



**STRATEGY
RESEARCH
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**STRATEGIC SWARMING:
A FUTURE OVERSEAS PRESENCE CONCEPT**

BY

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ABSTRACT

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True transformation for the U.S. military, requires review of all aspects of how the military is manned, equipped and ultimately employed. Transformation must match and respond to the diverse array of threats in a multi-polar world. The ability to deal with a single adversary of the former bipolar world through a policy of containment has given way to a long list of nation-state, non-state and transnational actors that pose serious regional threats that upset delicate strategic balance and put the U.S. vital interests at risk. As part of transformation and relying on the benefits of advanced technology for highly reliable, capable and lighter systems a change from power projection to overseas presence is required. It is not overseas presence of today. A new overseas presence concept is required that can respond and potentially anticipate threats in the world. This new concept is called Strategic Swarming. The concept is a complete change from power projection and current overseas presence concepts. The concept has tremendous benefits for the U.S. military's ability to meet the requirements of National Security Strategy, National Military Strategy, Joint Vision 2020 and transformation.

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PREFACE

While exploring the implications of transformation at the strategic level, I was struck by how incomplete the entire transformational process seemed. The Department of Defense's (DoD) main focus of transformation is on new systems that will better span the range of threats from the lethal to non-lethal environments. Transformation was conceived within the current tactical organization structure and power projection and overseas presence concepts. Transformation requires concepts and ideas that challenge traditional notions.

During the search for a research paper topic, I was introduced to the swarming concept through my readings. I decided to change the level of the concept to the strategic level and test that application in its ability to fulfill the military requirements of National Security Strategy, National Military Strategy and ensure that transformation could be maintained.

The concept of strategic swarming requires further in-depth investigation in the areas of joint organization, budget implications and the impact on families and unit cohesion. The concept introduced in this paper is intended to serve as a catalyst for further investigation and discussion of the merits and utility of the concept into overall DoD transformation. The idea for this paper came from an article in the Marine Corps Times in which Gen. Jones, Commandant of the Marine Corps is proposing a "lily-pad" concept to increase readiness through more and varied training opportunities and to alleviate or moderate complaints by host nations that have Marine forces in their countries. He envisions greater opportunity to train in more countries which will foster a broader base of support for U.S. forces abroad while meeting other nations' concerns over logistical footprint and the amount of time spent in their country by moving from place to place within a region. In particular, Gen Jones is focused on the Pacific where most of the deployed Marine forces reside. This is not necessarily a new concept, but one which is borne of USMC history. Deployed Marines have enjoyed a relative ease in moving from place to place throughout the world from the early times aboard ships, to the Interwar Years moving from Haiti to Nicaragua, to the more modern context of World War II and the island hopping campaign of the Pacific.

A Rand publication on swarming helped to put this concept into the operational realm. In reading this article, it invited examination at the strategic level and how to apply the concept in concert with the other instruments of power and how the concept supports the National Military Strategy, National Military Strategy, JV2020, QDR 2001 and transformation.

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STRATEGIC SWARMING: A FUTURE OVERSEAS PRESENCE CONCEPT

Transformation, as laid out in the 2001 Quadrennial Defense Review (QDR 2001), begins the movement from the legacy force of today to the objective force of 20-30 years hence to meet the requirements of Joint Vision 2020 (JV2020). The combination of economic forces, globalization, and an increasing number of dispersed threats requires a new concept of overseas presence that optimizes light, mobile, responsive agile, technologically advanced and expeditionary force qualities. This concept must fully leverage the military, economic and diplomatic instruments of power. In order to test this strategic concept, a realistic global strategic assessment and direction of National Security Strategy must be made. The heart of the test, from a military point of view, is how the concept assists in achieving JV2020 and military transformation.

The need for military transformation is a requirement for the future of the U.S. military and its role in preserving and protecting national security interests and supporting its relationship to the diplomatic, economic and informational instruments of power. It is in this interrelationship that there is a disconnection between the military and those other instruments. The instruments of power are diverging and becoming disconnected. The economic and diplomatic instruments of power are becoming more globalized while the military instrument is more withdrawn and lacking access. The military trend is to rely more heavily on power projection and less on overseas presence. A transformed and expeditionary military possesses the potential to parallel and support the other instruments of power. By not using the force to its full potential there is an increased risk for sub-optimization and resultant wastefulness. The QDR 2001 has stated that greater emphasis on overseas and forward presence and expeditionary forces is a requirement for the future and the ability of the U.S. to deter forward¹.

In an era of economic globalization, United States industry is moving with greater frequency to overseas manufacturing with the secondary benefit of tying other countries to the U.S. and fostering their economic development. Component manufacturing is done overseas and parts are shipped for assembly in the U.S. Some components are sent overseas for assembly and finished products delivered to the U.S.. These are internationally diversified operations and affect product availability for the U.S. civilian and military sectors. Foreign component manufacturers are not as accessible or secure as they would be in the U.S.. Key resources, such as crude oil, quite literally fuel the national economies of the world. Crude oil imports pits the Organization of Petroleum Exporting Countries (OPEC) against the rest of the world. OPEC controls 46.3 percent of total oil imports. OPEC is more than the Persian Gulf

countries. Nigeria and Venezuela are also members and as a bloc produce 21.7 percent of total crude oil imports. This bloc plus the other non-Western hemispheric producers amount to 36.4 percent of the world total.² The economic trends of today are continuing to evolve through global interdependence. These interdependence trends initially predicted in the 1960s and 1970s were responded to by a revolution in military affairs that started in the 1980s. There is a more recent call for a revolution in diplomatic affairs to bring the elements of power into developmental alignment.³ This continuing economic interdependence, the end of the Cold War and sudden emergence of global terrorism requires the U.S. military to transform as part of a continuing response to global evolution.

As countries develop economically and see the effects of a higher standard of living, they are more likely to embrace the democratic institutions of leading economic countries. Thus there is a rise in the application of economic and diplomatic power. A disconnection between the military power and the other instruments results as the military chooses to use power projection in response to crises as they arise while the economic and diplomatic power are wielded daily in the global economy and interdependent world. In short, military power is being drawn back to the U.S. while the other instruments expand outward. This gives an appearance of incongruity and a disconnection of the relationship that the power instruments provide to one another.

In 1999, the Department of State recognized the need to change its approach to overseas presence within its organization. The end of the Cold War increased the spread of democracy and access to many nations.⁴ From 1989 to mid-1998, the number of Americans traveling overseas increased from over 40 million to just over 50 million, or approximately a 25% increase in Americans abroad.⁵ To support globalization, diplomatic efforts must keep pace with global economic direction. The Department of State recognized this and is asking to increase its budget to improve, reorganize, increase numbers of sites, protect current overseas locations and to expand U.S. diplomatic missions worldwide.⁶

The difference between the numbers of personnel deployed overseas for the Department of Defense and Department of State numerically illustrate the difference in overseas presence. As a percentage, DoS is double to that of DoD.

Dept/Service	Total	Overseas	Percent
DoS			38 ⁷
DoD	1,384,338	254,042	18.5
USA	482,170	103,599	21.5

USN	373,193	60,437	16.2
USAF	355,654	64,394	18.1
USMC	173,321	29,387	17

TABLE 1⁸

When investigating the differences in the application of instruments of power, it appears that the diplomatic and economic elements are posturing forward while the military is maintaining an increased CONUS stationing presence and relying on power projection to influence interests overseas. Overseas presence, for the military, needs to be viewed in a new way consistent with the direction of the other elements of power. Current methods of permanent bases coupled with a rotational deployment schedule of deployed Naval forces should become an arrangement of the past as the military approaches the objective force of the light, responsive, agile, and more lethal military. This lighter force would also be more expeditionary and technologically advanced. In order to eliminate the incongruity in the application of the instruments of power, these lighter, expeditionary and technologically advanced forces should be employed to their fullest capability resulting from transformation. By fully exploiting the expeditious nature and technological advances required of the objective force, the U.S. military should become more forward based and responsive to the rapidly changing global environment. This requires a new concept of overseas presence.

THE CONCEPT

A vision for the future employment of the military is required. The vision is one that will match the capabilities of the objective force with how best to use those capabilities. The context will be with respect to a future National Security Strategy, National Military Strategy, threat determination, transformation, and Joint Vision 2020. Some assumptions are made to bound the implementation of the concept. Given that economic and diplomatic developments are increasing and expanding overseas and that military forces are transforming to be more responsive, the military may best be used overseas as an expeditionary force to support economic and diplomatic efforts and pursue national interests. Increased forces and forward locations coupled with a more expeditionary military, provide the following benefits:

- closer in-country and on site coordination for Theater Security Cooperation (formerly theater engagement) and intelligence sharing to foster acceptable international behavior and should those efforts fail, to quickly transition from a diplomatic focus to a military focus to quell conflict that is not in the national interests of the U.S.

- presence, protection and assured access in support of economic and diplomatic efforts that support U.S. national interests of the U.S.

The swarming concept is seen in modern business theory. Pods and clusters constantly change, organize, move, and regroup based on a common understanding of the overall vision, mission, goals and objectives and in response to global, regional and sub-regional situations. This constant re-ordering appears chaotic, but out of a series of chaotic events, order is created.⁹ This process is akin to a living organism that strives to achieve homeostasis while external influences drive the organism out of homeostasis. A near constant state evolves to attain momentary order in response to external stimuli. This response is to repair the organism and is a process of evolution. Without either repair or evolution, the organism dies.¹⁰ Information is nourishment at the micro-organism (individual) level that makes pods and cluster respond.¹¹ Pods and clusters can only respond based on information. This causes the regrouping, reorganizing and relocating due to the knowledge that is attained and the understanding of the vision. Therefore, the pods and clusters respond similarly to one another and correctly swarm around affected areas to achieve order. The effect is known as polychronicity. It is the synchronization of individual and group, internal and external, vertical and horizontal elements required for the functioning of an organization. In simple terms, it is the ability of small organizations to do several things at once by building relationships and solve complex problems.¹²

Swarming is a military concept that uses the ability of the institution to continually reorganize in response to and in anticipation of threat stimuli. Pods and cluster disperse and rejoin in new configurations. These new configurations, through their relative presence, exert influence around concentrations of threats. In more practical terms, swarming as a method of deploying and employing expeditionary forces would be to place them in permanent and temporary, ashore and afloat locations throughout the world to support further economic and diplomatic endeavors. These would be smaller but more abundant locations that would be dispersed but technologically connected through a global information grid. Locations could be occupied or not occupied based on national security requirements. By their locations, number, and inner-connectivity around the world, forces closer to a potential conflict or crisis area can converge and recede on a point, encircle an adversary, expand and contract to, from and between locations, serve as a point for force build up or vacate the location completely. Forces could also have possible locations for future use as required. The simultaneous deployment and occupation of these locations supports a concept called swarming. These locations are

analogous to beehives or wolf pack lairs where further theater and operational swarming could emanate.¹³

Swarming is an overall military doctrinal concept that is just beginning to emerge. The other military operating doctrines have been melee, massing and maneuver.¹⁴ At any given time, all doctrines may be practiced to gain a tactical or operational effect. However, in terms of military development, the U.S. currently relies on maneuver overall and massing at critical points. At the strategic level, the U.S. demonstrates how it can maneuver air, land, and naval forces from the U.S. to mass them at a point of interest when required. Strategic swarming will change the U.S. concept of power projection from a CONUS base and forward presence forces to one of small, identical or mixed “pods” or “clusters” that surround a region, threat or nation which acts from all directions simultaneously.¹⁵ Figure 1 illustrates the end point of swarming around a region or area of interest. Pods and clusters can move from multiple directions to engage forces and threats as required. They then can recede and disperse as needed as the threat shifts in response or becomes confused or defeated.

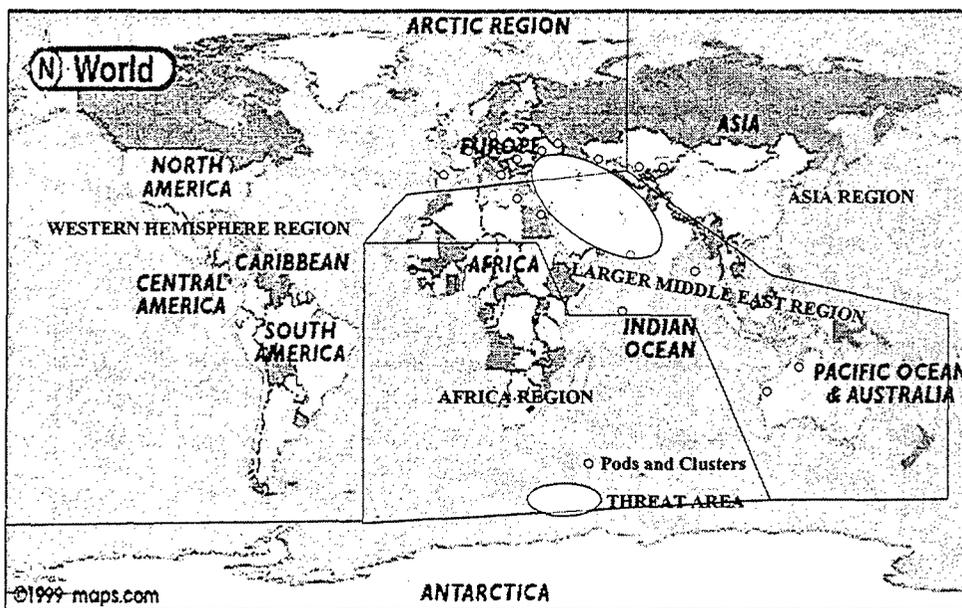


FIGURE 1

To fully transform the military, a new concept is needed to encompass the national and military security strategy. The individual services realize the need to lighten the force and be more responsive and deployable. What has not maintained pace is the military strategy of overseas and forward presence. The current method of large permanent overseas bases, U.S. based power projection, and a small continuous forward presence needs to give way to a more

expeditionary scheme comprised of smaller, semi-permanent posts, keeping only low density and high demand assets in a U.S. based power projection role and expanding and emphasizing forward presence.

A possible concept may be one of a network of smaller posts, exercise locations and Naval deployments that are interoperable, responsive to local requirements, and have the ability to open or close on a threat or location. They can expand, contract, or multiply in response to the overall security environment and support the diplomatic, economic and informational instruments of power. Occupied hubs in the network are pods or clusters of pods. The United States, as part of transformation, should develop a system of strategic pods and clusters as a system of swarming to replace the current system of CONUS-based power projection and forward presence. The basis to transform to strategic swarming is embedded in the current expeditionary service culture of the Navy and Marine Corps, the foresight of the Air Force to develop an expeditionary capability, the Army's significantly increased involvement in small scale contingencies and the DoD and service transformation and acquisition strategies.

Strategic swarming is more than a static network of worldwide locations. This concept encompasses the current service and DoD initiatives for transformation. In a peacetime environment with more forces forward stationed and deployed at a greater number of locations, forces can be arrayed around the world in order to surround an adjacent region or part of a region that is considered to be less stable in order to be immediately available to provide deterrence and influence. In the event of conflict, those forces can immediately respond before the conflict can spread. As the threat lessens and economic and diplomatic influences gain dominance, forces can recede to alleviate a perceived threatening posture. Forces could remain in those new locations at that point or shift toward another threat or contingency. Simply put, forces swarm and re-swarm to assure allies and friends, dissuade further military competition, deter threats and coercion against U.S. national interests and if necessary, defeat an adversary.¹⁶ The assurance to other nations by the U.S. military through a visible force, allows countries to maintain friendly contact with the U.S. and others and support unthreatened economic development.

Optimally, these swarms, pods and clusters should match the locations of Department of State (DoS) embassies, consulates, missions and other offices as those increase. In the same fashion that the DoS plans to reduce the size, shift resource, leverage technology and open new posts in an effort to minimize personnel increases, Department of Defense (DoD) could conduct a parallel effort with the possibility of no or very modest personnel increases.¹⁷

TESTING THE CONCEPT: THREATS, WORLD ORDER, NATIONAL SECURITY STRATEGY AND TRANSFORMATION

In order to demonstrate how the concept of strategic swarming would be employed, it is critical to assess the present and potential future National Security Strategy which the concept will support, define the world order of the future, show how threats would be evaluated and classified, apply modern principles of war, demonstrate the linkage between the concept and National Military Strategy, Joint Vision 2020 and transformation. Lastly, the potential implications of adopting this concept required exploration.

The United States military transformation that is currently being procured is flawed in many respects. All services pride themselves with their operational focus and orientation on a mission. In determining how the mission will be accomplished, several factors are considered in order to achieve a common view of the enemy and friendly situation and the direction to accomplish a common task. The military clearly sees its common direction and the need to dramatically change to meet the security requirements of the future through transformation. The difficulty lies in a common view of the enemy and friendly situations from the present time through the next twenty to thirty years.

Using a time period of 20 to 30 years makes any reasonable attempt to say who or what the threat will be an impossible task. Even in today's environment, the threat is difficult to determine. The sources that DoD chose to build the objective force based their design more on a range of capabilities versus a particular threat, thereby producing a force with systems which possess the tools to combat future threats as they emerge.¹⁸ An ability to assess threats or at least grade their impact to national security is required and needs to fit swarming doctrine.

Current trends in the rise to respond to small scale contingencies, humanitarian efforts and the method of fighting wars by proxy may or may not be the future direction but is certainly an option that is considered. What appears to have happened is the diversification, diffusion, and dispersal of threats meeting the humanitarian requirements of National Security Strategy.¹⁹ In the post-Vietnam era there have been no large conflicts except for the Persian Gulf War. That war was directly related to United States vital national security interests with respect to access to oil at a fair market price. All others have been varying sizes of small scale contingencies (SSC). There are two possible implications of the increase in small scale contingencies. First, that SSCs may be a product of the emancipating effect of the fall of a superpower. The countries formerly aligned with that superpower then realign and reorganize in response to power vacuums. This can be positive or negative in its outcome based on the direction and influence internal and external to the region. The other view is that SSCs are

demonstrative of mainly positive influences both internal and external to a region. Military assistance is required to provide security and allow positive internal forces to move in a more global direction. It is a realization that issues are not so serious that major theater or general war is warranted. These SSCs are nation-states reasserting their role and position in response to globalization.²⁰

THREATS

It is debatable whether threats drive military operations or military operations influence the direction or emergence of threats. Focus on a singular and dominant threat is a notion of the past. A method of determining and classifying the threat is required that can gauge the scope of the threat. This methodology needs to encompass a range from a Soviet-like threat through theater engagement in Third World countries. It will need to measure the threat as singular nations, other entities, or a combination that may emerge. Since transformation is still in its early stages, it is likely that threats will respond to the emergence of a transformed United States military and produce counter-capabilities or focus on exploiting weaknesses of a capabilities-based force.

Today's threats, and for the foreseeable future, need to be influenced by strategic swarming. In the post-Cold War era, for a variety of reasons, threats have multiplied. No single threat dominates for long periods. They are diverse, diffuse and dispersed around the world. Threats tend to be viewed in simplistic terms as singular nation-states or identifiable organizations that possess either a single threatening capability or collection of capabilities. Threats today and in the future will be much more sophisticated through the combining of nation-states, non-state actors, organizations and capabilities. These threats will transcend economic, geographical, ethnic and cultural boundaries into constantly expanding and contracting alliances for the purpose of attaining common but fleeting goals in order to attain an advantage over some other group that is changing and evolving similarly.

Threats can be categorized into three lists. A-list threats are threats similar to that possessed by the former Soviet Union. These threats would directly threaten the survival of the United States and its vital national interests. B-list threats are those similar to the current major theaters of war and geographically oriented on the Korean and Saudi Arabian Peninsulas. These threats are concerns to national interests but are not necessarily threats to the survival of the United States. C-list threats are those represented by the SSCs of Kosovo, Haiti, Bosnia, Somalia and Rwanda. These threats do not impact national survival or national interests, but are important to regional stability and humanitarian interests and are of peripheral concern.²¹

These are not static lists. The key feature is that the names on the lists may change dramatically through grouping of nations-states, non-state actors, terrorist organizations and possession of new capabilities. Threats may move up and down the lists based on the new threat they pose. A current example of the movement from list to list is the rise of Al-Qaeda. The potential existed for a formerly C-list local terrorist organization to attain A-list status through the innovative use of sources of funding, target analysis, and use of benign items to achieve massive weapons effects and the exploitation of a free and open society. National survival could have been put severely at risk had more targets been hit or the attack against the U.S. sustained by Al Qaeda.

Strategic swarming provides the ability to expand and contract to keep pace with the emerging threats and to influence emerging threats through forward presence. Expeditionary forces, if required, respond immediately with force before the threat becomes too widespread, dangerous, and grievous threat to the United States national security interests. The direction to be achieved is to move from deterrence to a more preventative defense.²²

Strategic swarms would be arrayed in concert with DoS diplomatic location and level of globalization or economic development and in response to A, B, and C-list threats. As threats shift from place to place and through the range from A to C and back, the density of those forces in number and size of swarms adjacent to a threat could be adjusted. It is a fluid process that requires constant assessment in and between the elements of power through an interagency process and an expeditionary U.S. military and postured to be responsive and agile.

WORLD ORDER

To ensure the proper placement of the strategic swarms and the deployment and employment of forces in the future, a prediction of world order is required. There are four prevalent views that attempt to explain the changing organization of world order. Samuel Huntington divides the world in eight groups that tend to be ethnically and culturally likeminded. These groups are the West, Sinic, Japanese, Hindu, Islamic, Orthodox, Latin America, and Africa. Seven of these groups have an identifiable physical center in the form of a country or capital city. Each of the eight regions exert influence on one another creating interaction that allows any of those eight groupings to emerge as dominant.²³ Henry Kissinger takes an economical, historical and geopolitical approach to world organization. He organizes the world into a Western Hemispheric group that includes the Americas and Europe due to their relative political, economic, diplomatic, and more modern similarities.²⁴ Asia is the second group with a common historical core, likening this group to the 19th century Europe using balance of power

arrangements to achieve stability.²⁵ The Middle East is ideologically and culturally religious centered in 17th century Europe by historical comparison.²⁶ Last is Africa, a confused grouping that started with tribes and clans, artificially and arbitrarily divided by colonialists that slipped back to tribes and clans, but is making an effort to re-emerge as reorganized nation-states.²⁷

William Perry and Ashton Carter organize the world from the view outward from the major powers, focused on the most dominant threat. They assume a stable America and Europe. They expressly focus on Russia as a re-emerging superpower that will either be cooperative or will retrench in Communism, a China that is the dominant Asian influence, weapons of mass destruction most desired by immature and rogue countries mostly located in the Middle East, and the potential phenomenon of catastrophic terrorism.²⁸

The last arrangement of the world is the more short termed view of the Quadrennial Defense Review of 2001. The constricted view of the Korean and Saudi Arabian Peninsulas as the focus of the two Major Theater War (MTW) concept to a slightly broader and more regional view of Southwest Asia and Northeast Asia.²⁹ Also mentioned are the traditional overseas presence commitment to Europe and the East Asian littorals.³⁰

Figure 2 depicts the four views and their relative similarities. The strategic regions column summarizes the four views into a useful generalization of world order.

STRATEGIC REGIONS	HUNTINGTON	CARTER AND PERRY	KISSINGER	QDR 2001
Western Hemispheric	West (U.S. and Europe)	U.S.	Western Hemisphere (America and Europe)	U.S.
	Latin America	Europe		Europe
Larger East Asia	Sinic (China and S.E. Asia)	China	Asia	N.E. Asia
	Japan			East Asia Littorals
Russia	Orthodox	Russia		
Larger Middle East	Islam	WMD and catastrophic terrorism (Middle East)	Middle East	Southwest Asia
Africa	Africa		Africa	

TABLE 2

To support the strategic swarm concept, the world is organized into five regions aligned by their likeminded characteristics. These groupings are not static. This is a starting point for the lay down of the strategic swarms and the density requirements for these swarms in individual size and numbers within a region. Due to the more modern outlook and economic and

democratic like-mindedness, the Western Hemispheric group requires fewer swarms. Russia and many of its former states along with the larger East Asia group split the bulk of forces and the highest density of swarms. Russian and its former states provide the northern influence to both the Balkans and the Middle East. The greater density of swarms in this region will also keep Russia from either failing completely or, more likely, keep it from returning to the former familiarity of Communism or some other unfavorable condition to the United States and world order.³¹

The Larger East Asia region has China at its core. This region splits the bulk of swarming forces. Since China is the core nation, it is important that pods and clusters be arrayed in a manner to positively foster China's globally responsible emergence and maintain regional stability. Swarming in this region would also have added benefit of continued deterrence on the Korean peninsula until that conflict is resolved, to keep smaller and less capable nations from sliding towards the influence of terrorism and to serve as a maritime influence from the east to the Larger Middle Eastern region.

The Larger Middle Eastern region will have a less dense swarm due to the lack of access and influence in the region. This region is bounded by higher density of swarms from the east, west and north. The final boundary is provided by perpetual temporary pods and clusters that can be grouped into a Naval swarm or join another established swarm through deployed Naval forces using the freedom provided by international waters and the maneuver space of those waters in and around the region.

Finally, the African continent will require the least dense swarms and they will be very temporary in nature in order to assist and provide support to African continent reorganization and ultimately its global direction.

FUTURE NATIONAL SECURITY STRATEGY

One of the problems in developing a strategic military employment concept is the need for a current National Security Strategy. Absent a current Bush Administration strategy, some assumptions can be made. National survival is the top priority and military force will be used to protect the United States' vital national interests.³² Beyond this, there is too much judgment and assessment required to determine what are important interests and interests that would be less likely to illicit a military response. It is possible to construct a direction for national security strategy. The Clinton Administration believed in cooperative security since "the ability to secure global security, shared prosperity and freedom is beyond the power of any one nation", and that the United States is just the leader of the effort and not the sole source or the biggest source of

world power.³³ The current National Security Advisor, Dr Condoleeza Rice, in a Presidential campaign article outlined the view of the Bush Administration on national security. She made the following five points:

- deter war, project power, and fight if deterrence fails,
- extend free trade and a stable monetary system to those who promote economic growth and political openness,
- renew relationships with allies to promote peace, prosperity and freedom,
- focus on China and Russia to influence the character of international development, and
- deal decisively with rogue regimes and hostile powers especially those using WMD and terrorism.³⁴

The cumulative effect of these points is the shift from broad cooperative security to re-establishment of relations with those most friendly with the United States and engaging with those who wish to become more open and globally economically minded. This approach is less broad but is more direct and could be categorized as selective engagement. Selective engagement is both powerful and peaceful and is a realist view concerned with those countries with industrial and military potential.³⁵

The attempt at predicting the future National Security Strategy is to show a possible direction of the U.S. and to clearly articulate the need for an overseas presence concept of strategic swarms. Selective engagement sets the limits of advance for forces by stipulating who the U.S. is engaging, through which elements of power and to what level. At the grand strategy level, based on how the world will organize itself in the future, expeditionary forces will be pushed out to the limits of the Western Hemispheric region (Fig 2) and especially toward eastern and southern Europe and to Asia with emphasis toward Southeast Asia. This placement of forces bounds the Larger Middle East region at the points near the Balkans and Persian Gulf and Indonesia. These areas are adjacent to regional boundaries. The forces are forward and through regions that are more economically advanced and thriving and are in a position to protect those areas to their rear, as well as, lead future development and globalization especially through Indonesia, Southeast Asia, and onward to south Asia.

Swarms move through the areas that are secure to provide security on the periphery of those areas and swarm around areas that are either threatening or where there is no access. In the event of threats in other areas, the swarm can be moved by pod and cluster to create a new swarm or join an existing swarm to address the new threat.

LINKS TO NATIONAL MILITARY STRATEGY, JV2020 AND TRANSFORMATION

Current National Military Strategy tenets of “shape, respond and prepare now”³⁶, have been refined by the 2001 QDR. The QDR provides greater definition on what defense policies the U.S. military must be configured and equipped to adhere to and how to attain those policies through a reoriented military posture. New U.S. defense strategy strives to “secure an international environment of peace that makes other goals possible.”³⁷ To accomplish this broad defense strategy, the U.S. military must assure allies and friends, dissuade future military competition, deter threats and coercion against U.S. interests, and should deterrence fail, decisively defeat any adversary.³⁸ To fulfill defense policy goals, transformed forces need to be reoriented and establish a military posture that

- develops a basing system that provides greater flexibility for U.S. forces in critical areas, with emphasis on additional bases and stations beyond Western Europe and Northeast Asia,
- provide temporary access to facilities in foreign countries that will enable U.S. forces to conduct training and exercises in the absence of permanent ranges and bases,
- redistribute forces and equipment based on regional deterrence requirement, and
- provide sufficient mobility, to include airlift, sealift, pre-positioning, basing infrastructure, alternate points of debarkation, and new logistical concepts of operation, to conduct expeditionary operations in distant theaters against adversaries armed with weapons of mass destruction (WMD) and other methods of denial to U.S. forces.³⁹

Where the 2001 QDR fails to create a vision for the future is the lack of specific commentary on new concepts, but instead refers to current systems, status quo basing and systems that are now being procured or will be procured in the near future.⁴⁰ Swarming is the means to implement the first three posture points, attain the defense policy goals and best achieve the stated defense strategy. Swarming is the new basing system. It has the ability to place forces forward “beyond Western Europe and Northeast Asia” through the deployment of pods and clusters around a region as depicted in Figure 2. These need not be permanent or large bases and may be deployed for purposes of training, theater engagement or simply as presence forces. The flexible size of pods and clusters is attractive to host nations and improves the possibility for greater access due to size and dispersion of forces that current forces are unable to accomplish. The nature of swarming, through the reconfiguration, regrouping, and reorganizing of pods and clusters into new swarms and redirected to new areas

of instability or conflict by a robust global information system, allows U.S. forces to quickly meet regional deterrence requirements.

The strategic swarm and its assumption of a total expeditionary force provides the basis to maintain United States global military superiority, enhance transformation, and support the vision and concept of JV2020.⁴¹ This concept assumes that the United States will remain the dominant military force with the ability to institute the proposed concept. The direction of the objective force of the future will have to be more expeditionary.

Dominant maneuver is a matter of scope and scale. It can range from the ability to position and reposition forces to dispersed locations and meet operational objectives from locations in the continental United States to areas in and around a specified objective area.⁴² Instead of building up and massing forces either from no presence or some presence and the time and lift requirements associated with that effort, swarming places dispersed forces forward, both land and sea, permanent and temporary, in and around a region, and will reduce or change the character of lift requirements and the time involved. With dispersed forces spread throughout the area, they can converge from any or many directions simultaneously creating operational dilemmas for potential adversaries.

Precision engagement elements of locating, surveillance, discerning, and tracking to use the right system at the right time to achieve the desired effects and, if necessary, complete the cycle again is enhanced by a completely expeditionary force and the dispersed strategic swarms.⁴³ With a preponderance of forces expeditionarily placed in pods and clusters throughout the world and linked with other elements of power through a comprehensive global information system, these forces will be physically able to accomplish the essential piece of precision engagement of target determination. With that information input through the global information system, attack can be achieved at any level in the system. By their expeditionary nature, swarms are readily available and can attack directly at a particular target either with systems or with personnel and forces from multiple directions and intensities.

The ability to provide a joint force the right resource at the right time in the right quantity will be improved.⁴⁴ Swarm forces will have many of their supplies forward in depots and through afloat and ashore prepositioned stock. Just-in-time supply will achieve the sustainment they need. This pushing forward of stocks will save on strategic lift for logistics. This, combined with the reduced need for lift with forces already forward deployed, will preserve lift for additional, rapid force build up should the need arise and for regrouping swarms, pods and clusters. Just as combat forces can converge on a particular conflict area, logistics will also be able to do the same in concert with the combat forces. Full dimensional protection may be the easiest

element of JV 2020 to attain. By the dispersion of forces in swarms, pods, and clusters throughout a region and the world both ashore and afloat on a permanent or temporary basis, any particular pods or clusters attacked, damaged or destroyed will not pose a significant loss in combat capability as to make the forces in a particular region combat ineffective.⁴⁵ The swarm will be able to move and regroup in response to threats that apply pressure to the swarm.

Swarming is the transformational employment concept that the objective force of the future will use to attain and demonstrate technical, structural and organizational transformation. The end point of transformation is the radical change from the forces and their employment today to the new concept of tomorrow. It moves the U.S. military closer to total Jointness by breaking down hierarchical organization and instead building organizations through a combination of capabilities to meet a threat. A sophisticated and robust, easily used and installed global information system allows pods and clusters in and between swarms to anticipate and rapidly respond to threats as deterrence or to limit regional instability.

IMPLICATIONS AND CONSIDERATIONS

The implications of adopting this concept fall into three categories: international perspective, domestic or internal interests, and the effect on the United States military. These are broad, general areas that do not necessarily negate the concept, but would be areas to plan for as part of the future direction.

In the international category, there are three views of this concept that correspond to general groupings of the countries portrayed in Table 2. These are emerging, failing, or failed countries; the group of Allies, likeminded or generally U.S. friendly countries; and lastly Russia and China who represent the potential of non-allied powerful countries not included in the other groupings.

First are those countries that are emerging, are failing, or have failed. This represents a fairly large range, but these are countries that have not achieved democratic governance, are ethnic, tribal or religious in rule, tend to have poor and undereducated populations that are the fertile field for terrorism cultivation and require significant assistance to exist, offering little in accessibility for the U.S. military. Referring to Figure 1, these would be the Large Middle East regions and Africa. These countries are exclusionary based on their perspective that Westerners will significantly change or eradicate their culture, religion or ethnicity as the basis of their current method of governance. Their focus is more internal and, at best, regional. Influence and access may have to be gained through others who do have access and are friendly to U.S. regional concerns.

Second are friends and Allies of the U.S. and the positive and negative implications this group represents. The range of the types of countries are those that are friendly, allow access and are embracing democracy as their form of governance, up to the traditional Allies similar to those in NATO and Europe. From Figure 1, these countries would be those in the Western Hemisphere and Asia groups. The positive aspect is that the U.S. and its significant military capability is seen as their protector and guarantor of continued prosperity and world position. By their association with the U.S., they gain collective security with the larger group of U.S. friend and Allies through trade and military cooperation. The negative aspect may be that the U.S. is perceived to be diverting attention and resources away from them and that there is not the necessary concern for their protection or continued economic prosperity. By defending forward beyond Europe and Asian allies may cause rearming of countries due to the perception that the U.S. is de-emphasizing security in their regions. The opposite is intended. By defending as far forward as possible, threats and instability are addressed at the source before they can be exported to the stable Europe and Asian, allied regions.

The last group of China and Russia could be discussed separately, but their general outcome would be similar. Both are powerful countries that could rise to the point of near-equal to that of the U.S.. Russia could easily be driven or allowed to fail to a point where they retrench in the familiarity of Communism and return to their former adversarial position. Likewise, China could easily be driven back to an more adversarial position if they are not appropriately and properly enticed to join the larger globalized world and the beneficial aspects are not institutionally ingrained into their society. Fortunately, the U.S. is much closer to gaining Russian acceptance than China's, so it is possible to work at different levels and intensities to develop economies and gain access and greater influence. However, the worst scenario would be to fail with Russia and China and creating a negatively charged tri-polar world.

The most difficult explanation of swarming is how this concept supports Homeland Defense and CINC NORTHCOM. Swarming requires the use of the entire force. Practicality dictates that there be some force for Homeland Defense and military assistance to civilian authorities (MACA). The concept assumes some risk by using more forces as far forward as possible and creating the perception that the U.S. is exposed. For enemies of the U.S. this may be seen as an invitation to attack an exposed U.S. while its forces are forward based. The domestic implications of adopting the strategic swarm concept may be the perception that Homeland Defense does not appear to be getting the emphasis that the public may demand. By creating a mainly expeditionary force and relying on overseas presence, it is envisioned that

the U.S. military can influence countries or directly address terrorist threats as far from the U.S. as possible through this swarming concept.

The adoption of the strategic swarm concept has the potential to create a force unable or less able to sustain heavy, long-term war winning operations. It may also affect the All Volunteer Force due to concerns over being deployed predominantly overseas. It may blur the lines between Services for roles and missions and break down service distinction in favor of a functional arrangement of forces. It would require a realignment of the Unified Command Plan.

The strategic swarm concept may reduce the upper end of U.S. military capability by reducing or eliminating heavy forces and the combat sustainment that would be required in the event of major theater war. A total expeditionary force may be preferable in light of budget and strategic lift constraints, but this potential weakness in defending against the full spectrum of conflict may be an invitation for an adversary to attack in a region based on a perception of an asymmetrical qualitative advantage in combat forces. The strategic swarm concept counter to this is forward forces that can identify, track, assess and, if necessary, attack a threat early and with the capabilities of the lighter expeditionary force before any advantage is realized.

Without careful analysis, the strategic swarm concept could have serious negative impact on the All Volunteer Force. The concept calls for more forces stationed overseas, more expeditionary postured forces and assumes that families will not be stationed with their service member. With a growing number of married personnel, there is a tension in achieving a balance of time at home with family and deployed time. This would certainly affect both the ability to recruit the numbers required to maintain the force and retaining those to maintain the experience and knowledge required of a professional military force.

Implications for service roles and missions, organization of forces and the redrawing of Unified Command boundaries will be affected. With lighter and expeditionary forces, the distinction between the Army and Marine Corps closes to a point where the only difference is that of a light expeditionary land force and a light expeditionary amphibious force remains. Both services would be similarly equipped and create the argument that with some training between land and amphibious forces, a single Army force could be attained. With the combining of Army and Marine Corps forces comes the possibility of using similar logic for the combining of air forces. The end result would be a U.S. military of land, air and sea forces and dissolution of a Service based military organization and a step toward total Jointness.

Globalization, transformation, and the adoption of the strategic swarm concept, coupled with the possible organization of the world in Figure 1 foretells of a possible redrafting of the Unified Command Plan boundaries. The Western Hemispheric group of Europe and North and

South America would comprise one region that is aligned with the postulated economic direction of that group. A Pacific Command would remain, but be redefined to meet the Asia region of Figure X. Central Command would remain, but would cover a region of the world that is culturally, ethnically and religiously aligned to encompass the predominantly Muslim region of the world stretching from the countries of northern Africa, through the current Central Command region, across south Asia, to southeast Asia and Indonesia. A command for sub-Saharan Africa would be required to encompass that region of the world. The Joint Chiefs of Staff would also change to assume some of the tasks and mission that would be shed by today's regional Commanders in Chief in favor of a new geographic organization that parallels future organization of the world. This new Unified Command Plan organization would foster a more effective placement of strategic swarms to match threats, support other regions and the needs to support the other instruments of power.

CONCLUSION

The concept of creating a mostly expeditionary force with the ability to significantly increase forward deterrence by the means of strategic swarming has the potential to closely link the military with the economic and diplomatic instruments and elements of power and provide a comprehensive basis for improved military transformation. This is accomplished through the swarming concept that significantly changes the concept of overseas presence from CONUS based power projection to forward presence through innovative and imaginative use of pods and clusters. These swarms semi-intelligently regroup and reorient on areas requiring military emphasis. The potential for greater security is immense and requires far greater vision by civilian and military defense officials to view transformation in a greater context from economic and diplomatic direction, the possible direction of the world, identification and classification of threats, military personnel impacts, the potential effect on Service roles and missions, traditional hierarchical military organization and the realigning of Unified Command Plan boundaries and the tasks and missions assigned to the regional Commanders in Chief.

Strategic swarming demonstrates the full potential of transformation and the linkage required through the government and the closer relationship with the other instruments of power. The fact that transformation will take place over the next 20-30 years, it is possible for the U.S. military to become more closely integrated with the diplomatic and economic instruments of power as they themselves evolve and as areas of the world become more accessible through globalization.

EPILOGUE – AFGHANISTAN

With the emergence of more information about OPERATION ENDURING FREEDOM, it appears that an argument can be made for swarming at the theater and strategic levels.

United States forces swarmed from the continental U.S. and from other deployment areas to new locations in and around Afghanistan. These forces were able to encircle Taliban and Al Qaeda forces from the sea and adjacent countries. Taliban and Al Qaeda forces were unable to discern or determine when and where attacks were coming from and who was attacking which caused immense surprise and confusion and created operational dilemmas of how best to confront U.S. or non-Taliban forces. As missions and tasks were attained, U.S. forces receded or dispersed to pods and clusters with the ability to immediately re-strike while maintaining effective force protection. The effect led to the effective collapse of enemy forces in Afghanistan. Although a relatively small number of U.S. forces are involved, the swarming concept has been shown to be successful and may have shown that the concept can operate within communication, logistical, and strategic lift constraints confronted by the legacy forces and demonstrating the element of efficiency that this concept may realize in the objective force.

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