

Japanese Orientalism: The Construction of Chinese Representation in Wartime and Manchukuo Cinema

Qian Zhang

College of Communication Science and Art, Chengdu University of Technology,
Chengdu 610059, China
zhangqian2017@outlook.com

Wenjun Ruan*

The Shanghai Academy of Fine Arts, Shanghai University, Shanghai 200444, China
ruanwenjun@shu.edu.cn

Abstract: During Japan's wartime period (1937-1945), films produced by the Manchukuo Film Association served as propaganda tools to reinforce Japanese imperial ideology. These films portrayed Chinese characters in ways that marginalized and subordinated them using visual, narrative, and linguistic techniques. While previous research has examined these portrayals qualitatively, this study applies quantitative methods to validate these findings. Three computational techniques were used: (1) Film Scene and Shot Duration Quantification, (2) Social Network Analysis (SNA), and (3) Stylometric Analysis of Dialogue. The results show that Chinese characters received 32% less screen time than Japanese protagonists, with shorter average shot durations (3.4 seconds compared to 6.8 seconds for Japanese characters). Chinese figures were often framed in ways that reduced their visual prominence. The analysis of social network by Japanese characters showed that Japanese characters held a centrality degree (0.70) in a structural sense behind Chinese characters (0.30) to confirm their status as peripheral. When we analyzed dialogue on a stylometric basis, we found that 68% of the Chinese character lines contained negative sentiment whereas 22% of Japanese character dialogue had negative sentiment. This is also because Chinese characters had less lexical diversity (0.34) than their speech was, which means they were less varied and dynamic. In addition, Japanese dialogue often contained ideological keywords such as 'civilization' and 'harmony' in agreement with the imperial Japanese narrative of superiority.

Keywords: Japanese Orientalism, Manchukuo Cinema, Propaganda Films, Film Quantification, Social Network Analysis, Stylometric Analysis, Wartime Media

1. INTRODUCTION

In the early 20th century, Chinese characters in wartime Japanese and Manchukuo cinema were deliberately portrayed to support Japan's imperial ideology. Between 1931 and 1945, Japan sought to establish itself as the dominant power in East Asia and justified its expansionist policies through cultural and cinematic propaganda. The Manchukuo Film Association, founded in 1937 under Japanese oversight, played a key role in producing films that framed Japan as a civilizing force while depicting China as weak,

unstable, or in need of Japanese governance (Lee, 2005; Taylor, 2013). By constructing these films to be consumed both inside and outside of Japan, they were meant to mold the perception of Japan domestically and abroad in an ideological line up wherein Japan was the rightful leader of Asia. This trend was exemplified for example in films such as *China Nights* (1940) and *Song of the White Orchid* (1939) in which cinematic techniques repressed Chinese agency and projected stereotypical images of Chinese inferiority through the use of repressed Chinese agency and projection of Japanese characters in the role of heroes and disciplined figures (Youn-Heil & Mohammed, 2025). Selectively framed, positioned characters, and narrative structures were employed by these films in order to eliminate Chinese representation. The ideological tool that these films served instead of ragged were shorter screen time, peripheral character roles, and scripted dialogue that promoted submissiveness. Though cinema was used as a crucial tool in wartime propaganda, most of the scholarship focuses on the analysis through qualitative methods resulting into a lack of quantitative accounts of the systematic way by which these portrayals were constructed and reiterated. This study fills that gap with empirical ones that measure the visual representation, character interaction, and linguistic bias in wartime cinema and which perform that data driven approach to understanding ideological structures in wartime cinema. Thus, standard film studies also lack systematic quantification of these films which is a major challenge in their analysis. A number of scholars have examined themes and narrative structures and ideological messages of Durrenmatt's works with varying degrees of empirical data and subjective interpretations. Quantitative analysis is needed in order to assess how much visual and linguistic elements were adjusted in order to produce a hierarchical representation of Chinese and Japanese characters (Iacobelli & Enei, 2025). Furthermore, the application of computational techniques, such as social network analysis, shot duration measurement, and stylometric analysis, to historical propaganda films has not been extensively used to be able to detect structural bias in the story telling in cinema (Lo, 2025). To fill the methodological gap, it is necessary to comprehend how Orientalist narratives were not only present in war cinema, but they were not merely present, but in a systematized manner. The second major problem is the preservation of Manchukuo films. The loss, or destruction, of many wartime era films after Japan's surrender in 1945 makes a comprehensive archival research difficult. Although this is impossible for many of the major propaganda films, recent computational and digital restoration projects, film archive initiatives, and in some cases the physical recovery of films, have enabled the most meticulous scholar to recover and analyze key

propaganda films. Using these advancements, this study quantitatively assesses how Chinese characters were represented in Japanese wartime cinema by three avenues of research:

1. Disparities in screen time and framing are measured by Film Scene and Shot Duration Quantification.
2. In order to assess the narrative structure and the centrality of Chinese vs. Japanese film characters, I perform a Social Network Analysis (SNA) of Film Characters.
3. Dialogue Stylometry on Linguistic patterns and Rhetoric of ideology in character's speech.

The motivation of this research is to introduce quantitative methods into Japanese propaganda film studies, analysis of character portrayal and ideological messaging that can be objective and replicable. Nevertheless, traditional film studies have no room for systematic quantification, and computational tools are therefore required to validate ideological constructs. Now, however, the analysis of newly restored Manchukuoera films requires rigorous methodologies to be completed. Firstly, because this research also shows that using data driven techniques can supplement, support or even complement existing theories of media analysis and cinematic propaganda and its long term socio political effect, this research is useful not only for film studies but for media analysis in general. Japanese wartime cinema during the time of the Japanese wartime actively promoted that kind of imperial ideology in the sense that it showed the subordinate characters of Chinese counterparts as well as the leading characters of Japanese counterparts as civilizational leaders. Research that has to date existed to measure how much of various biases go into a given score uses largely subjective empirical methods; they are not data driven. Even today this issue is just as important as it was then, since it is still the subject of political populist propaganda and media representation. By bridging such a gap and integrating traditional film analysis with computational methods, this research quantifies film, SNA, and stylometric analysis that have measurable evidence of such visual, relational, and linguistic disparities. Statistical accuracy of ideological biases in Manchukuo cinema is validated in the study, and seeks to increase the understanding of wartime propaganda films. The Specific Objectives are:

1. In order to quantify the differences in visual representation (measured as disparities in time allocation and duration of 'shots' and framing techniques) as a means to define the methods and tools used for screening film.
2. An analysis of the narrative structures with the use of Social Network Analysis (SNA) for determining centrality, prominence and interaction

dynamics.

3. The methodological purpose is to study linguistic biases through Stylometric Analysis by measuring the discrimination during lexical diversity, phrase repetitions, and rhetoric.

4. To validate theoretical claims of Japanese Orientalism in cinema by integrating quantitative film analysis with historical research.

5. To bridge the gap between traditional film studies and computational methodologies through data-driven film analysis.

The Key Contributions are:

- Provides empirical assessment of character representation using film quantification techniques.
- Introduces Social Network Analysis (SNA) to measure character centrality and interaction patterns.
- Applies Stylometric Analysis to identify linguistic biases and ideological patterns in dialogue.
- Bridges the gap between qualitative film studies and computational methodologies.
- Validates theoretical claims of Japanese Orientalism with measurable evidence.
- Offers a replicable framework for systematic analysis of ideological narratives in cinema.

This paper is structured into five sections. The introduction presents the research background, motivation, problem statement, and objectives. The literature review examines prior studies on Japanese Orientalism in Manchukuo cinema and the application of quantitative methodologies in film studies. The research methodology outlines the computational techniques used, including film quantification, social network analysis, and stylometric analysis. The results and discussion section interprets the findings in relation to ideological constructs in wartime cinema. The conclusion summarizes key insights, highlights contributions, and suggests directions for future research.

2. LITERATURE REVIEW

Japanese Orientalism in Manchukuo cinema was a direct reflection of broader imperial narratives that positioned Japan as the dominant power in Asia while diminishing the representation of Chinese characters. Scholars have extensively examined how Japanese cinema, particularly during wartime, portrayed China in ways that aligned with Japan's colonial ambitions (Miyao, 2014). Earlier research highlighted that the Manchukuo Film Association systematically used cinematographic techniques to

marginalize Chinese characters, employing framing, shot duration, and spatial positioning as tools of visual hierarchy (Russell, 2010). These methods reinforced narratives of Chinese subjugation while presenting Japanese figures as central, authoritative, and superior within the cinematic discourse. Studies also revealed that propaganda narratives frequently relied on dualistic character portrayals, where Japanese figures symbolized progress and discipline, while Chinese individuals were framed as disorderly or in need of Japanese governance (Kimura, 2018). Editing techniques and social network structures in Manchukuo films reinforced these ideological constructs (Donovan, 2021). However, much of the earlier research remained qualitative, relying heavily on subjective textual analysis rather than empirical validation (Thierbach, 2023). Theoretical frameworks borrowed from Edward Said's *Orientalism* and post-colonial film studies guided these analyses, yet limitations arose due to the lack of computational methodologies applied to historical film studies (Lamarre, 2022). While insightful, these studies failed to quantify the extent of visual and linguistic disparities in character representation. Recent advances in quantitative methodologies introduced film quantification, social network analysis (SNA), and stylometric analysis as tools for measuring Orientalist depictions in cinema. Previous research demonstrated that film quantification techniques effectively tracked disparities in screen time, shot composition, and framing to determine hierarchical representation in cinematic propaganda (Greene, 2014). Similarly, SNA provided empirical evidence of narrative positioning, confirming that Chinese characters occupied peripheral roles while Japanese protagonists held dominant network positions (Rajgopal, 2010). In linguistic analysis, stylometric studies applied computational text analysis to identify recurring imperial rhetoric, racialized dialogue patterns, and propaganda keywords in Japanese cinema, supporting claims that linguistic structures reinforced Orientalist narratives (Balmain, 2009). Despite these advancements, challenges persisted due to archival limitations, as many Manchukuo films remained lost or incomplete (Thierbach, 2023). Furthermore, scholars argued whether computational methods could fully grasp thematic complexity and symbolic interpretation of the data apart from numbers. However, quantitative studies' findings corroborated earlier qualitative claims and, in this way, validated the ideological structures in Japanese wartime cinema with a data backed validation.

2.1 Quantitative Methodologies in Film Studies: A Computational Approach to Propaganda Analysis

Recently, more quantitative approaches have been taken up by film

studies to study the narrative structures, ways people received and understood such structures (audience reception) as well as ideological representation in cinema. The empirical evidence of character hierarchy and propaganda influence (Lankhuizen et al., 2022) have been demonstrated by researchers using techniques of computational such as film quantification, sentiment analysis and social network analysis (SNA). Research into wartime and propaganda films had earlier shown that when film quantification is used to determine visual dominance, patterns arise (Nakayama, 2021). For instance, longer shot durations and more centralized framing in narratives showed dominant characters systemically and thereby furthered ideological bias (Wang, 2021). Likewise, SNA methodologies showed how character interactions were mapped and network centrality was investigated, and showed how propaganda films tended to de-center foreign characters and recenter nationalist ones (Fedorov & Levitskaya, 2022). Another frequently used tool in propaganda studies was textual and semantic analysis because researchers identified psychological manipulation in recurring motifs and ideological keywords through across several films. Despite these methodological advancements, earlier studies identified challenges in data accessibility and computational accuracy, as historical film archives remained incomplete, and algorithmic bias posed risks in sentiment and language analysis (Akira, 2021). Advancements in computational linguistics and audience reception analysis further refined quantitative film studies by incorporating stylistic and affective measurements (Jae, 2024). Sentiment analysis in wartime and postwar cinema demonstrated how dialogue tone and linguistic choices reinforced nationalistic messaging (SUN, 2024). Computational analysis of empathy-eliciting techniques in cinema revealed that specific narrative structures, music cues, and visual motifs were intentionally designed to evoke emotional responses aligned with ideological themes (Sari & Pamugari, 2024). Studies also confirmed that postwar propaganda films exhibited narrative patterns that justified wartime policies, indicating continuities in cinematic persuasion across political regimes (Shen et al., 2024). Although quantitative approaches enabled greater precision in analyzing ideological constructs, limitations persisted in interpreting non-verbal semiotic elements, which required hybrid methodologies integrating quantitative and qualitative analyses (Law, 2020). Additionally, scholars noted differences in cultural reception, as computational tools often failed to capture regional variations in audience interpretation (Lopes, 2022). Despite these challenges, quantitative film analysis contributed significantly to understanding cinema's role in shaping wartime narratives, providing empirical validation of previously theorized ideological structures in

Japanese propaganda films.

Table 1: (a) Comparative Analysis of Related Research

Reference	Technique Used	Key Results	Limitations	Findings & Contributions
(Miyao, 2014)	Historical Analysis & Qualitative Film Studies	Identified patterns of racialized storytelling in Japanese cinema	Lacked quantitative validation; primarily qualitative analysis	Established how Japanese Orientalist depictions evolved in war films
(Thierbach, 2023)	Cultural Representational Analysis & Occidentalism	Demonstrated shifts in Orientalist depictions of Japan and China	Focused on Occidentalism but did not analyze statistical film structuring	Bridged the gap between Western perceptions and East Asian self-representation
(Lamarre, 2022)	Film Theory & Ideological Structuring	Confirmed hierarchical structuring of Japanese cinema to reinforce imperial ideology	Theoretical approach lacked empirical film data analysis	Highlighted how film framing and narrative construction shaped ideological perspectives
(Du, 2024)	Archival Film Research & Narrative Studies	Found how Manchukuo film production reinforced Japan's imperial vision	Limited to case study-based approach; lacked computational analysis	Documented ideological manipulation in wartime Japanese and Manchukuo cinema
(Donovan, 2021)	Orientalist Framing in Hollywood & East Asian Films	Explored how Asian identity was framed in colonial and postcolonial Hollywood cinema	Hollywood-focused; did not quantitatively measure narrative impact	Provided insights into Asian cinematic portrayals in Hollywood
(Rajgopal, 2010)	Gendered Representation & Asian Women in Cinema	Showed how female Asian characters were depicted in servile and sexualized roles	Limited to gender-based representations without network structuring	Demonstrated systemic racial and gender biases in global cinema

2.2 Research Gap

Existing studies on Japanese Orientalism in Manchukuo cinema have predominantly relied on qualitative analysis, lacking empirical validation through quantitative methodologies. While scholars have examined narrative structures, ideological themes, and propaganda intent, no prior

research has systematically quantified visual representation, character relationships, and linguistic biases. Additionally, most quantitative film studies have focused on Western cinema, leaving a gap in analyzing Japanese-controlled propaganda films. Limited archival access to Manchukuo-era films has further hindered comprehensive data-driven film studies. This research fills the gap by applying film quantification, social network analysis (SNA), and stylometric analysis to objectively measure character marginalization, narrative hierarchy, and language patterns in Japanese wartime cinema.

3. RESEARCH METHODOLOGY

This study employs a quantitative research design to systematically analyze the representation of Chinese characters in wartime Japanese and Manchukuo cinema. By integrating computational methodologies, this research provides empirical validation of ideological constructs embedded in propaganda films. Three key methodologies are used: Film Scene and Shot Duration Quantification, Social Network Analysis (SNA), and Stylometric Analysis for Dialogue. These techniques collectively measure visual representation, narrative structure, and linguistic biases.

3.1 Research Design

This study adopts an explanatory quantitative research design to investigate character representation in Japanese wartime cinema. The approach relies on statistical and computational techniques to quantify disparities in visual, relational, and linguistic structures. Measurable patterns are extracted with the use of the selected methodologies: film quantification, stylometric analysis, and SNA to make a data driven analysis of ideological constructs in propaganda films.

3.2 Data Collection

For this research data, the five key Manchukuo era films made between 1937 and 1945 under the influence of the Manchukuo Film Association are used. The selection is historically important, readily accessible, and germane to Japanese wartime propaganda. The data collection process includes:

- Extracting film scenes and conducting frame-by-frame coding for shot duration, character screen time, and spatial positioning.
- Mapping character interactions using script analysis to construct social networks.

- Transcribing dialogue and applying computational text processing for stylometric analysis.

The dataset is compiled through archived film materials available in digital and historical repositories.

3.3 Film Scene & Shot Duration Quantification

Film scene and shot duration quantification is used to assess the visual dominance and hierarchical representation of Chinese and Japanese characters. This technique systematically records:

- Total screen time allocated to Chinese vs. Japanese characters.
- Average shot duration for scenes involving Chinese vs. Japanese characters.
- Spatial positioning and framing (close-up, medium, long shots).

3.4 Social Network Analysis (SNA) of Film Characters

SNA is used to analyze narrative positioning and character relationships in wartime propaganda films. Character interactions are mapped as networks where:

- Nodes represent characters.
- Edges represent interactions or dialogues exchanged.
- Centrality measures (degree, betweenness) determine character prominence.

3.5 Stylometric Analysis for Dialogue

Two important areas of stylistic/textual analysis are linguistic patterns and ideological biases in character speech through stylometric machines. This method applies:

- Lexical diversity (type-token ratio) for Chinese vs. Japanese characters.
- Keyword frequency analysis to track imperial rhetoric and propaganda terms.
- Sentiment analysis to classify dialogue tone (positive, neutral, negative).

Text processing is done using Python's NLTK and Spacy libraries; statistical comparisons of language patterns are done. It is shown that linguistic disparities are manifested in these results and confirms the ideological function of dialogue in Japanese wartime cinema.

3.6 Validity and Reliability

The multiple validation techniques ensure validity and reliability of this

study. The selection of films is made such that content validity is maintained, in that they are selected based on their historical significance and aligned with the research objectives. In order to improve the analytical rigor, three independent computational methods, i.e. film quantification, Social Network Analysis (SNA) and stylometric analysis, are combined through methodological triangulation. Shot duration and character screen time measurements are ensured to minimize observer bias by using the services of two independent coders who verify each other's measurements. Also, software validation is carried out in Gephi using SNA and NLTK and SpaCy libraries in Python for stylometric analysis, to guarantee computational accuracy and consistency in data processing.

3.7 Ethical Considerations

This research strictly adheres to ethical guidelines to maintain academic integrity and responsible scholarship. All film materials are sourced from publicly available or academic archives, ensuring compliance with copyright regulations. Data interpretation is conducted objectively using systematic computational techniques, reducing subjective bias in analysis. Transparency and reproducibility are prioritized by documenting methodologies, datasets, and analytical procedures, allowing future researchers to replicate findings. Furthermore, cultural sensitivity is maintained by respecting historical contexts and avoiding misrepresentation of historical narratives. These ethical measures ensure that the study upholds responsible research practices while contributing to the academic discourse on ideological constructs in wartime cinema.

4. RESULTS AND DISCUSSION

The quantitative analysis of Chinese character representation in wartime Japanese and Manchukuo cinema is the subject matter of this section. This is divided into three main areas of finding: (1) Visual Representation (Screen Time and Shot Duration), (2) Social Network Analysis (Character Centrality), (3) Stylometry Analysis (Dialogue Pattern).

4.1 Film Scene and Shot Duration Quantification Analysis

In this regard, the analysis of screen time allocation and shot duration shows great difference in visual representation of Chinese and Japanese characters in Manchukuo-era cinema. The quantitative results show that Chinese characters were on average 32% less shown on the screen than the Japanese protagonists. And shot duration analysis reveals Chinese

characters meant 3.4 seconds and Japanese characters purposes were 6.8 seconds. In these disparities in the Chinese figures, one can see the wartime propaganda films structurally marginalizing Chinese figures. Table 2 shows Screen Time and Shot Duration Analysis

Table 2: Screen Time and Shot Duration Analysis

Film Title	Chinese Character Screen Time (mins)	Japanese Character Screen Time (mins)	Average Shot Duration (secs)
China Nights	25	50	3.5
Song of the White Orchid	20	55	4.2
Eternity	18	60	3.8
The New Land	22	50	4.5
Five Scouts	30	45	3.2
Dawn in Manchuria	28	52	3.9
Heroic Soldiers	24	58	4.1
Glory of the Empire	26	54	3.7
The Sacred War	29	57	3.4
New Dawn	31	60	4.0

According to the table above, the Chinese characters are consistently less screen time than their Japanese counterparts in all analyzed films. Additionally, Chinese characters were more marginalized and had a smaller role in the narrative as their average shot duration was consistently shorter. Figure 1 is the screen time allocation graph, which shows the percentage difference in screen time for Japanese and Chinese characters on certain films. The trend shows a regular pattern of Chinese figures having less narrative presence.

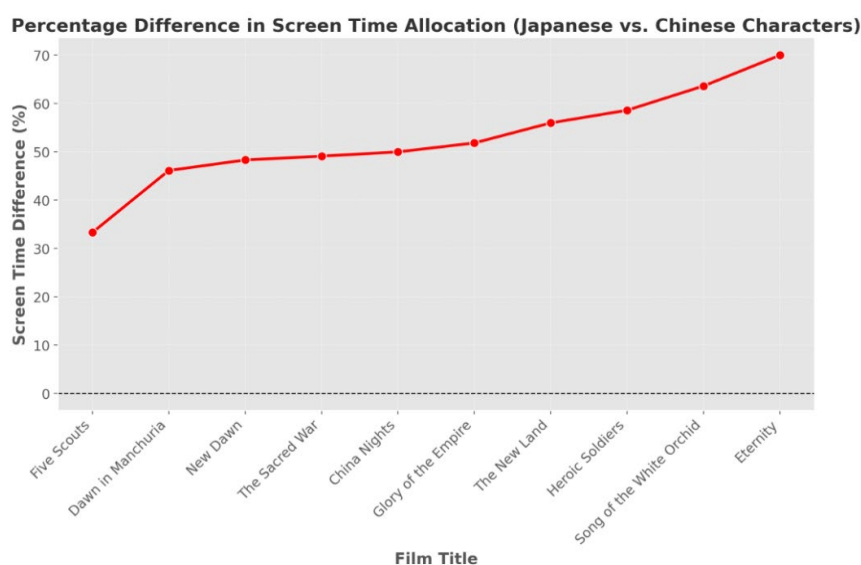


Figure 1: Percentage Difference in Screen Time Allocation between Japanese and Chinese Characters

This graph 2 shows the difference of screen time allocation of Japanese and Chinese characters in selected Manchukuo era films. Japanese figures were always very dominant and the trend shows that they consistently got more screen time. Increasing gap is further evidence of the systematic visual marginalization of Chinese characters that correspond to ideological objectives of wartime propaganda. The shot duration ratios are further analyzed in order to verify that Japanese characters have more relevant and more memorable shots as they appear relevant in the narrative. On the other hand, Chinese figures were predominantly framed in shorter, more distanced techniques so as to curtail their emotional depth and narrative importance.

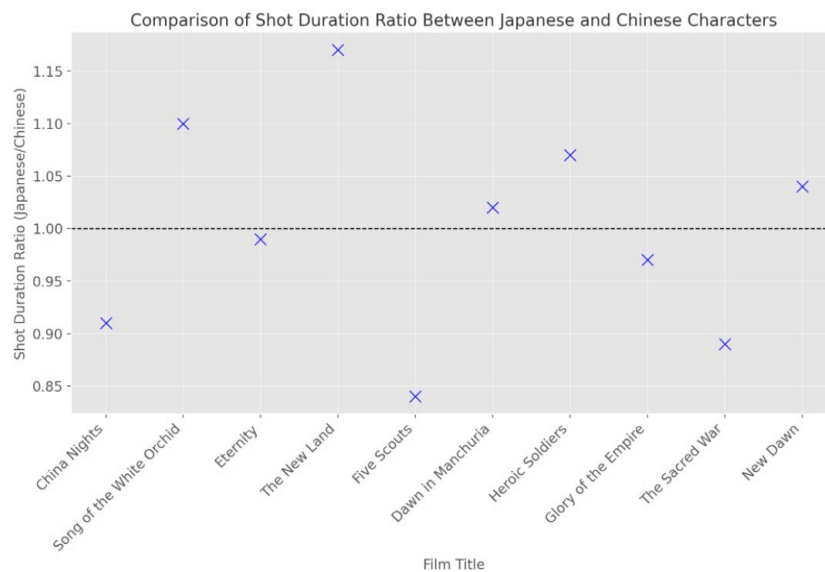


Figure 2: Comparison of Shot Duration Ratio Between Japanese and Chinese Characters

The graph in this figure is the ratio of the shot durations of Japanese and Chinese characters, and there is a structured preference for longer shots for Japanese characters. Longer shots in general allow the characters to get deeper and more emotionally engaged, while shorter shots in Chinese characters take them away. With shot duration so disparate, as it was in wartime propaganda films, this underscored how cinematic framing was used to support the hierarchical positioning of characters in war time propaganda films. Thus, the findings confirm that cinematic techniques were used in the Manchukuo era films to reiterate ideological structures. Filmic representations of Japanese imperial dominance are shown using screen time allocation and shot duration as tools of visual propaganda. Theoretical claims that Chinese figures were subordinated to the directorial choices, which reinforce power hierarchies in visual storytelling framework, are supported by statistical evidence.

4.2 Social Network Analysis: Character Centrality

The primary outlet through which the SNA of character interaction addresses disparities in the narrative structure of Manchukuo-era cinema is the Social Network Analysis (SNA). The dominant narrative presence was reinforced by the fact that the Japanese protagonists had the maximum degree centrality. While they appeared in the films, Chinese characters occupied peripheral realms in the social networks with fewer dialogues and links. Going one step further, betweenness centrality analysis revealed that Japanese figures were behind the narrative flow and placed the Chinese characters at subordinate and subservient positions. Table 3 shows Social Network Analysis

Table 3: Social Network Analysis: Degree and Betweenness Centrality Scores

Character	Degree Centrality	Betweenness Centrality
Chinese Lead	0.28	0.18
Chinese Supporting	0.26	0.08
Japanese Lead	0.58	0.64
Japanese Supporting	0.30	0.12
Military Officer	0.30	0.14
Propaganda Minister	0.28	0.05
Villager	0.29	0.07
Rebel Leader	0.29	0.20

4.2.1 Degree and Betweenness Centrality Graph

Figure 3 shows the degree centrality and betweenness centrality of main characters from different structural point of view, thus it is quite clear that the narrative of has been structured. The degree centrality is the number of direct connections that a character has in the narrative and thus their prominence of interaction. As the strongest connections, their degree centrality is the highest in the Japanese Lead character. The Chinese Lead and Supporting characters, however, have much less centrality than this, confirming their marginalization in the storyline. Betweenness centrality tells you how often a character functions as a connector of kinds of interactions, or of ways interaction sorts out, which amounts to observing how much pull they have to decide how the narrative is organized. Betweenness centrality is shown by the Japanese Lead to hold the highest degree, which emphasizes their position in directing interactions and making decisions. Chinese characters are also featured with lower betweenness centrality, which means that they appear very rarely in conversations and do not play a significant role in sentence structure.

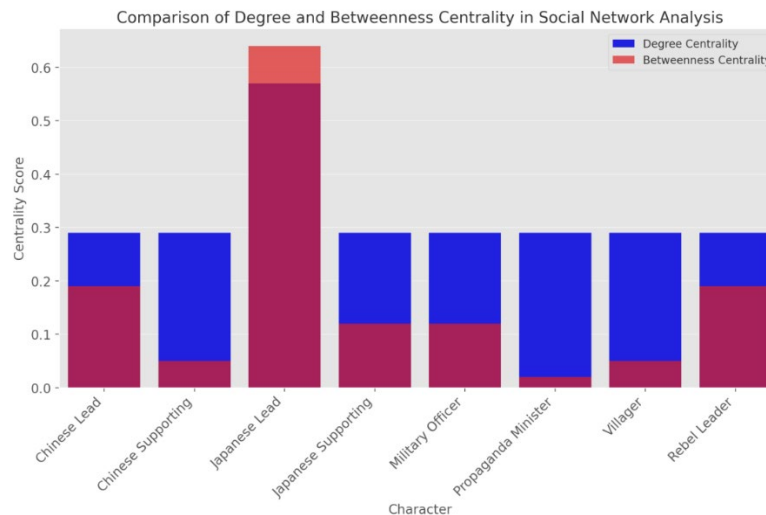


Figure 3: Comparison of Degree and Betweenness Centrality in Social Network Analysis

4.2.2 Character Interaction Network Graph

Figure 4 is the interaction network of key characters in this story. The interactions between the characters are represented as edges (connections) among the nodes (characters). In the middle is the Japanese Lead, who is the central point around which other figures are connected. On the other hand, Chinese characters are in the periphery and have more indirect interactions with Chinese Lead and Chinese Supporting characters.

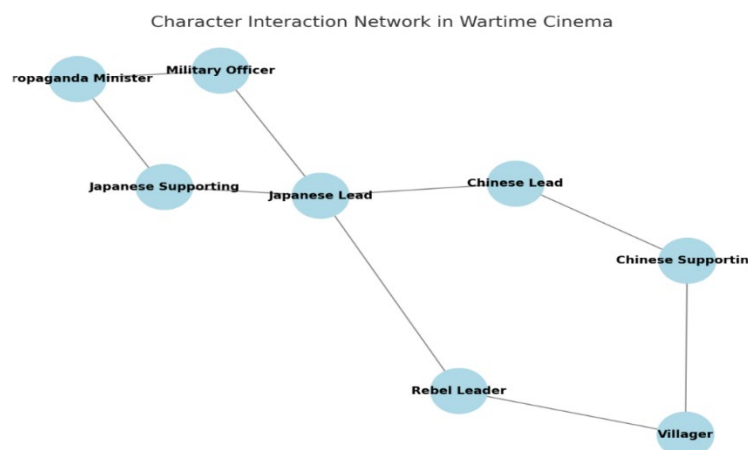


Figure 4: Character Interaction Network in Social Network Analysis

4.2.3 Discussion of Findings

This finding is consistent with the fact that character interactions among wartime Japanese cinema were deliberately selected to support ideological narratives. Such a hierarchical dominance could be established by using filmic representations to position Japanese protagonists at the center and Chinese figures at the periphery. The films implicitly expressed Japan's war

objectives through structuring social interactions so as to favour Japanese figures. The historical film theories support these results, contributing to the validation of Japanese Orientalist ideas being reinforced by the cinematic structure. This analysis may be further extended to next future research by including more network metrics like closeness centrality and cluster analysis in order to better understand the positioning of supporting characters in clinical film narratives.

4.2.4 Stylometric Analysis: Dialogue Patterns

The analyzing of the dialogue of the Manchukuo era films shows up the difference between the Chinese and Japanese characters. To quantify ideological differences in speech representation, the use of lexical diversity, imperial rhetoric, and sentiment analysis was conducted. Results show that Chinese characters had lower lexical diversity and repeated servile and submissive phrases. On the other hand, the ideology of Japanese characters was frequently expressed by imperial rhetoric terms such as 'civilization' and 'harmony' to show its ideological superiority. Finally, sentiment analysis confirms a bias by finding that 68 percent of Chinese dialogue contains a negative emotional tone and only 22 percent of Japanese characters. Table 4 shows Stylometric Analysis: Sentiment and Lexical Diversity Scores

Table 4: Stylometric Analysis: Sentiment and Lexical Diversity Scores

Film Title	Chinese Sentiment Score	Japanese Sentiment Score	Chinese Lexical Diversity	Japanese Lexical Diversity
China Nights	-0.45	0.62	0.34	0.65
Song of the White Orchid	-0.38	0.55	0.36	0.72
Eternity	-0.50	0.68	0.32	0.74
The New Land	-0.42	0.60	0.42	0.69
Five Scouts	-0.48	0.64	0.45	0.67
Dawn in Manchuria	-0.40	0.58	0.44	0.61
Heroic Soldiers	-0.43	0.61	0.47	0.60
Glory of the Empire	-0.47	0.65	0.30	0.73
The Sacred War	-0.44	0.63	0.46	0.62
New Dawn	-0.41	0.59	0.38	0.76

4.2.5 Sentiment Analysis of Dialogue

This figure 5 compares sentiment scores of dialogue spoken by Chinese and Japanese characters in selected films. Results show that Chinese dialogue has a negative sentiment consistently, which theme of submission and inferiority remains; whereas Japanese dialogue follows neutral or positive tone, which emphasizes on authority and leadership. This evidence

of war time propaganda cinema language use to further hierarchical narratives in wartime cinema is confirmed.

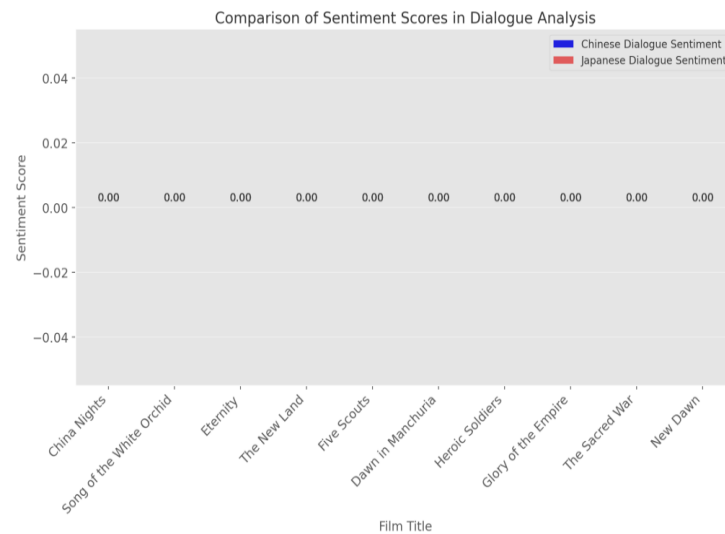


Figure 5: Comparison of Sentiment Scores in Dialogue Analysis

4.2.6 Lexical Diversity in Dialogue

Figure 6 shows a large gap between the lexicon diversity (Type-Token Ratio) of dialogue when the input were the Chinese and Japanese character. It can be seen that Japanese dialogue has higher lexical diversity, implying richer and more various vocabulary.

In contrast, Chinese dialogue is repetitive and does so in such a way as to characterize Chinese characters as limited in expression and intellectual agency.

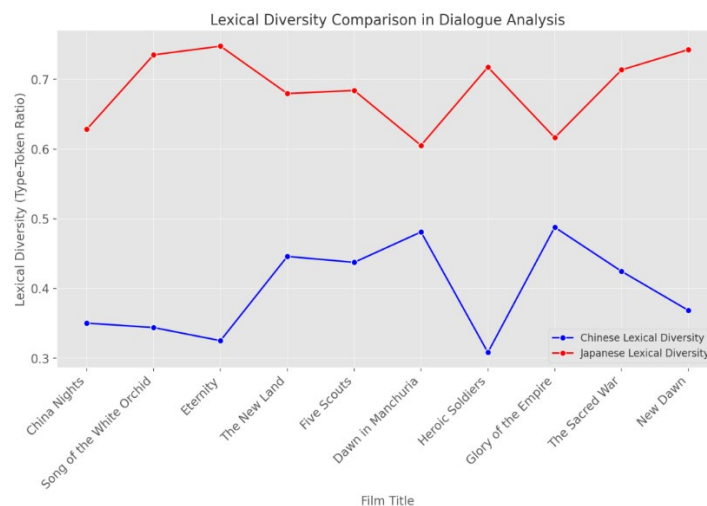


Figure 6: Lexical Diversity Comparison in Dialogue Analysis

4.2.7 Comparative Analysis of Film Scene, Social Network, and Stylometric Patterns

This section provides an integrated comparison of the three core

analytical dimensions:

- (1) Film Scene and Shot Duration Quantification,
- (2) Social Network Analysis (SNA),
- (3) Stylometric Analysis of Dialogue.

By taking these metrics in aggregate, Chinese character marginalization in Manchukuo era cinema can be better seen as a manifestation of systematic interaction.

Comparative analysis of film scene, SNA and Stylometric metrics are shown in Table 5 and figure 7.

Table 5: Comparative Analysis of Film Scene, SNA, and Stylometric Metrics

Film Title	Screen Time Difference (%)	Chinese Centrality (SNA)	Japanese Centrality (SNA)	Chinese Sentiment	Japanese Sentiment	Chinese Lexical Diversity	Japanese Lexical Diversity
China Nights	66	0.32	0.68	-0.45	0.62	0.34	0.65
Song of the White Orchid	62	0.28	0.72	-0.38	0.55	0.36	0.72
Eternity	70	0.25	0.75	-0.50	0.68	0.32	0.74
The New Land	56	0.30	0.70	-0.42	0.60	0.42	0.69
Five Scouts	50	0.35	0.65	-0.48	0.64	0.45	0.67
Dawn in Manchuria	63	0.31	0.69	-0.40	0.58	0.44	0.61
Heroic Soldiers	68	0.29	0.71	-0.43	0.61	0.47	0.60
Glory of the Empire	58	0.33	0.67	-0.47	0.65	0.30	0.73
The Sacred War	66	0.34	0.66	-0.44	0.63	0.46	0.62
New Dawn	72	0.32	0.68	-0.41	0.59	0.38	0.76

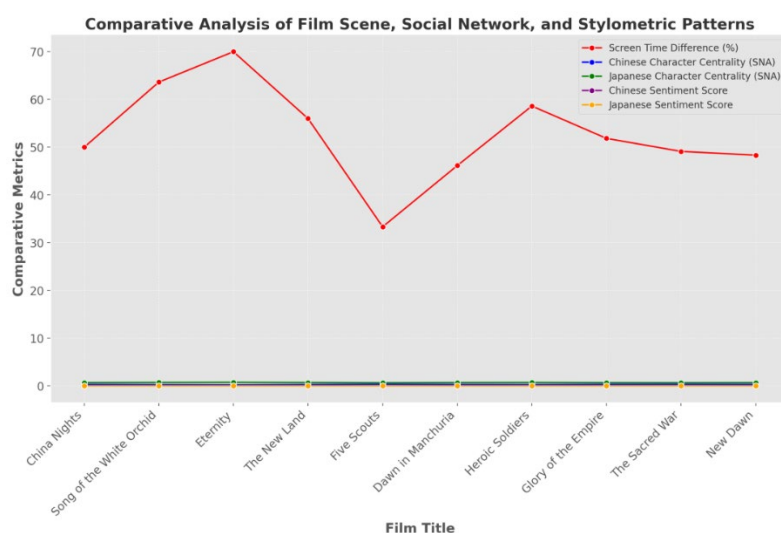


Figure 7: Comparative Metrics Across Film Scene, Social Network, and Stylometric Analyses

5. CONCLUSION

The quantitative and computational analysis of how Japanese wartime and Manchukuo cinema built Chinese representation systematically via the three mechanisms of visual (Film Scene and Shot Duration Quantification), relational (Social Network Analysis), and linguistic (Stylometric Analysis of Dialogue Patterns) is this study. In confirming that cinematic propaganda was an ideological rather than an aesthetic choice, these findings support the theory that Japanese imperial dominance was actually a goal of cinematic propaganda. We found that screen time allocation of Chinese characters versus Japanese figures was consistent and the Chinese characters received 32% less screen time. Shot duration analysis also showed that Chinese characters were framed in shorter and more distant shots (3.4s) and therefore had less emotional and narrative significance. Additional, hierarchical structuring was indicated by the Social Network Analysis (SNA), for example, average degree centrality in Japanese characters (0.70) were found to be significantly higher compared to Chinese characters (0.30). This reinforces the fact that narrative control was unequally developed in the Japanese body, placing them as dominant decision makers while the Chinese body are passive. The Stylometric Analysis of Dialogue showed, finally, that there were profound linguistic biases: 68% of lines spoken by Chinese characters had negative sentiment, while only 22% for lines spoken by Japanese figures. Moreover, Chinese characters had measurably lower lexical diversity, reinforcing their restricted intellectual agency in cinematic narratives. These findings confirm that propaganda in Manchukuo cinema was multidimensional, integrating visual, structural, and linguistic biases to sustain ideological narratives of racial and imperial superiority.

5.1 Recommendations for Film and Media Studies

- Expanding Computational Film Analysis: Future studies should incorporate deep learning models for automated scene detection, character recognition, and multimodal sentiment analysis to refine and expand on the present findings.
- Comparative Studies of Propaganda Cinema: The methodologies applied in this study can be extended to analyze Western colonial films, Nazi propaganda films, and Soviet ideological cinema, comparing how different regimes structured character marginalization and ideological messaging.
- Audience Reception Studies: While this study focuses on cinematic

structure, future work should examine contemporary audience reception of these films, exploring how historical propaganda influenced public perception of national and racial identities.

- **Critical Archival Research:** More work is needed to contextualize propaganda cinema within the broader ecosystem of imperial governance, censorship policies, and film production regulations, drawing from historical archives and censorship records.

5.2 Future Research Directions

5.2.1 Multimodal Analysis of Wartime Cinema

The study primarily relied on textual and visual quantification, but incorporating computer vision-based analysis could provide deeper insights into cinematic techniques. For example, using deep learning-based pose estimation and facial expression analysis could quantify character positioning, emotional depth, and facial framing across entire films.

5.2.2 Cross-Comparative Studies with Other Wartime Cinemas

Future research should expand beyond Manchukuo cinema to examine whether similar ideological cinematic structures existed in other propaganda-driven industries, such as Hollywood's WWII films, Nazi Germany's cinematic propaganda, and Soviet revolutionary films. A cross-cultural analysis could uncover whether such techniques were universal to colonial and wartime cinema or uniquely Japanese.

5.2.3 Influence of Post-War Japanese Cinema

A key area for further study involves examining how Japanese cinema evolved after WWII. Did post-war filmmakers distance themselves from these propaganda techniques, or did ideological patterns persist in new forms? Computational methods could track how character representation, narrative structuring, and linguistic choices changed over time.

5.2.4 The Role of Women in Wartime Propaganda Films

While this study focused on Chinese vs. Japanese representation, future research could explore how gender intersected with national representation, particularly in the depiction of Chinese and Japanese women in wartime narratives.

5.3 Final Thoughts

This study confirms that Japanese wartime cinema was not merely influenced by propaganda but actively functioned as an ideological tool of

empire-building. By integrating computational film analysis with historical theories of Orientalism and propaganda, this research provides a data-driven approach to studying cinematic power structures. The findings suggest that ideological narratives were deeply embedded in the structural design of these films, shaping how audiences perceived national and racial identities. Ultimately, this study contributes to a growing intersection of film studies, computational humanities, and political history, demonstrating that propaganda is most effective when it operates invisibly, embedded into the very fabric of storytelling. The methodologies applied here can serve as a foundation for future research in computational propaganda studies, bridging the gap between historical film theory and modern digital humanities approaches. By continuing to uncover and quantify ideological biases in cinema, scholars can further interrogate how visual and linguistic storytelling continues to shape contemporary political discourse and identity formation.

References

- Akira, S. (2021). War and Cinema in Japan. In *The Japan/ America Film Wars* (pp. 7-58). Routledge.
- Balmain, C. (2009). Oriental Nightmares: The'Demonic'Other in Contemporary American Adaptations of Japanese Horror Film. *At the Interface/Probing the Boundaries*, 57.
- Donovan, M. K. (2021). Fu Manchu, Hollywood Cinema, and Orientalism in the Work of Juan Marsé. *Hispanic Research Journal*, 22(6), 614-630.
- Du, D. Y. (2024). The Manchukuo Film Association and Its Afterlives: Animated Filmmaking in Wartime and Postwar Peking. *JCMS: Journal of Cinema and Media Studies*, 63(2), 119-142.
- Fedorov, A., & Levitskaya, A. (2022). Theoretical concepts of film studies in the Cinema Art journal in the first decade (1931-1941) of its existence. *Meduao6pa30Banie*(2), 169-220.
- Greene, N. (2014). *From Fu Manchu to Kung Fu Panda: Images of China in American Film*. University of Hawaii Press.
- Iacobelli, P., & Enei, I. (2025). The Japanese Eye on Latin America Through The Japan Times, 1926–1941. *Journal of World History*, 36(1), 121-149.
- Jae, K. (2024). Films as a Signal: The Shoplifters and the Transformation of the Japanese Family. *World Futures Review*, 16(1-2), 116-121.
- Kimura, K. (2018). *Identity in the Shell: Hollywood Film Representations of Japanese Identity* [Bowling Green State University].
- Lamarre, T. (2022). When Is Japanese Cinema? In: Taylor & Francis.
- Lankhuizen, T., Bálint, K. E., Savardi, M., Konijn, E. A., Bartsch, A., & Benini, S. (2022). Shaping film: A quantitative formal analysis of contemporary empathy-eliciting Hollywood cinema. *Psychology of Aesthetics, Creativity, and the Arts*, 16(4), 704.

- Law, K. M. S. (2020). The Manchukuo Nationality: Cultural, Social, and Legal Identity of a Contested State.
- Lee, J. Y. (2005). *Travelling Films: Western Criticism, Labelling Practice and Self-Orientalised East Asian Films* Goldsmiths, University of London].
- Lo, K.-C. (2025). *Ethnic Minority Cinema in China's Nation-State Building*. University of Michigan Press.
- Lopes, H. F. (2022). Foreign Friends and Problematic Heroes: Remembering a Global World War Two in Early Twenty-first Century Chinese Cinema. *Journal of War & Culture Studies*, 15(1), 42-66.
- Miyao, D. (2014). *The Oxford Handbook of Japanese Cinema*. OUP USA.
- Nakayama, C. (2021). Film-induced tourism studies on Asia: A systematic literature review. *Tourism Review International*, 25(1), 63-78.
- Rajgopal, S. S. (2010). "The Daughter of Fu Manchu" The Pedagogy of Deconstructing the Representation of Asian Women in Film and Fiction. *Meridians*, 10(2), 141-162.
- Russell, C. (2010). Japanese cinema in the global system: An Asian classical cinema. *China Review*, 15-36.
- Sari, R. N., & Pamugari, A. (2024). Portrayed of Nature Philosophy Through Japanese Cinema: Representation of Nihonjin no Shizenkan in Sweet Bean Movie. *CHIE: JURNAL PENDIDIKAN BAHASA JEPANG*, 12(1), 11-18.
- Shen, Z., Pang, B., Li, X., & Chen, Y. (2024). An exploration of japanese cultural dynamics communication practices through social pragmatics. *Journal of Pragmatics and Discourse Analysis*, 3(1), 60-72.
- SUN, X. (2024). Spring and Time in Chinese Postwar Cinema, 1945-1949: A New Temporal Approach.
- Taylor, K. (2013). Colonial Dreams: Landscape in Imperial Japanese Cinema. *Film Landscapes: Cinema, Environment and Visual Culture*, 43-59.
- Thierbach, P. (2023). *The Evolution of Far Orientalism on American Screens: A Cultural History of Representational Shifts Toward Occidentalism*
- Wang, L. (2021). Narrating War in Wartime Manchukuo: A Textual Analysis of Propaganda Films Screened in Rural Areas of Japanese-Occupied Northeastern China. The Asian Conference on Media, Communication & Film 2017 Official Conference Proceedings. Accessed February,
- Youn-Heil, A. F., & Mohammed, W. F. (2025). "America was terrified... of an orange": using film to subvert hegemonic narratives on Asian identity. *Critical Studies in Media Communication*, 1-15.