

Technology Sound not Technology Bound: The risks of over-  
reliance on modern military capabilities

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19 Feb 2009

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE <b>19 FEB 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>Technology Sound not Technology Bound: The risks of over-reliance on modern military capabilities</b>				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) <b>United States Marine Corps, Command and Staff College, Marine Corps University, 2076 South Street, Marine Corps Combat Development Command, Quantico, VA, 22134-5068</b>				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 <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>12</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

## INTRODUCTION

Technology and Bill Gates have a symbiotic relationship. Mr. Gates has been a key figure in the genesis of affordable, efficient and internationally known computers and associated software. In the same breath, one could say technology created Bill Gates, at least in the sense of notoriety. However, even Bill Gates, someone who has made a lucrative living through technology will tell you that it is merely a utensil. He once said, "Technology is just a tool, in terms of getting the kids working together and motivating them, the teacher is the most important."<sup>1</sup> A correlation can be drawn between teaching and leading. Both a teacher and a leader are responsible for the well-being of those in their charge. Therefore, it stands to reason that the leadership, to which a Marine is exposed, is far more critical to his development than technology.

The mastery of technology can evoke a false sense of superiority with regards to intelligence. Afterall, when the click of a mouse or the tap of a touch screen produces almost every conceivable piece of information, a sense of wisdom is the by-product. It hasn't always been this way. Gary Krug the author of Communication, Technology and Cultural Change, points out that for a long time, "... knowledge was considered not as a thing but as a process of engagement with the world."<sup>2</sup> Essentially, a knowledgeable person was not one who mastered

technology but instead was one who understood his world via experiences. A memory of a those times has faded as quickly as the ability to function without technology which insidiously pilfers opportunities to be engaged in the world.

### **BACKGROUND**

For nearly three centuries the United States Marine Corps has enjoyed a reputation built upon a bedrock of first-rate teamwork and leadership. The recipe for exceptional teamwork or leadership is not exclusive to the Marines. However, if one prescribes to the belief that teamwork and leadership require knowledge, as described previously, then one must concede that Marines have higher than average opportunities for engagement with the world in which they live. Thanks to the tools of technology those engagements are diminished in occurrence and value. During the majority of the Corps' history no mention can be found of Microsoft Office, PowerPoint, Computer Based Training (CBT), Blackberries, email, or cellular phones. Unfortunately, the Marine Corps' current over-reliance on capabilities limits leadership opportunities, promotes a divisive atmosphere and at times has hindered combat operations. A Marine Corps-wide degeneration of leadership and teamwork as well as reputation is bound to ensue if this trend toward techno-adoration goes unchecked.

### **LOSS OF LEADERSHIP OPPORTUNITIES**

Success as a leader requires an element of familiarity with those being led. Comprehension of this can be useful to those leading soldiers, sailors, airmen, and civilian employees. Additionally, it applies to leadership at all levels. Knowing what makes people tick is fundamental to determining the most effective means of motivation, inspiration and communication. Hence, the reason that knowing one's Marines and looking out for their welfare is a leadership principle.<sup>3</sup>

As an example, consider a fictitious Marine named Lance Corporal Fife who, as a child, lost his Father. Imagine that LCpl Fife's platoon commander, a year after first meeting him, asks, "So, how's your Mom and Dad?" This seemingly harmless question does not demonstrate that this particular leader has taken the time to get to know LCpl Fife? A certain level of confidence, in his leader, is lost by LCpl Fife.

With email that must be answered and PowerPoint presentations that need animating, the leadership within the United States Marine Corps does not spend as much time, as their pre-computer counterparts, getting to know those they may someday lead in combat. The distractions inherent in the form of technological advancement decrease opportunities to interact with one's Marines. To get to know someone, proximity to that

individual is required, computers and in this case emails do not provide that.

Another leadership opportunity lost is tied directly to the ever increasing reliance on computer-based training. What was once a Marine's job, to stand in front of a class and instruct, is being outsourced to a computer. The responsibility of the student to log into MarineNet or an equivalent platform for education is now more prevalent. Fewer, are the formal instruction forums which could have benefitted the instructor, i.e. dissecting the knowledge he/she wanted to teach, becoming a subject matter expert, and public speaking exposure.

#### **PROMOTION OF A DIVISIVE AND DISTRUSTFUL ATMOSPHERE**

People express emotions, beliefs, and mood through body language, intonation, and subtle gestures. These subtleties of communication, which often convey more than the words, are often lost when written communication is the chosen vehicle for the message. Take for example, an email or another form of written communication, where the reader perceives the writer's tone to be angry. Then, upon speaking to the writer it is realized that the actual tone intended to be conveyed was quite different from that perceived. Without clarification of the written message through

verbal or physical interaction there is much left to the reader's interpretation.

Within the military a reader's interpretation of the written message can cause problems ranging from distrust to a break down in unit cohesion. In an article by Mark Cantrell, posted to the military Officer's Association of America website, the author describes how a blog by an Army Sergeant named Hook was misinterpreted and led to dissention among his soldiers. In his blog Army Sergeant Hook wrote on the "challenges of leadership." His blog was misinterpreted by his soldiers and perceived to contain adverse comments about them.<sup>4</sup> This of course was not the message that Sergeant Hook intended to convey. However, when email or other written forms of communication are the chosen media to express oneself, is it any wonder that much of the intended message is lost? This is precisely why a leader who relies on email to accurately convey his intent will more often than not be displeased with the results.

#### **HINDERANCE OF COMBAT OPERATIONS**

The United States Marine Corps trains to maneuver warfare, an offensive style of warfare that relies on speed. Failure to anticipate coalition partners' incompatibilities and plan for alternate means of communication hampers operations. Failure to resolve these differences, because of an American unit's

inability to operate without advanced technology, creates significant road blocks in a coalition. These road blocks slow tempo. The result of which could be mission failure.

In an article by MajGen Robert H. Scales, USA titled "Trust not Technology Sustains Coalitions," he states, "interoperability of equipment and compatibility of doctrine and operational procedures pose significant challenges in any coalition."<sup>5</sup> He offers a historic example of "significant challenges" during the first Gulf War. In this particular case, it took 70 soldiers, 27 tons of equipment and 80 days of training and coordination just to create communication interoperability for an average brigade from a Middle Eastern nation.<sup>6</sup>

Eighty days is an unacceptable time lapse just to acquire the ability to communicate successfully, especially during combat operations. The Marine Corps, joint services or any member of the coalition cannot afford this type of delay and not eventually pay for it with one commodity common to all: lives and blood.

Given the case presented by General Scales, a reasonable commander is justified in being upset if it takes 80 days, in a joint fight, to be able to communicate with that Middle Eastern brigade. If that Middle Eastern brigade was a supporting effort to a key phase of the operation, that same commander would want to talk to them sooner rather than later. He likely would not



care if that coordination was via SatCom, VHF or smoke signals as long as it was effective in conveying his intent.

Another type of danger to maneuver warfare brought about by technology is covered in depth by Capt Michael Skaggs, USMC who paraphrases S. L. A. Marshall's Men against Fire. Skaggs states, "many U.S. company commanders in the Pacific were under constant pressure from headquarters to report information. Worse yet, they were often ordered to take tactical action based on the headquarters' estimates of the situation."<sup>7</sup> In a modern military, equipped with command and control technology such as Blue Force Tracker, centralized control is more likely. A headquarters' perception of the situation provided by command and control PC is a threat to the tactical commander whose immersion in the situation is far more accurate. That perception can, in many cases, become the catalyst for the abandonment of decentralized control and in turn lead to a tactical defeat.

#### **COUNTER ARGUMENT AND CONCLUSION**

The other side of the coin has many positives with regards to the way technology is employed in the military. Technology provides the individual with a vast amount of information at the click of a mouse but that does not guarantee knowledge. The knowledge most required is best gleaned by experience and

interacting with those in the leader's charge. Sitting behind a computer does not facilitate that interaction. Technology enables the individual to sit at his/her desk and convey orders, thoughts, or opinions en masse through email. However, that message is not the same as one delivered through verbal or physical interaction. Finally, the speed with which we can communicate has increased exponentially. That is providing that the electronic and communication equipment is compatible. If not compatible, then a reason for concern exists since the Corps has become more reliant on its own computers and advanced communications equipment.

The advent of the artificial heart did not prompt millions to abandon heart healthy lifestyles, eventually leading to a spike in heart disease, and an alarming number of transplants. Some people do of course need the technology to survive. However, when touting the benefits of the artificial heart there is one major downside. The artificial heart is a poor substitute for the original, considering that the longest living recipient, Peter Houghton, survived just over seven years.<sup>8</sup> A system is designed to function in a specific way with specific components. The modern military capabilities are not listed among the original mechanisms that fostered leadership, built camaraderie, or brought success on the battlefield. Yet, the United States Marine Corps continues to march toward obscurity led at a

lightning pace by those technological capabilities that will prove to be its undoing.

**Endnotes**

1. "technology quotes," Google Search Online, <[http://thinkexist.com/quotes/Bill\\_Gates](http://thinkexist.com/quotes/Bill_Gates)> (5 December 2008).
2. Gary Krug, *Communication, Technology and Cultural Change* (London: Sage, 2005), 12.
3. FMFM 1-0 Leading Marines (MCWP 6-11)
4. Mark Cantrell, "More Than Just a Blog," from "Blogging in the Military," "Today's Officer," (2006) <<http://www.moaa.org/TodaysOfficer/magazine/fall2006/blogging.asp>>
5. Robert H Scales, "Trust, not technology, sustains coalitions," *Parameters*, Carlisle Barracks: Winter 1998/99. Vol. 28, Iss.4. Proquest (5 December 2008)
6. Major General Robert H. Scales, Jr., Chairman's Peace Operations Seminar, Carlisle Barracks, Pa., 11 June 1998. Proquest (5 December 2008).
7. Michael D Skaggs, "Digital command and control: Cyber leash or maneuver warfare facilitator?" *Marine Corps Gazette* 87, no.6 (2003): 46, Proquest (5 December 2008).
8. Thomas H. Maugh II "Longest-living recipient of an artificial heart worldwide," *Los Angeles Times*, 7 December 2007, sec B-10

### **Bibliography**

Arndt, Stephanie R. "Marine Bloggers." *Marine Corps Gazette* 91, no.9, (2007): 9, Proquest (5 December 2008)

Diebold, John. *Man and the Computer*. New York: Frederick A. Praeger, 1969

FMFM 1-0 Leading Marines (MCWP 6-11)

Hall, Edward T. *The Silent Language*. New York: Doubleday and Co, Inc, 1959

Krug, Gary. *Communication, Technology and Cultural Change*. London: Sage, 2005

Lazarus, Sy. *Loud and Clear. A Guide to Effective Communication* New York: Amacom, 1975

Perelman, Michael. *Class Warfare in the Information Age*. New York: St. Martin's, 1998

Maugh II, Thomas. "Longest-living recipient of an artificial heart worldwide," *Los Angeles Times*, 7 December 2007, sec B-10

Mesthene, Emmanuel J. *Technological Change: Its Impact on Man and Society*. Cambridge, 1970

Scales, Robert H. "Trust, Not Technology, Sustains Coalitions." *Parameters*, Carlisle Barracks: Winter 1998/99. Vol. 28, Iss.4. Proquest (5 December 2008)

Scales, Robert H. Chairman's Peace Operations Seminar, Carlisle Barracks, Pa., 11 June 1998. Proquest (5 December 2008).

Skaggs, Michael D. "Digital command and control: Cyber leash or maneuver warfare facilitator?" *Marine Corps Gazette* 87, no.6 (2003): 46, Proquest (5 December 2008).

"technology quotes." Google Search Online. 2008.  
<[http://thinkexist.com/quotes/Bill\\_Gates](http://thinkexist.com/quotes/Bill_Gates)> (5 December 2008).