

*United States Marine Corps
School of Advanced Warfighting
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Quantico, Virginia 22134-5068*

MASTER OF OPERATIONAL STUDIES

TITLE: MEMETICS—A GROWTH INDUSTRY IN US MILITARY OPERATIONS

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF OPERATIONAL STUDIES

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ACADEMIC YEAR 2005-2006

Mentor: _____
Approved: _____
Date: _____

Mentor: _____
Approved: _____
Date: _____

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 2006	2. REPORT TYPE	3. DATES COVERED 00-00-2006 to 00-00-2006			
4. TITLE AND SUBTITLE Memetics--A Growth Industry in US Military Operations		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S)		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Marine Corps,School of Advanced Warfighting, Marine Corps University,2076 South Street, Marine Corps Combat Development Command,Quantico,VA,22134-5068		8. PERFORMING ORGANIZATION REPORT NUMBER			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 27	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

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EXECUTIVE SUMMARY

TITLE: Memetics—A Growth Industry in US Military Operations

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THESIS: Tomorrow's US military must approach warfighting with an alternate mindset that is prepared to leverage all elements of national power to influence the ideological spheres of future enemies by engaging them with alternate means—memes—to gain advantage.

- **DISCUSSION:**

- **Defining memes.** Memes are "units of cultural transmission, or a unit of imitation," and as ideas become means to attack ideologies. Meme-warfare enters into the hotly contested battlefields inside the minds of our enemies and particularly inside the minds of the undecided.

- Formations charged with Information Operations (IO) Psychological Operations (PsyOps), and Strategic Communications (SC) provide an existing construct for memes and the study of memes, memetics, to grow and mature into an accepted doctrinal discipline.

- **Epidemiology of insurgency ideology.** Using the analogy that ideologies possess the same theoretical characteristics as a disease (particularly as complex adaptive systems), then a similar method and routine can/should be applied to combating them. Memes can and should be used like medicine to inoculate the enemy and generate popular support.

- **Private sector meme application.** 3M Corporation employed an *innovation* meme designed to cultivate an employee culture, which accepts and embraces *innovation* in product development. As a practical matter, 3M executives endorsed and employed the *lead user process* in new product development, which translated into a thirty percent profit increase. The *innovation* meme was key to 3M's profit increase.

- **The proposed Meme Warfare Center (MWC).** The MWC as a staff organization has the primary mission to advise the Commander on meme generation, transmission, coupled with a detailed analysis on enemy, friendly and noncombatant populations. The MWC aims for a full spectrum capability of meme generation, analysis, quality control/assurance and organic transmission apparatus. The proposed MWC structure lays in stark contrast to the ad hoc nature of current IO and JPOTF formations.

CONCLUSION: Cognitive scientists, cultural anthropologists, behavior scientists, and game theory experts must be included as professional meme-wielding-gunfighters on future battlefields. The US must recognize the growing need for emerging disciplines in ideological warfare by 'weaponeering' memes. The Meme Warfare Center offers sophisticated and intellectually rich capability absent in current IO, PsyOps and SC formations and is specifically designed to conduct combat inside the mind of the enemy. Memes are key emerging tools to win the ideological metaphysical fight .

Memetics—A Growth Industry in US Military Operations

Introduction

Attacking an ideology is among the most difficult assaults known to conventional warfare practitioners. Ideologies are based on transcendent ideas and are inherently complex military problems.¹ Ideologies are at a minimum: very difficult to eradicate kinetically, highly dynamic, garner support for often undetectable reasons, contain both intangible and tangible attributes, generate visceral enmity, compel noncombatants to take up arms, influence strategic, operational and tactical relationships and in the simplest form present a daunting challenge for most conventionally trained military forces. *Tomorrow's US military must approach warfighting with an alternate mindset that is prepared to leverage all elements of national power to influence the ideological spheres of future enemies by engaging them with alternate means—memes—to gain advantage.* In the menu of tools to combat ideologies, there are but a few which offer a measure of promise. Among these tools are memes. This paper will present a military application and construct using memes designed to understand and defeat an enemy ideology and win over the masses of undecided noncombatants.

Memes are "units of cultural transmission, or a unit of imitation." Said another way, memes are bits of cultural information transmitted and replicated throughout populations and/or societies.² The principle method of meme transmission is interpersonal and societal interaction. Richard Dawkins introduced

¹ Van Riper, Paul K., LtGen USMC (Ret) and Schmitt John F., presentation to MCCDC, September, 2005.

² Dawkins, R. (1976), "The Selfish Gene," Oxford University Press, Oxford

the term ‘meme’ in 1976 and for context offered an analogy with genes to memes, positing they essentially have similar properties, one physical and one metaphysical. Where genes are tangible physical elements physiologically passed down and replicated through procreation, memes are metaphysical, intangible entities, transmitted from mind to mind, either verbally, with actions, music, or by repeated actions and/or imitation.

Some argue memes operate by the strength of their meaning and their fitness is analogous to Darwinian theory, hence only the strongest and fittest memes survive.³ Others have argued memes transmit and replicate based on the social, economic and cognitive nature of the receiving host and not attributed to the memes inherent strength and fitness.⁴ The central concept simply stated is memes are metaphysical, express ideas and replicate for any number of reasons. A suggested logic progression is as follows: Memes influence ideas, ideas influence and form beliefs. Beliefs generate and influence political positions combined with feelings and emotions, eventually producing actions, which inform and influence behavior. Using this logic progression, any attack upon an ideology must consider an assault on a central or transcendent ‘idea’ or group of ideas as means of achieving success. Memes as ideas are then ‘in play’ as tools (or means) to attack ideologies.

Understanding Memes

The value of understanding memes lies at the heart of accepting nonlinear thinking and extrapolating it into a warfighting ethos. Attacking and defeating ideologies with conventional military means (precision munitions or large infantry

³ Ibid.

⁴ Brodie, Richard, “Virus of the Mind: The New Science of the Meme

and armored formations) is not and has never been holistically successful. History and contemporary military operations prove defeating an ideology requires a more sophisticated and complex approach. The spread of ideologies proliferates daily with increased sophistication and widespread access to global media. As a contemporary example, ideas that spawn Muslim extremist ideologies are transmitted by various means, including websites, market distribution of DVDs and CDROMs, graffiti, leaflets, satellite television broadcasts, and, in some cases, reaffirmed by the physical presence of those engineering these ideas. Indeed physical presence of ideologues indicates an effort to collect on the ideology and ignite a levée en masse. How can the US military persuade, dissuade and deter future adversaries? Memes offer an opportunity to enter into the hotly contested battlefields inside the minds of our enemies and particularly inside the minds of the undecided.

Military Memes

Military operations produce memes, both intended and unintended. The unintended effects of memes are normally regarded as second and third order effects. On occasion, second and third order effects are the product of deliberate planning; however many times they cannot be accurately forecasted. Memes as defined above are cultural bits of information replicated and transmitted from mind to mind. Memes influence, affect, generate and alter ideas. A central theme behind this replication and transmission is individual and societal contact and interaction. Contact in this sense connotes both direct and indirect means. Contact with the enemy, 'friendlies' or the community at large provides a vehicle or medium for

memes to travel and replicate. In the absence of contact, memes are not transmitted, replicated, or re-transmitted. Without contact the conditions for meme transmission are severed. If the US military acknowledges that operations produce memes, what military apparatus is charged with noting or recording how memes are generated, received, transmitted, replicated, and re-transmitted? Some argue this is the purview of current Psychological Operations or Information Operations formations. Others argue skilled commanders will carefully examine the nature of an operation and filter the memes instinctively. Today (and perhaps the future), formations charged with Information Operations (IO) Psychological Operations (PsyOps), and Strategic Communications (SC) provide an existing construct for memes and the study of memes, memetics, to grow and mature into an accepted doctrinal discipline. The current construct however requires improvements, which will be discussed later. Memes are not currently acknowledged or accepted components of either Information Operations or Strategic Communications. Yet, under the rubric of Information Operations and Strategic Communications both currently offer a multi-faceted meme generation and transmission capability to US military commanders.

Meme legitimacy

Some private sector organizations and corporations have applied meme engineering and management to the internal corporate culture and marketing strategies. Still others have raised memes and memetics with rather diverse private sector applications including mergers, acquisitions, marketing approaches,

organizational science, and financial markets.⁵ While the private sector may be the vanguard of meme utilization, the US military has yet to recognize memes or their study as an accepted discipline. The practical application of meme management and engineering within the private sector is intended to complement or enhance efficiency, revenue and profit. The US military is obviously not interested in revenue and profit in the business sense (ends), but conceptually it is interested in persuading or compelling enemy and noncombatants (ends) and in this case to combat ideologies. Arguably, increased efficiency in both internal organization and external output is a goal pursued by both military and private sector alike.

Memes - The Clinical Approach

Some defense think tanks and contractors have latched onto the meme construct and offered a useful method to analyze contemporary military problems, namely insurgency ideology. In this sense, the theoretical idea of memes in insurgency describes a method of analyzing cultural ideas, isolating them into parts, and with a clinical approach revealing how an insurgency meme spreads and replicates itself (essentially an epidemiological approach).⁶ This analysis of meme application highlights how the insurgency meme replicates and spreads like a disease. The clinical disease analogy for the spread of memes infers a further metaphorical connection to the development and spread of ideologies.

To offer further clarity, clinicians' combat diseases by recognizing that both host and disease are complex adaptive systems. They analyze the diseases'

⁵ Voelpel, Sven C, Leibold, Marius, Streb, Christoph K., *Journal of Change Management*. London: Mar 2005.Vol.5, Iss. 1; pg. 57, 13 pgs.

⁶ Van Riper, Paul K., LtGen USMC (Ret) and Schmitt John F., presentation to MCCDC, September, 2005.

chemical properties, its proliferation method, the conditions favorable for incubation and catalysts for further spread. Then clinicians methodically construct substances to inoculate susceptible hosts. Using the analogy that ideologies possess the same theoretical characteristics as a disease (particularly as complex adaptive systems), then a similar method and routine can/should be applied to combating them. The connecting points are then two-fold. First, the ideology must be acknowledged as the disease and memes the proliferation method. While current US military practices may view ideologies as diseases, they do not acknowledge the emergent properties of memes as the disease vector. Second, to amplify this disparity, there is a nexus at the crossroads of sociology, anthropology, cognitive science, and behavioral game theory that can help us to *intentionally* persuade (inoculate) large audiences (or hosts) through subtle or overt contact. The germane components of sociology, anthropology, cognitive science and behavioral game theory in analyzing memes requires further study and analysis but are beyond the scope of this examination.

Ideological Warfare

Returning to a previous concept, contact points with the ideology are natural target sets for US military strategy to focus upon. Kinetically destroying the ideology (killing infected people) is a method of attriting the ideology, but in most cases this method is transitory or may perform the opposite effect. This understanding is best punctuated by doctrine of the closest US ally, Britain.

...It is considered that a “gloves off” approach to any insurgency problem has a strictly limited role to play in modern COIN [*counterinsurgency*]. Furthermore, the record of success for attrition in COIN operations is generally a poor one...the result of

this approach (normally to the delight of an insurgent) is an escalating and indiscriminate use of military firepower.⁷

Some infected cohorts view the kinetic destruction of another infected person as a compelling reason to retain the ideology and in some cases confirm the validity of the ideology. These are some of the aforementioned second and third order effects, specifically the unintentional effect. Worthy of mention are some examples where infected populations have been successfully quarantined and inoculated and the source of the infection kinetically obliterated. This was the case in Malaya where the British successfully fought an insurgency, though it took nearly twelve years to eradicate. Historically, this is the exception rather than rule, and there are a multitude of ancillary factors that materially contributed to the demise of an infected population and by extension the insurgency.⁸

Future nonlinear war

In the broader sense the US military must consider a more detailed analysis of ideology proliferation has both a strategic and operational imperative for future war. Conventional warfare with peer competitors is not necessarily the nature of future conflicts and should not be the only event horizon for which the US prepares. A central component of future warfare must consider how to confront the complex adaptive system of an ideology. The Global War on Terrorism (GWOT) has highlighted the Islamic extremist ideology as one of the most virulent threats to the

⁷ British Army Code No 71596 (part 2), Army Field Manual, Volume V, *Operations Other Than War*, Section B, *Counter Insurgency Operations*, Part 2, *The Conduct of Counter Insurgency Operations*, 2-1 through 2-2.

⁸ Nagl, John A, *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife*, Westport, Connecticut, Praeger, 2002. For more information, see p 92-94 where food control and geography played central roles in combating the Malayan insurgency.

United States. Targeting the source of the ideology is perhaps a blinding flash of the obvious, but the tools and methods for combating ideologies require a sophisticated nonlinear approach, ironically not concomitant with a conventionally trained and equipped US military force.

Future war within the ideological realm requires a force structure annealed to the nonlinear battlefield strata. The US military does not possess a doctrine or prescription for the contest contained in the nonlinear battle space of an enemy's mind or even the complex paradigm of the noncombatant. However, with some modifications, it is possible to achieve a new level of understanding and capability to achieve parity and perhaps even superiority in this realm. A good start is an acknowledgement from senior leadership to the degree that more than token efforts and resources are required in pursuit of achieving advantage in non-linear battle.

The below excerpt taken from the Department of Defense 2003, Information Operations Roadmap demonstrates the recent acknowledgment of the problem, but the road to achieving success remains under construction.

“(U) Effectively communicating U.S. Government (USG) capabilities and intentions in an important means of combating the plans of our adversaries. The ability to rapidly disseminate persuasive information to diverse audiences in order to directly influence their decision-making is an increasingly powerful means of deterring aggression. Additionally, it undermines both senior leadership and popular support for employing terrorists or using weapons of mass destruction.”⁹

⁹ Department of Defense, *Information Operations Roadmap*, October 30, 2003, Secret [Excised].

A Private Sector Case Study

The US military can learn from some examples of meme usage within the private sector. There is indeed growing precedent for applying memes inside the private sector to cultivate cultural changes.¹⁰ In this example the 3M Corporation sought a cultural paradigm transformation aimed at the fundamental embrace of *innovation*. 3M's desire was to focus both employee and stakeholders on the value *innovation*. This endeavor also retained the holistic business objectives of revenue and profit. The example described in the March 2005, *Journal of Change Management* highlights the 3M Corporation's recent use of memes. Memes were used in contacting/influencing employees, stakeholder and customers alike to inculcate a culture of *innovation*. The *innovation* memes were deliberately designed to cultivate an employee culture, which accepts and embraces change and innovation in product development. As a practical matter, 3M executives endorsed and employed the *lead user process* in new product development, which translated into a thirty percent profit increase.¹¹ The same *innovation* meme was intended to provide stakeholders with the view of 3M's changing culture—a culture that fosters creativity and encourages change to remain competitive. 3M achieved this harmony using memes while retaining the professional credibility to perform very well in an Organizational Fitness Profiling (OFP) management assessment model.¹² The OFP construct is a highly sophisticated model used to assess large organizational culture and structure. That 3M was able to demonstrate the practical application and success with memes has lent considerable credibility to the

¹⁰ Voelpel, Sven C, Leibold, Marius, Streb, Christoph K., *Journal of Change Management*

¹¹ Ibid, for more information on *lead user process*, see page 59 – 60.

¹² Ibid

stakeholders, employees and ultimately to 3M's customers base. Linkage between the 3M success and the US military may be stretching the sinews of meme usage but there are however, some crossovers. The most obvious crossover point exists in the senior leadership of 3M acknowledging the power of memes (specifically the *innovation* meme) in not only their own organization, but also the acceptance of the *innovation* meme as a transcendent idea, intended to infect their employees, stakeholders, customer base and ultimately raise company revenue and profits. This case study offers a compelling reason for the US military to at least test the application of memes within the ideological realm of current and future battlefields.

A Proposed Future - The Meme Warfare Center

“Deep in the confined spaces of the Tactical Operations Center (TOC) Col Peepers is furiously grinding out the latest memes needed for the next operation. He arrives at the brief and sits beside the Commanding General as the Meme Management Officer (or the Senior Information Integration Advisor). The CG's briefing is designed for three main purposes. First, the briefing reviews original mission guidance, Rules of Engagement (ROE) and then frames the context for how subsequent mission guidance will be transmitted to subordinate units. [think in terms of “No better friend, no worse enemy”, or “First do no harm”].¹³ Second, to review current battlefield memes, including a review of memes from the Meme Engineering Cell (MEC), Meme Analysis Cell (MAC) and Meme Communications Cell (MCC). Third, and perhaps most important, to review and assess enemy and noncombatant reactions to the latest meme-set (the feedback loop). This critical review by the CG will produce updated internal mission guidance, identify mediums for meme distribution, in order to influence the enemy and local noncombatants within the Area of Operations (AO).”

Proposing structure change within the US military is a risky endeavor as contests for power and resources enter into the decision cycle. Any proposed organizational change invariably influences or mandates modifications to doctrine,

¹³ Mattis, James M. MajGen, CG 1st Marine Division, Operation Iraqi Freedom I.

manning, training requirements, materiel needs, leadership, and infrastructure (DOTMLPF). While the proposed organizational changes introduced here will obviously require additional study, a complete DOTMLPF analysis is beyond the scope of this examination. Proposing structure changes bent on attacking ideologies indeed requires a unique approach. The Meme Warfare Center (MWC) described below is a proposed construct initially intended for the Joint Task Force level. (See Figure 1) MWC staff organizations with similar mission and structure may also be applicable at the Regional Combatant Command level similar to the way Regional Combatant Commands provide Joint Intelligence Support Elements (JISE) to support JTF level organizations.

Meme Warfare Center Defined

The Meme Warfare Center as a staff organization has the primary mission to advise the Commander on meme generation, transmission, coupled with a detailed analysis on enemy, friendly and noncombatant populations. The MWC is designed to advise the commander and provide the most relevant meme combat options within the ideological and nonlinear battle space.

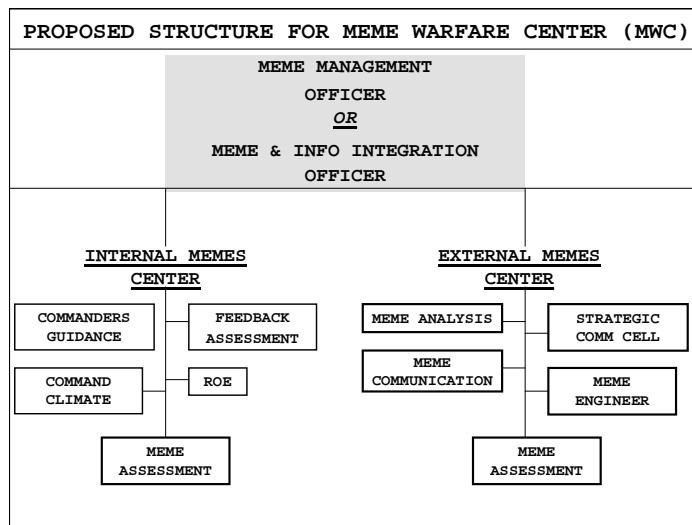


Figure 1—Proposed Meme Warfare Center

The MWC must be at first an amalgamation of all elements of US national power, essentially a joint interagency formation with either a senior military or civilian leader. The leader of this new organization may have at least two possible job titles: the Meme Management Officer or the Meme and Information Integration Advisor. The exact title of the leadership is less important than the organization itself. There are two distinct and complementary subdivisions inside the MWC: the External Meme Center (EMC) and the Internal Meme Center (IMC).

Internal Meme Center

The purpose of the Internal Meme Center is to advise the Joint Force Commander on the composition and posture of friendly forces, to include coalition and interagency partners. IMC focus areas include, but are not limited to, Command Climate, Commanders Guidance, Command Philosophy, Morale, Warfare Philosophy, Rules of Engagement and an assessment branch. The memes desired to influence the culture of the friendly combatant force are managed, analyzed and transmitted through common distribution mediums within the Joint Force. These mediums include annual training, intranet media, email and other accepted unclassified venues. The IMC requires skill sets of seasoned senior personnel, both officers, enlisted, and a cross section of junior, middle and executive management representative of the entire Joint Force.

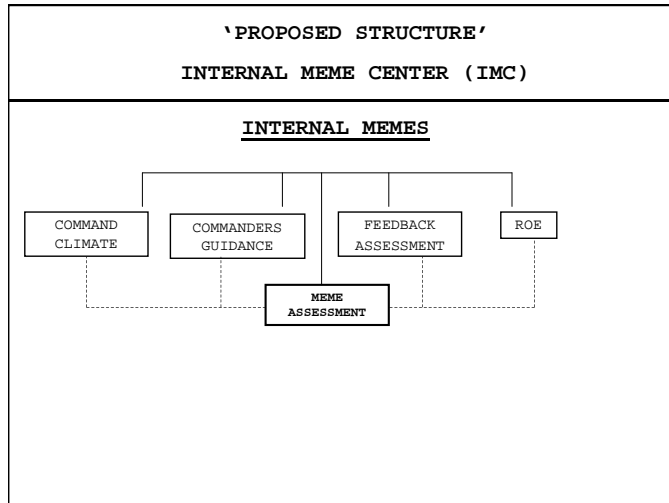


Figure 2 – Proposed Internal Meme Center

Personnel within the IMC, require skills in Human Resource Management, Clinical Psychologists, Equal Opportunity specialists, civilian personnel and assessment specialists. These skills are needed to produce capabilities that offer an unbiased view of and from the friendly force through physical, mental and moral lenses. The central focus of the IMC is on offering an internal analytical view of the Joint Force. The IMC purpose restated is to manage internal organizational memes, similar to the way 3M Corporation employed memes to spark organizational culture change.

External Meme Center

The External Meme Center (EMC) must be a more diverse and outwardly focused unit. The purpose of the EMC is to advise the commander on three critical areas: Enemy combat forces, noncombatant indigenous personnel, and the strategic audience. The EMC framework consists of: Meme Engineering Cell (MEC), Meme Analysis Cell (MAC), Meme Communications Cell (MCC) and the Strategic Communications Cell (SCC).

Meme Engineering

The Meme Engineering Cell is charged with meme generation, targeting and inoculations. The MEC must be staffed with a disparate group of subject matter experts from the entire US government and perhaps coalition representatives. MEC members at a minimum must include: Cultural Anthropologists, Economists, Linguists, Targeting Specialists, Technical Personnel, and assessment experts. The MEC is the heart of the MWC and generates the memes needed to target and gain ideological positional advantage in the nonlinear battlefield.

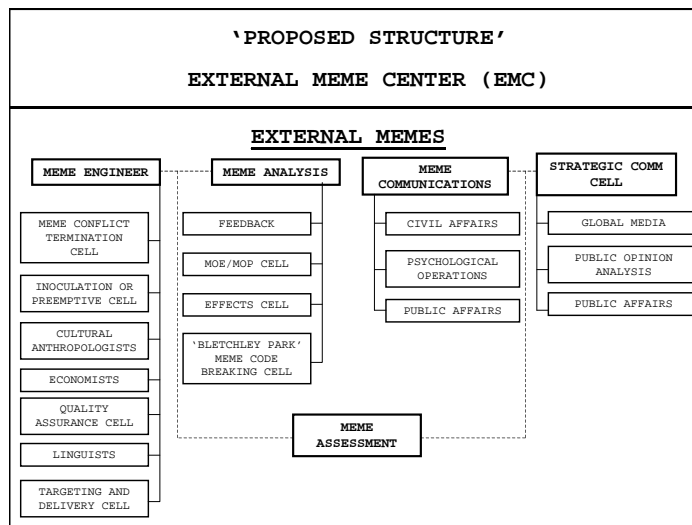


Figure 3–Proposed External Meme Center

The MEC core competency lies in its ability to offer the Joint Force Commander context and a more complete understanding of the widely arrayed audience of enemies and noncombatants. The MEC strives to gain an understating of their aims, their mindsets and their ways and means of achieving operational and strategic objectives. There are similar areas of study with regard to providing an advisory red cell within the same context, although historically the red cell has been principally concerned with enemy military forces. The MEC is deigned to perform

at greater depths and breadths than a traditional red cell. As a complementary organization, the red cell or even a robust red team should perform independent analysis of enemy formations. The red team analysis should be compared to the MWC analysis and conclusions. Conclusions and recommendations from both the MWC and red team will enrich discussion, offer independent and dispassionate analysis of the diverse operating environment and provide the commander with analytical fidelity not currently resident.

Meme Analysis

In consonance with the MEC, the Meme Analysis Cell (MAC) is charged with monitoring and recording the meme feedback loop from every sensor within the Joint Force. The MAC folds over the assessment cell within the Meme Engineering Cell to provide a holistic view and critical thinking capability in interpreting meme feedback. The MAC staff should consist of military and civilian analysts familiar with the enemy and skilled in the analytical rigors of social science, behavioral science, game theory, and cognitive science. They should also be educated on maneuver warfare philosophy and its application at both the operational and strategic levels. By design, the MAC is loosely analogous to the Program Analysis and Evaluation constructs resident within the US military and staffed with Operations Research Systems Analysts (ORSA).

Returning to a previous concept, which posits ideologies are complex adaptive systems, the nature and strength of the MAC will produce the most cogent analysis, if not only by skill set, then by the very character of its personnel. A unit

crawling with ORSAs, analyzing the complex adaptive nature of an enemy and noncombatant populations is designed to be in hot pursuit of greater understanding.

Meme Communications

To complete the MWC are two components of meme communications. The Meme Communications Cell (MCC) and Strategic Communications Cell (SCC) are separate cells with divergent purposes. The purpose of the MCCs is to translate memes from the MEC and MAC into acceptable, reasonable and transferable mediums. The MCC must possess the technical, tactical and intellectual moxie to apply the most effective medium(s) for meme transmission. The MCC leverages all available media outlets and is linked to higher and adjacent units for maximum audience saturation.

The SCC must contain SMEs most familiar with: global media *writ large*, local and regional global media availability, technical acumen needed to compete with adversary media output, technical analysts to offer context to the multitude of media sensors, and an executive component. The purpose of the executive component is to provide the administrative apparatus needed to link and synchronize the MCC to not only the Joint Force, but to higher, adjacent and coalition units. Additionally, the SCC must function unfastened from current PsyOps doctrine which prohibits communicating any PsyOps type message or meme to US domestic audiences.

To sum the MWC in the most basic sense, it is a joint interagency team, which must also be structured to accommodate coalition members and cultivate the remarkable diversity and broad chemistry that coalition organizations represent.

Inclusion of the full complement of national power and US coalition partners is not simply added for effect, but to enrich the MWC. This enrichment is derived from the views and opinions of non-military and international participants.

Differing from IO proper

Capability sets in the proposed MWC are quite different and advanced than those envisaged from current Information Operations within the US military. The fundamental difference lies in whom the MWC intends to target. Where current IO doctrinal targeting focuses on enemy forces and formations, the MWC targets a larger more diverse audience. Most significantly, the MWC intentionally targets noncombatants and seeks to provide a nonlinear method of cultivating or supplanting cultural ideas favoring the Joint Force. The use of memes is perhaps unintentionally and unofficially a small subcomponent of current IO dogma, but not studied or accepted as significant enough to merit a separate and distinct status with IO practitioners.

“...the ultimate strategic objective of offensive IO is to affect adversary or potential adversary decision makers to the degree that they will cease actions that threaten US national security interests. At the tactical, operational, and strategic levels, IO target and protect information, information transfer links, information gathering and processing nodes, and human decisional interaction with information systems.”

Joint Pub 3-13

In a broad sense the joint doctrinal excerpt above offers similar objectives to the aims of the MWC. But in a narrower view, the doctrine clearly focuses on enemy information and makes only tangential implication to a subject of significant interest to the MWC, ‘noncombatants.’ This delta is widened by the nature of

forces actually performing IO. Psychological Operations task forces have erupted on recent battlefields to conjure and execute complex IO campaigns. These Joint Psychological Operations Task Forces, (JPOTFs) are not standing peacetime organizations. In most cases, they are neither regionally focused nor staffed with large contingents of active duty personnel, as was the case with Combined Joint Task Force –180 in Bagram, Afghanistan during the spring of 2004.¹⁴ Within JPOTFs there has been scant employment of cultural anthropologists, economists, or social scientists. This chasm in subject matter expertise is the gap in which the MWC is partly designed to fill. By design, method and routine, the MWC seeks a richer analytical capability. There is insufficient structural and doctrinal background for a JPOTF organization to commence full spectrum nonlinear operations. Personnel are characterized best as ‘part-time executive level help,’ and little intellectual rigor to defend even the most creative and stunning IO campaign.

The MWC aims for a full spectrum capability of meme generation, analysis, quality control/assurance and organic transmission apparatus. The proposed MWC structure lays in stark contrast to the ad hoc nature of the JPOTF formations sprinkled throughout current real world US military operations. While the MWC is not a panacea, employing memes is designed to infect an entire organization with a renewed sense of capability in performing missions within a nonlinear battle space.

The aims of the new formation are to enable the Joint Force Commander the ability to fight on the logical nonlinear battlefield with the same prowess and cunning akin to the kinetic capabilities inherent to a Joint Force. Transcendent ideas and analysis of their emergent properties begs a formation organized to locate,

¹⁴ CJTF-180 CJPOTF author observation

close with and destroy the enemy within the metaphysical ethereal battle space fought over culture and ideals.

Conclusion and Recommendations

While meme acceptance remains elusive within the US military and largely the US government, the time has come to at least test the conceptual framework argued in this examination. Contemporary combat operations in Iraq, Afghanistan and the Horn of Africa offer ripe conditions to employ memes, if only as a test bed. Reshaping tomorrow's US military must encourage an alternative approach to warfighting and shifting to a mindset fully prepared to include all available national resources in order to gain advantage in the contest for human minds. By obvious implication, future battlefield application of memes will lean heavily on the intelligence community and other scientific disciplines, which are not traditionally members of a battle staff. Cognitive scientists, cultural anthropologists, behavior scientists, and game theory experts are the new professional meme wielding gunfighters, who can be organized, trained and equipped for future battlefields.

The US military must acknowledge the nature of future battlefields are inherently nonlinear and must adapt the force to achieve advantage within the contested territories of human minds. At the same time, the US must recognize the growing need for emerging disciplines in ideological warfare by 'weaponeering' cultural information, transmission and replication—in other words, using memes as weapons. While perhaps contentious, current US military Information Operations, PsyOps and Strategic Communications structure are inadequate to offer sophisticated combat methods to counter the nonlinear threats lurking inside the

minds of our enemies. Recent comments by the Secretary of Defense underline this chasm,

“Our enemies have skillfully adapted to fighting wars in today's media age, but for the most part we, our country, our government, has not.... the violent extremist[s] have established ‘media relations committees’—and have proven to be highly successful at manipulating opinion elites. They plan and design their headline-grabbing attacks using every means of communications to intimidate and break the collective will of free people.”¹⁵

The Meme Warfare Center offers a more complex and intellectually rich capability absent in current IO, PsyOps and SC formations and is specifically designed to combat the enemy’s sophistication as highlighted above. The emerging tools to win the metaphysical fight are memes. Managing, employing and leveraging memetic power is key for the US to shape and win on future battlefields.

¹⁵ Rumsfeld, Donald H., “War on Terror”, Speech to Council on Foreign Relations, 17 Feb, 2006, New York.

BIBLIOGRAPHY

Periodicals

- Barnett, S Anthony, *ISR. Interdisciplinary Science Reviews*. London: Summer 2002. Vol. 27, Iss. 2; pg. 125, 6 pgs.
- Blackmore, Susan. *Scientific American*. New York: Oct 2000. Vol.283, Iss. 4; pg. 64, 8 pgs
- Blackmore, Susan, Michael Bradie. *Free Inquiry*. Buffalo: Summer 2000. Vol.20, Iss. 3; pg. 42, 3 pgs
- Boxer, Sarah., *New York Times*. (Late Edition (East Coast)). New York, N.Y.: Oct 26, 2004. pg. E.1
- Cait, Anthony. *Science News*. Washington: Jan 2, 1999. Vol.155, Iss. 1; pg. 2, 1 pgs.
- Dawkins, Richard. *Time*. New York: Apr 19, 1999. Vol.153, Iss. 15; pg. 52, 2 pgs
- Dossey, Larry. *Alternative Therapies in Health and Medicine*. Aliso Viejo: Nov/Dec 2001. Vol.7, Iss. 6; pg. 12, 6 pgs
- Grimes, Robert G., *et Cetera*. Concord: Spring 1998. Vol.55, Iss. 1; pg. 30, 4 pgs
- Mann, Janet, *The Washington Post* (pre-1997 Full text). Washington, D.C.: Apr 27, 1996. pg. A.21
- Martin, Giles Col, French Army, *War in Algeria: The French Experience Military Review* Vol 85, No 4. pg 51-57.
- Nettle, Daniel, *Current Anthropology*. Chicago: Apr 2002. Vol. 43, Iss. 2; pg. 344, 3 pgs
- Richard J Pech, Bret W Slade. *Foresight : the Journal of Futures Studies, Strategic Thinking and Policy*. Bradford: 2005. Vol.7, Iss. 1; pg. 47, 14 pgs
- Pech, Richard J., *European Journal of Innovation Management* Bradford. : 2003. Vol . 6, Iss. 3; pg. 173, 9 pgs
- Pech, R.J., "Memetics and innovation: profit through balanced meme management", *European Journal of Innovation Management*, 2003, Vol. 6 No. 2.
- Silva, Dave. , *Los Angeles Times*. Los Angeles, Calif.: Mar 26, 1999. pg. 6, Letter to the Editor

....

Schmidt, Stanley. *Analog Science Fiction & Fact*. New York: Feb 2000. Vol.120, Iss 2; pg. 4, 5 pgs

Van Riper, Paul K., LtGen USMC (Ret) and Schmitt John F., presentation to MCCDC, September, 2005.

Voelpel, Sven C, Leibold, Marius, Streb, Christoph K., *Journal of Change Management*. London: Mar 2005. Vol.5, Iss. 1; pg. 57, 13 pgs

Websites

<http://www.jom-emit.org/>

<http://jom-emit.cfpm.org/>

<http://pespmc1.vub.ac.be/MEMES.html>

<http://users.lycaeuum.org/~sputnik/Memetics/>

<http://www.rubinghscience.org/memetics/dawkinsmemes.html>

<http://en.wikipedia.org/wiki/Meme>

<http://en.wikipedia.org/wiki/Memetics>

<http://viral-meme.info/>

Published Works

Auger, Robert "The Electric Meme: A New Theory of How We Think"

Blackmore, S. (1999), "The Meme Machine," Oxford University Press, Oxford.

Bloom, H. "Global Brain: The Evolution of Mass Mind from the Big Bang to the 21st Century," John Wiley & Sons, New York, NY. 2000.

Bloom H. "The Lucifer Principle" New York, NY: Atlantic Monthly Press; 1995.

Brodie, Richard, "Virus of the Mind: The New Science of the Meme"

Dawkins, R. (1976), "The Selfish Gene," Oxford University Press, Oxford.

Lynch, Aaron "Thought Contagion: How Belief Spreads Through Society."

Mattis, James M. MajGen, CG 1st Marine Division, Operation Iraqi Freedom I.

....

Nagl, John A, *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife*, Westport, Connecticut, Praeger, 2002.

Rumsfeld, Donald H., "War on Terror", Speech to Council on Foreign Relations, 17 Feb, 2006, New York.

Military Publications and Briefings

British Army Code No 71596 (part 2), Army Field Manual, Volume V, *Operations Other Than War*, Section B, *Counter Insurgency Operations*, Part 2, *The Conduct of Counter Insurgency Operations*, 2-1 through 2-2.

Department of Defense, *Information Operations Roadmap*, October 30, 2003, Secret [Excised].

Joint Publication, 3-13 Joint Doctrine for Information Operations. The Joint Staff, Washington DC 1998.

Joint Publication, 3-53 Joint Doctrine for Psychological Operations. The Joint Staff, Washington DC 2003.

Joint Publication, 3-61 Public Affairs, The Joint Staff, Washington DC, 9 May, 2005.

Field Manual No. 100-6, *Information Operations*, Headquarters Department of the Army Washington, DC, 27 August 1996