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**The perils of Network-Centric Warfare:  
Micromanagement, Morale and  
Combat Power in the age of information  
technology**

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## Abstract

Network-Centric Warfare (NCW), the leading-edge technology of U.S. Forces receives widespread attention throughout the media. However, it is difficult to find a noticeable number of sources, which address potential or already proven shortcomings of NCW in respect to interaction with the human operator.

The aim of this essay is to prove that some of the technological implications of network centric warfare invite micromanagement, which can degrade troop morale and as a result affect the combat power of military units. It will also be discussed that micromanagement is a personal driven and thus an avoidable approach to leadership. By concentrating on the relevant technological implications (speed through networking, shared battle-space awareness) it will be demonstrated how NCW has a proven high potential to invite micromanagement. Sources from the military and the corporate world will establish the link between micromanagement, the degradation of morale and the resulting degrading effects on combat power.

“Micromanagement within Network Centric Warfare? This subject is so messy, no one even wants to talk about it!”<sup>1</sup>

Dr. Norman Friedman

“Because you can control from the top you will control from the top!”<sup>2</sup>

Wayne P. Hughes

When renowned U.S. defense theorists make such clear and concise statements about the possible downsides of Network Centric Warfare (NCW) technology, which represents the critical centerpiece of U.S. military transformation, it simply generates inescapable attention. Were these limitations or potential dangers within the NCW framework overlooked or are they, moreover, implicit to this technological development and thus an unavoidable byproduct?

Shared situational awareness through data fusion and net-wide, real time connectivity are but some of the implications of NCW. All participants within the net protocol have access to the same information and their connectivity enables unsurpassed speeds of control and execution. This characteristic however can have huge implications, because senior commanders, due to their higher level of professional experience and responsibility can easily find themselves in a position where they extend their direct control to the lowest levels of the military hierarchy, whether they have a sound situational understanding or not.

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<sup>1</sup>Dr. Norman Friedman, lecture and question and answer period at Canadian Forces College, 24<sup>th</sup> February 2004.

<sup>2</sup>Capt. Wayne P. Hughes Jr., USN (Ret.), lecture and question and answer period at Canadian Forces College, 1<sup>st</sup> March 2004.

One could argue that it will be almost exclusively up to the U.S. military to tackle such problems because only they have enthusiastically embraced and fully implemented the NCW concept within their armed forces. However, if military middle powers will remain relevant as serious force contributors within a multinational context they will have to maintain the capability to conduct military operations within what will most likely be a U.S. led coalition framework.

In order to come to terms with NCW, we must understand the potential of this technological revolution. However, at the same time we must critically address the implications and the possible limitations of this cutting edge technology.

The aim of this essay is to prove that some of the technological implications of network centric warfare invite micromanagement, which can degrade troop morale and as a result affect the combat power of military units.

Defining the relevant areas of NCW and the respective interactions within a typical NCW-architecture will provide the basis for discussion, which will serve to support the thesis statement. Recently fought campaigns in Kosovo and Afghanistan will demonstrate, how the advent of NCW technology creates a permissive environment for micromanagement. Having demonstrated how some of the implications of NCW can invite micromanagement, specific examples from the corporate world<sup>3</sup> will exemplify how micromanagement can undermine the morale of members within an organization. Finally, it will be demonstrated how a degraded morale can affect the combat power of military forces.

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<sup>3</sup>Dr. Friedman's comment belies the fact, that a scientific discussion which addresses the potential for micromanagement within a NCW architecture has yet to occur. It is therefore not surprising that sources, which establish a direct link between some of the inherent implications of NCW and their effects on troop morale are very difficult to obtain.

It will become apparent during this discussion that the majority of the sources used within this paper are written from a U.S. perspective, representing a distinctively ground forces centric point of view. Before it can be discussed, how some of the technological implications of NCW invite micromanagement, which in turn can degrade troop morale and affect combat power within military units, some definitions will have to be made. The meaning of morale, micromanagement, combat power and NCW as well as their relevant implications will now be defined.

The WordNet dictionary lists morale as the spirit of a group that makes the individual members want to succeed.<sup>4</sup> Morale is a state of individual psychological well being based upon the sense of confidence, usefulness and purpose within an individual or a group. Esprit de corps, cohesion and team spirit are listed as Synonyms.<sup>5</sup> According to Cox, U.S. Army researchers contend that morale or the ‘human spirit’ as they define it, acts as a combat multiplier.<sup>6</sup>

Micromanagers, according to Blencoe, “give employees tasks to do and then meddle by overanalyzing every minute detail involved with the job in order to make sure that it is done right<sup>7</sup>”. Decisions are constantly second guessed, individual problem

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<sup>4</sup>“Morale”, *WordNet Dictionary in hyperdictionary*, [dictionary on-line]; available from <http://www.hyperdictionary.com/dictionary/morale>; Internet; accessed 04 April 2004.

<sup>5</sup>Ibid.

<sup>6</sup>Alexander A. Cox, *Unit Cohesion and Morale in Combat: Survival in a Culturally and Heterogeneous Environment*, Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, KS: (1996): 5.

<sup>7</sup>Gregory, J. Blencoe, *Are You a Micromanager?*, Lkd., *Business Dynamics Network*, [journal on-line]; available from [http://www.business-dynamics.com/resource\\_library/Business\\_Resources/243.html](http://www.business-dynamics.com/resource_library/Business_Resources/243.html); Internet; accessed 14 March 2004.

solving is shunned, and trust is thrown out the window<sup>8</sup>”. Although taken from a corporate background this definition holds credence within the military environment.

Rosenberg defines Combat Power as “the sum of the quantitative and qualitative factors, both internal and external, that affect the organization’s ability to accomplish a mission.<sup>9</sup>” Vaughn also notes that, “an Australian army manual refers to morale as the ‘force multiplier of combat power.<sup>10</sup>”

According to Dahl, NCW escapes an easy definition, because its leading advocates are loathe addressing the question of what it actually means.<sup>11</sup> Nevertheless, Cebrowski, the “Godfather of NCW”<sup>12</sup> and Garstka define NCW as follows:

NCW is about human and organizational behavior. NCW is based on adopting a new way of thinking – network centric thinking- and applying it to military operations. NCW focuses on the combat power that can be generated from the effective linking or networking of the war fighting enterprise. It is characterized by the ability of geographically dispersed forces (consisting of entities) to create a high level of shared battle space awareness that can be exploited via self-synchronization and other network-centric operations to achieve commander’s intent.<sup>13</sup>

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<sup>8</sup> Gregory, J. Blencoe, *Are You a Micromanager?*, Lkd., *Business Dynamics Network*, [journal on-line]; available from [http://www.business-dynamics.com/resource\\_library/Business\\_Resources/243.html](http://www.business-dynamics.com/resource_library/Business_Resources/243.html); Internet; accessed 14 March 2004.

<sup>9</sup>Ralph G. Rosenberg, *Relative Combat Power*, *Military Review*, (March 1978): 56.

<sup>10</sup>Thomas B. Vaughn, “Morale: The 10<sup>th</sup> Principle of War?”, *Military Review*, (May 1983): 38.

<sup>11</sup>Erik J Dahl,., *Network Centric Warfare and the Death of the Operational Art*. Paper, U.S. Naval War College, Newport, RI, (November 2001), 1.

<sup>12</sup>Dr. Paul Mitchell, *Small Navies and Network-Centric Warfare: Is there a role?*, [on-line]; available from <http://www.nwc.navy.mil/press/Review/2003/Spring/art5-sp3.htm>; Internet; accessed 11 March 2004.

<sup>13</sup>Arthur K. Cebrowski and John J.Garstka, *Network Centric Warfare: Its Origin and Future*, *Proceedings of the U.S. Naval Institute* 124:1, (January 1998), 28-35.

According to this definition, the technological implications of this technology are:

- Combat power through networking of war fighters (Resulting in increased speed of communications and conduct of operations and flatter hierarchies)
- Shared battle-space awareness (through a common operating picture)
- Self-synchronization

According to NCW critics, the supposed increase of speed of execution in net-centric operations and the shared battle-space awareness has the potential to cause problems by creating favorable conditions for micromanagement. This paper will show that this effect can affect troop morale and as a result affect combat power.

Smith contends that current technological revolutions in sensor technology, information and weapons technology interact, multiply each other and create a kaleidoscope of potential synergies that will profoundly change the nature of war as we know it.<sup>14</sup> Network-centric operations, therefore, can be conducted with increased and so far unrivaled speed and precision.<sup>15</sup> This speed of operations can be maintained on a global scale among widely dispersed net-entities. Distances are not an impediment anymore; hierarchies can dissolve quickly because networking enables dramatic shortcuts of communication through several hierarchical layers. Thus orders can be given in real-time, no matter how far the net-members are geographically separated from one another.

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<sup>14</sup>Edward A. Smith, *Network-Centric Warfare: What's the Point?*, Naval War College Review 54, no. 1 (Winter 2001): 60-61.

<sup>15</sup> Ibid.



Access to every net-participant can be established swiftly and without significant effort, because all net-participants are directly connected to each other. Superiors

Thus this implication of NCW has the potential to invite micromanagement because it facilitates so far unachievable access through the layers of hierarchy. This paper will demonstrate how this propensity to micromanagement can affect troop morale and degrade combat power.

According to critics, it is the availability of a constant data flow translated into a permanently updated common operating picture (COP) and the resulting shared battle-space awareness, which can also attribute to an increased occurrence of micromanagement within a NCW architecture.

In regards to the COP Professor Milan Vego of the Naval War College argues:

“Having a common operating picture will lead operational commanders to be increasingly involved in purely tactical decisions, instead of focusing on the operational and strategic aspects of the situation.”<sup>16</sup>

The Capstone Concept remarks that power, speed and the system oriented focus of network-centric operations will erode the traditional lines between the strategic, operational and tactical levels of war.<sup>17</sup> Thanks to the network, senior military leaders have the same battle space awareness and access to the same COP as all the other participants within the network structure. Their seniority enables them to exert control over actions well below their hierarchical level down to tactical situations.<sup>18</sup>

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<sup>16</sup>Milan Vego, *Net-Centric is Not Decisive*, United States Naval Institute Proceedings 129, (January 2003): 56.

<sup>17</sup>Capstone Concept (note 4), 12.

<sup>18</sup>Erik J. Dahl, *Network Centric Warfare and the Death of the Operational Art*. U.S. Naval War College, Newport, RI, (November 2001): 9.

So far it has been discussed how two of the technological implications of NCW – Networking and shared battle space awareness- can actually create a permissive environment for micromanagement.

Such permissive conditions will have a seducing effect on commanders who favor or rely on micromanagement as part of their leadership repertoire. One crucial distinction has to be made though. The desire to gain and to constantly update information should not be confused with micromanagement of ongoing proceedings. Generally speaking a prudent and vigilant commander should always and aggressively strive to gain a maximum amount of information pertaining to his area of responsibility.

However, only the will to micromanage, the intent to interfere with the responsibilities of subordinate personnel will grant him or her the “title” micromanager. Micromanagement therefore represents a choice in leadership style; it is not an inescapable necessity.

In the age of NCW it now literally depends upon the personality of the individual commander/decision-maker and his will, if he does or does not intervene within the areas of subordinated responsibility. The temptation to intervene though can be considered as relatively high. This is partly due to the ease of access provided by net wide connectivity but also because of additional promises some of the leading NCW advocates promote. According to these supporters NCW technology has massive potential to reduce the amount of uncertainty within the modern battle-space.

Admiral William Owens has made the clearest argument that the dictums of Clausewitzian fog and friction of war will belong to the past.<sup>19</sup> He remarks that the

commander will now be aware of the precise location and activity of enemy units at any weather, even when the enemy intends to conceal his movements.<sup>20</sup> At the same time the commander will have instant access to information about U.S. military force and its movements, thus enabling him to prosecute the enemy with only minor delay.<sup>21</sup>

Indeed such prospects are very encouraging to the concerned military leader in his quest to overcome –uncertainty-, the natural enemy of any decision-maker. Springett observed that the NCW paradigm provides a tempting vision for political leaders and military commanders alike, because it holds and fulfills the promise to enable theatre-wide leadership from a geographically remote, yet well-connected command center.<sup>22</sup> NCW technology does provide the command staff with a definitive display of ongoing operations and a direct and multiple communications link into theatre and out to every echelon of U.S. forces.<sup>23</sup> And this is exactly the stated vision of NCW proponents – a comprehensive command and control network that directs control over military forces up to the highest echelons of military or political leadership.<sup>24</sup> The “unsupervised” officer at the tactical level, whose actions might turn himself into a liability for his senior military and political leadership, will no longer be a source of concern for senior decision-makers.

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<sup>19</sup>William Owens and Ed Offley, Ed, *Lifting the Fog of War*,( New York: Farrar, Straus and Giroux, 2000), 14-15.

<sup>20</sup>Ibid.

<sup>21</sup>Ibid.

<sup>22</sup>John P. Springett II, *Network Centric – War without Art*, United States Naval Institute Proceedings, (February 2004): 59.

<sup>23</sup>Ibid.

<sup>24</sup>Ibid.

NCW-technology delivers the promise that control can be exercised from the highest strategic levels down to the tactical arena of operations.

This eventually will create what Milan Vego deemed the “tactization” of strategy – where strategy is poised to be defined by tactical considerations.<sup>25</sup>

Zimet, Armstrong, Daniel and Mait furthermore point to the interesting paradox that network centric technology enables a fast distribution of data and information to other network participants, thereby encouraging distributed decisions.<sup>26</sup> However, this characteristic also permits interactive decision-making throughout the network, thus inviting micromanagement from the higher command echelon.<sup>27</sup>

In this last part it was discussed that some of the aforementioned technological implications of NCW can create a permissive environment for micromanaging to come into effect. The tendency to choose micromanagement as a leadership style though is personality driven. However, the connectivity within the NCW architecture, the COP and the promise of NCW advocates, that the Clausewitzian elements of fog and friction will not unfold within NCW architecture. This altogether makes micromanagement a very tempting option for any commander who has concerns about the performance of his subordinates.

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<sup>25</sup>Milan Vego, *Net-Centric is Not Decisive*, United States Naval Institute Proceedings 129, (January 2003): 53.

<sup>26</sup> Elihu Zimet, Robert E. Armstrong, , Donald C. Daniel and Joseph N. Mait, *Technology, Transformation and New Operational Concepts*, Defense Horizons, [journal on-line]; available from [http://www.ndu.edu/inss/DefHor/DH31/DH\\_31.htm](http://www.ndu.edu/inss/DefHor/DH31/DH_31.htm); Internet;accessed 23 February 2004.

<sup>27</sup> Ibid.

Examples of previously conducted military operations and the extent of micro-management conducted will lend further credence to the fact that already discussed implications of NCW are very likely to invite micromanagement.

We will now focus on the Kososvo air campaign (OPERATION ALLIED FORCE), which was conducted in 1999. This campaign, fought by various NATO allies, provides interesting examples for repeated cases of micromanagement from the senior military leadership and the ease of interference due to the connectivity provided by NCW-technology. This recently conducted military operation teaches an interesting lesson about how micromanaging is also inexorably linked to the personality and character of the particular commander.

The U.S. Department of Defense report to Congress remarks that the air campaign over Kosovo was by far the most “connected” conflict the United States had fought up to the present. Thus this conflict is well suited to teach some interesting lessons about the inherent perils of NCW and the debilitating and in some instances even ridiculous cases of micromanagement. The focal military commander during this conflict, Supreme Allied Commander Europe (SACEUR), General Wesley Clark, became well known for his micromanaging activities.

His behavior revealed the belief that operational and tactical decisions could have a strategic impact. His actions in his position as SACEUR however were overshadowed by the enormous burden to keep a rather brittle, reluctant and diverging NATO-alliance united before and during the course of this conflict.<sup>28</sup>

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<sup>28</sup>Wesley K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat* (Public Affairs, New York, 2001), 420.

In his own words and in regards to the impact of tactical events on the higher ranking levels of war General Clark remarked:

What we discovered increasingly was that the political and strategic levels impinged on the operational and tactical levels...sometimes even seemingly insignificant tactical events packed huge political wallop. This is a key characteristic of modern war.<sup>29</sup>

General Clark backed up this observation with corresponding actions. In his case the NCW technology facilitated micromanagement, thus representing his deliberate choice for intervention into lower levels of command.

Rather than trusting his subordinate commanders to adhere to his guiding outline giving them ample latitude to come to reasonable decisions, he decided to micromanage into their areas of responsibility.<sup>30</sup> The connectivity provided by NCW means such as Unmanned Aerial Vehicle [UAV] live videos, Video Television Conferencing [VTC] and access to enormous amount of data via the SIPRNET [Secret Internet Protocol Routing Network] enabled him to conduct micromanagement down to the tactical level of operations.

General Clark was often directly involved in the targeting process, which in some cases led to engagement delays of up to 14 days. Thus he could circumvent various levels of command in what can only be described as an interventionist shortcut of the highest order. Woodcock points to a very remarkable event during this conflict.<sup>31</sup>

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<sup>29</sup>Wesley K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat*, (Public Affairs, New York, 2001), 10-11.

<sup>30</sup>Benjamin S. Lambeth, *NATO's Air War for Kosovo: A Strategic and Operational Assessment*, (Santa Monica, CA: Rand, 2001), 210.

In his office at SHAPE (Supreme Headquarters Allied Powers Europe) General Clark used to have video screens which enabled him to view in real-time what the airborne sensors of U.S. Air Force “Predator” UAV’s were detecting.<sup>32</sup> Woodcock’s interview with the Kosovo Air campaigns JFACC, Lieutenant General Mike Short revealed that during one UAV-mission General Clark had detected three tank-like vehicles while working at his desk.<sup>33</sup> Without further delay he called the JFACC and directed that those three vehicles had to be destroyed immediately.<sup>34</sup>

Especially this very specific example gives a good understanding of what NCW technology can provide to the concerned and micromanaging military leader.

A more recent example of a military campaign after the events of September the 11<sup>th</sup> is also suitable to illustrate how NCW and its technological implications invite micromanagement.

During OPERATION ANACONDA in November 2001 in Afghanistan the U.S. Air Force airplanes actually had high echelon Taliban and al-Qaeda operatives repeatedly (most ten times) in their weapon sights, but were not allowed to engage these targets.<sup>35</sup> The clearance for target engagement from U.S. CENTCOM in Tampa, Florida via real-time links did not arrive in time to prosecute these high value targets.<sup>36</sup>

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<sup>31</sup> William A. Woodcock, *The Joint Forces Air Command Problem: Is Network-centric warfare the Answer?*[journal on-line]; available from <http://www.ncw.navy.mil/press/Review/2003/Winter/art5-w03.ht>, Internet; accessed 23 February 2004.

<sup>32</sup>Ibid.

<sup>33</sup>Ibid.

<sup>34</sup>Ibid.

<sup>35</sup>Oren Harrari, *The Leadership secrets of Colin Powell*, (New York, Mc Graw & Hill, 2002, 185.

Thus the initiative and with it precious opportunities were simply lost because engagements had to be delayed for reasons which can only be deemed as “global micromanaging”.

Milan Vego remarks that the theater commander during that operation did not delegate authority by establishing an intermediate level of command close to the combat area.<sup>37</sup> Moreover, the netting of forces led to a further centralization of decision-making at all levels.<sup>38</sup> NCW technology enabled the Commander CENTCOM, General Franks to direct U.S. forces at the tactical level in geographically remote areas in the mountainous regions of Afghanistan. It is therefore not surprising that Major General Hagenbeck, the senior ground commander in Afghanistan, described the micromanagement conducted by CENTCOM during OPERATION ANACOANDA as very “disruptive”.<sup>39</sup>

A report of U.S. Marine Corps, reflecting the lessons learned from the war in Afghanistan also expresses serious concern about the inflexible command structures and the amount of micromanagement conducted during that operation.<sup>40</sup>

The Afghanistan campaign strikingly illustrates how, the major advantage of NCW operations, the inherent potential to conduct military operations at so far unrivaled

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<sup>36</sup> Oren Harrari, *The Leadership secrets of Colin Powell*, (New York, Mc Graw & Hill, 2002, 185.

<sup>37</sup> Milan Vego, *Net-Centric is Not Decisive*, United States Naval Institute Proceedings 129, (January 2003): 53.

<sup>38</sup> Milan Vego, *Net-Centric is Not Decisive*, United States Naval Institute Proceedings 129, (January 2003): 53.

<sup>39</sup> Ricks, Thomas E., *Beaming the Battlefield back home*, Washington Post, 26 March 2002.

<sup>40</sup> Neue Zuericher Zeitung, *Afghanistan-Operation mit Friktionen?: Kritik des U.S. Marine Corps am Central Command*, (07 August 2002) [journal on-line]; available from <http://www.nzz.ch/dossiersAfghanistan/2002.07.08-al-article89DG0.ht>, accessed 21 January 2004.



speed, was actually lost due to the severe impediment of micromanagement from spatially detached headquarters.

However, the critical analysis of the impact of NCW in both campaigns gives a clear hint that micromanagement and technology as the facilitator are inseparably linked and here to stay. The chosen examples of recently fought military campaigns serves to illustrate that the increased communications capability combined with shared situational awareness recently made it possible for senior leaders to direct actions at the tactical level, thereby gaining the doubtful reputation of being micromanagers.

Nevertheless we have to question ourselves critically if micromanagement really is all that disruptive and impractical for those who are exposed to it. Are there not circumstances imaginable, when senior leaders should or literally must influence military operations to the lowest tactical level possible simply because there is too much at stake in a political sense? Dahl remarks that some NCW advocates see great benefits from the “interference potential” provided by NCW technology.<sup>41</sup> This is because tactical commanders really may no longer have the best information about the battlespace they operate in.<sup>42</sup> Senior leaders may now actually be in a position to assist their subordinates in accomplishing their tasks because they can rely on a greater situational awareness and more professional experience.<sup>43</sup>

Operational failures such as the loss of American lives in Somalia in 1993 or the accidental bombing of the Chinese embassy in Belgrade during the Kosovo air campaign

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<sup>41</sup>Erik J.Dahl, *Network Centric Warfare and the Death of the Operational Art*. Paper, U.S. Naval War College, Newport, RI, November 2001, 8.

<sup>42</sup>Ibid.

<sup>43</sup>Ibid.

in 1999 could have been avoided, if more micromanagement would have been conducted by senior military leaders.<sup>44</sup>

The question to be answered is: Under which circumstances is micro-management justifiable? Milan Vego remarks that there are rare occasions imaginable when strategic or operational leaders should interfere. However, this should only take place when decisions made at the tactical level could severely affect the outcome of the mission.<sup>45</sup> A high risk of collateral damage or actions, which could endanger the cohesion of a fighting military alliance, could therefore be two absolutely justifiable scenarios for high-level interventions and micromanagement from top-down.

NCW technology and its inherent potential for micromanagement could actually help a basic principle of all free societies to prevail – the primacy of politics. If senior political or military leaders have the impression or solid proof, that direct intervention even down to the tactical level will be more effective than pure reliance on rules of engagement, the likelihood of their intervention will be extremely high. The intervention from the “head of state”, who bears the final responsibility for military action of the nation he was elected to lead, could now actually be ensured to a much higher degree than ever before.

So far this paper has shown that NCW technology provides unprecedented before achievable conditions, which allow for micromanagement by senior military leaders. However, it must be considered that circumstances can arise where more instead of less

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<sup>44</sup>Erik J. Dahl, *Network Centric Warfare and the Death of the Operational Art*. Paper, U.S. Naval War College, Newport, RI, November 2001, 8.

<sup>45</sup>Milan Vego, Milan, *Operational Warfare*, Newport: Naval War College, 2000, 579.

micromanagement reaps significant benefits, because the consequences of failure are not tolerable from a political perspective. It is obvious however, that networking and shared awareness as provided by NCW technology provides ideal conditions for micromanagement to occur.

It will now be discussed how the already described technological implications of network centric warfare, which invite micromanagement, can degrade the morale of members within an organization.

In order to establish the link between micromanagement and its effects on morale it is beneficial to take a closer look at the corporate world. Obvious similarities between these two different work environments in respect to the occurrence of micromanagement justify that approach.

A 1995 study by the University of Louisiana of civilian entrepreneurs, revealed a major tendency towards micro-management among the civilian managers the survey focussed on.<sup>46</sup>

The results proved that micromanagement severely affected and degraded morale among subordinates because it betrayed a lack of trust into their abilities.<sup>47</sup> It became obvious that such behavior impedes on flexibility and decision-making of the subordinate level.<sup>48</sup> Fred Nichols, a senior consultant and subject matter expert warns that, in the environment of micromanagement “people will not act or are even afraid to act. Then problems don’t get worked out, and everything gets escalated to the top. Eventually,

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<sup>46</sup>Mark Henricks, *Span of Control: How many employees directly reporting to you is too many?*, (January 2001); available from [http://www.entrepreneur.com/Magazines/MA\\_Seg/Article/0,1539,285040----2-,00html](http://www.entrepreneur.com/Magazines/MA_Seg/Article/0,1539,285040----2-,00html), Internet; accessed 23 February 2004.

<sup>47</sup>Ibid.

<sup>48</sup>Ibid.

you're not going to be able to respond.”<sup>49</sup> However, is there anything worse imaginable for a military organization than a lack of agility, responsiveness and problem solving attitude, because of the fear that the actions taken might potentially lead to failure?

Richard L. Porterfield, owner and CEO of Porterfield Consulting Solutions LLC additionally observed that professionals consistently list micromanaging as one of the leading three “misery” factors, which cause low morale and eventually lead to employee resignation. He furthermore observed the following effects of micromanagement on organizations:<sup>50</sup>

The organization also suffers, because micromanagers are not providing leadership.....In most businesses today the greatest asset, the greatest competitive edge, is the skill of the organization’s employees. Micromanaged organizations do not have this edge. As noted above, micromanagement leads to high turnover, low morale, poor quality and low productivity.<sup>51</sup>

Micromanagement and the likelihood for a degradation of mo

proportions within the U.S. Army.<sup>53</sup> Officers in the captains' range feel subjected to micromanagement on a constant basis, thus undermining their motivation and morale.<sup>54</sup> According to this survey, micro-management is seen as the "killer" on the frontline because simply too many events are directed from above.<sup>55</sup> All questioned participants (760) felt that micro-management was present at all levels.<sup>56</sup>

Although this last study did not establish a direct link between the effects of NCW and the effect on troop morale, it is obvious that a social environment with a high degree of micromanagement displays a significant lack of trust towards the abilities of the particular subordinates. This lack of trust, will severely affect morale, esprit de corps and unit cohesion within an organization.

The three discussed examples serve to illustrate how micromanagement impacts on the morale of those who are exposed to this leadership approach. Dr. Friedman's opening comments gives a clear indication of how difficult it is to find evidence, which could be directly used to establish the link between micromanagement and the negative impact on morale within the NCW arena. Out of this necessity the author, after having discussed NCW's potential for micromanagement, could not entirely rely on the findings of the U.S. Army's leadership survey. Thus he added two examples with a corporate perspective to establish the connection between micromanagement and its negative effects on morale.

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<sup>53</sup>Army Leadership Survey Comments, *Chief of Staff of the Army's Leadership Survey*, [online]; available from [http://www.d-n-i.net/fcs/leadership\\_comments.ht](http://www.d-n-i.net/fcs/leadership_comments.ht); Internet; accessed 24 February 2004.

<sup>54</sup>Ibid.

<sup>55</sup>Ibid.

<sup>56</sup>Army Leadership Survey Comments, *Chief of Staff of the Army's Leadership Survey*, [online]; available from [http://www.d-n-i.net/fcs/leadership\\_comments.ht](http://www.d-n-i.net/fcs/leadership_comments.ht); Internet; accessed 24 February 2004.

However, what makes morale such an indispensable element for a military organization? Napoleon Bonaparte's, the grandmaster of military experience at every level of war clearly demonstrated that he understood the importance of morale. Two of his most famous quotes on the subject are presented for clarification:

Morale makes up three quarters of the game: the relative balance of man-power accounts only for the remaining quarter...In war, everything depends on morale; and morale and public opinion comprise the better part of reality.<sup>57</sup>

One could argue that Napoleon's statements about the importance of morale lost their relevance altogether because they date back to an era where technology did not have such a significant impact on war fighting as today. It can be recognized though, that Napoleon clearly identified a connection between morale and combat power.

However, there are more recent examples, which attest to the importance of morale. As observed by Vaughn, the Australian army manual entitled *Combat Power* devotes an entire chapter to the definition and meaning of 'morale', which is clearly defined as 'the force multiplier of combat power.'<sup>58</sup>

Although dating back to 1911, von Freytag-Loringhoven's classic work, *The Power of Personality in War*, takes a specific look at the role of the human being in combat. He observed that, "In the future as in the past, war will be conducted man against man; the form will change, the essence will not."<sup>59</sup>

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<sup>57</sup>Robert D. Heinl, Jr., *Dictionary of Military and Naval Quotations*, (Annapolis: United States Naval Institute, 1966), 166.

<sup>58</sup>Thomas B. Vaughn, *Morale: The 10<sup>th</sup> Principle of War?*, *Military Review* (1983), 37.

<sup>59</sup>Hugo von Freytag-Loringhoven, *The Power of Personality in War*, trans. Historical Section, Army War College, *Roots of Strategy*, Book 3 (Harrisburg, PA: Stockploe Books 1938): 276.

These last examples demonstrated and addressed the importance and the almost timeless quality of morale and its synonymous qualities such as esprit de corps and cohesion and their effects on the degree of available fighting power. Moreover it became evident, that morale is not a constant and given component but a rather perishable but nonetheless absolutely crucial component in the equation of warfare. Morale as component is of such importance for the evolution and maintenance of combat power, that it can be rated as force multiplier of this element.

It is therefore of utmost importance to investigate, how modern technology with its inherent implications impacts on the interactive human-centric process.

The purpose of this paper was to research, how NCW and some of its implications affect morale and the interrelated component of combat power. The high potential of NCW in regards to the occurrence of micromanagement was theoretically discussed and further exemplified with the experience of recently fought conflicts. After that the link between micromanagement and its effects on morale were established. The last portion of this paper discussed the interrelation between the mental component of morale and its associated effects on combat power.

The conducted research showed that some of the technological implications of NCW (Speed of communication, shared battle space awareness, flatter hierarchies) create a permissive environment where micromanagement due to the facilitating role of technology can easily occur and persist. The research along the lines of the thesis statement showed, that Micromanagement in general, has distinctively negative effects on morale of organization members by creating an atmosphere of distrust, low motivation and retarded decision making.

The earlier mentioned technological implications of NCW actually have the potential, if not properly handled, to prevent the advantages of this technology (speed and thereby faster detection, decision and engagement cycles) to unfold in the projected and promised manner. Furthermore the belief of the users into the advantages of this technology could be undermined as well, thereby furthermore reducing its benefits. The quest for speed and performance thus might never gain the expected or predicted momentum.

It would therefore be irresponsible to ignore the perils and possible pitfalls of NCW. The human being has to be placed in the center of attention again after the technological implications and effects of a new technology are properly analyzed and understood. NCW actually delivered huge portions of its promises by providing so far unequalled battle space awareness, connectivity and speed of operations within the U.S. military. However, the net wide connectivity in combination with shared battle space awareness has huge implications for the conduct of command and control. This is because NCW technology enables a direct shortcut from the highest strategic level down to the tactical level, if this is desired. The fact is that all conflicts the U.S.A. was involved in during the last ten years, were conducted against technologically inferior adversaries. Analysis of these conflicts is therefore not entirely conclusive in highlighting the limits and pitfalls of NCW. It is typical for human behavior that lessons derived from military victories are usually not as thought provoking as those they had to learn from defeat.

Dr. Norman Friedman's comment was confirmed, because the sources used in this essay could not be used to establish a direct link between NCW and the negative effects



on performance. However, as recently conducted military operations illustrate, NCW technology provides ideal conditions for micromanagement because it creates so far unequalled and technologically implied opportunities. Surveys conducted in the corporate world and in the military served to illustrate, that micromanagement leads to a degradation of morale.

Senior military leaders are well advised to handle the tools at their disposal, with prudence and great care. They should also strive to fully understand the detrimental effects of micromanagement and how it degrades the morale of those they lead. Senior military leader should only revert to micromanagement as a last resort when simply too much in a political sense would be at stake.

NCW is ideally suited to convey the commander's intent and let the subordinates act accordingly with maximum leeway. The urge for micromanagement can be overcome by showing more self-restraint and by creating a social environment, where trust and empowerment of the subordinates is a key factor. To exercise self-restraint within an ever-increasing zero-defects culture in the military services however is a major undertaking, which requires strength of character and an independent mindset. However, such a responsible and sensitive behavior would reflect military honesty in its truest original sense.

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