Thematic Report on Chinese American Contributions:

Military and National Security
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National security is at the center of a nation’s interests. It serves as the precondition for US prosperity and the social wellbeing of US citizens. Alongside Americans of every race and ethnicity, Chinese Americans have demonstrated their loyalty to the nation by fighting for its security and freedom in every crucial moment in history—from the Civil War to World War II and during the War on Terror—and have contributed across different domains. Today, as rapid technological evolution is reshaping the character of national security operations, Chinese American scientists and researchers continue to play an important role in keeping the US at the forefront of global innovation and military leadership.
Overview

As of 2018, approximately 75,000 living Chinese Americans (that is, one in 40 Chinese Americans aged 17 years old or over) have previously served in the military, or are currently on active duty either in the military or for training in the Reserves and National Guard. The majority of Chinese American servicemen are enlisted in the Army or the Navy, which combined account for two-thirds of Chinese Americans on active duty as of 2018 (Figure 1).

In the intelligence community, more than 15,000 Chinese Americans work on national security and international affairs in the public sector as of 2018, accounting for 1.3% of all Americans working in this field—slightly above their share in the American population. Chinese Americans have outsized representation in certain technical occupations that serve crucial roles in the intelligence community. In particular, one in 20 computer and information research scientists and one in 40 interpreters and translators working in the intelligence community are Chinese American.

Historically, Chinese Americans—both foreign- and US-born—have served in the American armed forces since the Civil War, although their participation was not well documented until World War II. Despite the racial hostility and restrictions on civil rights they endured under the Chinese Exclusion Act of 1882, which remained law until 1943, one in five Chinese American men enlisted in the military during World War II. Many fought in battlefields on the front lines while many others worked on the home front to support the troops. In the postwar era, Chinese Americans continued to contribute to national defense and security and today play a notable role in both military and civilian capacities. Their contributions take many forms, including providing healthcare and technical support, developing cutting-edge technology, and serving on scientific advisory boards to the nation’s leadership.

**FIGURE 1** Distribution of active duty personnel by armed force in 2018

![Distribution of active duty personnel by armed force in 2018](chart)

Sources: US Census Bureau, 2018 American Community Survey one-year estimates, public use microdata sample (PUMS); The Economist Intelligence Unit analysis.
Despite dedication to the nation’s security interests, Chinese Americans have faced persistent racism, distrust and stereotyping as “perpetual foreigners.” During World War II, about 25% of Chinese Americans served in racially segregated units (the percentage was even higher among Japanese and Filipino American servicemembers). Although the US military ended the racial segregation of military units after the war, racism and discrimination within the armed forces have persisted.

A 2003 congressional report found that 9-14% of Asian Americans at military service academies reported the overall atmosphere for racial minorities was “poor or below average.” In 2011, Danny Chen, a born-and-raised New Yorker and an Army veteran of the conflict in Afghanistan, took his own life after racial slurs and physical abuse from others in his unit became unbearable. Moreover, while Chinese Americans have been a major force in scientific research, including on matters that are critical to national security, they have been targets of FBI investigation for decades.

Battlefield and home-front heroes in World War II

Sixteen million Americans joined the US Armed Forces to fight fascism abroad and defend their nation’s security during World War II. While accounting for less than 0.1% of the US population at that time and still facing various discriminatory policies and mistreatment at home, Chinese Americans—both men and women—made their contributions to the US’s victory by serving in combat, working in defense industries and providing civilian support.

One out of every five Chinese American men (more than 20,000 individuals) served in the US Armed Forces during the war. Among them, many were born and raised on American soil and volunteered for military service out of a strong sense of patriotism. However, some many were initially denied the opportunity to serve on the basis of their race, until General Henry Arnold, commander of the US Army during World War II, prohibited bigotry and racism and opened up enlistment to Chinese American volunteers.

Chinese American servicemembers, spread across numerous service branches and ranks, fought for the US and the Allies in both the European and Pacific theatres for the duration of the war. Seventy percent were in the Army, serving in the 3rd and 4th Infantry Divisions in Europe and the 6th, 32nd and 77th Infantry Divisions in the Pacific. Twenty-five percent of Chinese American servicemembers were in the Air Force, including Sergeant Thomas Fong—who received his Air Medal for outstanding service in the bomber corps over Europe—and Lieutenant Colonel Frank Fong, who commanded the Fifth Emergency Rescue Squadron in rescuing US and Allied aircrews downed in the North Sea.

In the Navy, Rear Admiral Gordon Chung-Hoon, the first Asian American to command a Navy warship, commanded the USS Sigsbee (a destroyer) in the Pacific campaign.
against Japan. In 1945, the destroyer assisted in the destruction of 20 enemy planes while screening a carrier strike force off the Japanese island of Kyushu. Admiral Chung-Hoon was awarded the Navy Cross and Silver Star honors for his extraordinary heroism.

Some Chinese American servicemen are particularly remembered for their valor. Among them is Francis B Wai, a recipient of the Medal of Honor—the US's highest and most personal military decoration for bravery. Serving in the Philippines in 1944, Captain Wai landed on the island of Leyte and immediately assumed command of a disorganized group of American soldiers, issuing clear and concise orders. Under heavy machine gun and rifle fire, he moved inland without cover. His soldiers, inspired by his cool demeanor, rose from their positions and followed him. During the advance, Captain Wai was killed in the line of duty while leading an assault upon the last remaining enemy stronghold in the area. His leadership inspired his men, even after his death, to advance and destroy the enemy. His efforts were largely responsible for the rapidity with which the position was secured.

In addition to their outsized representation in the US Armed Forces during World War II, the contributions of Chinese Americans to the war effort extended far beyond the men who served in combat. Several notable Chinese American women made important contributions by working with or serving in the military directly. For example, Hazel (Ying) Lee and Maggie Gee joined the Women Air Force Service Pilots (WASP) to work with the Air Force to ferry planes from factories to air bases and test planes for mechanical problems (Ms Lee was killed in a plane crash in the line of duty). In addition, a group of Chinese-American women also provided translation and interpretation duties under the Women's Army Corp while others served in the Army Nursing Corps.

On the home front, Chinese American women organized fundraising efforts, sold war bonds, and volunteered for the Red Cross and civil defense duties. To help address the domestic labor shortage, they also started to work in industrial manufacturing, undertaking dangerous and labor-intensive work that had previously been denied to women and minorities.

WWII proved to be a major turning point both for US-China relations and for Chinese Americans. The wartime success of the US-China alliance, as well as the proven loyalty and invaluable contributions of Chinese American throughout the war, ensured that the bond between the countries would last long after the ceasefire. In 1943 the US government officially repealed the Chinese Exclusion Act of 1882. In 2018, in recognition of their contributions to the war, Chinese American veterans were collectively awarded the Congressional Gold Medal, one of the nation's highest civilian honors.
After the war

Since the end of World War II, Chinese Americans have continued to play a crucial role in protecting American national security interests, including fighting in armed conflicts where necessary. Chinese American servicemembers fought for the US in every major military conflict in the 20th century, from the Korean War and the war in Vietnam to the Gulf War.

For example, Major Kurt Chew-Een Lee, the first Asian-American officer in the Marine Corps, led Marines into battle in the Korean War and was cited for bravery for helping to preserve a crucial evacuation route for 8,000 American troops. In 1950, Major Lee conducted a solo reconnaissance mission in heavy snow, moving well ahead of his unit to fire rounds and throw grenades to expose the location of the enemy soldiers who had attacked his unit. He was wounded, but his tactics worked, allowing his unit to reposition and drive back the opposing troops. Major Lee was awarded the Navy Cross, the second-highest honor that a Marine can receive, for "extraordinary heroism."

In addition to significant contributions to the Armed Forces, Chinese Americans have also been particularly active in certain occupations providing technical and healthcare support to national security operations. While Chinese Americans, like other minorities, remain underrepresented in the senior leadership of American military and national security organizations, some individuals have made exceptional contributions to institutional development within the military.
As of 2018, one in 40 first-line supervisors of mechanics, installers and repairers in the US Army is Chinese American; one in 50 healthcare practitioners and technical personnel serving in the military is Chinese American. Although not directly engaging in combat, these people provide essential support for frontline soldiers and help to mitigate casualties.

One example of such support is Colonel Geoffrey Ling, who specializes in traumatic brain injury and prostheses, two areas of medical practice that provide both veterans and active-duty servicemembers with life-changing care. For years, Colonel Ling was the Army’s only neuro-intensive specialist and was considered to be its premier authority on traumatic brain injury (TBI). (TBI has been called a “signature injury” of Afghanistan and Iraq Conflicts, and the Defense and Veterans Brain Injury Center has reported nearly 350,000 incident diagnoses of TBI in the US military since 2000.)

Colonel Ling was deployed in Afghanistan in 2003 and Iraq in 2005 to treat injured American servicemembers. In addition to his work with TBIs, he is also known for driving advances in the development of prosthetic limbs. He launched the Revolutionizing Prosthetics program in 2006, leading a research team in developing high-tech prosthetic limb replacements, including an advanced electromechanical prosthetic upper limb. The technology, which received approval from the US Food and Drug Administration (FDA) in 2014, helps those who have lost limbs—civilians as well as veterans—to regain independence and enjoy a vastly improved quality of life.

Although underrepresented at the highest echelons, several Chinese Americans have managed to break the glass ceiling and assume roles in the military’s senior leadership. For example, in 1980, Rear Admiral Ming Chang became the first naturalized Asian American naval officer to reach flag rank; during his 34 years of military service, he received the Legion of Merit (Combat V) and Bronze Star (Combat V) medals.

Some trailblazers are particularly remembered for making contributions with far-reaching impact in a management capacity. In 1984, Major General John L. Fugh became the first Chinese American in US military history to reach the rank of general. Following that achievement, he served in the Army Corps’ top post, The Judge Advocate General (TJAG), from 1991 to 1993. During his career in the Army, Maj. Gen. Fugh enacted a number of important and lasting reforms that reshaped the institution for the better. He introduced the Army’s first environmental law division and established its procurement fraud division. During the Gulf War, Maj. Gen. Fugh established a human rights training program and published the War Crimes Report—the first American effort since World War II to systematically document enemy war crimes. These initiatives improved the accountability and social consciousness of the US military, helping the centuries-old institution adapt to the modern era.
Civilian contributions to national security

It is impossible to overstate the importance of science and technology to American intelligence and security capabilities, particularly in an era of such rapid technological evolution and transformation. Artificial intelligence, for example, can be used in diverse areas of military activity, from weapons systems, intelligence, logistics and training to the learning tools employed in professional military education. Advances in robotics, computing and neuroscience will increasingly enable military personnel to compensate for cognitive and physical limitations with biotechnology and implantable devices. These technologies will reshape the character of military and national security operations. Chinese American scientists and researchers are a main driving force in American development in these areas and play an important role in keeping the US at the forefront of global innovation and military leadership.

Since the mid-20th century the US government has heavily invested in research and technology that can be applied to national defense and security, engaging closely with the scientific community and major industry players. Chinese Americans face significant obstacles to their participation in the field, including racial stereotyping as disloyal and foreign, prolonged security clearance processes, and continued suspicions about Chinese American scientists’ and researchers’ trustworthiness. Despite these barriers, Chinese American civilian experts have found their own ways to contribute to US national security by providing scientific advice to defense and intelligence leadership, working on basic research and developing cutting-edge technologies.

Over the past several decades, the US government has established various advisory groups to provide independent scientific and technical advice on matters critical to national security. These groups typically consist of top civilian scientists, experts from industry, national laboratories and academia, and retired military officers. Early advisory groups included the US Air Force Scientific Advisory Board (established in 1944), while a recent example is the latest National Security Commission on Artificial Intelligence (NSCAI; established in 2018). The

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Central Intelligence Agency also created a venture-capital arm called In-Q-Tel in 1999 to help identify and invest in startups developing technologies that serve national security interests. Because of their exceptional performance in relevant fields, Chinese American scientists, engineers and experts have played a key role in contributing to these advisory groups and organizations. One example is Heidi Shyu, a former Raytheon executive who provided expertise to the US Air Force in the areas of space and airborne systems in several capacities, first as a member of the US Air Force Scientific Advisory Board from 2000 to 2010, and later as chair of the Board from 2005 to 2008. Later, in her role as the Assistant Secretary of the Army for Acquisition, Logistics and Technology, Ms Shyu played a central role in the US Army’s development and acquisition of new weapons technology, overseeing the complete management of the Army’s weapons systems and equipment, from research and development to testing and deployment.

Another prominent example is Gilman Louie, a fourth-generation Chinese American who grew up in San Francisco in a military family. Building on a successful career in the video game industry, Mr Louie founded In-Q-Tel, and served as its first CEO until 2006. Under his leadership, In-Q-Tel invested in over 80 companies that have had a significant impact on national security. In 2003, the firm invested in Keyhole, a pioneer of interactive 3D earth visualization that became Google Earth the following year. Within two weeks of acquiring the technology, the Pentagon and the National Imagery and Mapping Agency began using it to support troops in Iraq. Since 2018, Mr Louie has served on the NSCAI, reviewing advances in artificial intelligence, machine learning developments and associated emerging technologies to address national security and defense needs.

These examples are merely representative of the innumerable Chinese American scientists, researchers and engineers who work in universities, research institutions, national laboratories and industrial sectors in roles related to protecting national security interests. Chinese Americans also offer support related to broader links between science and technology and national interests (for more information, see the Science and Technology pillar).

Conclusion

Military and national security are essential building blocks for a stable, prosperous country; as such, they have been and remain central to US national interests. Chinese American servicemembers, military leaders, researchers, expert advisors and many others have made essential contributions to US efforts to ensure national security and maintain military strength. In the decades to come, as science and technology rapidly evolves, Chinese American scientists and engineers, who have long been a driving force for research and innovation in the US, hold the promise to make increasing contributions to American national security and military leadership.
1 The minimum age for enlistment in the US military.
2 Including those on active duty for training in Reserves/National Guard.
3 US Census Bureau, 2018 American Community Survey 1-year estimates, public use microdata sample (PUMS), The Economist Intelligence Unit analysis.
4 US Census Bureau, 2018 American Community Survey 1-year estimates, PUMS, The Economist Intelligence Unit analysis.
5 US Census Bureau, 2018 American Community Survey 5-year estimates, PUMS, The Economist Intelligence Unit analysis.
17 “World War II Homefront Era: 1940s: Momentous Change for Chinese Americans.”
18 “World War II Homefront Era: 1940s: Momentous Change for Chinese Americans.”
21 “USS Chung-Hoon: Named in Honor of Rear Admiral Gordon Pa’ea Chung-Hoon.”
27 Yardley, “Kurt Chew-Een Lee, Singular Marine, Dies at 88.”
28 US Census Bureau, 2018 American Community Survey 5-year estimates, PUMS, The Economist Intelligence Unit analysis.
A 2019 congressional report found that in the officer corps, and especially at the senior leadership level, racial and ethnic minorities are underrepresented relative both to the enlisted corps and to the U.S. population. As of May 2018, only 1.8% of ranking Generals and Flag Officers (O-7 and above) were Asian American, while 87.5% were white. See Kamarck, “Diversity, Inclusion, and Equal Opportunity in the Armed Services: Background and Issues for Congress,” 25.


Brooks, “Technology and Future War Will Test U.S. Civil-Military Relations.”


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