Hijacking our Heroes: Exploiting Veterans Through Disinformation on Social Media

Hearing of the House Committee on Veterans' Affairs, scheduled for November 13, 2019

Statement of Dr. Vlad Barash, Science Director at Graphika

Chairman Takano, Ranking Member Roe, and distinguished members of this committee: thank you for holding this hearing today, and for inviting me to contribute on the topic of digital threats targeting service members, veterans, and their families.

I am the Science Director of Graphika, a network analysis company that examines how ideas and influence spread online. In this capacity, I oversee our work with DARPA and with our colleagues from leading academic institutions on developing and applying cutting edge methods and algorithms for detecting the manipulation of 21st Century networked communications. This is a problem I have been working on for many years.

My Ph.D. dissertation at Cornell demonstrated how an idea can reach "critical mass" simply by gaining enough supporters in the right online communities — no matter how true or false it is. Even the most outlandish rumor that reaches critical mass will go viral and become extremely difficult to disprove. This dissertation, using simulated network behavior, demonstrated some fundamental mechanisms explaining how truth and falsehood alike go viral. In the years since, at Graphika, I have had the opportunity to apply these and other models in studying a wide array of real disinformation campaigns, including the work we did with our Oxford University colleagues for the Senate Select Committee on Intelligence, analyzing the Russian disinformation campaigns surrounding the 2016 US Presidential election.1

Our work on Russian interference, along with numerous other campaigns we've detected, investigated, and analyzed, point to the insidious effects of sophisticated disinformation campaigns on individual citizens, on our social cohesion, and on our trust in factual and unbiased news and information required for democracy to function.

Disinformation on social media and information operations conducted by sophisticated actors came to broad public attention in the wake of the 2016 US Presidential election but have been going on longer than most people realize. In the past few years, foreign information operations

¹ Howard, P., Ganesh, B., Liotsiou, D., Kelly, J., and Francois, C. (2019). The IRA, Social Media, and Political Polarization in the United States, 2012-2018. The Computational Propaganda Project at the University of Oxford. URL: https://comprop.oii.ox.ac.uk/research/ira-political-polarization/. Retrieved on: 02/24/2019.

have targeted divisive political issues within American society and have sought to manipulate and divide political and social communities. Unfortunately, our military service members and veterans are no exception.

These operations are rapidly evolving. Early campaigns we observed and analyzed targeted individuals online at random, using easily discoverable methods; newer methods target specific communities, embed sock-puppet personas in them, and use sophisticated "cyborg" approaches that synergize large-scale automated operations with precisely crafted disinformation injection and hijacking efforts by human operators.2,3 The goal of these operations is not simply to "go viral," or to have a high "Nielsen Score," so to speak, but rather to influence the beliefs and narratives of influential members of key communities active at the wellsprings of social and political ideas. The effects of these operations aren't confined to the digital space: by targeting individuals directly, and by leveraging social media to organize offline events, they seek to produce chaos and harm in the homes and streets of our country.

These online campaigns have long targeted the US veterans and military service members community, who represents a target of interest for both foreign operators and commercial disinformation actors. US veterans and members of our military are highly respected members of society who "positively influence their country and their community." 4 At the same time, they are considered a "vulnerable population in the context of the digital divide." 5 Common topics of discussion in US veteran communities include mental and physical health issues, separation from military service, and reintegration into civilian life6: those are all topics we have seen malicious campaigns target and engage with in order to manipulate the US veterans community.

I would like to highlight a few important points that I have learned throughout my work examining social media threats targeting veterans on social media over the past few years.

² Francois, C., V. Barash, and J. Kelly. Measuring coordinated vs. spontaneous activity in online social movements. SocArxiv: https://osf.io/aj9yz/

³ Howard et al. 2019

⁴ Lieberman, D. and Stewart, K.(2014). Strengthening Perceptions of America's Post-9/11 Veterans Survey Analysis Report. Greenberg Quinlan Rosner Research on behalf of Got Your Six. https://www.dillonconsult.com/wp-content/uploads/2013/03/Strengthening-Perceptions-of-Americas-Post-911-Veterans-Survey-Analysis-Report-Got-Your-6-June-2014.pdf Retrieved on 11/1/19

⁵ Houston, T.K., Volkman, J.E., Feng, H., Nazi, K.M., Shimada, S.L., Fox, S. (2013). Veteran Internet Use and Engagement With Health Information Online. Military Medicine, Volume 178, Issue 4, April 2013, Pages 394–400, https://doi.org/10.7205/MILMED-D-12-00377

⁶ Olenick, M., Flowers, M., and Diaz, V.J. (2015). US veterans and their unique issues: enhancing health care professional awareness. Adv Med Educ Pract. 2015; 6: 635–639. Published online 2015 Dec 1. doi: 10.2147/AMEP.S89479

1. The U.S. veterans community is often a target of state-sponsored foreign information operations

Foreign information operations against our men and women in uniform are a persistent threat, ongoing since at least 2011.7 These operations are not isolated to one channel: they have played out on social media messages,8 including Twitter, Facebook, and LinkedIn; on social media advertisements9; and on alternative websites and news media focused on the veterans community.

These operations are surgically precise, targeting influential people and organizations in the veteran community. Veterans-focused publications have unwittingly published articles authored by false personas created by foreign intelligence services, such as the Russian persona "Alice Donovan." 10 Foreign information operations have also targeted the spouses of veterans, 11 exploiting the family connections of those who serve our country for their own malicious ends.

Last but certainly not least, these operations show no signs of stopping. Howard et al. 12 demonstrate that information operations by just one agency operated by one foreign actor — Russia's Internet Research Agency — increased dramatically after the 2016 US Presidential elections. Similarly, Spaulding et al. 13 say "the volume and intensity of these aggressive [information] operations have grown since 2016 and show no signs of abating." Our analysis of foreign information operations on Twitter released by Gadde and Roth 2018, 14 focusing

- 7 Finkle, J. (2014). Iranian hackers use fake Facebook accounts to spy on U.S., others. Reuters. https://www.reuters.com/article/iran-hackers/iranian-hackers-use-fake-facebook-accounts-to-spy-on-u-s-others-idUSL1N0OE2CU20140529. Retrieved on 11/10/2019.
- 8 Goldsmith, K. (2019). An Investigation Into Foreign Entities Who Are Targeting Troops and Veterans Online. Chief Investigator and Associate Director for Policy and Government Affairs
- $Vietnam\ Veterans\ of\ America.\ http://vva.org/trollreport/\ Accessed\ 11/04/2019.$
- 9 Howard et al. 2019, Goldsmith 2019. Goldsmith analyzed the advertisements placed by Russian Internet Research Agency accounts and found forty one ads targeting US veterans and military service members. These ads generated 476,131 impressions and 26,031 clicks.
- 10 Barrett, K. (2017). "Alice Donovan" sparks anti-alt-media witch hunt is "she" a false flag? Veterans Today. https://www.veteranstoday.com/2017/12/27/alice-hunt/. Retrieved on 11/10/2019. Alice Donovan was identified as an account run by Russian military intelligence in United States of America vs. Viktor Borysovych Netyshko, Boris Alekseyevich Antonov, Dmitriy Sergeyevich Badin, Ivan Sergeyevich Yermakov, Aleksey Viktorovich Lukashev, Sergey Aleksandrovich Morgachev, Nikolay Yuryevich Kozachek, Pavel Vyacheslavovich Yershov, Artem Andreyevych Malyshev, Aleksandr Vladimirovich Osadchuk, Aleksey Aleksandrovich Potemkin, and Anatoliy Sergeyevich Kovalev, Defendants (2018). CRIMINAL NO. 18 U.S.C. §§ 2, 371, 1030, 1028A, 1956, and 3551 et seq. In the United States District Court for the District of Columbia, Case 1:18-cr-00215-ABJ Document 1 Filed 07/13/18.
- $11 \quad Satter, \quad R. \quad Russian \quad hackers \quad posed \quad as \quad IS \quad to \quad threaten \quad military \quad wives. \quad Associated \quad Press. \\ https://apnews.com/4d174e45ef5843a0ba82e804f080988f. \\ Retrieved on 11/10/2019.$
- 12 Howard et al. 2019
- 13 Spaulding, S. Gresh, J. and Nair, D. (2019). Why the Kremlin Targets Veterans. Center for Strategic and International Studies. https://www.csis.org/analysis/why-kremlin-targets-veterans. Accessed on 11/10/2019.
- 14 Gadde, V. and Roth, Y. (2018). Enabling further research of information operations on Twitter. https://blog.twitter.com/en_us/topics/company/2018/enabling-further-research-of-information-operations-on-twitter.html. Accessed on 11/4/2019.

specifically on operations against US military and veterans, confirms previous findings and demonstrates the involvement of multiple state actors in targeting the US veterans community.15 Russia and Iran are the most prominent state actors in this context, but recent work16 has identified additional state actors, such as China and Saudi Arabia, using information operations to target communities and topics of interests.

2. These operations seek to divide and weaken the veterans communities and sometimes go hand in hand with sophisticated cyber attacks

Spaulding et al.17 observe that foreign attacks on US veterans, including Russian state-sponsored news outlets media such as Russia Today, "use misleading and divisive questions about the U.S. government's military and veteran policies to further amplify and exploit the existing frustrations in the veteran community." These attacks exploit "societal cleavages" in US veterans and military communities and work "to promote narratives that 'the system,' and thus democracy, is irrevocably broken." Our analysis of foreign information operations on these communities confirms this observation.

We present a few example posts to illustrate these tactics of division and exploitation. We also welcome the transparency efforts of the platforms in this area, notably Twitter and Facebook, who, since 2017, have publically released archives of posts and messages crafted by foreign actors and used in information operations. Together with our colleagues at the German Marshall Fund, we have created the "Information Operations Archive" online portal, enabling users to better navigate and analyze these archives 18.

15 We examined eight foreign information operations datasets published by Twitter: three datasets stemming from Russian information operations (2018 release, January 2019 release, June 2019 release) and five datasets stemming from Iranian information operations (2018 release, January 2019 release, and three datasets released in June 2019). We filtered each published Twitter dataset to include only messages that a) targeted an influential account for military and veterans, based on our analysis of Gallacher et al. 2017 (see below) and/or b) used one of the following keywords: "vet," "veteran," "veterans." Our rate analysis showed that two of the three Russian information operations datasets increased in activity after the 2016 election, while one dataset (the one released in June 2019, which included only 11 tweets targeting US Veterans or military service members) had no post-election activity. All five Iranian information operations datasets increased in activity after the 2016 election. Overall, the rate of increase for the two Russian datasets with post-election activity was 1.32 and the rate of increase for the Iranian datasets was 5.65. This means both Russian and Iranian information operations targeting US veterans and military service members ramped up their activity after the 2016 election.

16 Francois, C. and Nimmo, B. (2019). Briefing for the United States House of Representatives Committee on Science, Space, and Technology. Investigations and Oversight Subcommittee Hearing on Online Imposters and Disinformation. Statement of Camille Francois, Chief Innovation Officer, Graphika, and Affiliate at the Berkman Klein Center for Internet & Society, and Ben Nimmo, Director of Investigations, Graphika. Washington, DC. September 26, 2019

17 Spaulding et al. 2019

18 Available at www.io-archive.org



Figure 1. Screenshot: IRA-controlled Facebook page seeking to engage viewers through interactive or divisive memes. 19



Figure 2. Screenshot: Both images are from a Russian-backed Facebook group called Stop A.I. (Stop All Invaders).20

My team and I also analyzed the topics of posts from information operations datasets released by Twitter, again focusing on posts that target US veterans and military. Unsurprisingly, many of these topics are focused on veterans and the military. Quantitative analysis21 allows us to extract

¹⁹ Goldsmith, 2019 reprinted in Spalding, 2019.

²⁰ The images were reproduced in Senator Michael Bennet's book: Michael Bennet, Dividing America: How Russia Hacked Social Media and Democracy (Michael Bennet, 2019) and reprinted in Spalding, 2019.

²¹ We used Latent Dirichlet Allocation (Blei et al. 2003) to automatically identify the topics of discussion in the veteran-focused foreign information operations. Latent Dirichlet Allocation takes a fixed number of topics as an input constructs these topics from common word co-occurrences in documents (for the purposes of this study, a document is a Tweet). We experimented with different numbers of topics and found that seven topics provided a high level of semantic differentiation.

salient topics in the set of messages used by foreign actors to target the veterans community, which we found to be primarily belonging to three themes:

- Messages related to being homeless and getting help
- Messages related to post-traumatic stress disorder and trauma
- Messages related to supporting our troops

The last topic especially mixes generally positive statements like supporting veterans and troops (and a reference to Red Friday, an event to remember deployed troops) with calls to attack, take, and "wake up" -- indicating that the information operation involves hijacking the supportive messages to call for violence. Hijacking conversations to promote a particular message is often used in Internet culture and has been borrowed by foreign actors such as Russia in order to dominate key conversations at home and abroad.22 The Appendix includes key words for each topic discovered in the Twitter datasets, broken down by dataset.

The divisive and debilitating tactics of these operations are not limited to subversive messages posted on social media. In the cyber domain, attacks against our troops manifest as malware and phishing campaigns, for instance targeting veterans looking for employment.²³ The pairing of disinformation with cyber attacks demonstrates the sophistication of these operations, which aim to manipulate our veterans through multiple channels simultaneously and negate the utility of any single defense against their efforts.

3. Commercial disinformation operations and online "scammers" are also targeting the US veterans community

Today's disinformation landscape is an open playing field, with state and non-state actors having equally demonstrated interest and ability to engage in malicious behavior. As Goldsmith demonstrates, Russian foreign actors are not the only entities targeting our veterans. The Macedonian national Panche "Pane" Arsov purchased the Facebook page "Vets for Trump" after it had been compromised and stolen from its legitimate, American creators. Mr. Arsov grew the page's audience from 120,000 to 130,000 followers between April and mid-August 2019. Mr. Arsov is known to be one of the key figures of the Macedonian "Fake News industry" who "worked closely with two high-profile American partners for at least six months during a period that overlapped with Election Day" 14 in 2016. During the period when Arsov controlled Vets for

²² Howard et al. 2019

²³ Mercer, W. and Rascagneres, P. (2019). How Tortoiseshell created a fake veteran hiring website to host malware. https://blog.talosintelligence.com/2019/09/tortoiseshell-fake-veterans.html. Accessed on 11/10/2019.

²⁴ Silverman, Craig. "Macedonia's Pro-Trump Fake News Industry Had American Links, and Is Under Investigation for Possible Russia Ties." BuzzFeed News, 18 July 2018, https://www.buzzfeednews.com/article/craigsilverman/american-conservatives-fake-news-macedonia-paris-wade-libert.

Trump, the page posted images and text on the subject of American politics. These images were supportive of Russian President Vladimir Putin, hostile to law enforcement, and "us[ed] racist "dog whistles" (or subtly coded language), Islamophobic tropes, and dehumanizing language to incite division among the MilVets community."

Mr. Arsov is not an outlier when it comes to manipulating American veterans. Mr. Goldsmith discovered 41 Facebook pages targeting our service members with at least some foreign administrators. These pages had a combined audience of millions.25 Kris Goldsmith also discovered efforts to scam our veterans using platforms such as Instagram and Snapchat. Foreign commercial disinformation operations that take advantage of those who have given our country so much, for political or commercial ends, are a rapidly growing cottage industry that seeks to recruit our veterans into campaigns run from abroad and to profit off our veterans as they reintegrate into civilian life.

4. These operations intersect with domestic hyperpartisan and conspiratorial content

Gallacher et al.26 found 2,106 well-connected, active US veterans and military accounts on Twitter following or mentioning accounts for three prominent alternative hyper partisan media outlets ("junk news"27 in the study) that are reported to show links with Russian-origin content.

The precise targeting of these messages enables them to reach a large audience far beyond the initial set of targeted actors. For instance, our analysis of the 2,106 Twitter accounts identified in Gallacher et al.28 shows their combined audience exceeds 5 million accounts.29 Information operations targeting these 2,106 accounts can take advantage of their large Twitter following to expose millions of users to disinformation — an incredibly powerful multiplier effect.

The structure of our own public sphere creates the cracks through which bad actors target us. Gallacher et al.30 showed that disinformation operations spread to our veterans and military service members not directly from Russia or other foreign actors but mediated via American conspiracy theory communities, both on the right and on the left. Domestic conspiracy theory accounts act as

²⁵ All together, these 41 pages had 18,298,968 followers or likes. Of this larger set, the 16 pages with exclusively foreign administrators had 3,852,187 followers or likes.

²⁶ John D. Gallacher, Vladimir Barash, Philip N. Howard, John Kelly. Junk News on Military Affairs and National Security. COMPROP Data Memo 2017.9 / Oxford, UK: Project on Computational Propaganda. Comprop.oii.ox.ac.uk. 27 Gallacher et al. 2017 define junk news as "ideologically extreme, hyperpartisan, or conspiratorial political news and information. Much of this content is deliberately produced false reporting. It seeks to persuade readers about the

and information. Much of this content is deliberately produced false reporting. It seeks to persuade readers about the moral virtues or failings of organizations, causes or people and presents commentary as a news product."

²⁸ Gallacher et al. 2017

²⁹ The total number of Twitter followers of the 2,106 accounts is 6,279,927. Some followers may follow multiple accounts, so we apply a standard multi-following correction of 80%. The expected audience size of Veterans and Military accounts in Gallacher 2017 is 6,279,927*80% = 5,023,942.

³⁰ Gallacher et al. 2017

perfect amplifiers for foreign disinformation content, pushing it to a larger audience of Americans and situating it in a familiar context, where it is more believable. Technical features of our social media platforms, such as recommendation algorithms, strengthen these pathways even further: in the absence of consistent disinformation detection and removal, users can follow platform recommendations down virtual "rabbit holes" from personal interests to domestic conspiracy theories to foreign information operations.31

Conclusion

Proactive detection and transparency efforts by social media platforms in the last two years have allowed us to access the data and information necessary to shed light on the nature of information operations against our veterans and military service members. But, as a scientist, my inclination is also to highlight some of the key known unknowns of this topic. When it comes to the scope of operations, the data available so far allows for a piecemeal analysis approach to a multi-faceted operation. When it comes to the impact of operations, we need to answer the crucial question of how simple metrics related to reach and engagement, such as follows, retweets, and page clicks, translate to the changing of hearts and minds. The best way to answer this question is to conduct a causal analysis³² to understand how, and to what extent, online information operations change our veterans' beliefs and actions. Such an analysis is extraordinarily challenging, because it must take into account both the direct and indirect effects of disinformation, in both online and offline operations, yet it is the most rigorous method to make accurate determinations about the true effectiveness of these operations.

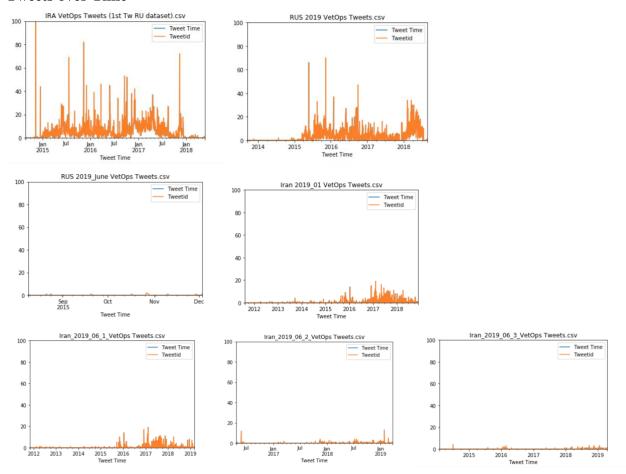
What we do know, however, clearly demonstrates that we need a whole of society approach to protecting and supporting the communities most targeted by foreign actors online. Our press and educational institutions could provide resources and fact-checking efforts specifically serving American veterans. Research institutions can fund, and researchers can develop, community-focused disinformation detection and deterrence approaches. Our social media platforms can continue to take action to protect and support vulnerable communities online. Our law enforcement agencies can identify and deter precision threats. Last but not least, legislators can pass laws to protect and support our veterans online. Only by acting in concert can we stop a concerted threat to the troops who have fought, and still and always will fight, for our freedom.

³¹ Howard et al. 2019.

³² Liotsiou, D., Moreau, L. and Halford, S., 2016, November. Social influence: from contagion to a richer causal understanding. In International Conference on Social Informatics (pp. 116-132). Springer, Cham.

Appendix

Tweets over Time



Topic Keywords

IRA VetOps Tweets (1st Tw RU dataset)

Topic Number	Words
0	Flag, hillary, hero, officer, god, bless, record, alien, order, son

1	Aircraft, obama, vietnam, sport, time, national, south, make, congress, usa
2	Veteran, rt, vet, news, get, help, homeless, year, care, military
3	Va, health, marine, know, group, report, memorial, good, give, law
4	Today, want, cop, wait, affair, sport, john, member, city, plan
5	Trump, war, american, world, go, attack, iran, deserve, donald, medium
6	Rt, honor, amp, shoot, barbmuenchen, potus, horseshort, joyreaper, transport, usaaf
7	Veterans, day, rememberyourheroe, happy, texas, forget, thank, woman, fight, life

RUS 2019 VetOps Tweets

Topic Number	Words
0	Amp, army, good, serve, ptsd, hillary, ht, come, member, break
1	Trump, maga, usmc, military, qanon, marine, care, president, year, veterans
2	War, force, usarmy, air, vietnam, iraq, people, kill, iran, news
3	Supportourveteran, supportourtroop, watch, new, usa, wakeupamerica, redfriday, time, attack, take
4	Memorialday, agree, ago, paratrooper, high, cause, important, dem, happymemorialday, empower
5	Va, refugee, say, need, donald, know, group, muslim, owe, call
6	Rt, veteran, vet, military, day, thank, help, today, navy, america
7	Obama, support, join, clinton, stand, line, pay, special, crisis, white

Iran_2018_VetOps Tweets

Topic Number	Words
0	Veteran, isis, trump, tell, va, saudi, rt, vet, parade, yountville
1	Rt, veteran, amp, trump, de, americans, day, parade, market, en
2	Niavaran, tehran, palace, iran, rt, iranian, realiran, complex, fight", call
3	Rt, توضيح,,واضحه, نميخا, veteran, need, protest, way, read, dear
4	Rt, usarmy, trump, iran, death, go, state, money, suicide, law
5	Rt, veteran, war, support, force, policy, trump, israel, putin, bitcoin
6	War, rt, rouhani, family, martyrs, army, veteran, great, amp, que
7	Visit, rt, veteran, old, response, disabled, isis, notmypresident, president, kill

Iran 2019_01 VetOps Tweets

Topic Number	Words
0	Rt, veterans, amp, usarmy, break, iran, americans, veteran, respect, usnavy
1	Rt, veteran, war, stand, support, amp, fight, new, army, meet
2	Rt, veteran, american, protest, actor, force, vet, air, war, today
3	Rt, و, amp, join, این, vet, این, trump, protect
4	Rt, trump, veteran, di, ya, israel, fuck, honor, star, life
5	Rt, good, care, veteran, از, video, home, deport, help, rally
6	Veteran, today, rt, military, nodapl, news, va, affair, foreign, standingrock
7	Rt, day, serve, war, time, shoor, undang, man, stop, leader

Iran_2019_06_01_VetOps Tweets

Topic Number	Words
0	rt, time, say, amp, try, wildlife, kill, native, marine, به
1	rt, veteran, face, meet, star, honor, great, look, amp, state
2	rt, veteran, nodapl, stand, return, rock, form, police, army, standingrock
3	rt, veteran, amp, die, trump, vet, meal, sleep, meds, box
4	rt, usarmy, soldier, vet, fuck, child, help, 3, military, dog
5	istana, iran, rt, di, niavaran, islam, tehran, dan, republik, delima
6	rt, veteran, war, good, serve, veterans, uk, amp, man, dress
7	rt, break, veteran, usarmy, usrc, thank, trump, march, navy, apologize

Iran_2019_06_2_VetOps Tweets

Topic Number	Words
0	کشتن, رو, برای, هفته ,rt ,چون, به ,usnavy ,یه, که
1	rt, grouppalestine, army, israeli, journalist, say, anti, israel, semitic, bds
2	و, هم, های, از, که, نه, کم, زبان ,rt, حالا
3	و, من, از, های, آقا, روز, جمعه, به ,rt ,در
4	رو, و, ازدواج, در, شما, به, با, این, اجبار rt,
5	که, می, هست, کنید, در, از, جای, دنبال, یکی, آدم
6	rt, grouppalestine, spy, weinstein, idf, penn, pechanac, name, stella, 🤊
7	رو, همین, کرد, ک, بزرگوار, کسی, مثل, هر, ب, هنوز

Iran_2019_06_3_VetOps Tweets

Topic Number	Words
0	trump, country, watch, syria, day, بيارجمند, چه, priority, help, wall
1	, care, health من, try, trump, veteran, به, است, که, و
2	و, را, کار, از, به, حال, هستیم, وزارت, rt, در
3	relation, usarmy, rt, defense, saudicrownprince, underreported, yemen, adjust, unjust, saudiarabia
4	rt, عشق, یعنی , money, عشق, یعنی , care, program, air, run, read
5	اینها, ضابطه, در, یعنی, به, و, رابطه, rt, بی, ای
6	رو, rt, رو, parade, از, veteran, force, pay, go, donald
7	و, از, به, که, سال, این, زنان, مردم, می rt,

RUS 2019_June VetOps Tweets

Topic Number	Words
0	opinion, problem, widespread, vascandal, veteran, different, suicide, prevent,

	tennessee, discussion
1	veteran, wish, marine, week, birthday, service, happy, thank, miss, rt
2	soldier, treat, usarmy, army, butthis, americanarmy, military, cannon, bestusatoday, fodder
3	veteran, butthis, bestusatoday, veteranaffair, diy, business, americanvet, vet, startup, va
4	murder, library, save, teenager, child, old, mass, plan, demolish, sue
5	pilot, crash, helicopter, kill, accuse, wsp, rural, law, ignore, preference
6	different, problem, opinion, vascandal, widespread, veteran, prevent, tennessee, suicide, wakeupamerica
7	wakeupamerica, suicide, prevent, veteran, different, vascandal, widespread, problem, miss, sue