The Army National Guard's Eroding Population Connection

A Monograph

by

LTC Jason D. Holmes
US ARNG

School of Advanced Military Studies
US Army Command and General Staff College
Fort Leavenworth, KS

2019

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
23-05-2019	Master's Thesis	JUNE 18-MAY 19

4. TITLE AND SUBTITLE
The Army National Guard's Eroding Population Connection

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
LTC Jason D. Holmes

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Army Command and General Staff College
ATTN: ATZL-SWD-GD
Fort Leavenworth, KS 66027-2301

8. PERFORMING ORG REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
ADVANCED MILITARY STUDIES PROGRAM

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution is Unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The Army National Guard's Eroding Population Connection, by Lieutenant Colonel Jason D. Holmes, Army National Guard, 50 pages. Current trends in the population of the United States such as obesity, drug use, and decreased willingness to serve are decreasing the pool of eligible recruits. The decreased pool of eligible recruits means a greater portion of those eligible to serve are needed to sustain the force. Increasing popular support for the military contributes to the likelihood that eligible people decide to serve. The Army National Guard (ARNG) is the best-postured military formation to ensure popular support for all armed services. The ARNG has almost 17 percent of the total armed forces' members and is located in over 600 more communities than all other Services combined. However, as the operational tempo of the ARNG increased, the ARNG has not placed enough focus, emphasis, or consideration on ensuring popular support. The current ARNG population does not adequately represent the total United States' population. The gap between these populations will likely create less support for the military over time and a degraded ability to maintain the All-Volunteer Force (AVF). The monograph proposes an operational approach to address the challenges created by this gap.

15. SUBJECT TERMS
Civil-Military Relations; Army National Guard; All-Volunteer Force (AVF); Popular Support

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. PHONE NUMBER *(include area code)*
(U)	(U)	(U)	(U)		228 669-3042

Monograph Approval Page

Name of Candidate: LTC Jason D. Holmes

Monograph Title: The Army National Guard's Eroding Population Connection

Approved by:

_____, Monograph Director
Jacob A. Stoil, PhD

_____, Seminar Leader
Glen E. Clubb, COL

_____, Director, School of Advanced Military Studies
Kirk C. Dorr, COL

Accepted this 23rd day of May 2019 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, PhD

Abstract

The Army National Guard's Eroding Population Connection, by LTC Jason D. Holmes, Army National Guard, 50 pages.

Current trends in the population of the United States such as obesity, drug use, and decreased willingness to serve are decreasing the pool of eligible recruits. The decreased pool of eligible recruits means a greater portion of those eligible to serve are needed to sustain the force. Increasing popular support for the military contributes to the likelihood that eligible people decide to serve. The Army National Guard (ARNG) is the best-postured military formation to ensure popular support for all armed services. The ARNG has almost 17 percent of the total armed forces' members and is located in over 600 more communities than all other Services combined. However, as the operational tempo of the ARNG increased, the ARNG has not placed enough focus, emphasis, or consideration on ensuring popular support. The current ARNG population does not adequately represent the total United States' population. The gap between these populations will likely create less support for the military over time and a degraded ability to maintain the All-Volunteer Force (AVF).

This monograph investigates the current population demographics in the ARNG. The monograph then compares demographics of the ARNG and the US population to understand one challenge facing the ARNG. Utilizing identified discrepancies, the monograph proposes an operational approach to address this challenge.

Contents

Acknowledgements

Thanks to my wonderful wife, Angel, and my three sons, Jonathon, Austin, and Nicklas and Godson Devin for putting up with my deployments and loving me although I often missed birthdays, anniversaries, sports and band events. I do not deserve any of you but I thank God every day that I have you in my life. Next, I thank COL Brent McCullouch and members of the Mississippi National Guard for inspiring me to attend the School of Advanced Military Studies. I also want to thank MAJ Noah M. Genger for writing a monograph in 2018 about the challenges of recruiting that inspired me to write this monograph. I thank Dr. Jacob Stoil for guiding me through this difficult project. I thank MAJ Carey Fitzpatrick and Ms. Venita Kruger for helping me with formatting and grammatical issues. Finally, I thank COL Glen Clubb and my classmates for challenging me every day to improve intellectually and professionally. I pray for future opportunities to serve alongside each of you.

Acronyms

ARNG	Army National Guard
AVF	All-Volunteer Force
CAARNG	California ARNG
DoD	Department of Defense
MAARNG	Massachusetts ARNG
MSARNG	Mississippi ARNG
OKARNG	Oklahoma ARNG
TXARNG	Texas ARNG
US	United States
VAARNG	Virginia ARNG
WIARNG	Wisconsin ARNG

Illustrations

Tables

Introduction

The third most trusted profession in the United States is the US military. Eighty-one percent of adults indicate a belief that the military has very high honesty and ethical standards.[1] In 1775, the beginning of the American Revolution, the Second Continental Congress established the Army, Navy, and Marine Corps. In 1789, Congress authorized the War Department. The National Military Establishment replaced the War Department in 1947. Congress renamed the National Military Establishment the Department of Defense (DoD) in 1949.[2]

In 2019, the DoD had three military departments that included the Army, Navy, and Air Force.[3] The Marine Corps is a component of the Navy and the Coast Guard operates under the Navy during times of war.[4] Each of the military departments have a Reserve Component. The Reserve Components of the Army include the US Army Reserve and the Army National Guard (ARNG).[5] The Navy, Marine Corps, and Coast Guard Reserve Components include the Navy Reserve, Marine Reserve, and Coast Guard Reserve.[6] The Air Force Reserve Components include the Air Force Reserve and the Air National Guard. The ARNG and Air National Guard are reserve components of their services and operate in part under state authority.[7]

---

[1] Mel Holohan, "America's 43 Most and Least Trusted Professions," MSN Money, February 21, 2018, 41, accessed February 15, 2019, https://www.msn.com/en-us/money/careersandeducation/americas-43-most-and-least-trusted-professions/ss-BBJnsRY.

[2] US Department of Defense, "Our Story," accessed April 9, 2019, https://www.defense.gov/Our-Story/#history.

[3] US Army, "Who We Are," accessed April 9, 2019, https://www.army.mil/info /organization.

[4] US Department of Defense, "Our Story."

[5] US Army, "Who We Are."

[6] US Navy, "Status of the Navy," accessed April 9, 2019, https://www.navy.mil /navydata/nav_legacy.asp?id=146; US Marine Corps, "Marine Corps Unit Directory," accessed April 9, 2019, https://www.marines.mil/Units/srterms/reserve; US Coast Guard, "United States Coast Guard Reserve," access April 9, 2019, https://www.uscg.mil.

[7] US Department of Defense, "Our Story."

In 1904, Major General Emory A. Upton identified the nation confusing volunteers with the militia as a weakness and a need to implement territorial recruitment. Upton's ideas in territorial recruitment were that areas unable to produce enough volunteers in proportion to the population required conscription to make up the deficiencies.[8] The US Congress passed the Selective Service Act on May 18, 1917 and gave the President the power to draft men for military service.[9]

DoD's establishment of the Total Force Policy and introduction of the all-volunteer force (AVF) at the conclusion of the Vietnam War increased reliance on the Army Reserve Component to include the ARNG. This increased reliance, compiled with declining budgets, resulted in the DoD organizing in such a manner that any significant conflict or war requires substantial mobilization of the Army Reserve Component.[10] This concept stemmed from the negative impact on morale of failing to mobilize the Reserve Component in the Vietnam War and concern that the end of the draft would negatively affect civil-military relations by divorcing the US Army from the general population.[11]

As subcomponents of the Army and Air Force, the National Guard connects the DoD with local communities and strives to maintain the trust and confidence of Americans.[12] The

---

[8] Emory A. Upton, *The Military Policy of the United States* (New York: Greenwood Press, 1904), xiv-xv.

[9] Selective Service, "Use of the Draft," accessed April 9, 2019, http://www.selectiveservice.us /military-draft/7-use.shtml.

[10] US Army National Guard, "History of ARNG 4.0," accessed January 10, 2019, http://www.nat ionalguard.mil/Resources/ ARNG-Readiness/History-of-ARNG-40/.

[11] There is debate on whether mobilizing the Reserve Component in the Vietnam War would have had a positive impact on popular support for the war effort. Some believe General Creighton Abrams, Army Chief of Staff (1972-74), placed a significant amount of logistical force structure in the reserve component after the Vietnam War so that deploying the Army required mobilizing the reserves, which would ensure support of the American people. For a discussion on the topic see James Jay Carafano, "Total Force Policy and the Abrams Doctrine: Unfulfilled Promise, Uncertain Future," Foreign Policy Research Institute, February 1, 2005, accessed April 9, 2019, https://www.fpri.org/article/2005/02/total-force-policy-and-the-abrams-doctrine-unfulfilled-promise-uncertain-future.

[12] General Joseph L. Lengyel, *Vision for the Future: Evolving to Meet Global Challenges* (Arlington, VA: National Guard Bureau, 2017), 4, accessed November 1, 2018,

argument for popular support involves the distribution of the general population throughout the Reserve, and the ARNG in particular, so when activated, the nation is more likely to support the war effort. This monograph assumes that keeping the military favorable with the US population results in an increased ability to maintain the AVF.

There exists inherent tensions in the ARNG that are not present in the active force or US Army Reserve. The ARNG has a role at both the State and Federal levels of government. State governors command their respective guard forces through a state Adjutant General. The governor calls the ARNG into action during state and local emergencies such as hurricanes, floods, and civil disturbances. The President of the United States also has authority to activate the ARNG for participation in federal missions.[13] The National Guard's requirements in both of these missions creates often-competing priorities for the ARNG.

As federal and state missions increase, so do tensions for the ARNG and its members, especially when such missions occur at the same time. For example, the reliance on the ARNG as an operational force from 2003 to the present conflicts with increased state-level emergencies that require ARNG intervention and stretches the formation thin. The increased requirements negatively affect local communities by increasing the frequency and time ARNG members spend away from their jobs and families.

Additionally, the economic impact on a state's tax base when the National Guard loses infrastructure results in significant political pressure on the National Guard from the respective Governor and Congressmen. This pressure drives state leaders toward a policy of never reducing force structure, regardless of the situation. A policy of maintaining force structure encourages staffs to inflate metrics used to identify the current state of National Guard readiness and

---

https://www.nationalguard.mil/Portals/31/Documents/Leadership/CNGB%20Vision%20for%20the%20Future%201FEB2017.pdf.

[13] Army National Guard, "About Us," National Guard Bureau, accessed December 18, 2018, https://www.nationalguard.mil/About-the-Guard/Army-National-Guard/About-Us.

capabilities resulting in unrealistic expectations from national leadership. Competing state and federal missions, coupled with political pressure to maintain force structure, confuses the role ARNG forces should play in US national defense. This confusion prevents the ARNG from reaching full effectiveness in maintaining popular support of the military.

In January 2019, General Joseph L. Lengyel was the 28th Chief of the National Guard Bureau located in Arlington, Virginia.[14] As Chief of the National Guard Bureau, Lengyel ensures the 453,000 Army and Air National Guard Soldiers and Airmen are accessible, capable, and ready to protect the homeland and to provide combat forces to the Army and Air Force.[15] Lengyel also serves on the Joint Chiefs of Staff.[16] In Lengyel's "Vision for the Future" in 2017, he stated:

> Men and women of the National Guard and their families live in nearly every ZIP code with facilities in over 2,600 communities. We are often the face of the military across much of our country. We communicate the strategic value of the Total Force to the citizens we serve, and help connect the Department of Defense with the fabric of our nation. In return, we maintain the trust and confidence of the American people.[17]

Therefore, the National Guard has three self-identified responsibilities, or tasks, in civil military relations: communicate the strategic value of the armed forces to the civilian population, connect the population with DoD, and ensure the civilian population maintains confidence and trust in the nation's military. Accomplishment of these self-identified responsibilities increases the chance for popular military support, identification with the military in times of war, and qualified people choosing to serve in the Uniformed Services. As a result, the DoD is able to maintain the AVF and not require conscription to meet manning levels.

Since the Vietnam War, the US population, active duty basing, and the ARNG continue to change. Changes in the general population and the ARNG led to a demographic decoupling of

---

[14] US Department of Defense, "General Joseph L. Lengyel, Chief, National Guard Bureau," accessed January 26, 2019, https://dod.defense.gov/About/Biographies/Biography-View/article/913541/general-joseph-l-lengyel/.

[15] US Department of Defense, "General Joseph L. Lengyel, Chief, National Guard Bureau."

[16] Joint Chiefs of Staff, "About the Joint Chiefs of Staff," accessed January 26, 2019, https://www.jcs.mil/About/.

[17] Lengyel, *Vision for the Future*, 4.

the military and civilian population. This decoupling assumes a negative effect on the future of civil-military relations, the future of ARNG force structure, and future employment of the ARNG. It is worth assessing whether the ARNG is currently capable of contributing to the operational force by serving as a link to popular support.

MAJ Noah M. Genger in his 2018 monograph titled, "Sustaining the All-Volunteer Force in the Era of the Operational ARNG," stated "current trends within the population of the United States such as obesity, drug use, and decreased willingness to serve are decreasing the pool of eligible recruits and threatening the viability of the AVF."[18] The decreased pool of eligible recruits means a greater portion of those eligible to serve are needed to sustain the force. Increasing popular support for the military contributes to the likelihood that eligible people decide to serve.

This project begins to answer the question of whether the ARNG, as it is now, can provide the vital link between the US military, writ large, and US citizenry, and whether that link can serve as a replacement for conscription. The research provides recommendations on ways the ARNG should address these issues to better posture the Army of the future. The conclusions effect matters of recruitment, retention, basing, and other strategic and operational decisions related to the employment of the ARNG. The research concludes that the ARNG's contribution to the operational force in providing popular support as a substitute for conscription is declining because the ARNG is not representative across the demographics of the US population and therefore needs reform in order to fulfill this self-identified mission.

Of all DoD uniformed formations, the ARNG is best suited to engage the civilian population. The ARNG has more locations than all other DoD entities combined, and provides 16.8 percent of the total military population. In 2018, the active Army, Navy, Air Force, Marines,

[18] Noah M. Genger, "Sustaining the All-Volunteer Force in the Era of the Operational Army National Guard" (Monograph, Advance Military Studies Program, 2018), Abstract.

and Coast Guard had approximately 237 military installations in the continental United States.[19] In 2018, the US Army Reserves, Air Force Reserves, Navy Reserves, Marine Corps Reserves, and the Air National Guard had approximately 1,427 installations in the continental United States.[20] In total, these organizations had approximately 1,664 total installations located in the continental United States in 2018. By contrast, the ARNG had 2,292 readiness centers in the ARNG in 2018.[21] Therefore, the ARNG has more citizen contact points than all other DoD organizations combined.

Although the ARNG has over 600 more locations in the United States than the rest of DoD, one must also consider whether enough people serve in the ARNG for effective representation. As of June 30, 2018, the total population of all active duty military in the United States was 1,165,781, the total population of all reserve members was 346,748, the population of the Air National Guard was 105,324, and the population of the ARNG members was 326,577.[22] The total summary of the US military population in the United States was 1,944,430 on June 30, 2018. Therefore, the ARNG represents 16.8 percent of the entire military population located in the continental United States, which is the second largest of all US based DoD uniformed entities. The Active Duty Army has the largest proportion of the military serving in the continental United

[19] Military.com, "Military Base Guide List," accessed December 1, 2018, https://www.military.com/base-guide/browse-by-service.

[20] LTG Charles D. Luckey, *America's Army Reserve at a Glance* (Arlington, VA: US Army Reserve, 2017), 16-118, accessed December 1, 2018, https://www.usar.army.mil/Portals/98/Documents/AtAGlance_2017/Army%20Reserve%20At%20A%20Glance_web.pdf?ver=2017-10-05-210537-190; Air Force Reserve, "About," accessed December 1, 2018, https://afreserve.com/about; The United States Navy Reserve, "NOSC Locator Map," access December 1, 2018, https://www.public.navy.mil/nrh/Pages/nosc-locator-map.aspx; Marine Forces Reserve, "Marine Forces Reserve Directory," updated July 18, 2018, accessed December 2, 2018, https://www.marforres.marines.mil/Portals/116/Docs/Units/MFR_Directory_PDF.pdf; Lengyel, *Vision for the Future*, 4.

[21] MAJ Bradley S. Willis, Army National Guard Installations and Environment Executive Officer, email correspondence with author, February 19, 2019.

[22] Defense Manpower Data Center, "Number of Military and DoD Appropriated Fund (APF) Civilian Personnel Permanently Assigned by Duty Location and Service/Component" (Active Duty Master's File, Reserve Common Components Personnel Data System (RCCPDS) File, Appropriated Fund (APF) Civilian Master's File, June 30, 2018).

States at 21.39 percent. However, the Active Duty Army's 58 installations in the continental United States is far less than the 2,292 ARNG readiness centers.[23] In addition to ARNG population size and number of installations in the United States, understanding that ARNG members serve in DoD while maintaining a job in the civilian population, provides more justification of why the ARNG serves as the most suitable conduit for civil-military relations and popular support of the military.

The first section of this research describes the methodology used to conduct the analysis, namely a data–driven statistical method. Section one further explains how the research arrived at its outcomes. The second section includes a literary review to explain categories, significant sources, and contributions. The third section compares sample ARNG and population demographic data randomly selected across the United States. The randomly selected states include California, Massachusetts, Mississippi, Oklahoma, Texas, Virginia, and Wisconsin. The fourth section compares demographic data across all ARNG selected cases. The fifth section offers recommendations and conclusions from the data analyzed, and includes directions for future research.

Section 1: Methodology

This section explains selection criteria for cases, control of case variables, case selected analytical data, statistical significance determinations, and data sources. This study measures how well the ARNG represents US citizenry through a comparative analysis of race, ethnicity, gender, and education level between the ARNG and its respective state population across seven cases. The researcher used these categories as the US government formally tracks them. Although this study does not cover all possibilities of comparison, it does provide enough insight to determine the necessity of further research.

[23] Military.com, "Military Base Guide List."

This study consists of an examination the seven randomly selected sample states. The advantage of using random states is they provide a snap shot of possible trends in areas around that state. The disadvantage is that each state is a complex adaptive system and cannot reasonably reflect all neighboring states. Another disadvantage is that some ARNG members do not serve, work and/or reside in the same state. This research assumes the population of ARNG members living and working in other states is statistically insignificant. Limiting the research to seven states prevents an overabundance of statistical data while capturing diverse possibilities of outcomes. Comparing the same set of demographics across multiple states, helps identify potential trends and unique differences. Using random samples also helps determine the need for possible further effort and analysis.

For each state, the project compares the demographics of the ARNG to that of the overall state population to determine the extent to which the ARNG reflects state demographics. Based on this comparison, the project judges whether, in a given state, the ARNG is in a position to link the full population of the United States together with its military. This monograph assumes that a strong link to the population by the ARNG replaces the need for a territorial representation based draft. Striving to develop equal proportion is not the goal; the goal is adequate proportionality to ensure adequate representation in the ARNG.

The categories considered in the comparative analysis include race, ethnicity, gender, and education level. Race/ethnicity is further broken down into White, African American, Hispanic, Asian, American Indian/Alaskan Native, Native Hawaiian/Other Pacific Islander, and two or more races. Gender categories will include male and female. Education levels include no high school diploma, bachelor's degree, and higher degree (master's or doctorate).

The entire ARNG population as the sample of the relative state is a sufficiently large sample. Gail M. Sullivan, MD is the editor-in-chief for the *Journal of Medical Education*. Richard Feinn, PhD teaches biostatistics at the University of Connecticut Health Center.

According to an article in the *Journal of Graduate Medical Education* written by Sullivan and Feinn and published in 2012:

> In reporting and interpreting studies, both the substantive significance (effect size) and statistical significance (P value) are essential results to be reported. Statistical significance is the probability that the observed difference between two groups is due to chance. With a sufficiently large sample, a statistical test will almost always demonstrate a significant difference.[24]

Sullivan and Feinn provide the framework to ensure adequate statistical considerations for this research. Based on guidance in an article by Sullivan and Feinn, this monograph will consider both statistical significance and effect size to understand whether a State's ARNG population adequately represents the respective State's entire population. In order to focus on potential problems in adequate representation, any effect size, or difference, greater than 5 percent will include change recommendations.

Data for conducting this research originated from three primary resources. First, the project used the Henry J. Kaiser Family Foundation data on population distribution of each state concerning race, ethnicity, and gender. The reason for choosing Henry J. Kaiser Family Foundation data was their use of Census Bureau based data. Second, the *Digest of Education Statistics* provided each state's education level. Third, the Defense Manpower Data Center (DMDC) provided race/ethnicity, gender, and education level data for the ARNG in every state.

Section 2: Background and Literature Review

This section includes a historical background. In order to understand the context of the ARNG in 2019, a historical look at the previous fifty years of the ARNG is necessary. On February 20, 1970, President Nixon tasked Secretary of Defense Thomas Gates to assess the pros

[24] Gail M. Sullivan and Richard Feinn, "Using Effect Size-or why the P Value is Not Enough," *Journal of Graduate Medical Education* 4, no. 3 (September 2012): 279-282, accessed January 2, 2019, https://www.ncbi.nlm.nih.gov/pmc/articles/PMc3444174/#_ffn_sectitle.

and cons of an AVF.[25] The Gates Commission issued a report that found, "that an All-Volunteer force would result in better retention; greater manpower efficiency, because the number of new recruits who required training would be lower; a higher readiness level; greater freedom for American citizens, who would no longer face a draft; and recruits of higher quality."[26] President Nixon signed a bill on September 28, 1971, that committed the country to transition to an AVF.[27]

The AVF initially changed the National Guard to a strategic reserve. ARNG 1.0 (1973 to 1983) required forty-eight drill periods and two weeks of annual training per year. ARNG 2.0 (1984 to 1991) required a tiered readiness that stratified units into manned, equipped, and trained at different levels based on the priority of the assigned unit in supporting federal missions. This required a small number of units to conduct additional training days each year.[28]

In ARNG 2.5 (1992 to 2001), the National Guard added the State Partnership Program and peacekeeping missions in places like Somalia, Haiti, Bosnia, and Kosovo.[29] ARNG 3.0 (2001 to 2017) began after the terrorist attacks on the World Trade Center in New York City on September 11, 2001. During this period, the National Guard transitioned from a strategic reserve to a component of the operational force. ARNG 4.0 (2017 to Present) requires readily deployable and better-resourced forces with an emphasis on high priority units, such as armor, infantry, and

---

[25] Bernard Rostker, *I Want You! The Evolution of the All-Volunteer Force* (Santa Monica, CA: RAND Corporation, 2006), 4, accessed March 3, 2019, https://www.rand.org/content/dam/rand/pubs/monographs/2007/RAND_MG265.pdf.

[26] The Commission on the National Guard and Reserves, "Transferring the National Guard and Reserves into 21st Operational Force" (Report to Congress and the Secretary of Defense, Washington, DC, January, 2008), E7.

[27] Rostker, *I Want You! The Evolution of the All-Volunteer Force*, 4.

[28] US Army National Guard, "History of ARNG 4.0," accessed January 10, 2019, http://www.nationalguard.mil/Resources/ ARNG-Readiness/History-of-ARNG-40/.

[29] National Guard, "State Partnership Program," accessed March 3, 2019, http://www.nationalguard.mil/ Leadership/Joint-Staff/J-5/International-Affairs-Division/State-Partnership-Program/.

engineers.[30] Shifting the National Guard from a strategic reserve to an operational force required increased focus on manning, equipping, and training.

This research nests within broader literature on social organizations, demographics, and population influence. Dr. Robin Ian MacDonald Dunbar's work on population influence provides insight to this study. Dunbar, a British anthropologist and evolutionary psychologist demonstrated in his study that "the figure of 150 seems to represent the maximum number of individuals with whom we can have a genuinely social relationship, the kind of relationship that goes with knowing who they are and how they relate to us."[31] Dunbar's figure of 150 is debatable, especially in an environment filled with increasing social media platforms. However, this monograph assumes Dunbar's work as its basis for consideration of societal influence because of Dunbar's reputation and the figure provides a baseline to measure social influence of a state's ARNG for the sake of analysis.[32] Other factors, such as community outreach and public relations activities, affect the amount of influence a state's ARNG has on the population, however these cannot entirely negate the role of personal connection.

Section 3: Regional Population Analysis

West Coast Region – California

The estimated population of the State of California in 2017 was 38,713,900.[33] The population of the California ARNG (CAARNG) in 2017 was 13,349.[34] As a result, the CAARNG

[30] US Army National Guard, "History of ARNG 4.0."

[31] Robert Dunbar, *Grooming, Gossip, and the Evolution of Language* (Cambridge, MA: Harvard University Press, 1996), 77.

[32] Oxford Neuroscience, "Research Directory, Robin Dunbar," accessed February 15, 2019, https://www.neuroscience.ox.ac.uk/research-directory/robin-dunbar.

[33] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity," accessed October 25, 2018, https://www.kff.org/other/state-indicator/distribution-by-raceethnicity /?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22 asc%22 %7D.

[34] Arnulfo J. Organista (Program Analyst), "DRS_122927" (Excel Spreadsheet, Demographic Data on the Army National Guard, Northrup Grumman Technology Services, Defense Manpower Data Center (DMDC), Data as of September 30, 2018).

represents .034% of the population of California. In applying Dunbar's guidance that one person on average influences 150 people, the CAARNG population influences approximately 5.2% of California's population.[35] Therefore, the ARNG has limited influence on California's population. With such a small population of ARNG in California, most Californians are not likely to have ever met an ARNG soldier. The result is that the overall population of the CAARNG does not adequately connect the DoD with the California citizens. The CAARNG may improve this connection with an increase in force structure and an emphasis on community outreach and public relation engagements. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of California's population in 2017 was 36.95% or 14,305,700 White, 5.33% or 2,061,600 African American, 39.25% or 15,194,400 Hispanic, 14.46% or 5,598,000 Asian, .36% or 138,100 American Indian/Alaskan Native, .32% or 122,900 Native Hawaiian/Other Pacific Islander, and 3.34% or 1,293,200 consisting of two or more races.[36] The racial make-up of the California ARNG in 2017 was 10,615 or 79.52% White, 1,053 or 7.89% African American, 4,576 or 34.28% Hispanic, 1,388 or 10.40% Asian, seventy-seven or .58% American Indian/Alaskan Native, seventy-two or .54% Native Hawaiian/Other Pacific Islander, and 144 or 1.08% consisting of two or more races.[37] Figure 1 provides a graphic depiction of the race/ethnicity population proportions of the CAARNG and California population.

[35] Dunbar, *Grooming, Gossip, and the Evolution of Language*, 77.

[36] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[37] Organista, "DRS_122927."

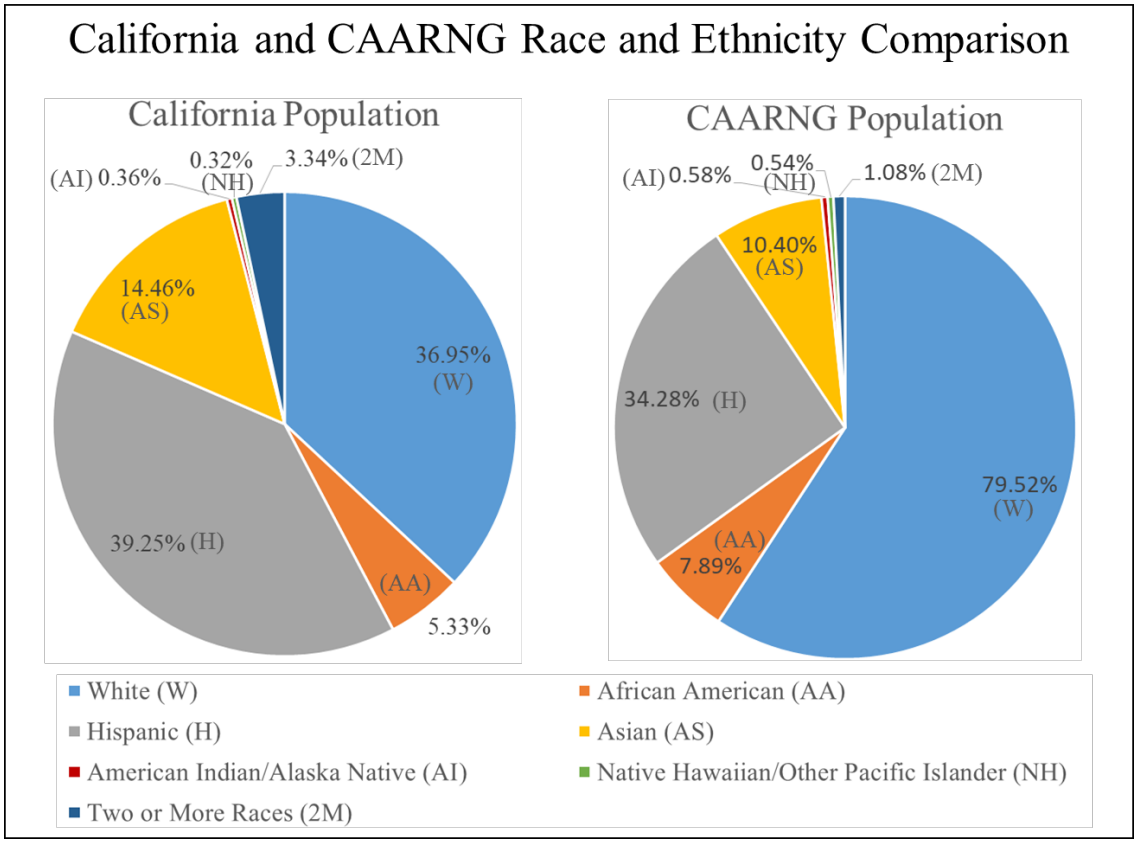


Figure 1. California ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the CAARNG and the general population of the state of California are as follows: 42.57% more Whites, 2.56% more African Americans, 4.97% less Hispanics, 4.46% less Asians, .22% more American Indians/Alaskan Natives, .21% less Native Hawaiians/Other Pacific Islanders, and 2.26% less with two or more races. For the CAARNG to have equal proportion in race/ethnicity to the population it needs 5,682 less Whites, 342 less African Americans, 663 more Hispanics, 542 more Asians, twenty-nine less American Indians/Alaskan Natives, thirty less Native Hawaiians/Other Pacific Islanders, and 302 more people with two or more races. As stated earlier, striving to develop equal proportion is not the goal; the goal is adequate proportionality to ensure adequate representation in the ARNG. The CAARNG should focus on race/ethnic proportion differences greater than 5 percent, which only applies to the White population.

The next comparison to consider is whether the CAARNG population adequately represents the population of California in education levels. The first education level evaluated includes individuals with no high school diploma. The second education level evaluated includes those individuals with only a bachelor's degree. The final education level evaluated includes those individuals that completed either a master's or doctorate degree. The estimated education level make-up of California is 6,804,929 or 17.58% with no high school diploma, 8,013,553 or 20.70% with a bachelor's degree, and 4,749,930 or 12.27% with a master's degree or higher.[38] The education level of the CAARNG in 2018 was 2,737 or 20.5% with no high school diploma, 2,104 or 15.76% with a bachelor's degree, and 677 or 5.07% with a master's degree or higher.[39]

The proportion of the CAARNG 2.93% higher with no high school diploma, 4.94% lower with a bachelor's degree, and 7.2% lower with a master's or doctorate degree than the respective proportions of the Californian population. For the CAARNG to educationally represent the population in equal proportion, the CAARNG should have 391 more people with a high school diploma, 659 more people with a bachelor's degree, and 961 more people with a master's or doctorate degree. Based on statistical significance and effect size, the proportion of CAARNG members with a master's or higher degree do not adequately represent the population.

Since the CAARNG does not adequately represent the non-White population and people with a master's degree or higher, they should analyze whether these demographic differences are a problem, and if so, determine solutions. Additionally, the ARNG of other west coast states should conduct their own population analysis because situations across states, regardless of regions, are not likely to be the same.

---

[38] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over, by Educational Attainment and State: 2000 and 2016," May 2018, accessed January 25, 2019, https://nces.ed.gov/programs/digest/d17/tables/dt17_104.80.asp.

[39] Organista, "DRS_122927."

The CAARNG represents such a small portion of the population, it should first determine whether it should increase force structure. The CAARNG should analyze how much force structure the California population can support, the specific types of units California could/should fill, and additional funding needed to support new units in California. Analysis may include whether the pay and incentives for serving in the CAARNG are adequate considering the cost of living in California, the population's willingness to serve, and the amount of the population who meet entry-level armed forces' standards.

The second step for the CAARNG to increase representation of the population should include analysis of inadequacies in race/ethnicity, gender, and education levels compared to the general population. Race/ethnicity analyses should focus first on the White population and then on populations nearing the 5% difference which includes the Hispanic and Asian populations. For example, the CAARNG needs 1,205 total additional people in the Asian and Hispanic populations and 5,682 less White people for equal representation. Education level analysis should focus on the population with master's and doctorate degrees.

Finally, the CAARNG should implement ways to conduct future analysis in order to measure if they are improving in population representation over time. Table 1 provides a graphic depiction of the overall demographic comparison between the CAARNG and the state population.[40] Areas with italics text indicate potential problem areas that need further analysis. Sufficient population influence and representation by the CAARNG will ensure the operational force can meet popular support during war efforts and manning levels without DoD needing implementation of conscription in an environment burdened with a decreased recruiting force pool.

[40] Henry J. Kaiser Family Foundation, "Population Distribution by Gender," Based on the Census Bureau's American Community Survey, 2008-2017, accessed December 15, 2018, https://www.kff.org /other/state-indicator/distribution-by-gender/?currentTimeframe=0&sortModel=%7B% 22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

Table 1. CAARNG overall demographic analysis compared to the population

CAARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.035%	*5.172%*	*34.03%*	*-34.03%*	2.93%	-4.94%	*-7.20%*
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
42.57%	2.56%	-4.97%	-4.06%	0.22%	-0.21%	-2.26%

Source: Created by Author.

Northeast Region – Massachusetts

The estimated population of the State of Massachusetts in 2017 was 6,620,600.[41] The population of the Massachusetts ARNG (MAARNG) in 2017 was 5,904.[42] As a result, the MAARNG represents .09% of the population of Massachusetts. The MAARNG represents three times more of its population compared to the CAARNG. Since one person on average influences 150 people according to Dunbar, the MAARNG population, on average, influences approximately 13.38% of Massachusetts's population or 885,836 people.[43] Thirteen out of every one-hundred Massachusetts' residents likely knows someone in the MAARNG. Therefore, the total MAARNG population connects a small amount of the DoD with the Massachusetts's population. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Massachusetts's population in 2017 was 71.7% or 4,746,900 White, 6.93% or 459,100 African American, 11.86% or 785,300 Hispanic, 6.41% or 424,700 Asian, .14% or 9,100 American Indian/Alaskan Native, and 2.94 or 194,800 consisting of two or more races.[44] The racial make-up of the Massachusetts ARNG in 2017 was 4,803 or

[41] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[42] Organista, "DRS_122927."

[43] Dunbar, *Grooming, Gossip, and the Evolution of Language*, 77.

[44] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

81.35% White, 691 or 11.7% African American, 586 or 9.93% Hispanic, 170 or 2.88% Asian, nine or .15% American Indian/Alaskan Native, and 228 or 3.86 consisting of two or more races.[45] Figure 2 provides a graphic depiction of the race/ethnicity population proportions of the MAARNG and Massachusetts' population.

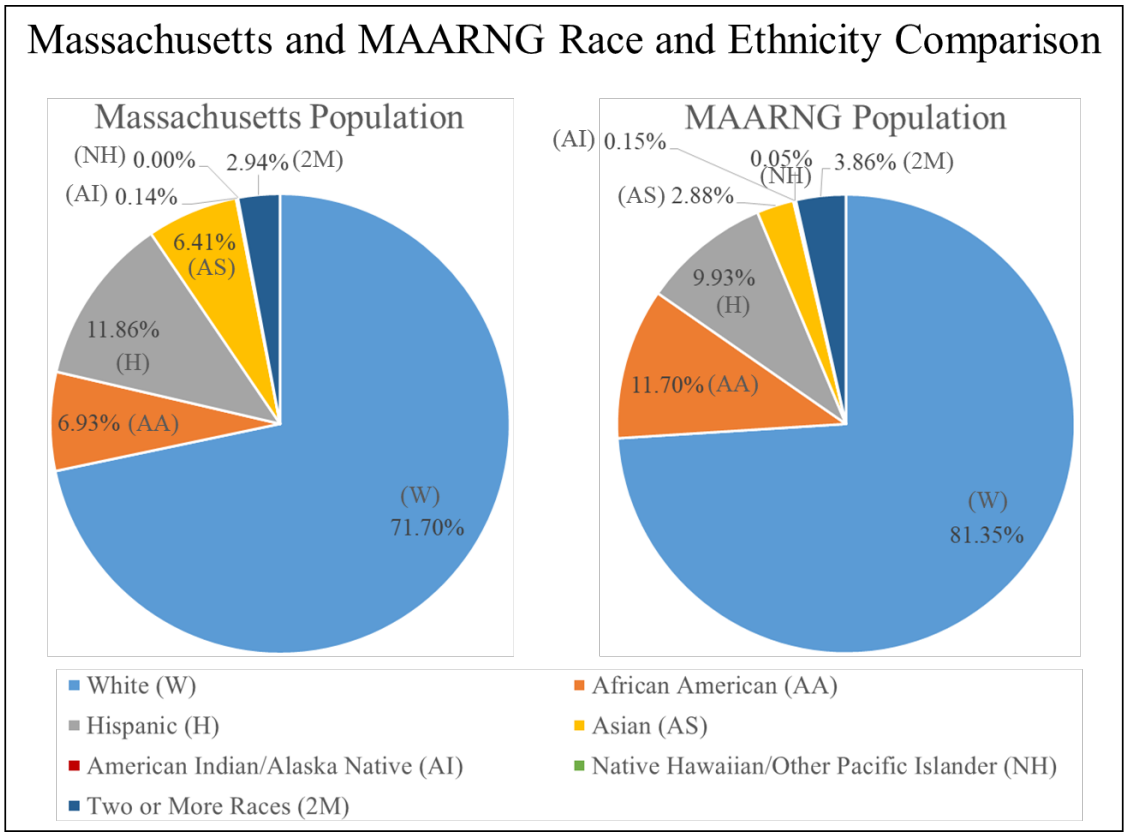


Figure 2. Massachusetts ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the MAARNG and the general population of the State of Massachusetts are as follows: 9.65% more Whites, 4.77% more African Americans, 1.94% less Hispanics, 3.54% less Asians, .01% more American Indians/Alaskan Natives, .02% less Native Hawaiians/Other Pacific Islanders, and .92% more with two or more races. For the MAARNG to have equal proportion in race/ethnicity to the population it needs 691 less Whites, 282 less African Americans, 114 more Hispanics, 209 more Asians, one less

[45] Organista, "DRS_122927."

American Indians/Alaskan Natives, three less Native Hawaiians/Other Pacific Islanders, and fifty-four less people with two or more races. Based on statistical significance and effect size, the MAARNG does not adequately represent the population of Massachusetts regarding race and ethnicity.

The next comparison to determine population representation involved education level. The estimated education level make-up of Massachusetts is 629,057 or 9.5% with no high school diploma, 1,577,176 or 23.82% with a bachelor's degree, and 1,256,060 or 18.97% with a master's degree or higher.[46] The education level of the MAARNG in 2018 was 1,181 or 20% with no high school diploma, 1,049 or 17.77% with a bachelor's degree, and 360 or 6.10% with a master's degree or higher.[47]

The proportion of the MAARNG is 10.5% higher with no high school diploma, 6.5% lower with a bachelor's degree, and 12.8% lower with a master's or doctorate degree than the proportion of Massachusetts people. For equal representation, the MAARNG needs 620 more people with a high school diploma, 357 more people with a bachelor's degree, and 760 more with a master's or doctorate degree. Based on statistical significance tests and effect size, the MAARNG significantly under represents the population of Massachusetts in all education levels.

The MAARNG adequately represents the Massachusetts' population proportionality in ethnicity for most demographic categories. A deeper analysis to determine the over representation of the White population should ensue. Additionally, the MAARNG it does not adequately represent the population in education levels. A thorough analysis of education level tracking, data systems, and recruiting efforts may also help improve population representation. The MAARNG may also analyze and consider increasing force structure to better connect to the population. Although, the MAARNG adequately represents some portions of the population, several areas of

[46] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

[47] Organista, "DRS_122927."

analysis may improve the amount DoD connects to Massachusetts population. Table 2 provides a graphic depiction of the overall demographic comparison between the MAARNG and the state population.[48] Areas in italics indicate potential problem areas that need further analysis. The MAARNG needs a strong connection with the population to prevent a conscription need in DoD. This connection may increase the possibility that an increased percentage of eligible people serve in the Uniformed Services as the recruiting force pool shrinks and popular identification with the military.

Table 2. MAARNG overall demographic analysis compared to the population

MAARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.08%	*13.38%*	*35.41%*	*-35.41%*	*10.50%*	*-6.05%*	*-12.87%*
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
9.65%	4.77%	-1.94%	-3.54%	0.01%	0.02%	0.92%

Source: Created by Author.

Southeast Region – Mississippi

The estimated population of the State of Mississippi in 2017 was 2,884,500.[49] The population of the Mississippi ARNG (MSARNG) in 2017 was 9,564.[50] As a result, the MSARNG represents .33% of the population. According to British Anthropologist Robin Dunbar, one person influences 150 people.[51] Thus, the MSARNG population, on average, influences approximately 48% of Mississippi's population or 1,384,560 people. Almost half the population of Mississippi is likely to know someone serving in the MSARNG. Therefore, the total

[48] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

[49] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[50] Organista, "DRS_122927."

[51] Dunbar, *Grooming, Gossip, and the Evolution of Language*, 77.

MSARNG population significantly connects the nation to the DoD. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Mississippi's population in 2017 was 56.93% or 1,642,100 White, 37.7% or 1,087,600 African American, 2.76% or 79,500 Hispanic, .93% or 26,800 Asian, .41% or 11,800 American Indian/Alaskan Native, and 1.22% or 35,300 consisting of two or more races.[52] The racial make-up of the Mississippi ARNG in 2017 was 5,618 or 58.74% White, 3,794 or 39.67% African American, ninety-eight or 1.02% Hispanic, forty-five or .47% Asian, forty-five or .47% American Indian/Alaskan Native, and sixty-two or .65% consisting of two or more races. White and African American people together make up 94.63% of Mississippi's total population and 98.41% of the MSARNG population.[53] Figure 3 provides a graphic depiction of the race/ethnicity population proportions of the MSARNG and Mississippi population.

[52] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[53] Organista, "DRS_12292,7."

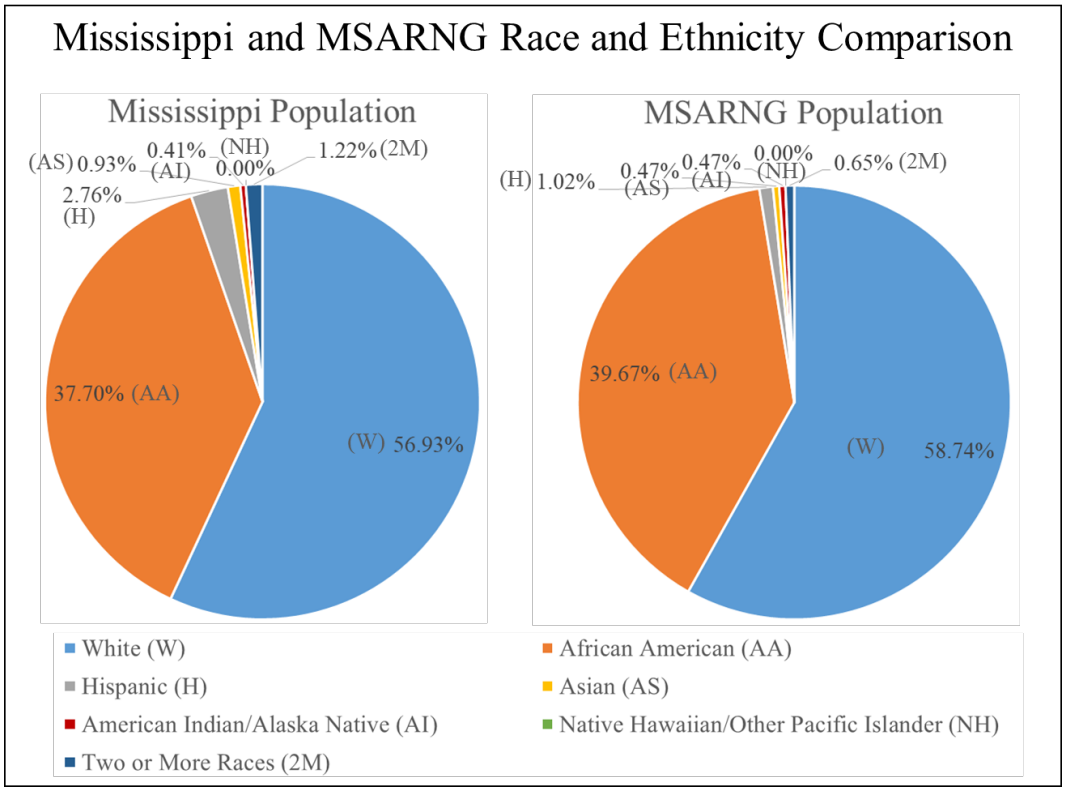


Figure 3. Mississippi ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the MSARNG and the general population of the State of Mississippi are as follows: 1.81% more Whites, 1.96% more African Americans, 1.73% less Hispanics, .46% less Asians, .06% more American Indians/Alaskan Natives, and .58% less with two or more races. For equal proportion, the MSARNG needs 173 less Whites, 188 less African Americans, 166 more Hispanics, forty-four more Asians, six less American Indians/Alaskan Natives, and fifty-five more people with two or more races. The low differences of effect size in race/ethnicity between the MSARNG and the Mississippi population means that the MSARNG is proportionally adequate to connect the DoD with the population.

The estimated education level make-up of Mississippi is 461,930 or 16.01% with no high school diploma, 389,797 or 13.51% with a bachelor's degree, and 241,922 or 8.39% with a master's or doctorate degree.[54] The education level of the MSARNG in 2018 was 1,587 or

[54] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

16.59% with no high school diploma, 1,120 or 11.71% with a bachelor's Degree, and 391 or 4.09% with a master's or doctorate degree.[55]

The proportion of the MSARNG .58% higher with no high school diploma, 1.8% lower with a bachelor's degree, and 4.3% lower with a master's or doctorate degree compared to the proportion of Mississippians. To achieve equal proportion, the MSARNG needs fifty-five more people with a high school diploma, 172 more with a bachelor's degree, and 411 more people with a master's or doctorate degree. Based on statistical significance and effect size, the MSARNG closely reflects the state population proportionally in education levels.

The MSARNG adequately serves as the link between DoD and the civilian population of Mississippi. First, the MSARNG influences approximately 48% of the population. Second, the MSARNG adequately represents the population across all demographics and ethnicity. Third, the MSARNG adequately represents Mississippians across all education levels. With the exception of gender differences, table 3 graphically shows how closely aligned the MSARNG is with Mississippians.[56] The MSARNG's role in connecting the population to DoD must stay strong to ensure required manning levels in all DoD entities, as the number of eligible recruits declines in the United States, as well as ensure popular identification with the military.

Table 3. MSARNG overall demographic analysis compared to the population

MSARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.32%	49.73%	*34.91%*	*-34.91%*	0.58%	-1.80%	-4.30%
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
1.81%	1.96%	-1.73%	-0.46%	0.06%	0.01%	-0.58%

Source: Created by Author.

[55] Organista, "DRS_122927."

[56] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

Plain States Region – Oklahoma

The estimated population of the State of Oklahoma in 2017 was 3,803,700.[57] The population of the Oklahoma ARNG (OKARNG) in 2017 was 6,567.[58] As a result, the OKARNG represents .17% of the population of Oklahoma. According to British Anthropologist Robin Dunbar, one person influences 150 people.[59] In applying Dunbar's method, the OKARNG population, on average, influences approximately 26% of Oklahoma's population. This means that one in four Oklahomans are likely to know someone serving in the OKARNG. Therefore, the total OKARNG population connects the nation with the DoD. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Oklahoma's population in 2017 was 65.92% or 2,507,400 White, 6.91% or 262,800 African American, 10.52% or 400,200 Hispanic, 2.06% or 78,400 Asian, 7.4% or 281,500 American Indian/Alaskan Native, .14% or 5,300 Native Hawaiian/Other Pacific Islander, and 7.05% or 268,100 consisting of two or more races.[60] The racial make-up of the Oklahoma ARNG in 2017 was 5,213 or 79.38% White, 648 or 9.87% African American, 457 or 6.96% Hispanic, 108 or 1.64% Asian, 320 or 4.87% American Indian/Alaskan Native, seven or .11% Native Hawaiian/Other Pacific Islander, and 271 or 4.13% consisting of two or more races.[61] Figure 4 provides a graphic depiction of the race/ethnicity population proportions of the OKARNG and Oklahoma population.

---

[57] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[58] Organista, "DRS_122927."

[59] Dunbar, *Grooming, Gossip, and the Evolution of Language*, 77.

[60] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[61] Organista, "DRS_122927."

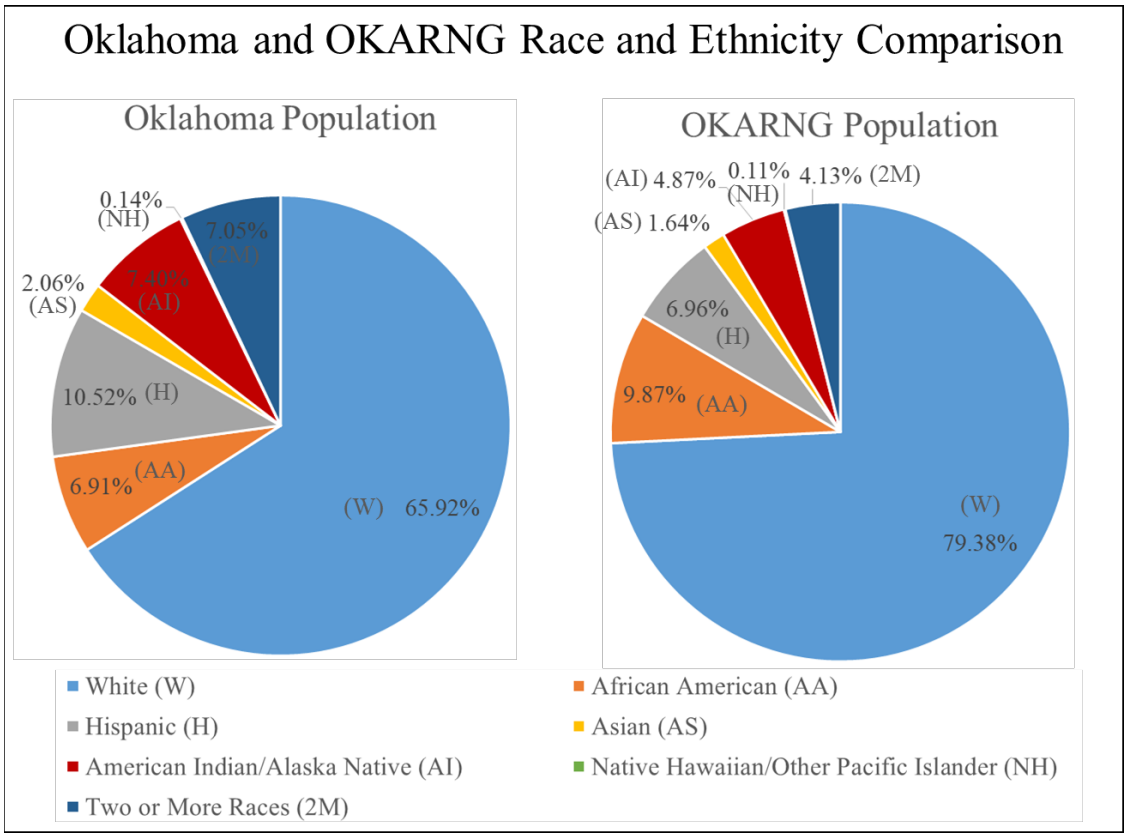


Figure 4. Oklahoma ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the OKARNG and the general population of the State of Oklahoma are as follows: 13.46% more Whites, 2.96% more African Americans, 3.56% less Hispanics, .42% less Asians, 2.53% less American Indians/Alaskan Natives, .05% less Native Hawaiians/Other Pacific Islanders, and 2.92% less with two or more races. For equal population proportions, the OKARNG needs 884 less Whites, 194 less African Americans, 234 more Hispanics, twenty-seven more Asians, 166 more American Indians/Alaskan Natives, two more Native Hawaiians/Other Pacific Islanders, and 192 additional with two or more races. Based on statistical significance and effect size, the OKARNG does not adequately represent the population of Oklahoma regarding race and ethnicity.

The estimated education level make-up of Oklahoma is 458,851 or 12.06% with no high school diploma, 647,299 or 17.02% with a bachelor's degree, and 324,060 or 8.52% with a

master's or doctorate degree.[62] The education level of the OKARNG in 2018 was 1,588 or 24.18% with no high school diploma, 848 or 12.91% with a bachelor's degree, and 297 or 4.52% with a master's or doctorate degree.[63]

The proportion of the OKARNG is 12.12% higher with no high school diploma, 4.1% lower with a bachelor's degree, and 4% lower with no master's or doctorate degree than the proportion of Oklahomans. For equal proportion, the OKARNG needs 796 more people with a high school diploma, 270 more people with a bachelor's degree, and 262 more people with a master's or doctorate degree. Based on statistical significance and effect size, the OKARNG does not adequately represent the state population regarding education levels.

In summary, the OKARNG should consider further analysis to determine how it can better connect the nation to the DoD. The largest available areas for improvement include determining reasons for the large disproportions in the White population and people with no high school diploma. Table 4 provides a graphic depiction of the overall demographic comparison between the OKARNG and the state population.[64] Text highlighted in italics on the graphic indicate potential problem areas that may need further analysis. The OKARNG should maximize efforts to connect the population with DoD.

Table 4. OKARNG overall demographic analysis compared to the population

OKARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.16%	25.90%	*34.28%*	*-34.28%*	*12.12%*	-4.10%	-4.00%
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
13.46%	2.96%	-3.56%	-0.42%	-2.53%	-0.05%	-2.92%

Source: Created by Author.

[62] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

[63] Organista, "DRS_122927."

[64] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

Southwest Region – Texas

The estimated population of the State of Texas in 2017 was 27,621,300.[65] The population of the Texas ARNG (TXARNG) in 2017 was 17,809.[66] As a result, the TXARNG represents .06% of the population of Texas. By applying Dunbar's guidance, the TXARNG population, on average, influences approximately 10% of Texas's population. [67] One in every ten Texans will likely know someone that serves in the TXARNG. Therefore, in regards to total population, the TXARNG connects some of the nation to the DoD. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Texas's population in 2017 was 41.85% or 11,559,700 White, 11.57% or 3,196,500 African American, 39.65% or 10,951,000 Hispanic, 4.77% or 1,317,300 Asian, .25% or 69,700 American Indian/Alaskan Native, .07% or 18,400 Native Hawaiian/Other Pacific Islander, and 1.84% or 508,600 consisting of two or more races.[68] The racial make-up of the TXARNG in 2017 was 14,136 or 79.38% White, 2,742 or 15.4% African American, 4,907 or 27.55% Hispanic, 482 or 2.71% Asian, seventy-one or .4% American Indian/Alaskan Native, nine or .05% Native Hawaiian/Other Pacific Islander, and 396 or 2.07% consisting of two or more races.[69] Figure 5 provides a graphic depiction of the race/ethnicity population proportions of the TXARNG and Texas population.

---

[65] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[66] Organista, "DRS_122927."

[67] Dunbar, *Grooming, Gossip, and the Evolution of Language*, 77.

[68] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[69] Organista, "DRS_122927."

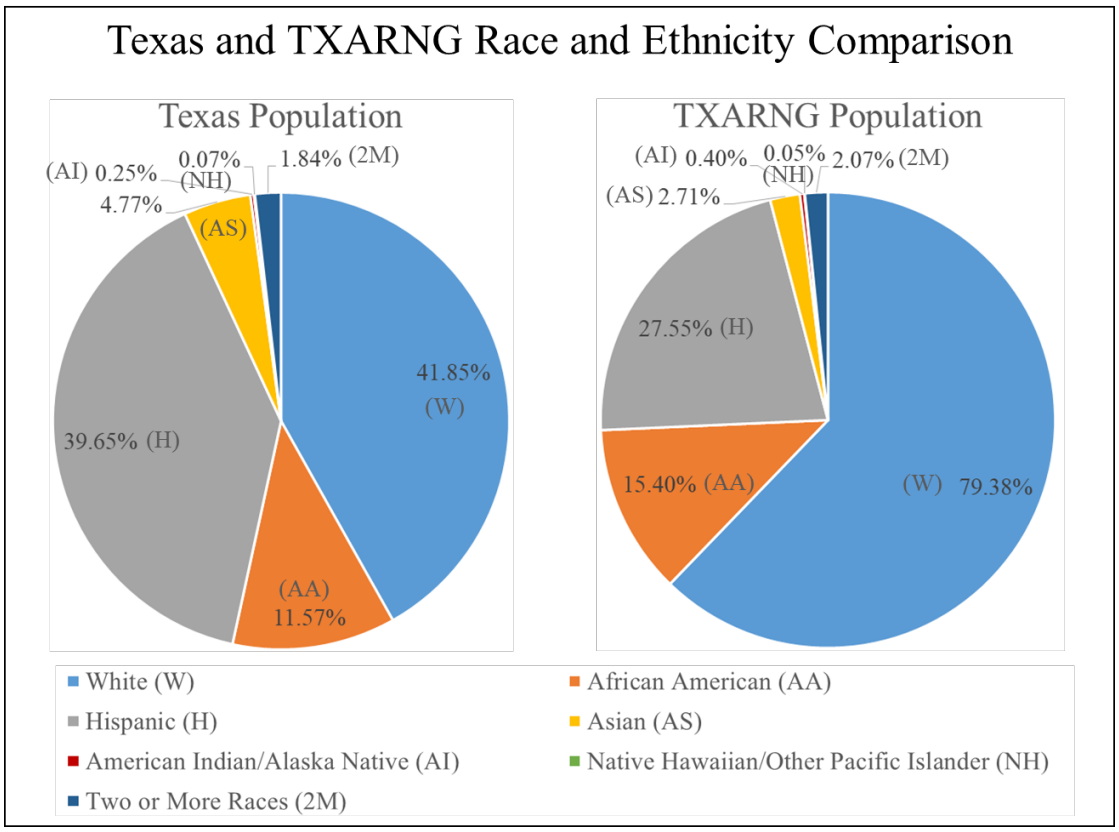


Figure 5. Texas ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the TXARNG and the general population of the State of Texas are as follows: 37.52% more Whites. 3.82% more African Americans, 12.09% less Hispanics, 2.06% less Asians, .15% more American Indians/Alaskan Natives, .04% less Native Hawaiians/Other Pacific Islanders, and .23% more with two or more races. For equal proportion, the TXARNG needs 6,683 less Whites, 681 less African Americans, 2,154 more Hispanics, 367 more Asians, twenty-six fewer American Indians/Alaskan Natives, three more Native Hawaiians/Other Pacific Islanders, and forty-one less with two or more races. Based on statistical significance and effect size, the TXARNG does not adequately represent the population regarding race and ethnicity.

The estimated education level make-up of Texas is 4,709,705 or 17.05% with no high school diploma, 5,223,462 or 18.91% with a bachelor's degree, and 2,765,011 or 10.01% with a

master's or doctorate degree.[70] The education level of the TXARNG in 2018 was 2,547 or 14.3% with no high school diploma, 2,766 or 15.53% with a bachelor's degree, and 886 or 4.98% with a master's degree or higher.[71]

The proportion of the TXARNG is 2.75% lower with no high school diploma, 3.38% lower with no bachelor's degree, and 5.04% lower with no master's or doctorate degree. For equal proportion, the TXARNG needs 490 less people with a high school diploma, 602 more people with a bachelor's degree, and 897 more people with a master's or doctorate degree. Based on statistical significance and effect size, the TXARNG adequately represents the population with a high school diploma and bachelor's degree. However, the TXARNG does not adequately represent the master's or doctorate degree population proportionally.

In summary, the TXARNG has several areas to consider further analysis in order to better connect Texans to the DoD. First, the TXARNG should consider the feasibility of increasing their force structure. Other focus areas for the TXARNG include disproportionate representation of the White population, Hispanic population, and people with master's or doctorate degree. Table 5 provides a graphic depiction of the overall demographic comparison between the TXARNG and the state population. Italicized text indicates potential problem areas that may need further analysis.[72] Strong connectivity between the TXARNG and the population could help prevent DoD from needing conscription.

[70] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

[71] Organista, "DRS_122927."

[72] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

Table 5. TXARNG overall demographic analysis compared to the population

TXARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.06%	*9.67%*	*32.59%*	*-32.59%*	-2.75%	-3.38%	*-5.04%*
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
37.52%	3.82%	*-12.09%*	-2.06%	0.15%	-0.04%	0.23%

Source: Created by Author.

Mid-Atlantic Region – Virginia

The estimated population of the State of Virginia in 2017 was 8,140,700.[73] The population of the Virginia ARNG (VAARNG) in 2017 was 7,076.[74] As a result, the VAARNG represents .09% of the population of Virginia. By applying Dunbar's concept, the VAARNG population, on average, influences approximately 13% of Virginia's population. Thirteen in every one hundred Virginians are likely to know someone serving in the VAARNG. Therefore, the total population of the VAARNG slightly connects the nation to the DoD. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Virginia's population in 2017 was 61.9% or 5,039,200 White, 18.52% or 1,507,600 African American, 9.32% or 758,500 Hispanic, 6.55% or 533,400 Asian, .22% or 18,100 American Indian/Alaskan Native, .04% or 3,200 Native Hawaiian/Other Pacific Islander, and 3.45 or 280,700 consisting of two or more races.[75] The racial make-up of the VAARNG in 2017 was 4,798 or 67.81% White, 1,921 or 27.15% African American, 341 or 4.82% Hispanic, 249 or 3.52% Asian, thirteen or .18% American Indian/Alaskan Native, seven or .1% Native Hawaiian/Other Pacific Islander, and eighty-eight or 1.24% consisting of two or more

[73] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[74] Organista, "DRS_122927."

[75] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

races.[76] Figure 6 provides a graphic depiction of the race/ethnicity population proportions of the VAARNG and Virginia population.

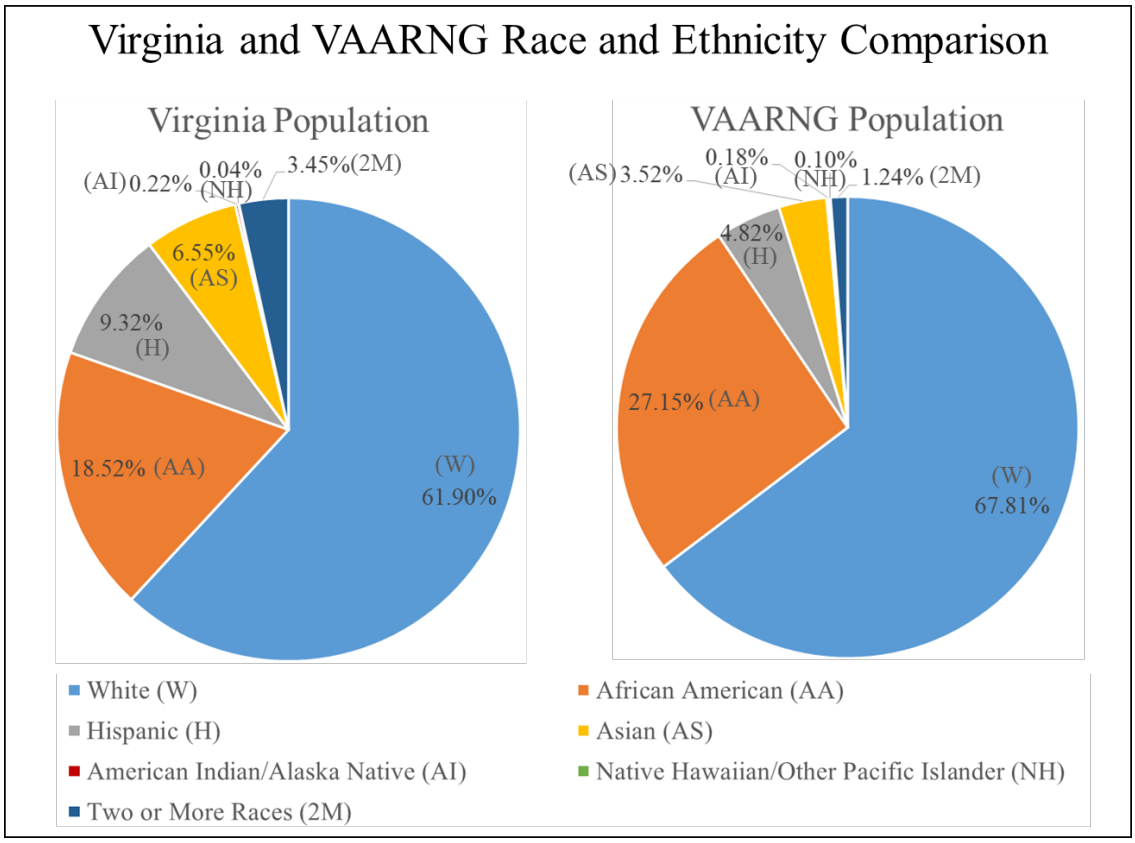


Figure 6. Virginia ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the VAARNG and the general population of the State of Virginia are as follows: 5.91% more Whites, 8.63% more African Americans, 4.5% less Hispanics, 3.03% less Asians, .04% less American Indians/Alaskan Natives, .03% more Native Hawaiians/Other Pacific Islanders, and 2.20% less with two or more races. For equal proportion, the VAARNG needs 418 less Whites, 611 less African Americans, 318 more Hispanics, 215 more Asians, three more American Indians/Alaskan Natives, four less Native Hawaiians/Other Pacific Islanders, and 156 more with two or more races. Based on

[76] Organista, "DRS_122927."

statistical significance and effect size, the VAARNG does not adequately represent the population of Virginia regarding race and ethnicity.

The estimated education level make-up of Virginia is 886,330 or 10.89% with no high school diploma, 1,771,277 or 21.76% with a bachelor's degree, and 1,334,141 or 16.39% with a master's or doctorate degree.[77] The education level of the VAARNG in 2018 was 1,217 or 17.20% with no high school diploma, 1,388 or 19.62% with a bachelor's degree, and 477 or 6.74% with a master's or doctorate degree.[78]

The proportion of the VAARNG is 6.31% higher with no high school diploma, 2.14% less with a bachelor's degree, and 9.65% less with a master's or doctorate degree. The VAARNG needs 447 more people with a high school diploma, 152 more people with a bachelor's degree, and 683 more with a master's or doctorate degree for equal population proportion of education level. Based on statistical significance and effect size, the VAARNG does not proportionally adequately represent Virginians regarding education levels.

The VAARNG should consider conducting further analysis to determine how to improve in connecting the DoD with the nation. First, the VAARNG should consider feasibility of increasing force structure. Next, the VAARNG should consider conducting further analysis of disproportionate populations to include people with no high school diploma, or a master's or doctorate degree, African American people, and White people. Table 6 provides a graphic depiction of the overall demographic comparison between the VAARNG and the state population. Areas in italics indicate potential problem areas that need further analysis.[79] In an environment plagued by decreasing eligible recruits, the VAARNG should focus on establishing stronger connection with the population to maintain the AVF.

---

[77] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

[78] Organista, "DRS_122927."

[79] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

Table 6. VAARNG overall demographic analysis compared to the population

VAARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.08%	*13.04%*	*34.27%*	*-34.27%*	*6.31%*	-2.14%	*-9.65%*
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
5.91%	*8.63%*	-4.50%	-3.03%	-0.04%	0.03%	-2.20%

Source: Created by Author.

Northern Mid-Western Region – Wisconsin

The estimated population of the State of Wisconsin in 2017 was 5,643,000.[80] The population of the Wisconsin ARNG (WIARNG) in 2017 was 7,158.[81] As a result, the WIARNG represents .13% of the population of Wisconsin. The WIARNG population, on average, influences approximately 19% of Wisconsin's population by applying Dunbar's concept. Almost one in every five Wisconsinites likely knows someone that serves in the WIARNG. Therefore, the total WIARNG population connects a good portion of the nation to the DoD. Having established this in a general sense, the study will consider the representation across specific subsets of the population.

The estimated racial make-up of Wisconsin's population in 2017 was 81.53% or 4,600,500 White, 5.81% or 328,100 African American, 6.77% or 382,000 Hispanic, 2.96% or 166,800 Asian, .77% or 43,500 American Indian/Alaskan Native, and 2.14% or 120,600 consisting of two or more races.[82] The racial make-up of the WIARNG in 2017 was 6,637 or 92.72% White, 305 or 4.26% African American, 322 or 4.5% Hispanic, 145 or 2.03% Asian, forty-six or .64% American Indian/Alaskan Native, and twenty-three or .32% consisting of two or

[80] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

[81] Organista, "DRS_122927."

[82] Henry J. Kaiser Family Foundation, "Population Distribution by Race/Ethnicity."

more races.[83] Figure 7 provides a graphic depiction of the race/ethnicity population proportions of the WIARNG and Wisconsin population.

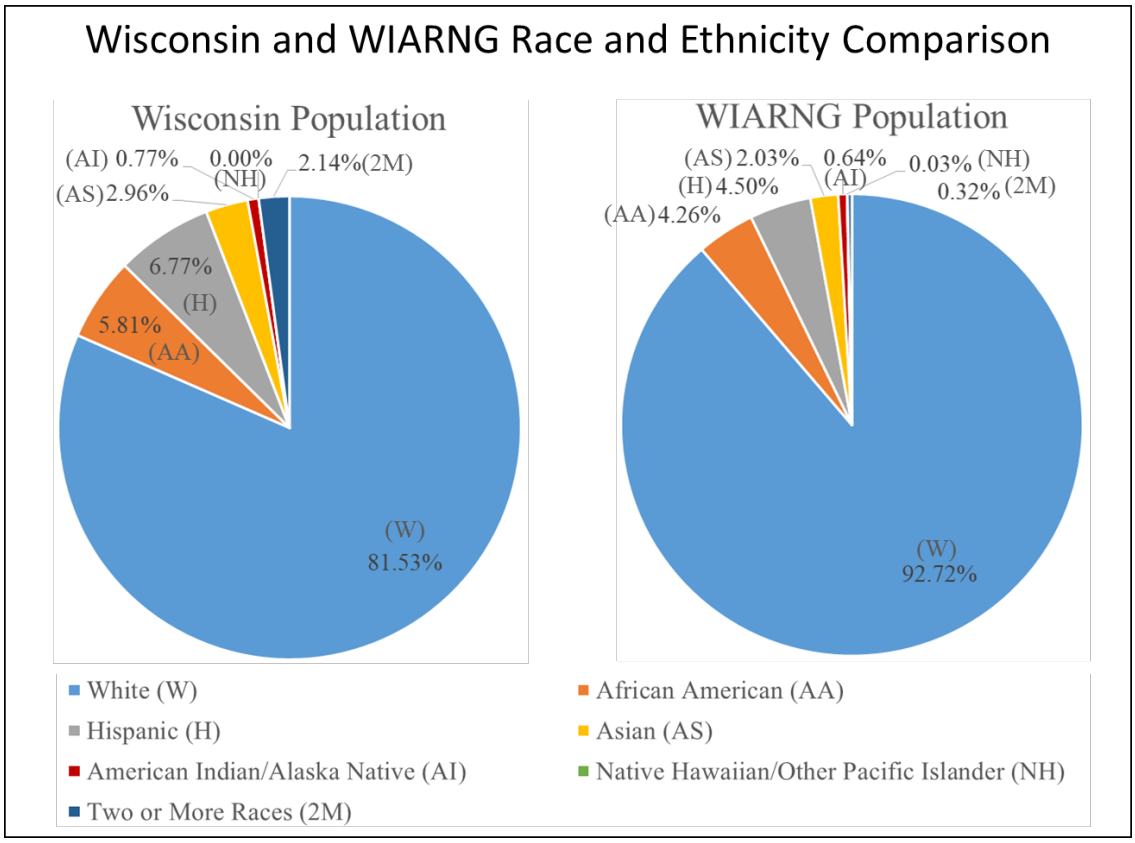


Figure 7. Wisconsin ARNG and Total Population Race/Ethnicity Comparison. Created by Author.

The differences between the racial/ethnic makeup of the WIARNG and the general population of the State of Wisconsin are as follows: 11.2% more Whites, 1.55% less African Americans, 2.27% less Hispanics, .93% less Asians, .13% less American Indians/Alaskan Natives, and 1.82% less with two or more races. For equal proportion, the WIARNG needs 801 less Whites, 111 more African Americans, 163 more Hispanics, sixty-seven more Asians, nine more American Indians/Alaskan Natives, and 130 more with two or more races. Based on

[83] Organista, "DRS_122927."

statistical significance and effect size, the WIARNG does not proportionally represent the Wisconsin population regarding race and ethnicity.

The estimated education level make-up of Wisconsin is 439,260 or 7.78% with no high school diploma, 1,109,984 or 19.67% with a bachelor's degree, and 573,522 or 10.16% with a master's or doctorate degree.[84] The education level of the WIARNG in 2018 was 1,601 or 22.37% with no high school diploma, 1,002 or 14% with a bachelor's degree, and 290 or 4.05% with a master's or doctorate degree.[85]

The proportion of the WIARNG is 14.58% more with no high school diploma, 5.67% less with a bachelor's degree, and 6.11% less with a master's or doctorate degree. To achieve equal proportion, the WIARNG needs 1,044 more with a high school diploma, 406 more people with a bachelor's degree, and 437 more people with a master's or doctorate degree. The WIARNG does not proportionally represent the population of Wisconsin regarding education level.

The WIARNG should consider ways to better connect Wisconsinites to the DoD. First, the WIARNG should consider deeper analysis of the disproportioned White population. Next, the WIARNG should consider further analysis of all disproportioned education levels. Table 7 provides a graphic depiction of the overall demographic comparison between the WIARNG and the state population.[86] Areas in italics indicate potential problem areas that need further analysis. A focus by the WIARNG on strengthening the connection with the population will contribute toward helping DoD meet the required manning levels, the ability to keep an AVF, and ultimately achieve one of the ARNG's key self-identified missions.

[84] Digest of Education Statistics, "Table 104.80, Percentage of Persons 18 and Over."

[85] Organista, "DRS_122927."

[86] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

Table 7. WIARNG overall demographic analysis compared to the population

WIARNG Overall Demograhpic Analysis Compared to the Population						
ARNG % of Population	ARNG Influence	Gender Difference		Education Difference		
		Male	Female	No HS	Bachelor	Master or Doctorate
0.12%	19.03%	*30.06%*	*-30.06%*	*14.58%*	*-5.67%*	*-6.11%*
Race and Ethnicity Difference						
White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or More Races
11.20%	-1.55%	-2.27%	-0.93%	-0.13%	0.00%	-1.82%

Source: Created by Author.

Section 4: Comparative Analysis

This sub-section compares the seven ARNG case studies above to determine paradigms, trends, and potential problems. Comparisons will include how well the ARNG connects DoD to the overall population, ethnic and race groups, gender groups, and education groups. Understanding the relative success level of the ARNG in representing the population is critical to determining its ability to fulfill its stated goal.

This first analysis compares case study population. Figure 8 displays the estimated percentage of the population for each of the case studies.

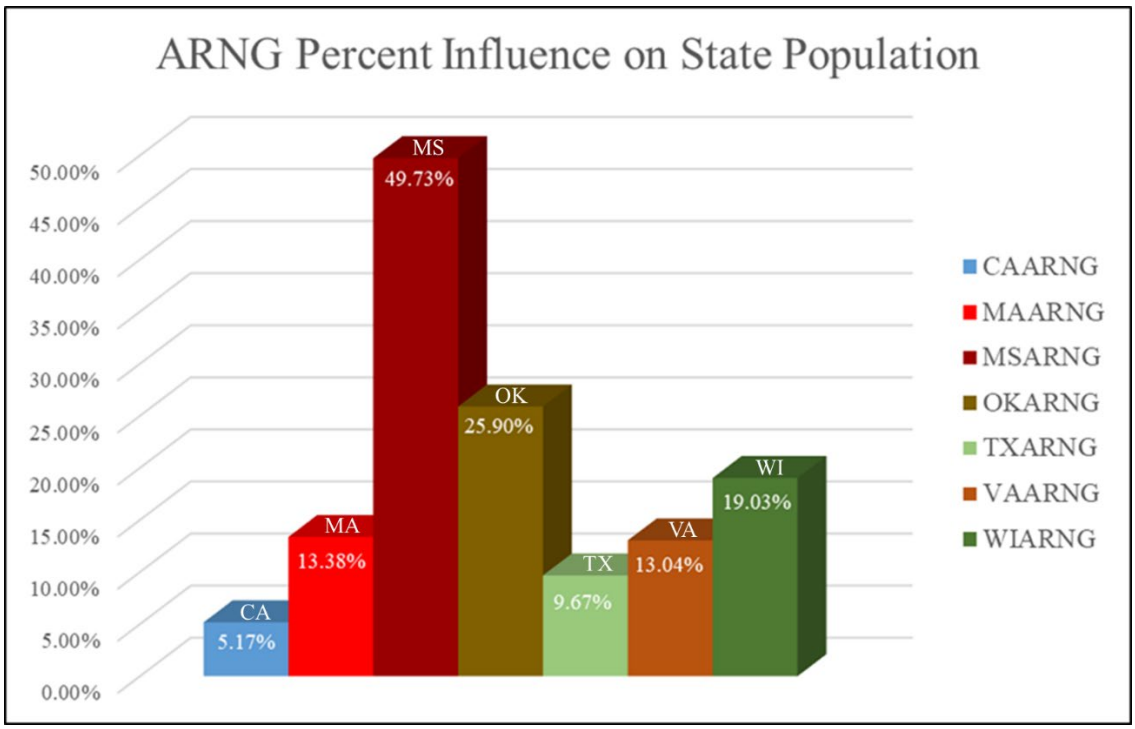


Figure 8. ARNG percent influence comparison on the respective state population. Created by Author.

The influence on the population varies from 5.17% to 49.73%, a difference of 44.56% from lowest to highest, and an average of 19.42%. Without considering any other states, this graph shows the MSARNG as an anomaly. Basing the average on all states other than the MSARNG drops the average to 14.36%, with a difference between the highest lowest percentages at 20.73%. Each state is a complex adaptive system affected by common and unique variables. Each state needs to conduct its own analysis to determine inadequacies in population influence and the ARNG should investigate a comparison among all states to determine potential problems. Then both the ARNG and each state's ARNG can determine ways to ensure their improved mission success in connecting the fabric of the nation with the DoD.

The second analysis compares ARNG ethnicity and race proportions compared to the state populations across the seven regions. Table 8 displays the percentage difference between proportion of the ARNG and the state population for the seven case studies regarding race and

ethnicity. Italicized text with grey background indicates an effect size greater than 5% and considered ineffective for ensuring population connection to the DoD.

Table 8. ARNG percent race and ethnicity proportion comparison to the respective state population

ARNG	Race and Ethnicity Difference						
	White	African American	Hispanic	Asian	American Indian / Alaskan Native	Native Hawaiian / Other Pacific Islander	2 or more races
CAARNG	*42.57%*	2.56%	-4.97%	-4.06%	0.22%	-0.21%	-2.26%
MAARNG	*9.65%*	4.77%	-1.94%	-3.54%	0.01%	0.02%	0.92%
MSARNG	1.81%	1.96%	-1.73%	-0.46%	0.06%	0.01%	-0.58%
OKARNG	*13.46%*	2.96%	-3.56%	-0.42%	-2.53%	-0.05%	-2.92%
TXARNG	*37.52%*	3.82%	*-12.09%*	-2.06%	0.15%	-0.04%	0.23%
VAARNG	*5.91%*	*8.63%*	-4.50%	-3.03%	-0.04%	0.03%	-2.20%
WIARNG	*11.20%*	-1.55%	-2.27%	-0.93%	-0.13%	0.00%	-1.82%
Average	*17.45%*	3.31%	-4.44%	-2.07%	-0.32%	-0.03%	-1.23%
Average w/o MS	*20.05%*	3.53%	-4.89%	-2.34%	-0.39%	-0.04%	-1.34%

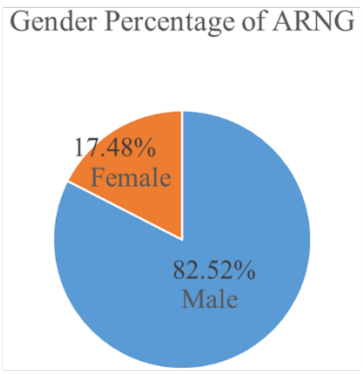
Source: Created by Author.

With the exception of Mississippi, the most significant issue depicted across all regions in regards to race and ethnicity is an over proportioned representation of White people serving in the ARNG. The ARNG should consider determining if this is a nationwide trend. If the ARNG finds this as a nationwide trend, efforts to determine possible reasons should ensue. The ARNG needs to implement ways to improve identified reasons and better connect the fabric of the nation with the DoD.

In addition to the ARNG conducting deeper analysis into over representation of the White population, the VAARNG should identify reasons for African Americans over representation and the TXARNG should consider reasons for Hispanic under representation. Upon identification of possible reasons for these imbalances, the VAARNG and the TXARNG should develop plans to improve these population proportions over time to better connect the DoD to their state populations.

The third area of analysis compares ARNG gender proportions to the state population in the seven case studies. Figure 9 displays the difference between gender proportions in the state and in the ARNG for the respective state.[87]

ARNG	Gender Difference between ARNG and Population
CAARNG	34.03%
MAARNG	35.41%
MSARNG	34.91%
OKARNG	34.28%
TXARNG	32.59%
VAARNG	34.27%
WIARNG	30.06%
Average	33.65%



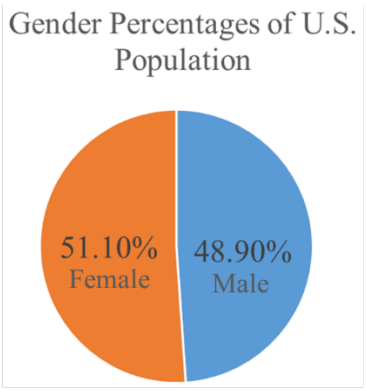


Figure 9. ARNG percent of gender proportion comparison to the respective state population. Created by Author.

The average difference in gender proportions between the ARNG and the US population based on these case studies is 33.65%. However, several possible reasons exist for these differences. First, several military occupational specialties were not available to women until recently. Second, males in the US historically have a greater propensity to serve in the armed forces than females. Finally, females have more armed force entry-level disqualifiers than males based on human anatomy. The ARNG should monitor gender proportion across all states to ensure either stagnation or improvement over time. This will ensure better population connectivity with the DoD.

The final comparative analysis includes ARNG comparison of education level to the state population in the seven case studies. Figure 10 displays the difference between education level proportion in the ARNG and state population. Any percentages above 5% are areas of concern.

[87] Henry J. Kaiser Family Foundation, "Population Distribution by Gender."

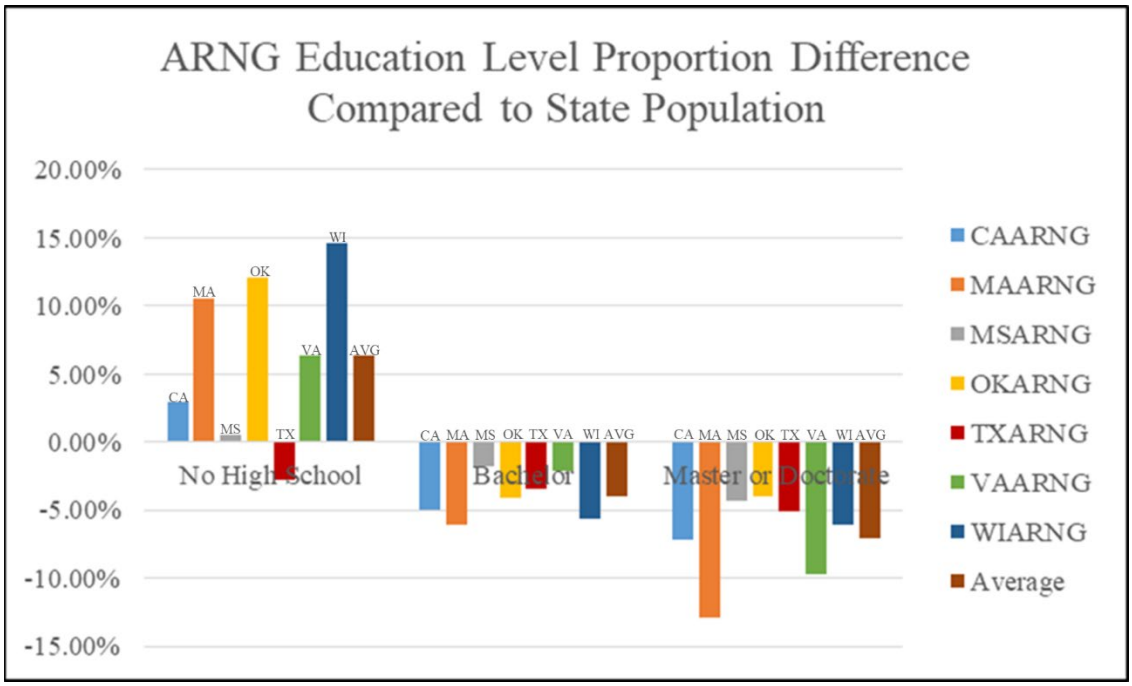


Figure 10. ARNG education level proportion comparison to the respective state population. Created by Author.

The sample states whose ARNG has greater than 5% of its population with no high school diploma compared to the respective state's population include Massachusetts, Oklahoma, Virginia, and Wisconsin. The sample states whose ARNG has greater than 5% of its population with no bachelor's degree compared to the state's population include Massachusetts and Wisconsin. The sample states whose ARNG has more than 5% of its population with no master's or doctorate degree compared to the state's population include California, Massachusetts, Virginia, and Wisconsin. These states must conduct further research to determine possible reasons for this imbalance in education levels of people serving in their ARNG. The ARNG in those states should then determine ways and means to make improvements in order to better align the education levels of the population with the ARNG. Balancing representation across the various education levels better connects the state's fabric to the military.

Section 5: Recommendations and Conclusions

Studying how well the populations of the ARNG reflect the populations of the states they serve reveals several areas of disconnect between the two. If the ARNG serves as the portion of

the armed forces that connects the DoD the nation's population, and therefore serves as a replacement for conscription, further analysis and possible changes must occur. This paper only addresses seven sample states that each represent one region of the United States of America. An examination of this small sample reveals some significant discrepancies. Although the ARNG recruiting formations look at the demographics of a particular population to determine marketing efforts, little effort compares those demographics to the state population. The ARNG must use this demographic information to identify existing problems in population representation across the formation. Upon problem determinations, the ARNG must invest to improve population connections across the formation to ensure eligible people choose to serve.

The increased responsibilities of the ARNG in becoming an operational force and the ability of the United States to maintain an AVF requires increased contributions by the ARNG in ensuring popular support for the military. The decreased pool of eligible recruits means a greater portion of those eligible to serve are needed to sustain the force. Increasing popular support for the military contributes to the likelihood that eligible people decide to serve. The ARNG's position is best suited to serve as the primary conduit to increase popular support, connect the nation to the DoD, and ensure the ability of the nation to keep its AVF.

The operational approach recommended for improving the connection between the population and the DoD includes four lines of effort. In the first line of effort, the ARNG must establish a better understanding of inconsistencies between the ARNG and the general population, and then commit resources to make improvements. Example resources include improving service benefits, increasing bonuses, and building or moving unit locations. In the second line of effort, the ARNG should study current and future societal and cultural changes and incorporate those changes into long-term plans. Plans must reflect changes in demographics and the changing locations of population centers.

The third line of effort requires the ARNG to rebalance during force structure increases and attrition. States whose ARNG compliment is small relative to the state population should

receive new force structure and states whose ARNG compliment is high compared to the state population should lose force structure. This line of effort requires the ARNG to shift units from states with the low manning percentages to those with the high manning percentages. This shift will balance the population representation. Implementing this line of effort requires either cultural change or new policy. The ARNG must move away from the goal of maintaining force structure to a goal of realistic capabilities based on non-influenced metrics with minimal influence from the political environment. This cultural change is challenging in the ARNG because of tensions molded by political pressures to maintain force structure and the requirement to conduct both state and federal missions.

In the fourth and final line of effort, the ARNG focus shifts from meeting unrealistic training objectives during drill weekends to conducting mandatory community outreach instead. Community outreach helps shield the ARNG from the negative impacts associated with the political influence problem discussed in the previous line of effort. This effort requires the US Army to stop requiring the ARNG to meet the same collective training objectives as active duty until placed on orders for mobilization. This effort also shifts the ARNG focus toward physical fitness, military discipline and professionalism, so when the population encounters ARNG members, the highest levels of confidence, health, and professionalism are on display.

Ensuring the nation continues to support the efforts of the armed forces is essential for the population to provide enough eligible recruits willing to serve and thereby maintain the AVF. Without invoking conscription, the AVF is essential for the military's ability to fight and win the nations wars. The DoD's ability to fight and win the nations wars affects the safety and security of the United States. The ARNG is best postured to provide the link that ensures the DoD's needed popular support. Failure to implement both the ways and means to ensure popular support for the military is a failure of the ARNG and the US Army to ensure adequate support to the operational force. Changing ARNG focus toward citizen outreach will not be easy or popular, but it is vital to the future of the United States.

Bibliography

Air Force Reserve. “About.” Accessed December 1, 2018. https://afreserve.com/about.

Army National Guard. “About Us.” National Guard Bureau, 2018. Accessed December 18, 2018. https://www.nationalguard.mil/About-the-Guard/Army-National-Guard/About-Us.

Carafano, James Jay. “Total Force Policy and the Abrams Doctrine: Unfulfilled Promise, Uncertain Future.” Foreign Policy Research Institute. February 1, 2005. Accessed April 9, 2019. https://www.fpri.org/article/2005/02/total-force-policy-and-the-abrams-doctrine-unfulfilled-promise-uncertain-future.

Commission on the National Guard and Reserves. “Transferring the National Guard and Reserves into 21st Operational Force.” Final Report to Congress and the Secretary of Defense, Washington, DC, January 2008.

Defense Manpower Data Center. “Number of Military and DoD Appropriated Fund (APF) Civilian Personnel Permanently Assigned by Duty Location and Service/Component.” Active Duty Master’s File, Reserve Common Components Personnel Data System (RCCPDS) File, Appropriated Fund (APF) Civilian Master’s File. June 30, 2018.

Digest of Education Statistics. “Table 104.80, Percentage of Persons 18 and Over, by Educational Attainment and State: 2000 and 2016.” May 2018. Accessed January 25, 2019. https://nces.ed.gov/programs/digest/d17/tables/dt17_104.80.asp.

Dunbar, Robert. *Grooming, Gossip, and the Evolution of Language*. Cambridge, MA: Harvard University Press, 1996.

Genger, Noah M. “Sustaining the All-Volunteer Force in the Era of the Operational ARNG.” Monograph, Advanced Military Studies Program, 2018.

Henry J. Kaiser Family Foundation. “Population Distribution by Gender.” Based on the Census Bureau's American Community Survey, 2008-2017. Accessed December 15, 2018. https://www. kff.org/other/state-indicator/distribution-by-gender/?currentTimeframe=0&sortMode l=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D.

———. “Population Distribution by Race/Ethnicity.” 2017. Accessed October 25, 2018. https://www.kff.org/other/state-indicator/distribution-by-raceethnicity/?current Timeframe=0&sortModel=%7B%22.colId%22%22Location%22,%22sort%22:%22asc%22%7D.

Holohan, Mel. “America’s 43 Most and Least Trusted Professions.” MSN Money, February 21, 2018. Accessed February 15, 2019. https://www.msn.com/en-us/money/careersandeducation/americas-43-most-and-least-trusted-professions/ss-BBJnsRY.

Joint Chiefs of Staff. “About the Joint Chiefs of Staff.” Accessed January 26, 2019. https://www.jcs.mil/About/.

Lengyel, Joseph L. *Vision for the Future: Evolving to Meet Global Challenges*. Arlington, VA: National Guard Bureau, 2017. Accessed November 1, 2018. https://www.national

guard.mil/Portals/31/Documents/Leadership/CNGB%20Vision%20for%20the%20Future%201FEB2017.pdf.

Luckey, Charles D. *America's Army Reserve at a Glance*. Arlington, VA: US Army Reserve, 2017. Accessed December 1, 2018. https://www.usar.army.mil/Portals/98/Documents/AtAGlance_2017/Army%20Reserve%20At%20A%20Glance_web.pdf?ver=2017-10-05-210537-190.

Marine Forces Reserve. "Marine Forces Reserve Directory." Updated July 18, 2018. Accessed December 2, 2018. https://www.marforres.marines.mil/Portals/116/Docs/Units/MFR_Directory_PDF.pdf.

Military.com. "Military Base Guide List." Accessed December 1, 2018. https://www.military.com/base-guide/browse-by-service.

National Guard. "State Partnership Program." Accessed March 3, 2019. http://www.nationalguard.mil/Leadership/Joint-Staff/J-5/International-Affairs-Division/State-Partnership-Program/.

Organista, Arnulfo J. (Program Analyst). "DRS_122927" Excel Spreadsheet, Demographic Data on the Army National Guard, Northrop Grumman Technology Services, Defense Manpower Data Center (DMDC), Data as of September 30, 2018.

Oxford Neuroscience. "Research Directory, Robin Dunbar." Accessed February 15, 2019. https://www.neuroscience.ox.ac.uk/research-directory/robin-dunbar.

Rostker, Bernard. *I Want You! The Evolution of the All-Volunteer Force*. Santa Monica, CA: RAND Corporation, 2006. Accessed March 3, 2019. https://www.rand.org/content/dam/rand/pubs/monographs/2007/RAND_MG265.pdf

Selective Service. "Use of the Draft." Accessed April 9, 2019. http://www.selectiveservice.us/military-draft/7-use.shtml.

Stoil, Jacob A. School of Advanced Military Studies Monograph Director. March 26, 2019. Reviewed for content, grammar, punctuation, and clarity of expression.

Sullivan, Gail M., and Richard Feinn. "Using Effect Size-or why the P Value is Not Enough." *Journal of Graduate Medical Education* 4, no. 3 (September 2012): 279-282. Accessed January 2, 2019. https://www.ncbi.nlm.nih.gov/pmc/articles/PMc3444174/#_ffn_sectitle.

US Coast Guard. "United States Coast Guard Reserve." Accessed April 9, 2019. https://www.uscg.mil.

US Navy Reserve. "NOSC Locator Map." Accessed December 1, 2018. https://www.public.navy.mil/nrh/Pages/nosc-locator-map.aspx.

Upton, Emory A. *The Military Policy of the United States.* New York: Greenwood Press, 1904.

US Army. "Who We Are." Accessed April 9, 2019. https://www.army.mil/info/ organization.

US Army National Guard. “History of ARNG 4.0.” Accessed January 10, 2019. http://www.nationalguard.mil/Resources/ARNG-Readiness/History-of-ARNG-40/.

US Department of Defense. “General Joseph L. Lengyel, Chief, National Guard Bureau.” Accessed January 26, 2019. https://dod.defense.gov/About/Biographies/Biography-View/article/913541/general-joseph-l-lengyel/.

———. “Our Story.” Accessed April 9, 2019. https://www.defense.gov/Our-Story/#history.

US Navy. “Status of the Navy.” Accessed April 9, 2019. https://www.navy.mil/navydata/nav_legacy.asp?id=146.

US Marine Corps. “Marine Corps Unit Directory.” Accessed April 9, 2019. https://www.marines.mil/Units/srterms/reserve.

Willis, MAJ Bradley S. ARNG Installations and Environment Executive Officer. Email correspondence with author, February 19, 2019.