

The Roar of the Lion City

Ethnicity, Gender, and Culture in the Singapore Armed Forces

Sean P. Walsh

Although the Singapore Armed Forces is one of the most technologically advanced militaries in Southeast Asia, it suffers from a number of institutional weaknesses. Singapore's multiethnic but Chinese-dominated society and unique geographical and political characteristics result in challenges in both the recruitment and retention of high-quality personnel into the armed forces as well as in developing the proper role in the military for Singapore's Malay minority (whom the government historically has seen as a security risk but who also have a strong cultural inclination toward military service). This article contends that in meeting these challenges, Singapore has reduced the effectiveness and professionalism of its military significantly by unwisely preventing Malay participation systematically in key areas of the armed forces, by limiting the positions women can hold in the military, and by using a promotion system that is based more on education and scholarships than on proven competence.

Keywords: *Singapore; ethnicity; professionalism; civil-military relations*

The Republic of Singapore traditionally has played a critical role in the global economy as a financial center and as the world's busiest container port, yet today, it faces increasingly difficult security challenges. Often described as a "good house in a bad neighborhood," Singapore is extremely vulnerable both to conventional and unconventional attacks. The tiny island nation frequently has maintained frosty relations with its far larger, Muslim-dominated neighbors, who often look with envy and resentment at the wealthy and Chinese-dominated city-state. In addition, tapes of potential terrorist targets discovered in Afghanistan in 2001 provided chilling evidence that terrorists also have Singapore in their sights.¹ Despite these challenges, Singapore also has begun to commit its forces to regional and global deployments, sending its troops to perform peacekeeping operations in East Timor, combat support operations in Afghanistan, and Iraq and humanitarian missions throughout Southeast Asia.

Author's Note: The views expressed in this article are those of the author and do not reflect any official position of the U.S. Department of Defense or the United States Army.

Perhaps in response to its rough neighborhood, Singapore, though possessing a population of merely 3.5 million, has developed what is almost certainly the most powerful military in all of Southeast Asia. Built from universal male conscription of two-and-a-half years, the Singapore Armed Forces (SAF) is a high-tech military equipped with American-built F-16s and advanced, locally produced infantry-fighting vehicles. Its special-operations forces are also world-class and capable of operating without outside assistance in almost any given situation. However, despite the strength of its technology and niche capacities, the SAF is built on a shaky foundation arising from its particular system of training and promotion as well as a policy of ethnic discrimination. Singapore's increasing regional and global military deployments mean that the institutional weaknesses in the SAF will have serious implications for its capacity to provide for its own security as well as accomplish the humanitarian, peacekeeping, and support missions to which it has committed. This article will attempt to elaborate on these weaknesses and demonstrate the impact they have on domestic and regional ethnic tensions and the likely effectiveness of the SAF as a combat force. In addition, it will strive to place Singaporean officers in the context of civil-military relations theory as well as prescribe possible solutions to the problems arising from these institutional weaknesses.

The weaknesses in the SAF arise primarily out of the challenges of producing a competent and professional military in Singapore's multiethnic but Chinese-dominated society. This situation results in difficulties in the recruitment and retention of high-quality personnel into the armed forces as well as in developing the proper role for Singapore's Malay minority in the military. Singapore's responses to these challenges have produced a military system unique to the world. SAF personnel are almost all extremely well educated but are also very young, operationally inexperienced, and restricted by training that sacrifices effectiveness for safety. To increase retention and recruitment, the SAF uses a prestigious scholarship system to educate and promote its officers. However, this system results in political and military elites' become socially and functionally integrated, significantly reducing the professionalism of SAF officers. In addition, the SAF severely limits the roles women can fill and actively discriminates against Singapore's Malay minority in promotion and assignment. During the course of forty years, these policies, though many in the SAF would argue they are necessary in light of Singapore's geographic position and multiethnic society, have decreased the SAF's overall fairness and likely effectiveness in combat.

These weaknesses are significant for two major reasons. First, Singapore's increased regional role in humanitarian and peacekeeping operations and commitment to provide logistical support for coalition operations in Afghanistan and Iraq are placing new and difficult requirements on its military. Addressing the weaknesses discussed in this article will contribute to regional and global security by increasing the capacity of the SAF to meet the demands of these deployments. Second, the discriminatory policies of the SAF regarding the Malay minority contribute greatly to domestic ethnic tensions by continuing to foster a sense of distrust

of the ethnic Malay population and also act as a source of strain between Singapore and its Muslim-dominated neighbors. A better ethnic personnel policy in its military would certainly go a long way toward making Singapore a fairer state, ethnically speaking, as well as make the SAF more effective in meeting its new security challenges.

Scholars and Farmers

One of Singapore's greatest challenges is producing a professional armed force out of a society dominated by a culture that heavily looks down on military service.² An old Chinese expression sums up the difficulties of recruitment and retention of high-quality personnel in the SAF in Singapore's Chinese-dominated society: "One never uses good iron to make nails; good sons do not become soldiers."³ In addition, Singapore's prosperity and a labor shortage caused by declining birth rates have made military service seem even more unattractive in light of opportunities in the civilian sector. Universal male conscription and years of postconscription reserve duties address the basic issue of recruiting for Singapore's conscript and reserve force, but Singapore has a need to maintain high-quality personnel in its regular force. The SAF attempts to meet this goal with a system of mandatory early retirement and also by providing special educational opportunities for its officers. While these methods are definitely successful in keeping the academically elite in the military, they lead to an armed force that, while competent overall, has an extremely young and operationally inexperienced leadership.

Current SAF policy lays down a mandatory retirement age for its personnel—with few exceptions—of forty-five with one extension to forty-eight.⁴ The stated purpose behind this policy is that it keeps the SAF purposefully young, renewing the energy and focus of military personnel.⁵ It also is designed to allow the possibility of starting a second civilian career after regular military service, even after a career reaching the highest ranks of the SAF.⁶ The overall intent is that high-caliber personnel will be more likely to stay in the military if they feel they can accomplish other goals after a full career in the armed services.

One of the major ramifications of this policy is that it causes SAF personnel to be very young compared to international standards, even at its highest levels. To put the youth of the SAF in perspective, both the current heads of the Navy and Army were only thirty-nine when they assumed their respective posts.⁷ Most Western officers only would reach the rank of lieutenant colonel or full colonel by that age. Such youth naturally corresponds to inexperience, as an officer of thirty-eight, no matter how talented, cannot have the operational experience that an officer of fifty would. In addition, because the mandatory retirement age prevents any Singaporean from devoting his or her entire life to the military, some scholars have suspected that many in the SAF leadership are more interested in their career after the military than their time spent as an officer. Such officers reduce the military's professionalism and commitment to service. Because Singapore's real-world deployments have been

limited to peacekeeping and support duties in places such as Iraq, Afghanistan, and East Timor, it is very hard to determine what effect the relatively young age of SAF personnel has on its actual capacity as a combat force. However, the inexperience of even the SAF's most senior officers casts obvious doubts on the ability of the SAF's top echelons to lead in a conflict against battle-hardened troops.⁸

More important than early retirement in building the character of the SAF is the use of education as a recruitment and retention tool for SAF officers. Beginning in 1971, the Singapore government has sent the best and brightest of each year's cohort of its new officers to free education at the best universities in Singapore and the most prestigious schools abroad in Asia, Europe, and the United States. Out of the approximately 600 new officers each year (of whom about 120 a year will choose to become regular officers), about 50 scholars a year are sent to overseas and Singaporean universities in exchange for an approximately eight-year service commitment.⁹ Those chosen for this program are believed to be the cream of the crop of new SAF officers, at least academically, and their special selection and education radically alters the way in which they are promoted.

Selection

There are five levels of scholarships for SAF officers. The most prestigious are the level-one and level-two scholarships to overseas universities.¹⁰ Close to a total of twenty of these Overseas and Merit Scholarships, respectively, are awarded each year.¹¹ A handful of officers are awarded level-three scholarships to attend military academies abroad, such as West Point and the Australian Military Academy.¹² To many Singaporeans, this is considered the least attractive scholarship as it is perceived to provide no education for anything outside the military.¹³ Many of those who accept the level-three awards are already officers in the regular armed forces who pursue attendance at a military academy after their career already has begun. At the lowest level, about twenty to thirty officers a year are selected each for the level-four and level-five scholarships to attend local institutions.¹⁴

Selection for the scholars program begins during high school, even before the start of National Service, which occurs at the age of eighteen. During the last year before graduation, outstanding students at Singapore's most elite high schools are subject to a "charm offensive" from the SAF about the possibility of an Overseas Scholarship. These students, almost exclusively male,¹⁵ are chosen primarily on the strength on their transcripts and their performance on the Singapore-wide General Certificate of Education "A" level examinations. They are met by senior SAF officers and are invited to receptions intended to woo them. The intensity of this recruiting drive is necessary because Singaporean students of such high caliber are also offered many nonmilitary scholarships at the same time.¹⁶

Once National Service commences with the beginning of basic military training (BMT), the boot camp where all Singaporeans conduct their initial entry training, the

selection process continues. Rather than be assigned to basic-training units randomly like their peers, those recruits under consideration for SAF scholarships are placed in special platoons. These “scholar platoons” are typically very segregated and only have a small number of non-Chinese Singaporeans. In addition, the elite academic nature of the group means that many of the new recruits will know each other as classmates from high school.¹⁷ During BMT and afterward in Officer Candidate School (OCS), the potential scholars are under constant observation for leadership potential, especially while holding cadet leadership positions.¹⁸

Training and Promotion

After being awarded a scholarship, scholar officers are commissioned four months ahead of their peers and miss the second half of their professional military training during OCS.¹⁹ Although they make up some of this training during their academic summers, they are still very inexperienced compared to their peers who have spent four years in operational service. Despite this vast difference in experience, scholar officers still will be promoted to captain one year after university graduation at approximately the same time as their nonscholar peers. This program results in scholar officers’ being promoted far faster than their nonscholarship peers, despite the fact that they have considerably less operational experience.²⁰ Scholar officers can expect to reach the rank of major, lieutenant colonel, or even full colonel within their eight-year commitment.²¹ Although there have been some improvements since the 1990s, scholar officers make up a disproportionately higher percentage of senior officers. In 1991, two-thirds of officers of the rank of major and above were scholars, and in 1993, more than half of SAF general officers were scholars.²²

There are two schools of thought on why scholars are promoted so quickly. The first, obviously supported by many scholars themselves, is that those officers selected for the program are simply the best that Singapore has to offer. They are promoted faster because they perform better and are able to overcome their relative lack of experience. Scholarship officers frequently explain that they understand the need to prove themselves as worthy of the advantages that they were given.²³ At its heart, however, the issue of promoting officers based on their educational achievements instead of their operational experience and time leading soldiers comes from the way in which the SAF selects all of its officers for promotion and assignment.

The SAF uses a system in which officers have a currently estimated potential (CEP) to determine how far an officer can go and terminal rank during his or her career. For the most part, this CEP is formed during OCS based on an officer’s cadet performance and educational background. For regular officers, it is possible to change a CEP if one’s performance comes as a surprise (especially if it is an unpleasant surprise), but for National Service officers, CEP is more or less set in stone.²⁴ An officer’s CEP spells out his or her career path for assignments, educational opportunities, promotion, and attendance at military schools. The result of this system is that

officers are selected and groomed for even the most senior leadership positions in the SAF based on little more than how they performed as a cadet in OCS and the strength of their high school transcript.²⁵

An officer with a high projected position will be pushed through promotion and military schools far faster than his or her peers.²⁶ For instance, in the summer of 2004, a class attending the Army Officers' Advanced School at the Singapore Armed Forces Training Institute (SAFTI) was composed of second lieutenants, first lieutenants, and captains, all in the same section. They were placed in the course based on when their career path required them to attend the course, irrespective of the rank that they currently held. As an example, National Service officers who were slated for company command during their commitment would attend the course while a second or first lieutenant so that they could maximize their National Service time as a company commander. This results in a National Service officer's achieving this position while having only spent minimal time at junior leadership positions such as platoon leader. Although scholar officers are captains by the time they attend the Advanced School, because they have accumulated seniority while in college, they still face the same problems of minimal experience. This problem is only exacerbated further as a scholar officer's career continues, because his or her CEP dictates assignment and promotion more than performance and experience do.²⁷

Outside of the obvious inexperience of senior leaders in the SAF, a major consequence of the scholar-officer program is the resentment it causes among nongraduate regular officers, many of whom see younger, less operationally experienced scholar officers promoted ahead of them. There is even a nickname for this conflict, as many nongraduate officers are despairingly referred to as farmers, a reference to China's ancient social hierarchy that placed scholars above farmers, merchants, and soldiers.²⁸ SAF leadership has stressed the need to reduce scholar-farmer tensions and emphasized that any high-performing officer, regardless of scholar status, can reach high ranks.²⁹ Despite this, there has been little tangible action in addressing the very justifiable grievances of farmer officers, many of whom have had more operational experience and more command time than their scholar superiors.

Professionalism and Civil Military Relations among SAF Officers

Although academically elite, many SAF officers should not be considered professional in the theoretical sense because they do not meet all of the necessary qualifications outlined in civil-military relations theory. Samuel P. Huntington states that the career officer is a professional because he or she sees military service as a call to serve society. Many officers, especially scholar officers, do not view their military service as a lifelong calling and instead see it as a mere occupation and as a stepping stone to other careers in politics, business, or the civil service.³⁰ In addition, many scholar officers fail to meet the level of expertise that Huntington says is a component of the professional. Huntington writes that the expertise of the professional officer "is

acquired only by prolonged education and experience.”³¹ The rapid promotion and limited operational experience that SAF officers (again, especially scholar officers) possess means that many, albeit not all, officers are not experts and should not be considered true professionals. Although writing in reference to scholar officers in particular, Derek Da Cunha, senior fellow at the Institute of Southeast Asian Studies, gives a succinct description of the major consequences resulting from this lack of professionalism that may be applied as well to the SAF as a whole: “As most scholar officers spend only eight years in the ranks and their training appears to focus more on sharpening managerial techniques rather than combat skills in preparation for future civilian careers, their experience and competence in military matters is often limited.”³²

This lack of professionalism at the institutional level in much of the SAF does not mean the SAF is disposed to domestic intervention. On the contrary, the SAF is firmly under the control of the civilian government. As S. E. Finer points out in the classic *The Man on Horseback*, it is not professionalism alone that prevents military intervention. A tradition of civilian supremacy plays an equally important role in deterring the military from intervention.³³ Singapore quickly established this tradition when its military was reformed following independence, in large part because of the fact that most of its new senior leaders were appointed from the civil service rather than from within the existing command structure (mostly because of a desire to remove ethnic Malays from military leadership).³⁴ While this certainly had a significant negative impact on the competence of the postindependence military, it immediately helped set a tradition of civilian supremacy over the military. Since then, the Singaporean government has installed mechanisms for funding and decision making that further limit the autonomy of the SAF. Civilian leaders control the Ministry of Defense as well as its subordinate departments, and these leaders ensure that all major decisions for budgeting and acquisitions must go through their committees.³⁵

The lack of a professional officer class makes the exact nature of civil-military relations in Singapore very difficult to identify. Although civil-military relations in Singapore can, at their simplest, be described as an example of subjective civilian control, Singapore scholar Tan Tai Yong better characterized the situation as an example of civil-military fusion, because the military is not merely subservient to the civilian government but almost completely integrated into it.³⁶ However, this definition also is not entirely sufficient, because it fails to take into account the uniquely Singaporean way in which the scholarship program affects the integration of military and political elites. These elites are linked in a manner that shares many of the elements of what Morris Janowitz describes as the aristocratic model of political-military elite structure. In Singapore, civilian and military elites are linked socially and functionally in a manner similar to the classical Western European concept of the aristocratic family’s supplying sons for both politics and the military.³⁷ The aristocratic model is apt because the very narrow base for elite recruitment results in social linkages among those recruited and because the frequent crossing of elites between the armed forces and politics or the civil service leads to functional

integration between military and political elites. This social and functional integration results in a partial civilianization of the military and ensures stable and effective civil-military relations in the absence of a professional officer class.

Officers and political elites are linked socially, in large part because the importance of scholarships to achievement in both sectors means that all elites likely will share a common social origin. Regardless of whether they leave the military immediately and work to become political elites or stay for a long-term career and emerge as military elites, scholarship winners form the base of recruitment for both types of elites. Because the pool of competitive applicants is so small, most scholarship winners will know each other from Singapore's elite high schools even before their careers begin. Later, scholar officers will serve together in scholar platoons during BMT and continue their service in close proximity to one another.

Military and political elites are linked functionally because officers see themselves not as a separate officer class but as an integrated part of the government in much the same way that the civil service is. This is in large part because of the fact that the first senior leaders of the SAF were told explicitly that their task was not to create a professional army but rather a "civil service in uniform."³⁸ As a result, the military often is seen and even advertised as a means toward participation in politics and the civilian sector. For instance, at present, five of the nineteen members of the national cabinet were SAF scholarship winners and achieved high ranks in the military.³⁹ Many SAF scholarship winners even are selected for their awards with the intention that they will participate in politics after their military career has ended.⁴⁰ In addition, a significant number of SAF scholar officers take advantage of a program in which they temporarily can take a posting in the elite administrative arm of the civil service for two years and then decide whether to join the civil service permanently or return to the SAF.⁴¹ By allowing officers to jump back and forth between the civil service and the military, the scholarship program and the dual-service program contribute to a partial civilianization of the armed forces and help to maintain the functional linkage between political and military elites.

These factors all combine to make Singapore a technocratic state in which the elites of both politics and the armed forces are linked socially and functionally. An examination of the Singapore case shows the possibility of effective, long-term, civilian-controlled civil-military relations with a modern military that lacks true professionalism.⁴² Although SAF officers should not be considered professionals, these linkages mean that the SAF will remain integrated into, and therefore, under the control of the civilian government in all but the most implausible of future circumstances.

Ethnic Diversity

Historically, one of Singapore's most pressing concerns has been how to integrate its multiethnic society into a capable and trustworthy military force. Singapore's

dominant Chinese leadership has responded to this situation by keeping Singapore's minority ethnic groups, Indians and Malays, from being integrated fully into the structure of the SAF. Because of the historical legacy of the federation period and Singapore's perception of Malaysia as its most likely adversary, Malays particularly are discriminated against.⁴³ Lip service always has been paid to integrating the military fully as a way to maintain loyalty for the Singapore state. Dr. Goh Kong See, Singapore's first minister of defense, endorsed this supposed policy by saying, "Nothing creates loyalty and national consciousness more speedily and thoroughly than participation in defense and membership in the armed forces."⁴⁴ Reality has failed to live up to this goal, however.

At present, official discrimination against the Malay population remains an open secret among the Singaporean military.⁴⁵ Although there have been some improvements in recent years, Malays systematically are kept from serving in areas of the military considered sensitive, to include signal, intelligence, and elite-guards units.⁴⁶ This exclusion is so extreme that SAF intelligence uses ethnic Chinese trained in Malay as analysts to read Malay newspapers rather than take advantage of their own ethnic Malay soldiers.⁴⁷ Also, it was not until 2004 that Singapore's first non-Chinese officer reached flag rank.⁴⁸

There are a number of reasons for this discrimination against Malays in the SAF. The foremost reason is that Singapore's leadership does not trust the almost exclusively Muslim Malay population. The historical legacy of the federation period is still fresh in the minds of most of Singapore's leaders. In 1964, the Malay population's resentment of Chinese wealth led to race riots that left 21 dead, 450 injured, and more than 1,700 arrested.⁴⁹ Other riots occurred in the years to follow.⁵⁰ Although the days of such violence are over in Singapore, there is still significant resentment among many in the Malay population about the obvious ethnic socioeconomic disparity that exists in their country and government policies that restrict religious expression.⁵¹ It is feared that if push came to shove and Singapore was forced to fight against Malaysia, Singapore's Malay population would refuse to take up arms for the Lion City. This feeling is only exacerbated by revelations that the attempted terrorist attacks in 2001 were planned by Singapore Malays, several of whom had served in the SAF.

More important than the history of poor relations in Singapore between the Malays and Chinese in fostering distrust is the fact that in the minds of Singapore's leadership, Malaysia is the Lion City's primary threat. Although trade and relations between the two states are stable now, Singapore's small size and island geography, while making it the perfect entreport into Southeast Asia, makes it particularly vulnerable to an attack from its far larger neighbor. In addition, Singapore's fresh water comes almost exclusively from Malaysia, making the possibility of resource blackmail a frightening reality. Singapore also fears that events in Muslim-dominated Malaysia or Indonesia, where relations between the ethnic Chinese and the majority populations are especially tense, will spill over into a conflict with Singapore. For

instance, in 1969, race riots between Chinese and Malays in Malaysia spread to Singapore, causing significant turmoil there as well. Singapore's leadership also fears that a Malaysian or Indonesian government rocked by economic or political problems could use a strike on Singapore as a way to rally the country and maintain control.⁵² The aftermath of the 1999 Asian financial crisis gave credence to this fear. While Singapore emerged relatively unscathed, many of its neighbors were devastated financially, and their leaders attempted to exploit domestic jealousy of the prosperity of Chinese-dominated Singapore as a scapegoat for their own domestic problems. In Indonesia, for instance, there were acts of violence against ethnic Chinese, and President B. J. Habibie publicly called the Singapore people and government "real racists."⁵³

This fear of the Muslim Malay population has led to a systematic discrimination in the military by Singapore's leadership after 1965. Most of the senior military officers appointed to the SAF immediately after independence came from the civil service and shared the view that the Malay population could not be trusted.⁵⁴ At the time, however, Malays made up the vast majority of both the Singaporean military and police force. Yet, the new, postindependence SAF leadership, though possessing minimal martial experience, proceeded to exclude the Malay population forcibly from the military. Recruitment of Singaporean Malays virtually was halted after 1967, despite the fact that Malays made up 50 to 80 percent of the first cohort of volunteers for the new armed force.⁵⁵ Experienced Malay officers and noncommissioned officers were transferred from field commands to logistics and support, while many others were forced to retire or were shut off from promotion.⁵⁶ Prime Minister Lee Kwan Yew and the rest of the Chinese leadership feared that the Malay population would surrender in a conflict with Malaysia so much that they sacrificed virtually all of the experience and professionalism that had been built up before 1965 in exchange for a Chinese-dominated military.⁵⁷

Consequences of Ethnic Policy

Although declining birth rates have forced Singapore to accept an increasingly larger role for the Malay population in its military, the effects of the systematic exclusion of the first years after independence still are felt today.⁵⁸ Singapore's policy of preventing full integration of minorities into the SAF has two major consequences. First, it limits the involvement of the ethnic group most inclined to join the military. This creates serious challenges for the ability of the state to field the force it needs to meet its domestic security needs as well as conduct peacekeeping and humanitarian operations abroad. Second, the discrimination of Singaporean Malays in the military contributes to a continued perception of second-class status among the ethnic Malay population, a fact of which terrorist recruiters have taken advantage before, and they may do so again.

As discussed earlier, Singapore must expend considerable effort in overcoming the cultural factors discouraging ethnic Chinese from joining the military, yet it fails

to fully use the Malay population that culturally looks highly on military service. This is evidenced by the composition of Singapore's armed forces before independence. The local military and police force that Singapore inherited from the United Kingdom was almost exclusively Malay. In 1965, seven-eighths of Singapore's police were Malaysian. By the mid-1970s, however, Malaysians had become, in the words of Harvard researcher Alon Peled, "exasperated for not being called to serve" because of the exclusionary policies of the SAF leadership.⁵⁹

The SAF exclusion also reinforces the feeling that Malays cannot be trusted. By denying them the chance to serve in all capacities of the military, Singapore simply is entrenching the belief that Malays are inherently disloyal.⁶⁰ Singapore's leadership has said that Malays can be better integrated into the armed forces only when they have been integrated more fully into Singaporean society. Yet, the SAF's systematic discrimination and obvious distrust of the Malay population is a major reason Malays are unable to become full members of Singaporean society, which in turn is claimed as the reason why they are not allowed full participation in the military.⁶¹ Singaporean leadership, to include former prime minister Lee Kwan Yew, has dismissed this perspective, denying that this chicken-and-the-egg problem even exists.⁶²

The SAF's discrimination and distrust of its Malay soldiers certainly contributes to any sense of alienation that is felt among the Singaporean Malay population. Although large-scale protest is difficult in Singapore because of tight social controls, there is obvious discontent among the Malay population regarding its second-class status.⁶³ Perhaps most disturbingly, the planned terrorist attacks discovered in 2001 show that terrorist groups such as Al-Qaeda and Jemiah Islamiyah see Singapore as a potential target and wish to recruit Singaporean Malays to participate in their operations.⁶⁴ Such terrorist groups could take advantage of the discrimination and feelings of alienation that many Malays feel for being restricted from many roles in the military.⁶⁵

Benefits of Integration

Singapore could benefit immensely from the full use of the large non-Chinese segment of its population that sees military service as a favorable profession. By working toward full integration, Singapore could build a more professional military more easily with large numbers of Malay commissioned and noncommissioned officers who more willingly will stay in the military longer. Rather than relying on educational opportunities as a primary tool for promotion and retention, an SAF that features a large Malay population that joins the military out of a desire for service likely could make experience the primary requirement for promotion. In addition, fielding a more diverse force could make the SAF more effective in those peace-keeping and humanitarian operations that involve Singapore's neighbors and in which the Chinese in Singapore are often looked at with jealousy and resentment.

Also, if the SAF had more high-profile minority senior officers, it potentially could go a long way in dissuading its neighbors from viewing Singapore with such jealousy and anger. For instance, as previously stated, following the 1999 Asian financial crisis, during a time of extremely high tension between Singapore and its neighbors, Indonesian president B. J. Habibie called Singaporeans racists and specifically criticized the discriminatory policies in the SAF by saying, "In Singapore, if you are Malay, you can never make a military officer."⁶⁶ The presence of high-profile Malaysian senior officers in the SAF certainly would lessen the threat of a neighboring and potentially hostile state's characterizing Singapore as an aggressive Chinese-dominated state to divert attention away from domestic problems. It is likely that such officers also could help to diffuse regional tensions by playing an active role in military-to-military contact with Singapore's neighbors. Such contact could include combined training and officer exchanges.

Perhaps most importantly, ending the discriminatory policies in the SAF would have the effect that Singapore's government long has claimed that National Service is meant to achieve: "Apart from fulfilling military requirements, National Service has the wider objective of integrating a multi-ethnic, multi-lingual and multi-religious community committed to Singapore and the well being of its citizens."⁶⁷ Ideally, by bringing together individuals from all strata of society and giving them a common experience, conscription breaks down barriers and serves as a force of acculturation and the creation of a more closely knit society. Yet, under current policies, conscription in Singapore fails to achieve this goal fully. Full integration of the SAF, that is to say, participation of Malays in all branches of service beyond mere token representation and the removal of glass ceilings to promotion and assignments, greatly would help to incorporate the Malay population more fully into Singaporean society and reinforce its commitment to the Singapore Armed Forces.

Studies have shown that integrated military service has a lasting positive impact on acculturation and cross-cultural learning.⁶⁸ However, the policies of official discrimination of minorities in the SAF prevent any such cross-cultural learning from producing lasting structural and attitudinal changes. By denying Malays the opportunity to participate fully in all branches of the military and by placing glass ceilings to their promotion, members of the armed forces that serve in these capacities and at the SAF's upper levels lose the benefits of cross-cultural learning that come with shared military service. For instance, the special scholar platoons in basic training, composed of scholarship winners, are usually almost entirely Chinese, and therefore, scholar officers work very little with Malay soldiers even during BMT. Because high-ranking officers are often incredibly influential in determining Singapore's policies after their military career is over, the fact that they do not gain many of the benefits of cross-cultural learning that are a part of fully integrated military service is especially significant. If these officers have not served with Malays in any meaningful capacity during their military careers, it only can be expected that the policies

of distrust will continue until Malays are given the chance to prove themselves in sensitive areas and positions of high rank.

Role of Women in the SAF

Compulsory National Service has meant that for most of the SAF's history, there has been little need to use women fully in its ranks, and it was not until 1969 that women were admitted to the SAF at all.⁶⁹ In recent years, however, a shrinking labor pool has forced the SAF to make increasingly greater use of Singapore's female population. Despite this, one of the SAF's greatest shortcomings has been its failure to use its female soldiers and officers to their maximum potential.

A great deal of the basic military training of female personnel in the SAF is conducted separately from their male counterparts and is also significantly shorter. At the officer level, females are placed in the separate "Gulf" company for their twelve-month officer candidate course at SAFTI.⁷⁰ This is several months shorter than the regular course for male cadets, primarily because of less emphasis on front-line combat skills for female personnel.⁷¹ In the Navy, differences in training time are even more extreme; naval basic military training is ten weeks for men and two weeks for women.⁷² At more advanced training, however, female SAF personnel are reintegrated for courses that are branch neutral, such as the Army Officers' Advanced Course.⁷³

The opportunities and areas of service open to women are rather limited compared to Western standards. Only since 1993 have women been allowed to compete for the SAF Merit Scholarship for Women, equivalent to the second highest level of scholarship for men used for overseas study. As mentioned earlier, these scholarships are vital in determining promotion and assignment.⁷⁴ Today, however, high rank and important commands remain closed to most females, as few women are promoted beyond the rank of Captain. It was not until 1999 that two women were first promoted to Lieutenant Colonel.⁷⁵ Women also are assigned primarily to support positions, though in 2004, the SAF experimented with women's being assigned as mortar platoon leaders in infantry units.⁷⁶ This open-minded arrangement does not translate to Singapore's Air Force or Navy, however, as both services severely limit the role that women can play. For instance, in neither service are women permitted to fly combat aircraft.⁷⁷ This unusual situation may be because of the fact that a service such as the infantry is heavily looked down on in Asian cultures, but aviation is far less so. SAF leadership has to try much harder to find regular officers who want to accept spots in the infantry, and therefore, it is willing to use regular female officers in a limited infantry role.

Although somewhat exacerbated by traditional Asian cultural values, the attitudes in Singapore regarding women in the armed forces leads to challenges for females in the SAF very similar to the ones faced by their counterparts in Western militaries. Public sentiment in Singapore is strongly against the use of women in front-line

positions, limiting the possible roles that women can play in the SAF.⁷⁸ In addition, female personnel in Singapore's armed forces complain that they are under extra scrutiny because of their gender. Many have stated that they must work harder than their male counterparts, as any mistake on their part is assumed to be because of their gender.⁷⁹ This is a complaint common among women even in militaries that are more integrated than the SAF.⁸⁰

Singapore's failure to use its female population to its full potential has significant consequences for the capabilities of the SAF to field the educated and talented personnel at the levels it requires. As the Ministry of Defense (MINDEF) frequently points out, the SAF is one of the world's most technologically advanced militaries, and to be successful, it requires highly educated soldiers and officers.⁸¹ Singapore is one of the best educated societies in the world and it is not taking advantage of the caliber of its female population, despite the population shortfalls and difficulties in recruiting with which the SAF has dealt in recent years. The Singapore government should undertake two major changes to take full advantage of its female population for military service. First, Singapore needs to make a concentrated effort to actively recruit female personnel into its ranks. Rather than consider recruiting women a secondary effort, it is in the best interests of the SAF to consider finding female personnel a priority equal to that of finding male recruits.⁸² Recruiting materials should focus on highlighting female personnel and the opportunities open to women in the SAF.

The second step that the SAF should take is to lift many of the restrictions that are currently in place on the positions that a woman can have in the military. Further integration of women into positions such as Air Force pilots or as combat officers and divers in the Republic of Singapore Navy (RSN) could help the SAF more easily field highly qualified personnel. The experiences of many Western militaries, including those of the United States, Great Britain, and Australia, have shown that women are fully capable of fulfilling many roles in the military that currently are being restricted in the SAF. In the United Kingdom, for instance, women can occupy 96 percent of posts in the Air Force and 73 percent of posts in the Royal Navy.⁸³ The United States Armed Forces also has had success with women serving as pilots in all service branches as well as naval officers in combat theaters.

Recent literature also has indicated that increasing the value of the role that a woman fills in the military has a very strong positive relationship with her perceptions of the significance and benefits of her military service. A recent study by Yechezkel Dar and Haul Kimhi published in this journal indicates that the particular job a woman has in the military plays the greatest role in her level of satisfaction with her service.⁸⁴ A survey of men and women in the Israeli Army showed that women's satisfaction with their military service increases the greatest amount when eliteness of their role is increased. While variance in rank influences men's satisfaction the greatest amount, changing a female soldier's role from, say, office work to something more prestigious, such as command or instruction, will increase

her satisfaction significantly. In addition, female soldiers' perception of the benefits of their military service is far more closely linked to their levels of satisfaction than is that of male soldiers.⁸⁵

Although Dar and Kimhi's survey was of Israeli soldiers, Singapore can be expected to have similar results, given the similarities that the two countries share in conscription policy and economic and security situations. It is likely that by easing restrictions on the positions women can hold, the SAF will cause an upswing in perceptions of the significance and benefits of military service of many of its female members. This increase in significance and benefits can be expected to have a positive impact on levels of retention of women in the military. This likely would be especially true among women in those roles that would be newly opened to them, such as pilots, which are exactly the kind of highly technical and difficult-to-train roles that the SAF most needs to increase retention in.

Training Culture

The SAF's method of training makes the force, though competent overall, less effective in many ways. All branches of the SAF are limited by attention to safety at the cost of realism in training and an instructional method that reinforces a single prescribed solution and reduces creativity. The end result of this culture is less effective and unrealistic training that contributes to a force less likely to be capable in combat or during peacekeeping and humanitarian deployments.

Safety is the primary concern for the SAF in its training and deployments.⁸⁶ While militaries in such countries as the United States are willing to accept a certain level of training-related injuries in exchange for a higher state of operational readiness in preparation of deployments, this is not the case in Singapore. As a conscript force, Singapore's military is made up of primarily nonvolunteers, and any major injury or death during training causes a very public uproar among parents. Any such incident quickly becomes a large scandal and frequently leads to the resignation of senior officials.⁸⁷ Because of this concern, MINDEF makes it a point to defuse potential parental complaints even before they start. National Service literature frequently makes reference to the increased safety and lowered injury rates seen in the past decade.⁸⁸ In addition, the SAF's initial entry training allows frequent opportunities for families to meet their sons, such as family days, weekend passes, and even the opportunity to inspect their barracks on the first day of BMT.⁸⁹ This is a marked contrast to the basic training of most militaries that use isolation from friends and family to reinforce the military's socialization process.

This emphasis on safety extends past BMT to the operational force. For instance, at Sembawang Airbase, a no-cover rule is maintained to eliminate the possibility of an errant patrol cap's being caught up in an active rotor. While such a rule is common on most military flight lines, at Sembawang, it extends to the entire airbase,

resulting in a military post almost devoid of headgear. In addition, the Republic of Singapore Air Force (RSAF) is very reluctant to let its pilots fly in bad weather for fear of a training accident.⁹⁰ Especially significant is the fact that in all branches of service, live-fire training is especially controlled, resulting in tightly scripted affairs rather than practical exercises.⁹¹

Besides undue attention to safety, SAF training is marked by its restrictive nature. Rather than use exercises and field problems that encourage creativity and innovation, Singapore's military prefers to continue to reuse classic exercises written by the SAF's doctrine department that only have a single approved solution. An SAF book commemorating SAFTI's thirtieth anniversary summarized the manner in which Singapore develops its exercises: "SAFTI's stock in trade are the elaborate lesson formats which detail every minute of activity of every lesson from range shooting to field craft. They adopt a standard layout which identifies lesson objectives, required attainments . . . to be used with the *directing staff solution* Approved lessons are produced by the SAFTI publications branch. Many are classics and some technical lesson formats continue to be used unchanged even now."⁹²

This emphasis on a single correct solution for most tactical problems is exacerbated by Asian cultural tendencies to avoid correcting a superior. Because most members of the SAF have been brought up in a society in which respect for one's elders is incredibly important, subordinate commanders are very reluctant either to question a superior's orders or to bring up ideas of their own. In addition, the CEP method to promotion for many officers, especially scholarship officers, provides little incentive to rock the boat when an officer knows that promotion is more or less assured. As a result, training in the SAF suffers from a lack of innovation and is extremely slow to change.⁹³

The consequences of this training culture on the SAF are obvious. Singapore's extremely high emphasis on safety and constrictive training methods result in unrealistic training and a force that is less ready for deployment. For instance, the RSAF's reluctance to fly training missions in poor weather makes it unprepared for real-life missions in similar conditions. Also, the approved-solution method to training at SAFTI and elsewhere in the SAF leads to inflexible thinking on the part of many SAF officers. This concern will grow only more pressing as Singapore's armed forces become increasingly involved in complex and nuanced situations internationally, such as regional peacekeeping and providing support to coalition forces in Iraq and Afghanistan.

Conclusion

Although many criticisms are directed at Singapore's military in this article, there can be no doubt that the SAF is the most competent, well equipped, and best trained force in all of Southeast Asia. The SAF is more than capable of providing the means to defend the territorial integrity of Singapore as well as conduct limited peacekeeping

and support operations in and out of Southeast Asia. Singapore is also ready to deal with the possibility of asymmetric threats in the wake of September 11. Singapore's special-operations forces are especially capable and would not require outside assistance in the face of terrorist activity inside its territory, as shown by the SAF Commandos' expert handling of the 1991 hijacking of a Singapore Airlines plane. Singapore is a firm ally in the United States' global war on terrorism, and America likely will continue to seek support from Singapore for its future operations.

Singapore also should not be judged too harshly for the recruitment and training policies described here. Singapore is a tiny and vulnerable city-state surrounded by larger and unstable neighbors, and in the years immediately following independence, the SAF, with an understandably short-term view of its development, made decisions that quickly produced a force that, while adequate for providing for Singapore's immediate security, had major institutional weaknesses. These weaknesses have had long-term implications for the competence, efficacy, and fairness of the Singaporean military. The necessary conditions placed on training by the realities of National Service are also understandable. However, in today's contemporary operating environment in which the SAF deploys overseas to provide peacekeeping forces and to support the American war on terrorism, Singapore needs a military that has a greater capacity than simply providing for the island's security. The institutional weaknesses that have been described in this article are the source of significant impediments to Singapore's effectiveness.

Singapore's allies should work with the Lion City to try to address these weaknesses to improve the capabilities of its military. Specifically, the SAF should make full use of its Malay population and end the quota system that limits this population's involvement in sensitive areas such as intelligence, signal, and guards units. In addition to improving military effectiveness, ending these discriminatory policies would help to address domestic grievances among the local Malay population and even would help diffuse regional tensions. Singapore's military also needs to open up more combat positions for women while at the same time making a concentrated drive for their recruitment. Most importantly, the SAF needs to fix its current system of promotion and training by making major reforms of the CEP system, and it needs to improve the strictness and realism of training. Doing so will make SAF officers more effective as well as more professional. These changes, though they will be very difficult to implement considering that they involve the very foundation of the SAF, will produce major benefits in the quality of the SAF in the long run and make it more effective in providing for Singapore's security and in conducting peacekeeping, humanitarian, and support operations abroad.

Notes

1. Simon Elegant, "Singapore Sleepers," *Time Asia Online*, January 21, 2002. Retrieved April 26, 2005, from www.timeasia.com.

2. COL R. Menon, SAF, *To Command: The SAFTI Military Institute* (Singapore: Land Mark Books, 1995), 109.
3. Tim Huxley, *Defending the Lion City: The Armed Forces of Singapore* (Sydney, Australia: Allen and Unwin, 2000), 94.
4. Author's interview with knowledgeable United States Army officer (source 1), June 2004, Republic of Singapore. Hereafter referred to as source 1 interview.
5. Author's interview with Overseas Scholar at Harvard University, April 1, 2005, Edinburgh, Scotland. Hereafter referred to as Harvard interview.
6. Tan Tai Yong, "Singapore: Civil-Military Fusion," in *Coercion and Governance: The Declining Political Role of the Military in Asia*, ed. Muthiah Alagappa (Stanford, CA: Stanford University Press, 2001), 289.
7. Chan Kairen, "Change of Command Parades for Army, Navy Chiefs," *Pioneer Online*, March 27, 2003. Retrieved February 6, 2006, from www.mindef.gov.sg/cyberpioneer.
8. Huxley, *Defending the Lion City*, 121.
9. Ibid., 109, 111.
10. Harvard interview.
11. Huxley, *Defending the Lion City*, 109.
12. It has been pointed out that education at foreign military schools may produce officers substantially different than those without foreign military education. However, all officers still are socialized primarily during their training in the Singaporean military, lessening the influence of foreign military education. In addition, only a handful of officers obtain this type of education, resulting in only a small impact at the institutional level.
13. Harvard interview.
14. Ibid.
15. "MINDEF Scholarship Centre," from MINDEF Scholarship Center page. Retrieved April 21, 2005, from http://www.scholar.mindef.gov.sg/aboutus_intro.asp. Since 1993, women have been permitted to compete for the Merit Scholarship for Women, the second highest scholarship award. Each year, only five women receive this award. See the section Women in the SAF.
16. Derek Da Cunha, "Sociological Aspects of the Singaporean Armed Forces," *Armed Forces & Society* 25, no. 1 (1999): 463.
17. Author's interview with Overseas Scholar at University of California at Berkeley, February 2005, Boston, MA. Hereafter referred to as Berkeley interview.
18. Harvard interview.
19. Menon, *To Command*, 67.
20. Da Cunha, *Sociological Aspects*, 463.
21. Berkeley interview.
22. Huxley, *Defending the Lion City*, 110–11.
23. Berkeley and Harvard interviews.
24. Ibid.
25. Source 1 interview.
26. Author's interview with knowledgeable United States Army officer (source 2), June 2004. Hereafter referred to as source 2 interview.
27. Author's interview with knowledgeable United States Army officer (source 3). June 2004. Hereafter referred to as source 3 interview.
28. Huxley, *Defending the Lion City*, 241; Da Cunha, *Sociological Aspects*, 463.
29. Menon, *To Command*, 67.
30. Yong, "Civil-Military Fusion," 289.
31. Samuel P. Huntington, *The Soldier and the State* (Cambridge, MA: Harvard University Press, 1985), 8.
32. Da Cunha, *Sociological Aspects*, 465.

33. S. E. Finer, *The Man on Horseback: The Role of the Military in Politics* (New York: Frederick A. Praeger, 1962), 28, 30.

34. Alon Peled, *Soldiers Apart: A study in Ethnic Military Manpower Policies in Singapore, Israel, and South Africa* (Ann Arbor, MI: UMI Research Press, 1995), 286–87.

35. Yong, “Civil-Military Fusion,” 283.

36. *Ibid.*, 278.

37. Morris Janowitz, *The Military in the Political Development of New Nations: An Essay in Comparative Analysis* (Chicago: University of Chicago Press, 1964), 111.

38. Alon Peled, *A Question of Loyalty: Military Manpower Policy in Multiethnic States* (Ithaca, NY: Cornell University Press, 1998), 117.

39. These ministers currently hold such important portfolios as defense, foreign affairs, and trade and industry.

40. Berkeley interview.

41. Da Cunha, *Sociological Aspects*, 465. This program also serves to reinforce the social linkages between elites.

42. Many other cases, of course, show the debilitating impact on effective civil-military relations that can arise without a professional officer class. Janowitz writes that “in the absence of a development toward a democratic model (of civil military relations) historical change replaces the aristocratic model with a totalitarian one.” However, this situation is very unlikely in Singapore because for military elites to gain influence in the government via entrance into politics or the civil service, they must leave the armed forces, limiting the possibility of military cronyism. In addition, the systems and traditions of civilian supremacy that have been in place in Singapore since its independence ensure that elite integration results in the military’s being firmly under civilian control. As a result, integration reduces rather than increases the power of the military vis-à-vis the civilian government. Civil-military relations theory should be modified to take into account the possibility that the aristocratic model can produce effective long-term civil-military relations with a modern military if a partial civilianization of the military can maintain a social and functional unity of political and military elites. Such a model has the potential to be applied to the formation of new militaries in states that have undergone regime change (either from external or internal means), such as Iraq and Afghanistan. Much as they were in Singapore, civil servants whose loyalty to the state is known (such as expatriates or even vetted bureaucrats of the old regime) could be used to replace former military leaders. The creation of a “civil service in uniform” would assure stable civil-military relations more quickly than the far more difficult task of training professional officers. However, as it did in Singapore, such a program would significantly decrease combat effectiveness. Given the security challenges that occur in post-regime-change states, such a trade-off between military effectiveness and civil-military relations may not be prudent.

43. Elegant, “Singapore Sleepers.”

44. Peled, *Soldiers Apart*, 55.

45. Harvard interview.

46. Simon Elegant, “Not a Question of Loyalty,” *Time Asia Online*, February 18, 2002. Retrieved April 26, 2005, from www.timeasia.com.

47. Harvard interview.

48. Source 2 interview.

49. Peled, *Soldiers Apart*, 58.

50. Sadanand Dhume, “Singapore’s Security Complex,” *Contemporary Southeast Asia* 23, no. 1 (2001): 86, available from www.JSTOR.org (accessed April 26, 2005).

51. Elegant, “Not a Question of Loyalty.”

52. Huxley, *Defending the Lion City*, 31–33.

53. Michael Richardson, “Indonesian President’s Remark Touches a Nerve: Singapore Quickly Denies an Assertion of ‘Racism,’?” *International Herald Tribune*, February 12, 1999, available from www.iht.com.

54. Peled, *Soldiers Apart*, 7.
55. Ibid., 66.
56. Huxley, *Defending the Lion City*, 102, 103.
57. Peled, *Soldiers Apart*, 67.
58. Tim Huxley, "Singapore in 2000: Continuing Stability and Renewed Prosperity amid Regional Disarray," *Asian Survey* 41, no. 1 (2001): 204.
59. Peled, *Soldiers Apart*, 65, 176.
60. Elegant, "Not a Question of Loyalty."
61. Huxley, "Singapore in 2000," 204.
62. Huxley, *Defending the Lion City*, 102, 103.
63. Elegant, "Not a Question of Loyalty."
64. Zachary Abuza, *Militant Islam in South East Asia* (Boulder: Lynne Rienner, 2003), 221.
65. Huxley, "Singapore in 2000," 204.
66. Richardson, "Indonesian President's Remark."
67. *Singapore 1971 Yearbook*, as quoted in Peled, *Soldiers Apart*, 56–7.
68. For instance, see David L. Leal, "The Multicultural Military: Military Service and the Acculturation of Latinos and Anglos," *Armed Forces & Society* 29, no. 2 (2003): 219.
69. Menon, *To Command*, 20.
70. Huxley, *Defending the Lion City*, 119.
71. Menon, *To Command*, 120.
72. "Navy Careers," from Republic of Singapore Navy page. Retrieved April 21, 2005, from <http://www.mindef.gov.sg/navy/careers/>.
73. Source 2 interview.
74. "SAF Merit Scholarship for Women," from MINDEF Scholarship Centre page. Retrieved April 21, 2005, from <http://www.scholar.mindef.gov.sg/>. Only about five women a year receive this award.
75. Huxley, *Defending the Lion City*, 119.
76. Source 2 interview.
77. Author's interview with anonymous female SAF officer (source 4), June 2004, SAFTI Military Institute, Republic of Singapore.
78. Huxley, *Defending the Lion City*, 120.
79. Source 4 interview.
80. See R. Claire Snyder, "The Citizen-Soldier Tradition and Gender Integration of the U.S. Military," *Armed Forces & Society* 29, no. 2 (2003) for an analysis of gender integration in the United States military.
81. Minister for Defense Teo Chee, lunch talk, "Defending Singapore: Strategies for a Small State," April 21, 2005, Singapore.
82. MAJ Fred Tan, "Recruitment Strategies for SAF in the 21st Century: Is There Still Hope for Military Recruitment in Singapore?" from Canadian Forces College Web site, available from <http://198.231.69.12/>, 17.
83. Rachel Woodward and Patricia Winter, "Discourses of Gender in the Contemporary British Army," *Armed Forces & Society* 30, no. 2 (2004): 284.
84. Yechezkel Dar and Shaul Kimhi, "Youth in the Military: Gendered Experiences in the Conscript Service in the Israeli Army," *Armed Forces & Society* 30, no. 3 (2004): 451.
85. Ibid. Dar and Kimhi report that "the perception of service significance had a noteworthy effect of perception of service benefits for both genders, as expected, but its weight was greater among women. Adding perceptions of significance . . . doubles the explained variance in women's perception of benefits."
86. Vincent Phang, "Pushing the Envelopes with Zero Accident," *Focus Magazine*, June 2004, p. 14.
87. Huxley, *Defending the Lion City*, 98.
88. *Shoulder to Shoulder: Our National Service Journal* (Singapore: Ministry of Defense, 2002), 22.

89. "The Parents' Lounge," Army Recruitment Center page. Retrieved April 21, 2005, from <http://www.mindef.gov.sg/arc/parents/index.html>.

90. Source 1 interview.

91. Source 2 interview.

92. Menon, *To Command*, 90. Emphasis is the author's.

93. Source 2 interview.

Sean P. Walsh is a 2005 graduate of the United States Military Academy, where he earned a BS in comparative politics and East Asian studies. In the summer of 2004, he was placed on temporary duty to the United States Embassy to the Republic of Singapore. He is a graduate of the Infantry Officer Basic Course and the United States Army Ranger School. His research interests include comparative military systems, ethnicity, and gender in the armed forces and security challenges in Asia. He is currently assigned to the 2nd Cavalry Regiment, Vilseck, Germany. *Address for correspondence:* Sean P. Walsh, 609 North Settlers Ct., Warrington, PA, 18976; e-mail: sean.walsh1@us.army.mil.