

# Social Armed Forces: A Comparative Analysis of the Popularity of Two US Flight Demonstration Teams on Facebook

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## Abstract

Social media has been used by business organizations for quite some time now for purposes not limited to promote their products and services, attract new age customers and handle their grievances. Public Figures like politicians, sportsperson, etc. as well as public offices like the various government ministries are making use of the social media as a public relations medium. Interestingly, the armed forces across the globe are also adopting social media to connect with the online population. This paper attempts to undertake a comparative study of the first-looks and popularity indexes between the social media presence of two organizations which are into similar functions of conducting air flight demonstrations. The organizations under study are the United States (U.S.) Navy Blue Angels and the U.S. Air Force Thunderbirds.

**Keywords:** Armed, Blue Angels, Facebook, Forces, Social, Thunderbirds, United States Air Force (USAF), US Marine Corps (USMC), US Navy

## 1. Introduction

The world has seen flight demonstrations since the 1930s. It is usually undertaken by the military organizations like the Air Forces or the Air Wings of the Navies or Armies. The U.S. Navy Blue Angels (BA) was established in 1946. The mission of the United States Navy Flight Demonstration Squadron is to showcase the Pride and Professionalism of the United States Navy and Marine Corps and inspire a culture of excellence and service to country by conducting flight demonstrations and community outreach. The team operates F/A-18 Hornets and a C-130T Hercules (lovingly called Fat Albert). The Fat Albert represents the US Marine Corps and is famous for the Jet Assisted Take Off (JATO) demonstration (last performed in 2009).

The U.S. Air Force Thunderbirds (TB) was established in 1953 and as the name suggests is operated by the USAF. It aims to demonstrate the pride, professionalism and

dedication of hundreds of thousands of Airmen serving at home and abroad. It currently operates F-16s.

In early 2013, sequestration actions in the US led to the cancellation of multiple military outreach events including aerial demonstration team performances of both the BA and TB for a few months. In October 2013, the Secretary of Defense Chuck Hagel in a memo issued to the chiefs of the military services communicated, "Community and public outreach is a crucial Departmental activity that reinforces trust and confidence in the United States Military and in its most important asset – people. It is our obligation to sustain that trust well into the future." Thus, there was a resumption of appearances by the military's jet and jump demonstration teams, military band concerts, ceremonial unit appearances, port visits, service weeks, and nonprofit and corporate leader outreach. The activities "showcase our superior combat power, demonstrate readiness to defend the nation, and help to preserve the all-volunteer force," Hagel said.

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The above mentioned incident is an indication of the role and importance of air demonstrations to glorify the Armed Forces, to connect with the citizens, instill confidence in them about the Armed Forces, and attract the youth to the glorious service.

The adoption of social media by the military organizations has acted as a ‘force multiplier’ in their public outreach effort. Both the above mentioned flight demonstration teams use the social media platforms like Facebook and Twitter to connect with their fans, disseminate information, and gain feedback.

## 2. Comparative Analysis

The paper aims to present a comparative analysis of various factors pertaining to the Facebook Pages of the two military organizations (specializing in flight demonstrations) under study. The study aims primarily at the ease of locating, first look, and popularity indexes of the Pages. The tools used are facepager and fanpagekarma for data collection; and likealyzer and R for analysis.

## 3. Basic Information

The basic information about the two organizations are listed in the Table 1 below:

**Table 1.** Basic Information Of BA and TB Facebook Pages

Factors	U.S. Navy Blue Angels	U.S. Air Force Thunderbirds
Address (Physical Location of home base)	Yes	Yes
Website	Yes	Yes
Can Be Messaged (Private Message)	No	Yes
Notes Feature	Used up to 2013	Not used
Events	Occasionally used	Used up to 2012
Milestones	Used	Not used

(Source: [www.facebook.com/USNavyBlueAngels](http://www.facebook.com/USNavyBlueAngels); [www.facebook.com/AFThunderbirds](http://www.facebook.com/AFThunderbirds))

It is interesting to note that the BA cannot be privately messaged. This hinders an important channel for communication like feedback. This also reduces the work of the social media managing team to respond

appropriately to each private message. Events is a feature which both the Pages have used in the past to announce public activities like air shows. It would have benefitted both the teams as well as the common public. The use of Milestones feature indicate that an organization values its past and provides a great way for the audience to know about it. Any military organization is rich with historic glories and displays of valour and courage. The proper use of this feature can act as a quick timeline view of the organization’s history.

## 4. Verified Badge

Facebook has a ‘Verified’ feature and is represented by a check sign in a circle and the badge is placed next to the Page title. As the name ‘Verified’ suggests, it is an indication that a particular page is verified as authentic by Facebook and that the page represents the true business organization or personality.

There two types of Verification badges offered by Facebook – blue and gray. The blue badge is an indicator for authentic Page or profile for a public Figure, media company or brand. The gray badge is an indicator for authentic Page for a business or organization.

Most military organizations having a verified page feature a blue badge. Following the trend, BA has a blue Verification badge but TB has a gray badge.

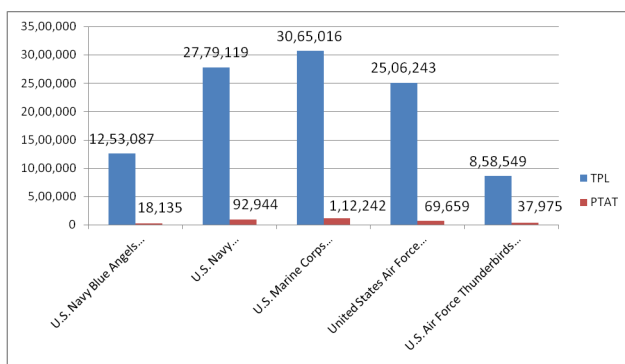
For regular users, a gray badge can come as a surprise as they are accustomed with Government Facebook Pages with blue badge. Also, the blue badge is visually more appealing and a similar badge is also adopted by Twitter to verify accounts. Being verified pages, it also helps users to easily locate them while searching as they usually appear higher on the search result list.

## 5. Popularity - Total Page Likes, People Talking About This

On Facebook the popularity of a Page is indicated through ‘Total Page Likes’ (TPL) and ‘People Talking About This’ (PTAT). TPL is an indicator for the number of unique Facebook users who directly liked the page or maybe liked it through a promotional feature (Facebook suggests Pages a user might be interested in or an external website can promote the Facebook Page, and fetch a Page Like). PTAT is an indicator for the number of unique Facebook

users interacting directly (likes, comments, shares, etc.) with the Page in the last seven days from prior to two days. For example, if today is the ninth day of the month, then for today's PTAT, Facebook uses data from the first to the seventh day of the month. The below graph (as of 3 Sep, 2016) shows the TPL and PTAT for not just BA and TB but also for their parent organizations, U.S. Navy and U.S. Marine Corps for BA, and U.S. Air Force for TB. A higher PTAT to TPL ratio is a healthy indication for the Page. As per likealyzer.com, a value of 0.07 is healthy enough; as per <sup>2</sup>a value of about 0.10 and 0.05 is healthy enough for less than 1000000 Page Likes and more than 1000000 Page Likes respectively; and as per Daniel Decker the average value of the top 20 most engaging Pages is 0.06. In this case, the PTAT to TPL ratio value for BA and TB are 0.0145 and 0.0442 respectively. This indicates that users are engaging more with TB. This could be due to factors like upcoming or just finished events like air shows; or the use of more engaging posts by TB.

The TPL of the organizations under study to the TPL of its parent(s) ratio can give an indication of the former's popularity compared to its parent. The values for BA to USN, BA to USMC, BA to USN and USMC combined, TB to USAF are 0.45, 0.41, 0.21, 0.34 respectively. A higher value indicates higher relative popularity.



**Figure 1.** Total Page Likes and People Talking about this for the USN Blue Angels, USN, USMC, USAF, USAF Thunderbirds.

(Source: [www.facebook.com/USNavyBlueAngels/likes](http://www.facebook.com/USNavyBlueAngels/likes); [www.facebook.com/USNavy/likes](http://www.facebook.com/USNavy/likes); [www.facebook.com/marines/likes](http://www.facebook.com/marines/likes); [www.facebook.com/AFThunderbirds/likes](http://www.facebook.com/AFThunderbirds/likes); <https://www.facebook.com/USairforce/likes>)

## 6. Popularity - Reviews

The 'Reviews' feature available on the Facebook Pages

enables users to rate the Page on a scale of one to five stars, where one star denotes 'Poor' while five stars denote 'Excellent'. Along with the rating, the user can also put forward their review in words. The overall Review Ratings of the BA and TB are 4.9 (26k reviews) and 4.8 (3.2k reviews) respectively out of 5. 92% and 90.6% of the reviews for BA and TB respectively are five star ratings. Only 1.25% and 1.8% of the reviews for BA and TB are one star ratings.

## 7. Popularity - Country-Wise

Using fanpagekarma, an online social media analysis tool we get the list of top thirty countries whose Facebook users contribute to the Total Page Likes for the two Pages under study (as of 8 Sep, 2016). The BA operates the F/A-18 Hornet and the C-130. The TB operates the F-16. The countries in the BA list operating F/A-18 Hornets, and the countries in the TB list operating (or have operated in the past) F-16s are highlighted in bold. A few points to be noted about some non F-16 operating countries:

- Puerto Rico has used F-16s till 1998.
- UK (USA) and Bangladesh (Turkey) do not own F-16s but have a few pilots trained on it through training programs in countries mentioned in the brackets.
- Japan uses the Mitsubishi F-2 which is a derivative of the F-16. The F-2 is jointly developed by the Mitsubishi Heavy Industries and Lockheed Martin (manufacturer of the F-16).

The C-130 operating (or have operated in the past) countries in the BA list are marked with an asterisk(\*). Italy currently does not use the C-130 but has used it till 2001. The countries on the TB list that have either considered, or are/were offered the F-16 but did not induct it or have not yet inducted it are marked with a caret (^). Similarly, the countries on the BA list that have either considered, or are/were offered the F/A-18 Hornet but did not induct it or have not yet inducted it are marked with a caret (^). As twenty five out of the thirty countries on the BA list operate the C 130, countries that have either considered, or are/were offered the C 130 but did not induct it or have not yet inducted it, have not been marked.

**Table 2.** Top 30 countries from where TPLs originate for BA and TB

Serial No.	U.S. Navy Blue Angels			U.S. Air Force Thunderbirds		
	Country	Number of Page Likes (Total Page Likes = 12,54,010)	% Contribution to Total Page Likes	Country	Number of Page Likes (Total Page Likes = 859,111)	% Contribution to Total Page Likes
1	USA*	807702	64.40953	USA	348958	40.6185
2	India^*	41816	3.334583	Brazil	72387	8.425803
3	Brazil^*	40707	3.246146	India^	58528	6.812624
4	Philippines^*	38983	3.108667	Philippines^	34770	4.047207
5	Mexico*	19419	1.548552	Pakistan	19324	2.249302
6	Italy*	12860	1.02551	Mexico^	17478	2.034429
7	UK^*	12174	0.970806	Italy	16366	1.904992
8	Thailand^*	11233	0.895766	Thailand	12752	1.484325
9	Canada*	11000	0.877186	UK	12274	1.428686
10	Japan^*	10879	0.867537	Bangladesh	11919	1.387364
11	Bangladesh*	10457	0.833885	Myanmar	11321	1.317758
12	Pakistan*	10100	0.805416	Indonesia	9893	1.151539
13	Myanmar	10091	0.804699	Egypt	9431	1.097763
14	Germany	8758	0.6984	Canada^	8979	1.04515
15	Indonesia*	8710	0.694572	Japan	8709	1.013722
16	France^*	8224	0.655816	France	8520	0.991723
17	Australia*	6876	0.548321	Iraq	8157	0.94947
18	Malaysia*	6481	0.516822	Malaysia	7655	0.891037
19	Puerto Rico	6025	0.480459	Turkey	6986	0.813166
20	Iraq*	6021	0.48014	Germany	6187	0.720163
21	Egypt*	5706	0.45502	Iran	5747	0.668947
22	Argentina*	5004	0.39904	Argentina^	5180	0.602949
23	Taiwan*	4991	0.398003	Australia^	4968	0.578272
24	Nigeria*	4848	0.3866	Taiwan	4908	0.571288
25	Iran*	4827	0.384925	Puerto Rico	4753	0.553246
26	Colombia*	4710	0.375595	Colombia^	4710	0.548241
27	Turkey*	4670	0.372405	Saudi Arabia^	4548	0.529384
28	Spain*	4415	0.352071	Romania^	4448	0.517745
29	Poland^	4356	0.347366	Poland	4364	0.507967
30	Vietnam	3854	0.307334	Vietnam	3957	0.460592

(Source: <http://www.fanpagekarma.com/facebook/USNavyBlueAngels#influencers>; <http://www.fanpagekarma.com/facebook/AFThunderbirds#influencers>)

### 7.1 Observations and Inferences:

- The home country, USA contributes the maximum Likes to the Pages – 64.40 and 40.62 % for BA and TB respectively.
- The second and third spots in both the lists feature India (second in BA and third in TB list) and Brazil (second in TB and third in BA list).
- The F/A-18s (operated by BA) is used by 5 out of the 30 countries in the list. There are just seven non-US operators plus USA operating these aircrafts.
- The F/A- 18s were linked to 8 more countries on the list but failed to be inducted.
- The C-130 aircraft (operated by BA) is used by 24

(excluding Italy as it was a former operator) out of the 30 listed countries.

- The F-16 (operated by TB) is used by 9 (excluding Puerto Rico as it was a former operator) out of the 30 listed countries.
- The F-16s were linked to 9 more countries but failed to be inducted.
- In countries which operate these aircrafts or have either considered, or are/were offered these aircrafts, there is an interest about these aircrafts among their citizens. This causes the citizens to gather information about these aircrafts like origin, specifications, operational history, etc. While doing so, their citizens

can come across the flight demonstration teams – BA and TB because the aircrafts are of US origin; and these flight demonstration teams are US based teams operating the said aircrafts. This contributes to TPL for their Pages and future engagement.

## 8. Conclusion

The paper is comparative study of the social media presence of the BA and TB on Facebook taking into account relevant parameters for popularity. TB has more engaging fans than BA during the time period in which the study has been conducted even though TB has less than half the number of fans compared to BA. The reviews for the Facebook pages of both BA and TB are on the higher side of the spectrum but the number of total reviews is very less. Therefore, the reviews cannot be considered to be the holistic sentiment of the most the fans. The paper attempts to draw a close relationship between the online popularity of these military organizations and the real world facts like if a particular aircraft is operated by/ linked to a certain country. Five out of the eight F/A-18 operating countries are present on the BA list of top thirty country-wise fan distributions. Eight more countries on that list are those to which the F/A-18 was linked to but failed to be inducted. Twenty five countries of the same list operate the C 130s. Similarly, the F-16s operated by the TB is also operated by nine countries of the TB list of top thirty country-wise fan distributions, and another nine countries of that list were linked to the F-16 but failed to induct it. The above mentioned figures are an indication that the popularity in each country of the world of the flight demonstration teams under study is influenced in a way by the popularity of the machines operated by them.

## 9. Future Scope of Study

The paper attempts to comparatively study the factors like first looks and popularity indexes pertaining to only one social media platform (Facebook) presence of the two military organizations under study. The PTAT values can be studied over a period of time. For example, the PTAT to TPL ratio value can be recorded weekly and the trend can be studied. Also, it would be interesting to understand how the trend is influenced by factors like start or end of the air display season. This is important to be undertaken because the PTAT to TPL ratio value is a

dynamic value and corresponds to only a snapshot of the time. Based on this, a micro analysis of the content posted by the two military organizations can be undertaken to understand the factors leading to more engagement online. The scope of the study can be widened to include other social media platforms like Twitter. This would give a holistic view of the online popularity of the two military organizations under study and present an even more accurate correlation between the geographical popularity of the two military organizations and the actual use of/ link up of the machineries (used by the two military organizations) in those geographies.

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