Studying the Hollywood and Pentagon Relationship

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Ravinithesh Annapureddy   Asli Yörüsün

Abstract

The Department of Defense of the United States of America (DoD) and Hollywood have a long-lasting and gainful relationship. Given that they are leaders in their respective fields, it is of particular interest to understand the collaboration between them. This article investigates 1) What the DoD offers to the film industry and what they get back in return and 2) How does the DoD decide to assist a movie or not. The study uses text mining and analysis on the remarks made by DoD while deciding on the decision to support or not. The results show that Hollywood receives the support of costly and military-related paraphernalia from the top agencies of the DoD and in return sheds good light on DoD in the movies. Simultaneously, DoD cast off the movies that narrated uncomfortable stories about the United States.

1 Introduction

Production and consumption of information - which exists in various forms such as text (including numbers), audio, and video - have become part of everyday lives. One such industry where mass production and consumption happens is the movie industry. People seek entertainment through movies which include films, TV shows and documentaries that cover a wide range of genres and cut across age/gender. Hollywood is one of the largest film industries in the world, and its films receive a global viewership. With time, the production of movies and TV shows has evolved into large businesses and makers trying to bring new experiences to the audiences which result in increased production costs.

The other side of this study deals with the military. Armed forces in any nation are projected to be the highest acts of patriotism. Yet, many individuals are not ready to be enlisted. There could be multiple reasons for it, including the sentiments against war, the negative image of living conditions, and the uncertainty of life. This hesitation produces a major challenge for any nation to maintain a military and resist opposition to spending on the military. Thus, publicity is an important and essential tool for armed forces.

This article looks at the U.S. military, a military powerhouse in the world. The common point that connects the Hollywood and U.S. military is the assistance provided by the latter to the former in the production of films. The assistance ranges from providing shooting permissions at military installations to allowing the filmmakers to use the equipment, personnel across various branches of the military. The outcome of this exchange has been subject to debate. Pentagon [1] states that their

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[1] A metonym for U.S. Department of Defense

goal in cooperating with filmmakers is to both "accurately depict military stories and make sure sensitive information is not disclosed"[1][8] whilst researchers argue that Pentagon has influenced makers to modify the scripts to show U.S. military in good light [[11], [9]]. Therefore, examining the relationship between Hollywood and the U.S. Department of Defense (DoD) in the United States of America would explain what they are producing together. The connection between these two vast establishments was studied under two large themes. First, the nature of the relationship between them is analysed, followed by the political impact of DoD on Hollywood.

The next section discusses thematic fields and research questions to be answered. Section 3 describes the data and is followed by Section 4 that is a description of methods used to answer the research questions. The penultimate Section 5 discusses the results and interpretations and followed by the limitations and possible directions to further the research in Section 6 and concluding with Section 7 that reflects the findings.

2 Background and Research Questions

2.1 Military and Entertainment

The armed forces have had a long association with the media industry. Military around the world uses various modes of media to reach out to their citizens. This outreach started with posters and songs for recruitment [3]. As time progressed and with the rise of new media forms, the military has also turned their attention to them. The most important of these are movies/TV shows and video games. While video games were first started to serve the troops with simulations, investments in films were made to directly communicate with the audience [7]. This work focuses on movies as they are widely common and reach a greater number of people.

The relation between the U.S. military and Hollywood dates back to the 20th century. Looking at the history of this relationship provides the base to analyze the nature of tie-ups between these complexes. The collaboration started informally when a filmmaker asked an Air Force general to perform to his camera at an airshow and used it to make the *Military Air Scout* film [14]. Not until 1924 the army started to provide equipment support to the movies when they saw a patriotic message in the movies [14]. Eventually, the other branches of the military have started supporting the movies and opened individual entertainment liaison offices [15]. During the initial days, the military only saw the opportunity to depict their activities to the audiences. However, this relation eventually grew deep due to the world wars. During the second world war, the U.S. Department of War commissioned the *Why We Fight* film to justify their participation in the war [13]. Later, the scriptwriters went back to the military as they found many interesting stories circling the war. The next key phase in the relationship began when Mr. Phil Strub became the chief of the DoD media liaison office in which he continued until 2018. He became so influential that accepting or rejecting support for a film was his sole decision and thus exerted influence on the scripts [15]. Under his tenure, DoD issued "Instruction 5410.6" which lays out the requirements to be fulfilled by the script to formalize the process of granting support to the filmmakers [4]. The journey between the military and filmmakers, that started to recreate the war moments later transformed into a new cinema with various other depictions of the military such as fighting extraterrestrial beings [2].

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[2]Movies such as Battleship (2012) and Transformers series (2007, 2009 & 2011)

In any movie based on the DoD agencies, the need to recreate military facilities and use of its equipment was key to make the movies more authentic. However, this could result in huge production costs [15]. The need for more stories, an attempt to show realistic imagery together with the need to control production cost could have compelled the producers to approach the military to provide aid.

Research Question: Altogether, the relationship is two ways where one entity provides services for the other. This association was analysed by answering, what were the various types of support provided by the DoD? How did the movies that have received and did not receive the support portray the military?

2.2   Hollywood and Politics

As mentioned earlier, scholars have stated that the DoD has engaged in a wide-ranging politicized campaign of promotion and revisionism through films [11]. They go on to say that DoD has sidelined or changed the politically inconvenient lines in the films/TV shows in order to support the production. David Robb's Operation Hollywood [11] (as cited in [15]) describes that Mr. Phil Strub often denied support to movies that portray a negative image of the American military. Additionally, the needs of the filmmakers presented the DoD an opportunity to steer changes in script and production [15]. Matthew argues that multiple instances of such events occurred and reported mostly based on anecdotal evidence [9]. A primary reason for such a proceeding is the lack of data. However, now, the (partial) data about the movies and TV shows that were supported and not supported by the DoD is available to the public along with reasons for doing so which provides a way to understand the political effects.

Research Question: The political impact on the movies in receiving the assistance was studied by answering, what were the reasons and the political motives of the movie plot in movies that were rejected vis-a-vis the movies that have received support?

3   Data

The Military-Hollywood Collaboration Database[2] was used as the primary dataset for this research. The database includes a list of 865 films and TV shows with a status of assistance request along with short remarks from the military. The status of a film or a TV show is defined as the military's response to the assistance request. There are 5 possible status according to the dataset: APP, DEN, LIM, OTH, RSCH indicating if the movie is approved for assistance, denied assistance, approved for limited assistance, withdrawn the request for assistance, and approved for research assistance respectively. The original data was acquired in a 2017 Freedom of Information Act (FOIA) request to the U.S. Pentagon. Key columns from the resulting PDF were then transcribed in a CSV file. The original dataset was augmented with additional data that helps in answering the research questions. First, the IMDb[3] IDs were added to the entries in the dataset. The movies that were found to be not produced and those films whose titles were ambiguous and did not have clear information were excluded from the analysis. Next, using the IMDbPY Python package and

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[3]IMDb (an acronym for Internet Movie Database)

the IMDb ID as the key the data about the plot for each film/TV show was obtained. The detailed changes are provided on our Github repository [4].

3.1 Data Description

This dataset contains 9 columns and their description is given in Table 1. The first 6 rows correspond to the data from the original dataset and remaining are the augmented columns to the original data.

Column Name	Description
Title	The title of the film or TV show requesting assistance.
Subtitle	An alternate name for the film, or the episode title of the TV show.
Status	The military's response to the assistance request.
Media Type	The type of media requesting assistance, a Film or TV show.
Year	The year that the film or TV episode was released.
Remarks	The comment made by the military on providing support to the movies.
Plot	The storyline of the movies as described in IMDb.
IMDb ID	Unique identifier for a movie defined in IMDb.

Table 1: Dataset Description [5]

3.2 Data Cleaning and Preprocessing

As the data was transcribed from a PDF, a series of cleaning operations were performed to overcome some of the limitations of the dataset. Mainly, the films/ TV shows that represent the same entity were merged and a basic spelling correction on the remarks column was performed. The next subsection summarizes the preprocessing performed on the text to handle the unstructured text data and it is followed by a description of data after cleaning and preprocessing.

3.2.1 Text Preprocessing

To apply the text processing methods to the data, the remarks and the plot information of each movie was cleaned. The major steps include replacing the non-alphanumeric characters [6]. Lastly, as stop words form a key part of expression they were not removed from the text.

3.2.2 Final Data Description

In the end, there were 783 films and TV shows. Out of the 783 movies, 514 (65.7%) of them are films and 263 (33.6%) were TV media. The distribution of the movies for each status and media type is shown in Figure 1. This study deals with the movies that have APP, DEN or LIM assistance and neglects those with OTH and RSCH status. The only film with RSCH status is the

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[4]Github repo for the changes made to the dataset
[5]The first 6 descriptions is taken as-is from [2]
[6]The detailed changes are provided on the Github repo for the text preprocessing

"U-571" - a submarine-based film. As the script had inaccuracies, DoD decided not to support the movie. However, they provided material to the director to understand life on submarines.
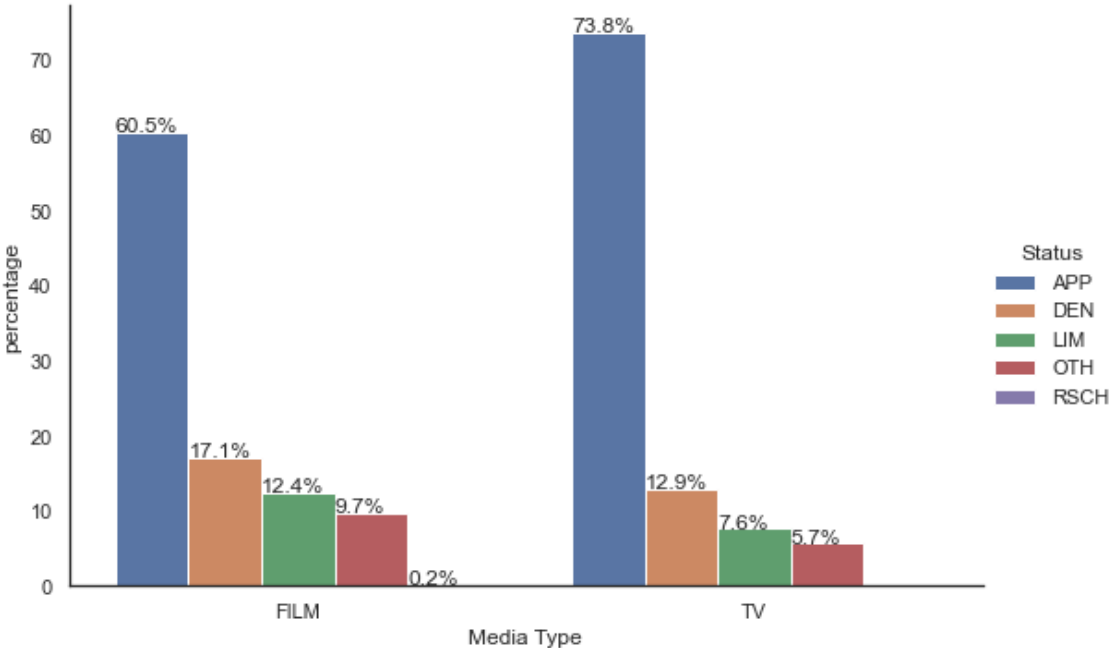

Figure 1: Percentage of Films and TV Shows with Support Status by the U.S. DoD

4 Methods

As the data was primarily composed of text, the methods centred around text mining and text analysis were used.

4.1 Nature of Relationship

4.1.1 Support

Named Entity Recognition (NER) was performed on the remarks made by the DoD while deciding on assistance to the films to identify the types of support provided to the movies. Pre-trained NER model that was available on spaCy [5] was used to obtain the entities relating to FAC (buildings, airports, highways, bridges, etc.), LOC (mountain ranges, bodies of water), GPE (countries, cities, states), ORG (companies, agencies, institutions), and PRODUCT (objects, vehicles, food, etc.) tags. As DoD could provide support in terms of personnel, equipment, and locations, these tags of the NER identify such entries from the text.

4.1.2 Portrayals

As the remarks made by DoD would indicate how the military perceived their portrayal in the movie, the sentiment of those remarks were studied to understand how the DoD decided to provide support or not. This sentiment was compared against the decisions of the DoD to provide or deny assistance. At the same time, to look at the filmmaker's point of view, the sentiment of

the movie plots was studied. Sentiment analysis on the overall text would be influenced by the number of words in the text that are associated with positive or negative sentiment. To mitigate this effect Aspect Based Sentiment Analysis (ABSA) [12] was performed considering the military, navy, marine, army, war, and air force as the aspects. The choice of the aspects was based on the frequent appearance of these characteristic words/topics in the movies.

4.2 Political Influence

The differences in terms, present in the remarks corpus for the movies that have been assisted and those that were rejected by the DoD were studied to comprehend the influence of politics through DoD on the production of films and TV shows. Scattertext tool [6] which is an interactive HTML plot that helps in finding distinguishing terms in corpora was used.

5 Results & Interpretation [7]

5.1 Nature of Relationship

5.1.1 Support

The NER analysis was performed separately on movies that were approved, denied and given limited assistance. Figures 2 - 4 represent various types of locations discussed in remarks made by DoD. The most important location is *mugu, ca/california* which had the former U.S. Navy air station. The other major locations are *san diego and Hawaii (pearl harbor)* where the U.S. has a Marine Corps Recruit Depot and the U.S. Pacific Fleet are stationed respectively. These are followed by *charleston air force base and Marine Corps Base Camp at Pendleton*. This suggests that one of the key support provided by the DoD are locations to shoot the films. Figure 5 shows various agencies mentioned in the remarks. These are primarily the organisations the filmmakers approached for support. It can be seen that the navy and the army assisted majorly in the films that have received support followed by marines, USMC. The probable reason that the navy and army were approached more frequently could be the heavy cost of creating navy sets and obtaining army stories. Lastly, a library (at Georgetown University) appears where the filmmakers could have availed some material for research or footage. Figure 6 shows the product/object support the filmmakers approached for support or were provided by the DoD. The letters *f*, *c* and *b* occupy a major portion and are followed by *black hawk, stryker, uss and mustang*. These specify the fighter jets, helicopters, battleships and aircraft carriers of the U.S. military.

The most common GPE entity was Vietnam in the remarks of movies where DoD denied assistance suggesting that DoD was not comfortable providing support to those films. This is discussed further in Section 5.2. While the organisations remained similar to that of approved films, the products were barely mentioned. Lastly, for the films, to which only limited assistance was provided, the locations were California and Pearl Harbor, similar to others. In terms of organisation, the army has given more partial support than the navy. The product that has appeared in these sets of remarks was stock. This indicates that most of the limited support provided by the DoD was in giving the stock footage to the filmmakers (through the Georgetown library) or technical advisory.

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[7]The data, code and the (additional) graphs produced in this work are available in the GitHub repository.
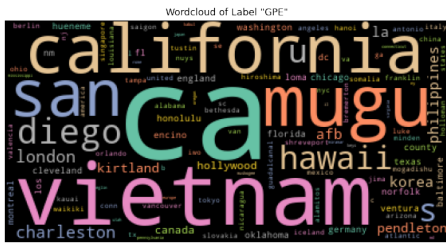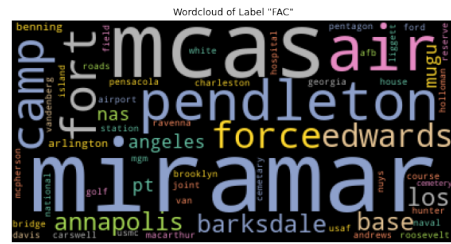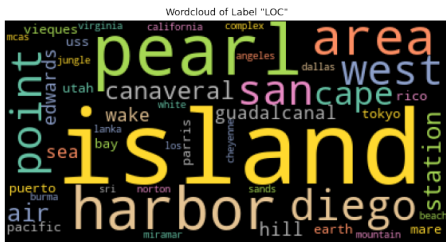
Figure 2: GPE entities
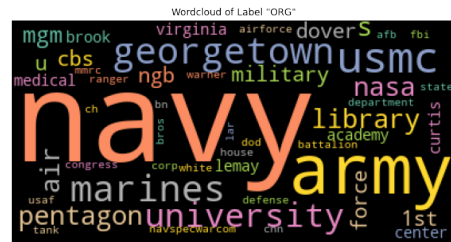

Figure 3: FAC entities

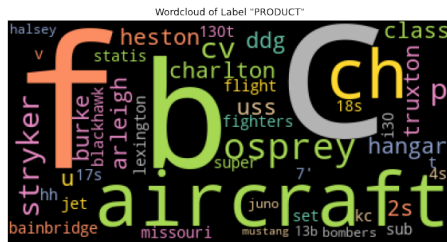Figure 4: LOC entities

Figure 5: ORG entities

Figure 6: PRODUCT entities

5.1.2 Portrayals

The ABSA was performed on the remarks and plot of the movies that have been either provided or denied support by DoD explicitly. Figure 7 - 8 show an example of the sentiments obtained through ABSA for a movie. A value of 0 represents a neutral sentiment, 1 represents a negative sentiment and 2 represents a positive sentiment. Figure 7 shows that the model predicts a neutral sentiment for 4 out of 6 aspects namely military, air force, war, and marine corps for the plot of the "Coming Home" movie. However, DoD remarks carried negative sentiment in the majority of the aspects and the movie was denied assistance. On the other hand, in Figure 8, it can be seen that the 'The Hunt for Red October' movie plot has negative sentiment in all aspects except for war. However, DoD remarks for that film had neutral sentiment for all aspects and a positive aspect for the navy and was assisted.

tt0077362 - Coming Home (1978, Denied/Film)
[DoD remark] marines refused to provide assistance on story which contained reference to leathernecks in vietnam cutting ears off dead viet cong, portraying an officer suffering a breakdown from his war experiences and committing suicide, and a paralyzed vietnam vet attacking the marines. in fact, if script shot had been submitted, marines might have assisted. in any case film helped convince marine corps it was better to assist than to ignore.
1 Military / 1 Army / 1 Air Force / 1 Navy / 0 War / 0 Marine Corps

[Movie plot] sally bender is the wife of a captain in the united states marine corps. he is sent over to vietnam, and sally is alone. with nothing else to do, she decides to volunteer at a local veteran's hospital, where she meets luke, who went to high school with sally. luke was wounded and is paralyzed and confined to a wheelchair. when sally begins to fall in love with luke, she has to make a crucial decision about her life.
0 Military / 1 Army / 0 Air Force / 1 Navy / 0 War / 0 Marine Corps

Figure 7: ABSA Results for a Support Denied Film

tt0099810 - The Hunt for Red October (1990, Approved/Film)
[DoD remark] the script was very positive for the navy. this film was released in 1999 but filmed in 1939 the film was approved by the department and the navy. assistance included use of aircraft, an aircraft carrier, a surface warship used to depict the red october engine room and a nuclear attack submarine.
0 Military / 0 Army / 0 Air Force / 2 Navy / 0 War / 0 Marine Corps

[Movie plot] soviets create a new nuclear submarine that runs silent due to a revolutionary propulsion system. russian sub captain defects, goal of taking it to the u.s.a. to prevent the russians from using the sub to wreak nuclear missile war against the u.s. lots of plot turns and twists in this high tech thriller.
1 Military / 1 Army / 1 Air Force / 1 Navy / 0 War / 1 Marine Corps

Figure 8: ABSA Results for a Support Approved Film

Table 2 presents the result of ABSA on all the films and TV shows where each column represents one aspect and the values are the aggregated sentiment of the text, i.e. plots or remarks across all movies having the same status. The sentiments were aggregated per status by taking the majority of the sentiment of the aspect across all the movies in that status.

Assistance		Air Force	Army	Marine Corps	Military	Navy	War
Approved	Plot	0	1	0	1	1	0
Approved	Remark	0	0	0	0	2	0
Denied	Plot	1	1	0	1	1	0
Denied	Remark	1	1	1	1	1	0

Table 2: Aspect Based Sentiment Analysis for Movies' Plots and DoD Remarks of Assistance Approved and Denied movies

The sentiment analysis shows that the movie plots for the assistance approved films were neutral for air force, marine corps and war while a negative sentiment for army, military, and navy aspects. In the case of the assistance denied films, the sentiment is negative for all aspects except for marine corps and war, which was neutral. The sentiments do not show a correlation with assistance decisions. Nevertheless, a clear distinction can be seen in the remarks made by the DoD. The movies that have received support from the DoD have neutral sentiment in all aspects except for the navy, where the sentiment is positive. Showing a clear contrast the sentiment of all aspects are negative (except for war, which is positive) for the movies to which the assistance was denied.

While the limitations of this method are discussed in the last section, it is interesting that the sentiment of the plots does not provide a clear indication. However, this could be directly related to the concise nature of the plot i.e. to convey the storyline rather than the internal mechanics. On the other hand, DoD has access to the full script of the movies and was more informed on the scenes and character. Additionally, DoD was able to suggest changes to the script and this is not captured in the plot information. To sum up, the ABSA shows that the movies that have received assistance portrayed the DoD in a non-negative light whereas those films/TV shows that were critical on the aspects of the DoD did not receive any help.

5.2 Political Influence

This analysis used the Scattertext tool that differentiates terms between two categories of text. In a Scattertext plot, the x and y axes are the dense ranks of the term usage by categories mentioned

on the axes. Each dot corresponds to a word or phrase mentioned in the text corpus. The closer a dot is to the top of the plot, the more frequently it appeared in the remarks to the category mentioned on the y-axis and the further right a dot, the more that word or phrase appeared in the remarks to the category mentioned on the x-axis.
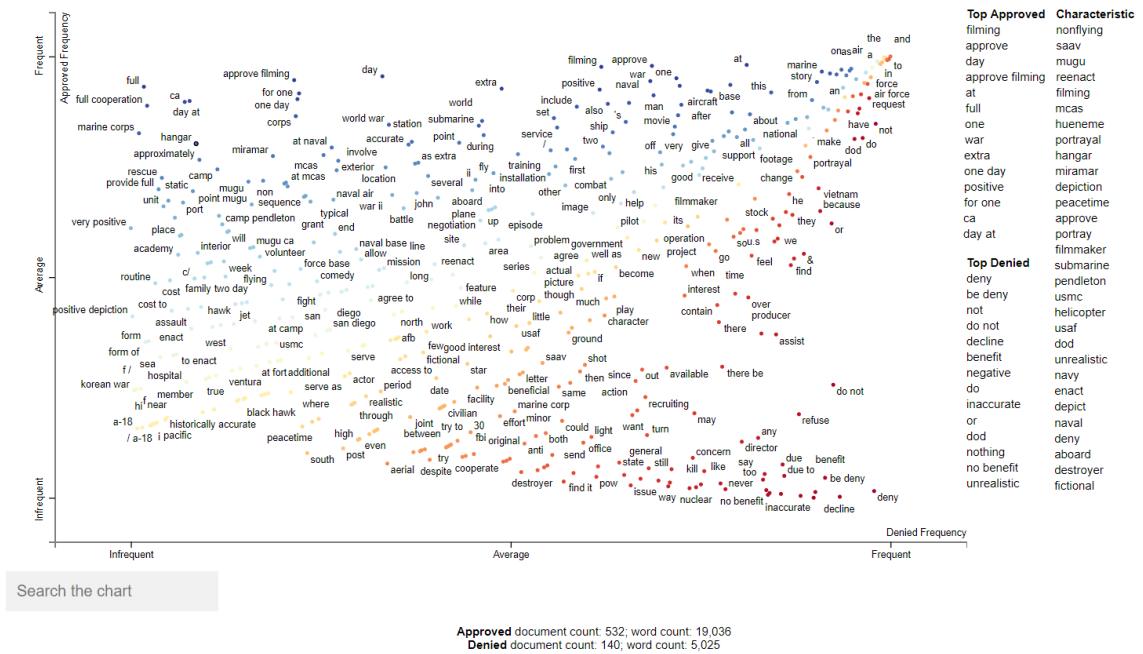

Figure 9: Scattertext of the DoD Remarks for Approved and Denied Films

Figure 9 shows the Scattertext plot of the remarks for approved and denied films. The approved category is on the y-axis, while the denied category is on the x-axis. The top words in the approved category - *approve* and *approved filming* - are trivial. The words *one* and *day* point out that the frequent amount of time approved for the shooting was very short. The other frequent word that appeared in the remarks of the approved movies was *positive*. It indicates that the DoD felt the movie(s) provides a positive image of them and thus have been approved for assistance. Similarly, *deny, decline* and other contradictory words appear highly in remarks of denied movies, trivially indicating that they were denied. However, the key terms are *negative* and *benefit*, indicating that those movies were rejected because the DoD felt they portrayed a negative image of them and it did not benefit the DoD. Other frequent words, *inaccurate* and *unrealistic*, shows that another reason for DoD to deny the support is an inaccurate portrayal. The characteristic words that differentiate the two categories are *portrayal* and *depiction*. These words convey that the crucial factor in the decision-making process of DoD was trying to get a beneficial representation in the movies.

Apart from the terms mentioned above, *vietnam* is inclined to the denied side on the top right. Upon looking at the occurrence of the word *vietnam* in the corpus (Figure 10), it was found that those movies that have celebrated the U.S. military, South Vietnam or the Vietnam war, in general, have been supported and at the same time, those that had anti-war sentiments were denied. The movies based on historical events where the U.S. military either won or has not created strong anti-war sentiments in the U.S. [10] are present in the approved category (*world war ii, korean*

(war), pearl (harbor), german and japanese; these terms are visible in Figure 12) and conversely those movies that are based on situations that were not favourable to the U.S. like *vietnam*, *anti* are present in the denied category. This also shows that many of the films that were supported by DoD were based on historical/significant events to the U.S. military.

Term: vietnam

Approved frequency:	Denied frequency:
38 per 25,000 terms	104 per 25,000 terms
32 per 1,000 docs	79 per 1,000 docs
Some of the 25 mentions:	**Some of the 17 mentions:**

ALL THE UNSUNG HEROES
dod approved for stock footage. this video was good recruitment for the **vietnam** american fighting force and historically accurate.

BAT 21
initial script received air force approval 5mar84. air force felt script was an excellentportrayal of a true incident that occurred in **vietnam**. however, the project went into limbo until 1987, the air force approved a new script, once some changes were made. assistance was provided in the philippines, but two objectional scenes remained in the film, including the destruction of a vietnamese village. accordingly, dod declined screen credit.

FLIGHT OF THE INTRUDER
the department of the navy and the dod, approved the paramount film. the film was technically accurate and portrayed the military in a generally positive manner. one of the most positive movies about us military in **vietnam**. failed at box office because it appeared at the time the gulf war was being fought on television

FLY AWAY HOME
pilot for **vietnam** war era series. positive depiction of south **vietnam,** u.s. state dept, lls. military. army & navy depicted. filmed at navy installations & second unit work with an a/

GARDENS OF STONE
the request for installation, personnel, equipment, and animals was approved. the request film perfect example of dod denying help to a filmmaker on one project (apocalypse now) and then giving full cooperation to another. some feel that the film contains a powerful anti war and anti~**vietnam** war message, one of the strongest, if not strongest in any film which received dod assistance.

GOOD GUYS WEAR BLACK
one of first films set in **vietnam** time frame to receive army cooperation in the form of helicopters and equipment--story of special forces unit sent back to **vietnam** to rescue pows, but set up to get rid of unit as part of peace agreement--survivers are being killed by order of secretary of state designate who agreed to orders to achieve accord. chuck norris is leader of unit, now a history professor, who saves the day.

HAMBURGER HILL
army found the film to be historically accurate and moving. presented a more realistic view of the struggles of combat soldiers in **vietnam**, as opposed to other **vietnam** films. one of very few combat films set in **vietnam** to receive full cooperation in this period.

HEARTS IN ATLANTIS
approved filming a county fair type scene set up at the army's fort story installation in virginia beach, va. lengthy set up/tear down, but only several days filming. virtually no military presence, aside from army recruiters at the fair and references to one of the main characters as a decorated **vietnam** vet. on the other hand, not much impact on the site, as the location is somewhat isolated

BEACH RED
marines liked script and provided combat footage which cornel wilde restored. however, the corps then concluded the film would make an anti war statement at a time when **vietnam** was escalating and declined to provide actual assistance. instead, the production company used the philippine army.

BLUE THUNDER
army refused cooperation on short scene set in **vietnam**. shows a viet cong being thrown out of a helicopter.

CINDERELLA LIBERTY
director and film company negotiated for a long time seeking cooperation. sticking point was that sailor goes awol to take care of boy whose mother is a prostitute. ultimately reached a tentative agreement, but then chief of information decided that film perpetuated negative image of navy resulting from the **vietnam** war even though **vietnam** is not mention ed and is not subject after final turndown, filmmakers returned to original script

COMING HOME
marines refused to provide assistance on story which contained reference to leathernecks in **vietnam** cutting ears off dead viet cong, portraying an officer suffering a breakdown from his war experiences and committing suicide, and a paralyzed **vietnam** vet attacking the marines. in fact, if script shot had been submitted, marines might have assisted. in any case film helped convince marine corps it was better to assist than to ignore.

DISTANT THUNDER
film was denied because scenes of the film were objectionable. too fictional. about a **vietnam** veteran who lives alone in the wilderness.

FIELD OF FIRE
mr webb requested helicopters, extras for filming in **vietnam**. as a fall back measure, if the political situation precluded filming with u.s. assets in **vietnam**, he requested marines on leave to film in **vietnam**. numerous negative military portrayals. marines asked for reconsideration on 12jan1994. no further action taken. project in limbo until 1999 when webb revised script and resubmitted it to saav. still no official action. as of 01jan2000, dod is still waiting for the production to get off the ground.

FORREST GUMP
requested army support to reenact basic training and **vietnam** combat scene. early script had nihilistic view of military & **vietnam** experience. army & we said no thanks. later script much better, with input from tech advisor dale dye, but army still not interested in assisting. during this process, dod & marines indicated that they may be willing to support, but director bob zemeckis was not interested in changing from army. the filmmakers did make one very important change suggested by the army: original script had an entire company of men like forrest and bubba; army pointed out that the actual program distributed soldiers like forrest among "normal" soldiers in many companies. the final script made this important change.

GOOD MORNING, VIETNAM
this is the first comedy set in **vietnam**. focus on armed forces **vietnam** network dj played by robin williams. based on actual air force dj, but wildly exaggerated for dramatic effect. completely unrealistic.

Figure 10: Occurrence of the term *vietnam* in approved and denied films remarks. The blue label is the title of the film/tv show.

Term: change

Approved frequency:	Denied frequency:
44 per 25,000 terms	86 per 25,000 terms
4 per 1,000 docs	21 per 1,000 docs
Some of the 29 mentions:	**Some of the 14 mentions:**

E.R.
approved filming for two days at ford island naval base, honolulu, hi, to enact scene of main character visiting his childhood neighborhood. producer agreed to **change** portrayal of drug use on base during the 70s period.

ONE MINUTE TO ZERO
army provided full cooperation to film about opening days of korean war. however, service then objected to closing sequence in which officer calls down artillery on line of refuges infiltrated with north korean soldiers. howard hughes refused to delete or **change** sequence since it was crucial to story. hughes did check to make sure pentagon would not cancel his defense contracts if he refused.

AN OFFICER AND A GENTLEMAN
the navy declined because of damaging portrayal of navy single parent lifestyle, negative portrayal of women living around air station, and a fight between officer candidate and drill instructor. filmmakers wouldn't **change** these scenes, so assistance became impossible. marines offered to cooperate, but producer did not have time. still, marines provided a d.i. as technical advisor and off duty marines as extras

BROTHERS IN ARMS
the film had too many inaccuracies for the production **change** without completely changing it for dod approval. the events depicted were implausible & not authentic portrayals of military operations bl personnel.

FORREST GUMP
requested army support to reenact basic training and vietnam combat scene. early script had nihilistic view of military & vietnam experience. army & we said no thanks. later script much better, with input from tech advisor dale dye, but army still not interested in assisting. during this process, dod & marines indicated that they may be willing to support, but director bob zemeckis was not interested in changing from army. the filmmakers did make one very important **change** suggested by the army: original script had an entire company of men like forrest and bubba; army pointed out that the actual program distributed soldiers like forrest among "normal" soldiers in many companies. the final script made this important **change.**

Figure 11: Occurrence of the term *change* in approved and denied films remarks.

Lastly, the word change appeared in 0.4% and 2.1% of the remarks of the approved and denied films respectively. Looking at the corpus of remarks in conjunction with this word (Figure 11) reveals that the DoD has asked the filmmakers to make the changes to the scripts and they have provided support to those films that have agreed to make the suggested changes which make the script favourable to DoD. Next, we see the term *recruiting* in between average and frequent near the denied terms. Looking at the corpora indicates that DoD denied the films which they deemed did not help in recruiting and at the same time it approved films that they deemed would help in recruiting.

In comparing the movies of approved and limited approved categories the results for the approved movies and the characteristics terms differentiating the two classes remain similar to that

of comparison of approved with denied movies. For the movies with limited support, the terms *footage*, *stock footage* were frequent suggesting that these movies were stated under limited support as they were mostly provided with historical footage. Alongside the footage, *technical (advisors)* and *background* were seen suggesting that technical supervision and location or personnel in the background were provided as part of limited assistance.

A similar analysis was repeated after removing stop words. The results before removing the stop words were maintained and only words that were not visible in earlier plots, but were present, are seen. Figure 12 shows the Scattertext plot of the remarks for approved and denied films after removing the stop words. The word *john wayne* is seen near average frequent terms on the Approved axis. He was a famous American actor popular through the 1920s and until the end of World War II (the golden age of Hollywood) [8]. He is one of the top actors that brought heavy box office collections [9] and no film starring him has been rejected for support. This suggests that DoD wanted to send their message through celebrities who represent the personification of American values. The results for the scattertext analysis on remarks for approved and limited support films remained the same even after removing the stop words.
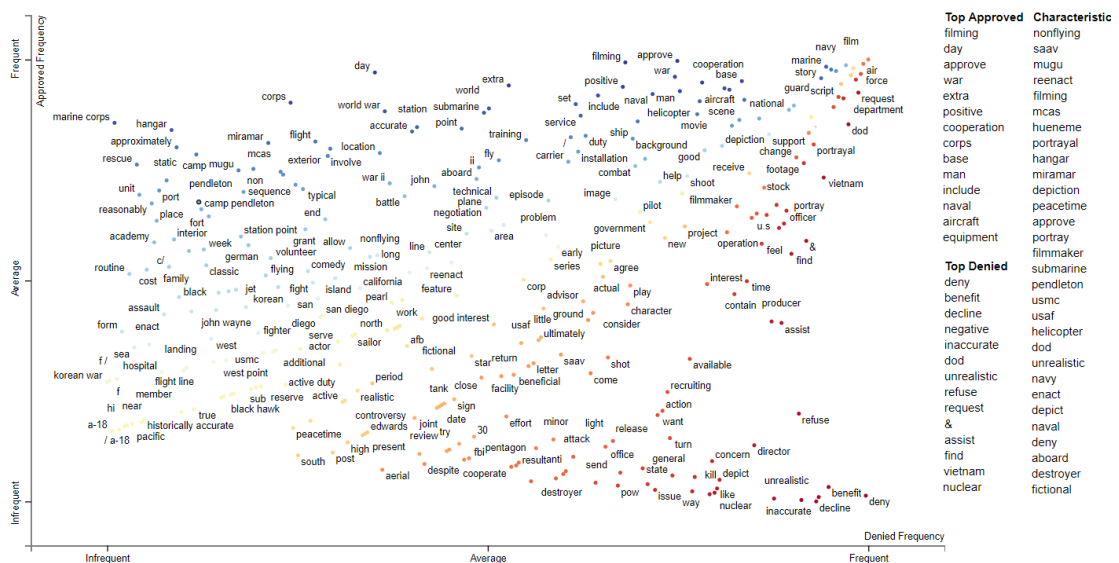
Figure 12: Scattertext of the DoD Remarks for Approved and Denied Films after removing stop words

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[8] https://www.britannica.com/biography/John-Wayne
[9] https://www.the-numbers.com/person/430401-John-Wayne#tab=summary

6 Discussion

6.1 Limitations

While this study reveals the dynamics of the support mechanism, it encounters some practical difficulties. The primary limitation comes from the fact that the data was released by the Pentagon. Thus, there could be movies that have received support but were not listed for political reasons (for example, Zero Dark Thirty: A movie based on the killing of Osama Bin Laden - that was supported by multiple agencies [9]). Then, the data was transcribed into a CSV file from a PDF and thus contained spelling and grammatical errors. The remarks made by the DoD were extensively used in this study. However, they provide a short summary of the conversation between the makers and the DoD. Alongside, the plots of the movie used in Section 4.1.2 are obtained from IMDb while the DoD had access to the complete script. Thus, more grounded results could be obtained by accessing the full scripts and transcripts of communication between makers and the Pentagon. Additionally, the ABSA was performed using models that were trained on restaurant and laptop domains [10]. Hence to obtain a coherent sentiment a custom model must be trained on data related to military information.

6.2 Implications and Future Work

The primary aim of producing films is to cater to the audience, and this study did consider the third theme for studying the relationship between the military and Hollywood, which is the effectiveness of military advertising. The questions on that end were, did the audience have a positive feeling about the U.S. military after watching the movies that were approved by DoD and how did it affect the recruitment? The user reviews for movies and recruitment data were key to answer this question. Although the user reviews were available to the movies on IMDb, two major limitations were found. The first is a difficulty to address the time dilation effect, i.e. the user reviews were available from the year 1998 while the movies were available from 1911 and responses to the movie might change across years depending on the environment in the country. The second difficulty arises from the fact that the locations of reviewers on IMDb are not known and thus making it difficult to gauge the effect on the primary intended audience. A future direction of this work that would strength the conclusions is to conduct a study that would understand the effects of a movie when it was released by looking at the movie reviews and interviews that appeared in the newspapers and other movie related advertisement media of that time.

The results of this study bring to the discussion two important questions relating to the social implications of the movies produced through such collaborations. Hollywood has become more than an American film industry and audiences around the globe watch the movies it produces. Thus a selective promotion in the popular culture could create fictional narratives of the history and secondary problems on addressing the fictional legacy arise. The second implications that requires further study is how do these films and TV shows affect the children? What role do they play in the process of enlisting themselves into the armed forces?

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[10] https://github.com/ScalaConsultants/Aspect-Based-Sentiment-Analysis#ready-to-use-models

7 Conclusion

Movies provide a rich medium of communication to large numbers of the general public. Realizing their role in shaping the public's mind, many businesses use it to present their message. The U.S. Department of Defense was no different and came forward to extend assistance and collaborate with movie-makers. This study analyzed this collaboration both in terms of material and narrative collaborations. Concerning the material support, the Pentagon provided the filmmakers with access to air force/naval/army bases, sophisticated military equipment such as jets, submarines and even persons to operate them. In exchange for this valuable and high-cost material support, the movies have presented the good side of the armed forces. More clearly from the sentiment analysis results, only those movies that portrayed non-negative impressions of the military were extended assistance. This study further revealed how the pentagon is involved in making and promoting only those movies that showcase their victories and help them in recruiting. On the other hand, they have sidelined movies that put a spot on the U.S. government or military and occasionally those that had an unrealistic representation of the military. The words' accuracy and realism that are mentioned in the DoD directive to provide support give a wide scope for individual interpretation and thus enables Pentagon to apply its understanding of what forms part of correct presentation and selectively support the films.

References

[1] Department of the Air Force Entertainment Liaison Office. "Introduction". In: (n.d.). URL: https://www.airforcehollywood.af.mil/Intro/.

[2] K. Beheraj. "Films TV Shows Requesting U.S. Military Support". In: (2020). URL: https://www.kaggle.com/ksb357/military-hollywood-collaboration-database.

[3] D. Bell. "World War I Recruiting Songs: Building the Military with Music". In: *Teaching with the Library of Congress* (2021). URL: https://blogs.loc.gov/teachers/2017/04/world-war-i-recruiting-songs-building-the-military-with-music/.

[4] U.S. Department of Defense. "5410.16: Department of Defense Assistance to Non-Government, Entertainment-Oriented Motion Picture, Television and Video Productions, issued on January 26, 1988, and reissued as DoD Assistance to Non-Government, Entertainment-Oriented Media Productions on July 31, 2015". In: (2015). URL: http://www.dtic.mil/whs/directives/corres/pdf/541016p.pdf.

[5] Matthew Honnibal et al. *spaCy: Industrial-strength Natural Language Processing in Python*. 2020. DOI: 10.5281/zenodo.1212303. URL: https://doi.org/10.5281/zenodo.1212303.

[6] Jason S. Kessler. "Scattertext: a Browser-Based Tool for Visualizing how Corpora Differ". In: (2017).

[7] K. Lange. "All But War Is Simulation: The Military-Entertainment Complex". In: *Configurations* 8(3) (2000). URL: https://doi.org/10.1353/con.2000.0022.

[8] K. Lange. "How & Why the DOD Works With Hollywood". In: (2018). URL: https://www.defense.gov/Explore/Inside-DOD/Blog/Article/2062735/how-why-the-dod-works-with-hollywood/.

[9] A. Matthew. "The Political Impact of the Department of Defense on Hollywood Cinema". In: *Quarterly Review of Film and Video* 33:4 (2016). DOI: 10.1080/10509208.2015.1086614.

[10] J. E. Mueller. *Trends in Popular Support for the Wars in Korea and Vietnam*. Vol. 65(02). American Political Science Review, 1971. DOI: 10.2307/1954454.

[11] D. L. Robb. "Operation Hollywood: How the Pentagon Shapes and Censors the Movies". In: *Prometheus* (2004).

[12] Scalac. *ABSA: Aspect Based Sentiment Analysis*. 2021. URL: https://github.com/ScalaConsultants/Aspect-Based-Sentiment-Analysis.

[13] C. Silver. "Why We Fight: Frank Capra's WWII Propaganda Films". In: (2011). URL: https://www.moma.org/explore/inside_out/2011/06/07/why-we-fight-frank-capras-wwii-propaganda-films/.

[14] L. H. Suid. "Beginnings. In Guts and Glory: The Making of the American Military Image in Film". In: *The University Press of Kentucky* (2002). URL: http://www.jstor.org/stable/j.ctt130hw0p.

[15] J. Tricia. "Get Smart: A Look at the Current Relationship between Hollywood and the CIA". In: *Historical Journal of Film, Radio, and Television* 29:2 (2009). DOI: 10.1080/01439680902890704.