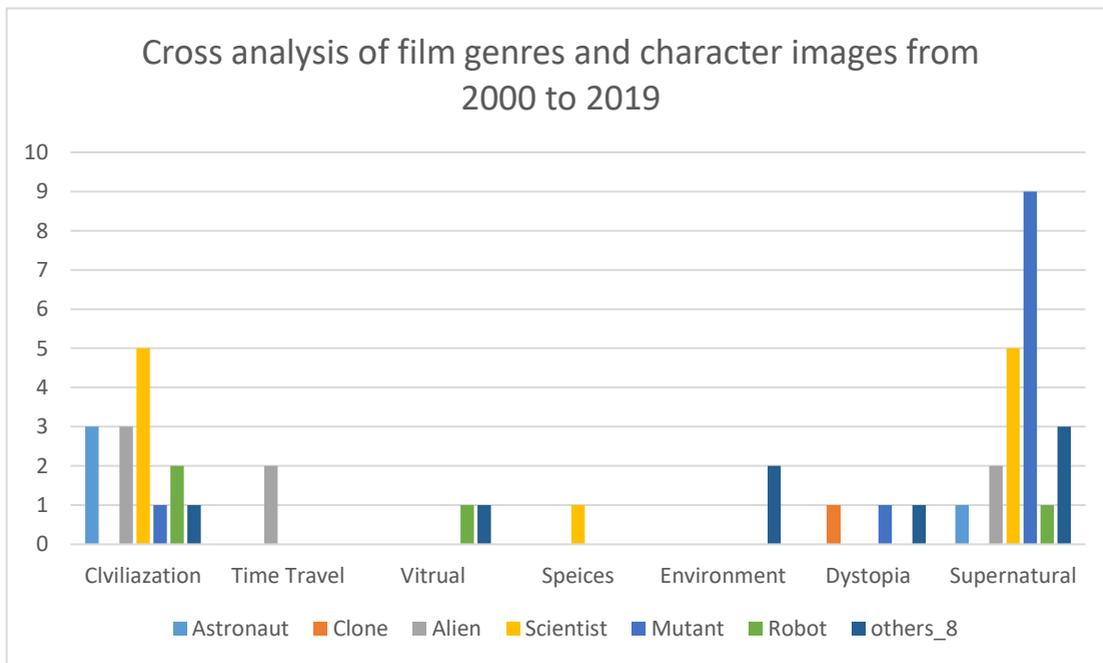

Chart 2: Cross-Analysis of Science Fiction Film Types and Science Fiction Color Characters from 2000 to 2019.

Looking at the types of science fiction characters within the object "supernatural power," there is a rich variety of science fiction color characters. Apart from clones, all other types are well represented, especially the "mutants" category, with as many as nine films. The "mutants" category significantly emerged during this period and undoubtedly became an important type of science fiction character. Below is a brief list of some representative superhero science fiction films from 2000 to 2019:

Table 3: Partial List of Superhero Movies in the First Two Decades of the 21st Century

Release Year	Film Title	Superhero Abilities	Reflection of National Media Image
2008	Iron Man	Money, Super intelligence, super genius	Demonstrates its powerful national strength to Middle Eastern terrorists using technological prowess.
2011	Thor	God, traditional Viking warrior with the power of lightning (accompanied by weapons)	Justice will eventually triumph over evil (the USA represents justice).
2012	Captain America: The First Avenger	Strength, speed, endurance, and cognitive ability four times beyond ordinary people	Reflects America's contributions to world peace, the cohesion of the American spirit, implying its unshakeable international status.
2013	The Avengers	Compilation of superheroes' abilities	The USA possesses institutions and heroes to combat powerful evil forces.
2014	Man of Steel	Combines various abilities, including speed, strength, sensory perception, and more	The USA is invincible and can overcome all other external forces.
2016	Ant-Man	Can change the size of oneself and other objects with "Pym Particles"	Has the ability to save the world.
2016	Doctor Strange	Perceives and manipulates time, the source of divine power, energy absorption, astral projection	Protects the Earth, preventing it from being destroyed by the dark god Dormammu.
2017	Wonder Woman	Superhuman strength, flight, and other abilities far beyond humans	Fearlessly sacrifices herself to save humanity from catastrophe.
2019	Captain Marvel	Super strength, invulnerability, super speed, energy projection and absorption	Bears the responsibility of protecting the Earth.
2019	Spider-Man: Far From Home	Abilities include speed, self-healing, night vision, web-spinning, and more	Defends Earth against alien attacks.

The table showcases some representative superhero characters. Although they differ in gender, identity, status, and social class within the films, they all strive to portray a spirit of American heroism and courage, committed to justice, which conquers the world. These superheroes all embody the idea of "saviors" with a mission to protect humanity, showcasing not only America's possession of various "superpowers" for maintaining world order but also representing the national spirit. This national spirit is characterized by loyalty, bravery, freedom, and equality. Given the current political climate

in the United States, these superheroes' mission also reflects America's strong desire to counter terrorist organizations and maintain global peace. As symbols of American media imagery, these superheroes are endowed with a god-like mission, which is seen as an externalization of America's desire for world hegemony, with the immense power of these superheroes implying the invincibility of the superpower USA.

In addition to the characters, the films are replete with symbols representing the United States, as shown in the figure below:
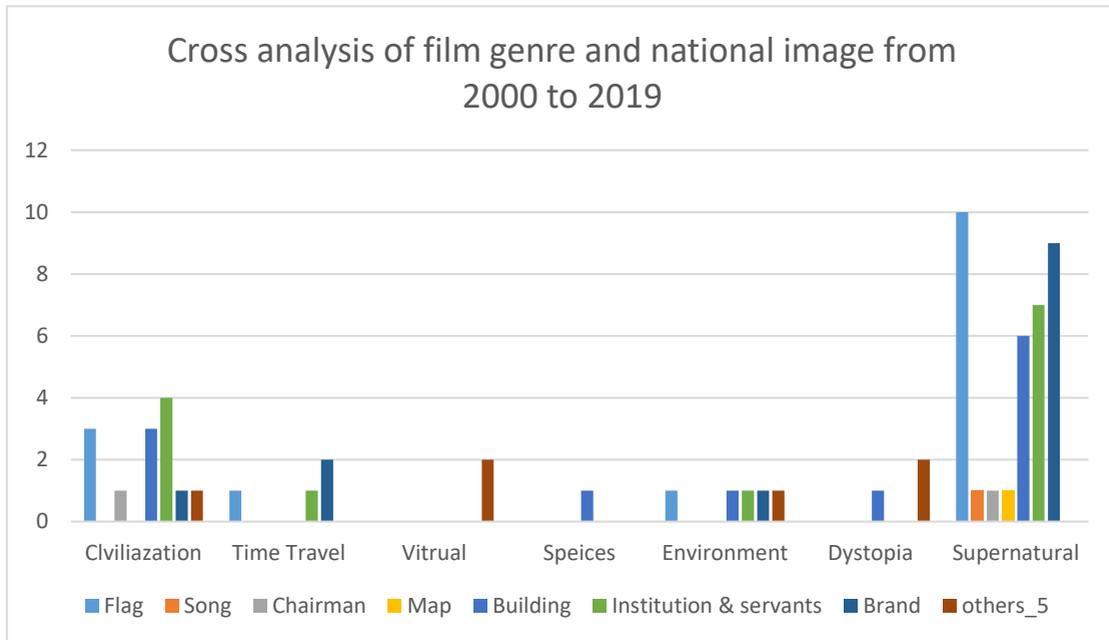

Chart 3: Cross-Analysis of Film Types and Symbols of National Identity and Imagery from 2000 to 2019

In the "supernatural power" category, the frequency of the American flag's appearance is as high as 10 films. Symbols of national identity, such as national and city landmarks, institutions within the national system, and government officials, appear in 6, 7, and 9 films, respectively. In a horizontal comparison, the use of symbols of national identity and imagery in "supernatural power" type films is rich, offering the audience a more vivid experience of America's presence. Symbols such as the White House, NASA research centers, and the Ford automotive emblem frequently appear in the movies, leaving a strong impression on viewers and, from various angles and dimensions, emphasizing America's hardcore strength.

National Behavioral Aspects: Specific attributes of the "supernatural power" object reveal distinct characteristics. As shown in the figure below, the specific behaviors include confronting evil forces on Earth (9 films) and confronting extraterrestrial (space) civilizations (3 films), while other behaviors were not involved.
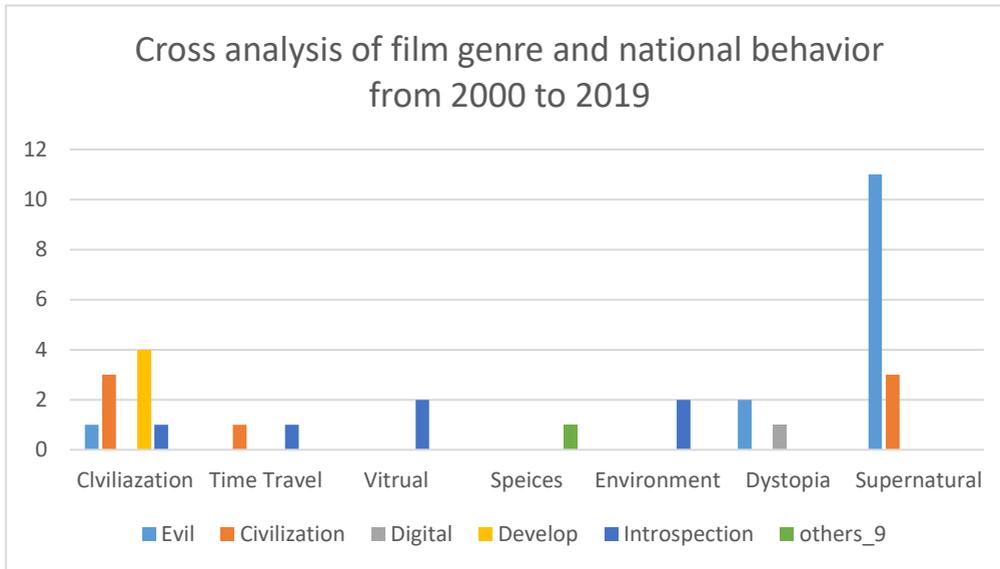
Chart 4: Cross-Analysis of Film Types and National Behavioral Aspects from 2000 to 2019

Due to cultural, social, and political events, indeed, have played a role in shaping the narrative and thematic elements of science fiction genres. Over the past decade, there has been a tendency to view the attacks on the United States in 2001 (and subsequently, the "War on Terror" initiated by George W. Bush) as a turning point. [21] In the early 21st century, American society experienced significant social changes and upheaval, events that left people feeling uncertain and fearful about the future. After the "9/11" attacks, senior officials in the United States specifically convened Hollywood magnates, requesting that they use their films to inform the civilians in the Middle East that they were not enemies of the United States but rather the ones being protected by the United States. This allowed them to unite against evil forces on Earth. This also corroborates that the main actions undertaken by the United States in science fiction films during this period were to eliminate the evil forces threatening the people of Earth or plundering Earth's resources, using the personal and collective abilities of superheroes.
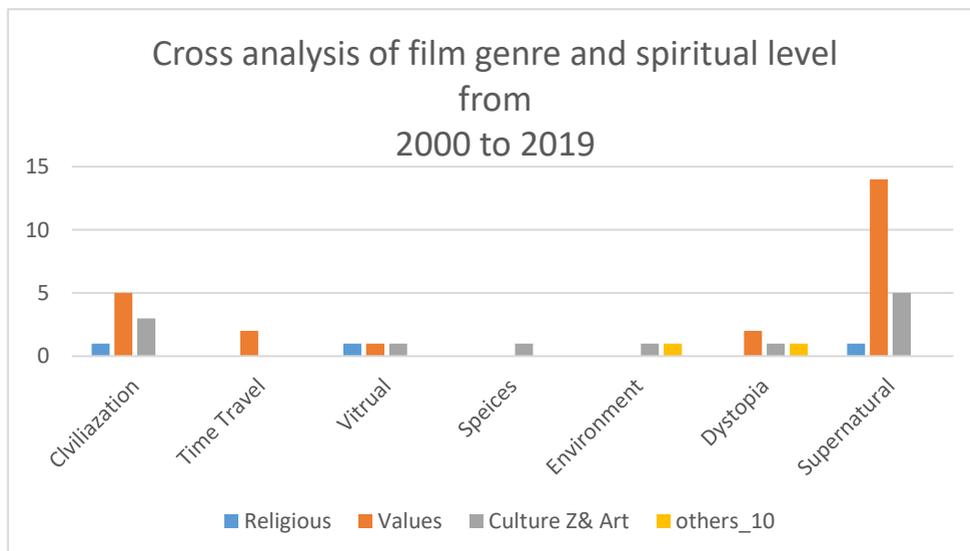

Chart 5: Cross-Analysis of Film Types and Spiritual Aspects from 2000 to 2019

National Spiritual Aspects: The attribute of values is most prominent in the object of "supernatural power" at the national level. The alliance between national power and Hollywood creators deeply embeds the mission of conveying a positive American image into every superhero film. Therefore, in science fiction films, individual heroism is depicted as a way to solve problems, emphasizing personal courage and determination.

Additionally, by setting the y-value as the positive or negative aspect of the national media image and the x-value as the 32 elements in the encoding table, an OLS regression analysis was conducted to examine which factors in the films are related to the positive or negative aspects of the national media image.

Table 4: OLS Regression Analysis of National Media Image

	(1) Image	(2) Image	(3) Image	(4) Image	(5) Image
Flag	-0.125				
	(0.356)				
Song	-1.286***				
	(0.414)				
Chairman	0.253				
	(0.262)				
Map	-1.411***				
	(0.326)				
Building	-0.145				
	(0.390)				
Institutionservants	-0.869**				
	(0.318)				
Brand	0.526				
	(0.364)				
others_5	1.117*				
	(0.630)				
NuclearWeapon		-0.506*			
		(0.288)			
Guns		0.497			
		(0.524)			
Spacecraft		-0.820*			
		(0.458)			
SpaceStation		0.193			
		(0.509)			
Armed		-1.220**			
		(0.484)			
Military		0.169			
		(0.398)			
others_6		0.763			
		(0.573)			
Astronaut			-0.717*		
			(0.396)		
Clone			0.243		
			(0.396)		

Table 4: Continued

	(1) Image	(2) Image	(3) Image	(4) Image	(5) Image
Alien			-0.054		
			(0.415)		
Scientist			-0.023		
			(0.486)		
Mutant			-0.476		
			(0.438)		
Robot			0.441		
			(0.477)		
others_8			0.877		
			(0.578)		
Evil				-0.097	
				(0.231)	
Civilization				-0.468**	
				(0.171)	
Digital				0.365**	
				(0.139)	
Develop				-0.635***	
				(0.139)	
Introspection				1.565***	
				(0.182)	
others_9				1.365***	
				(0.139)	
Religious					0.333
					(0.648)
Values					-1.458***
					(0.423)
CultureZArt					-0.125
					(0.402)
others_10					1.125**
					(0.467)
_cons	1.885***	2.145***	1.757***	1.635***	2.875***
	(0.435)	(0.537)	(0.396)	(0.139)	(0.467)
N	30.000	30.000	30.000	30.000	30.000
r2	0.495	0.546	0.350	0.526	0.544
ar2					

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

From the results in the table above, concerning national image symbolism, the elements of the American national anthem, American map, and elements representing American national institutions and public servants show a significant negative impact at around the 1% level. This means that as the elements representing the American national anthem, American map, and American national institutions and public servants appear more in the movies, the positive national media image decreases by 1.286, 1.411, and 0.869 units respectively. In terms of military power, elements representing nuclear weapons, spacecraft, and armed vehicles show a significant negative impact at

around the 10% level. This implies that as the elements representing nuclear weapons, spacecraft, and armed vehicles appear more in the movies, the positive national media image in contemporary America decreases by 0.506, 0.820, and 1.220 units respectively. In terms of character representation, the element of astronauts shows a significant negative impact at around the 10% level, meaning that as the elements representing astronauts appear more in the movies, the positive national media image in contemporary America decreases by 0.717 units. Regarding national behavior, elements representing resistance against digital life and self-reflection exhibit a significant positive impact at around the 5% level, while elements representing resistance against extraterrestrial (space) civilizations and the development of cosmic civilizations show a significant negative impact at around the 5% level. This indicates that as the elements representing resistance against digital life and self-reflection appear more in the movies, the positive national media image in contemporary America increases by 0.365 and 1.565 units respectively. On the other hand, as the elements representing resistance against extraterrestrial (space) civilizations and the development of cosmic civilizations appear more in the movies, the positive national media image in contemporary America decreases by 0.468 and 0.535 units respectively. In the spiritual aspect, the element of values shows a significant negative impact at around the 1% level. This means that as the elements representing values appear more in the movies, the positive national media image in contemporary America decreases by 1.458 units.

5. Conclusion

Through the analysis of the results mentioned above, the object setting for the American national media image primarily focuses on the "supernatural power" type, followed by "interstellar civilizations." Different attributes within the objects exhibit distinct characteristics. On the material level, the emphasis is mainly on the creation of mutants (primarily referring to superheroes) and scientists. On the national image symbolism level, the national flag and symbols representing American culture and brands play a more significant role. At the national behavioral attribute level, confronting earthly evil forces and combating extraterrestrial (cosmic) civilizations are the main tasks and goals for American science fiction films as they entered the new century. On the spiritual level, science fiction films primarily convey American values such as freedom, democracy, adventure, and heroism.

The above aspects constitute the construction of the American national image through the attributes and objects shaped by the transmission subject, i.e., American science fiction films. However, the interpretation of the positive national media image differs concerning the communication audience, as revealed by the OLS regression analysis. Elements such as the American national anthem, American map, and elements representing American national institutions and public servants show a significant negative impact at around the 1% level. This indicates that audiences are more likely to have a negative national media image when elements representing the American national anthem, map, and American national institutions and public servants appear in the movies. Regarding national behavior, elements representing resistance against digital life and self-reflection exhibit a significant positive impact at around the 5% level, while elements representing resistance against extraterrestrial (space) civilizations and the development of cosmic civilizations show a significant negative impact at around the 5% level. This suggests that self-reflection within national behavior and the mission of resisting digital life can enhance a positive audience perception of the national media. In contrast, resistance against extraterrestrial (space) civilizations and the development of cosmic civilizations are correlated with a negative image. However, on the spiritual level, the element of values shows a significant negative impact at around the 1% level, implying that the transmission of values does not align with the establishment of a positive national media image.

Combining the analysis results with other films not included in the sample, the shaping of the American national media image in the new century primarily presents a media image of the "hardcore Iron Man," oriented towards saving the world and safeguarding the Earth. In the films, different characteristics are meticulously and ingeniously set on the material, national behavioral, and spiritual levels to meet the contemporary international communication needs of the United States.

In the first two decades of the 21st century, technological advancements have rapidly evolved, not only changing people's way of life but also altering their imagination of the future. The rapid development of technology has led people to believe that a brighter future can be created through technological advancement. The heroism depicted in science fiction films reflects this optimistic belief and satisfies the audience's desire to witness heroism and justice. Due to the pressures of social change and technological progress, people increasingly need a positive emotional outlet. Personal heroism provides a means to cope with these pressures, which is why it is loved and welcomed by the audience.

The dazzling visual and auditory elements in the films are a crucial characteristic of this genre. The development of technologies like 3D, IMAX, Dolby Atmos, high frame rates, motion capture, and others has elevated the visual and auditory effects of films. The unique abilities and superpowers of most superheroes in the movies represent the advanced technological capabilities of the United States, emphasizing its absolute advantage in technology, military, and other domains. In fact, these technologies are synonymous with American film and television technology, repeatedly astonishing audiences and demonstrating the United States' capacity to shape its national media image through imagery.

However, American science fiction films have also started to encounter bottlenecks in recent years. In 2019, "Avengers: Endgame" achieved a box office revenue of over 42 billion. After 2020, Hollywood films, as a whole, have experienced a decline in China, with a significant reduction in box office revenue. This can be attributed to various factors such as market conditions and the COVID-19 pandemic, but more importantly, the declining proportion of original scripts. Hollywood increasingly relies on adaptations and sequels, leading to the realization that the formulaic and routine nature of scripts can no longer provide audiences with a sense of freshness and curiosity. Superhero films dominated the global film scene in the first two decades of the 21st century, but with the conclusion of "Avengers: Endgame" and the retirement of classic old heroes, some new faces have taken the stage, maintaining the same formulas and trends. Even die-hard Marvel fans may develop aesthetic fatigue due to decades of formulaic and routine content.

Compared to the United States, the science fiction genre in China's film history has long occupied a peripheral position. With the rapidly growing science fiction film industry and strong support from national policies, it is crucial to tell good Chinese stories, disseminate the Chinese voice, and present a real, comprehensive, and multifaceted China. The experience of American science fiction films in constructing national media images offers valuable insights for the development of Chinese science fiction films.

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