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COMMAND DECISION: ETHICAL LEADERSHIP IN THE INFORMATION ENVIRONMENT

Keir Giles

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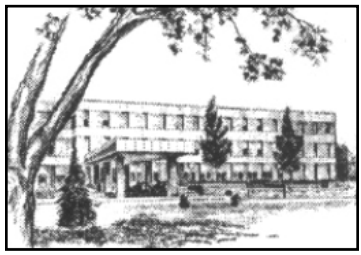

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Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute and U.S. Army War College Press, U.S. Army War College, 47 Ashburn Drive, Carlisle, PA 17013-5238.

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The author would like to thank John Knights of LeaderShape for permission to reproduce the image shown on page 12 of this volume. Mr. Knights' most recent development of his leadership theories are available from John Knights, Danielle Grant, and Greg Young, eds., *Leading Beyond the Ego: Becoming a Transpersonal Leader*, Oxford, UK: Routledge, 2018.

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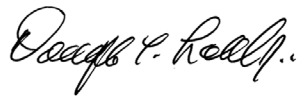
FOREWORD

Given the unprecedented scale, variation, and speed involved in the creation, consumption, and distribution of information in the era of big data, the classic challenge of military leadership—that is, making crucial decisions based on insufficient and likely unreliable information—can become even more daunting. However, British scholar Keir Giles warns that technological solutions alone are inadequate to equip the commander with the insight necessary for decision-making in the information and disinformation environments.

As a result, Giles draws from existing leadership models to illustrate key approaches to leadership, emotional intelligence competencies, and critical values that will assist the commander in allowing his intelligence providers to address most effectively the uncertainty emerging at the various stages of the intelligence process. Ultimately, these approaches have a broader utility in consolidating the military commander's ability to understand multiple perspectives and adjust their decisions accordingly.

The monograph concludes with a series of policy recommendations for the U.S. Army on potential modifications to standard military professional development programs. Such a process should include exercises and mentorship support aimed at preparing officers for the leadership styles and values relevant to today's challenges at a senior level. The Strategic

Studies Institute recommends this analysis of the types of behaviors military commanders must cultivate to develop ethical leadership in order to confront better the new information environment.



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ABOUT THE AUTHOR

KEIR GILES is a Senior Consulting Fellow with the Russia and Eurasia Programme at Chatham House, and works with the Conflict Studies Research Centre (CSRC), a small group of deep subject matter experts which was formerly part of the United Kingdom (UK) Ministry of Defence. Mr. Giles is an internationally recognized expert on information warfare, including the subdomains of computational propaganda and of cyber-conflict. He is a regular speaker on the topic, and has given open conference presentations and closed briefings for government bodies in a dozen European countries, the United States and Canada. Mr. Giles has been involved with exploitation of the Internet for over 25 years. In previous roles, he developed the strategy for BBC Monitoring, the UK Government's open source collection agency, to adapt its operations to respond to the emergence of the Internet, and gained practical experience as a network engineer. He now combines this technical background with an in-depth study of hostile information activities to develop forward-looking analysis and assessments of cyber and computational propaganda threats. Mr. Giles is a member of several academic and editorial boards on cyber and information warfare studies, and has written or co-authored three monographs assessing international attitudes and approaches to new bodies of law governing the Internet and information security. He co-authored (with Kim Hartmann) "Shifting the Core," an influential article calling for an urgent reconsideration of basic assumptions on privacy, encryption, and national cybersecurity in the context of constant, ubiquitous, and unconscious use of connected devices. He is also the author of a significant number

of groundbreaking studies on Russian theory, doctrine, and structures for engaging in information and cyber-confrontation, many of which predate the explosion of interest in Russian information warfare, subversion, and disinformation that followed the annexation of Crimea.

SUMMARY

This monograph considers how a classical challenge that commanders face in war—namely, making critical decisions on the basis of limited and often unreliable information—has been exacerbated in the era of big data. Data overload complicates the intelligence community's efforts to identify and exclude disinformation, misinformation, and deception, and thus hampers its ability to deliver reliable intelligence to inform decision-makers in a timely manner. The military commander remains responsible for making a final decision, yet the great wealth of data now available through the intelligence cycle amplifies the risk of decision paralysis. With this in mind, technological solutions tend to be considered the most appropriate response for managing data overload and disinformation. While these remain relevant, they alone may be insufficient to equip the military commander with the necessary insight to guide decisions through the uncertainty of the big data environment. Rather, the military commander must cultivate a range of new behaviors in order to avoid decision paralysis and fulfill the distinct leadership roles a commander must play at the various stages of the intelligence process.

For this purpose, this monograph combines U.S. psychologist Daniel Goleman's theory of leadership styles; author John Knights' notion of "transpersonal leadership," on how to identify appropriate behaviors that reflect values which are essential to ethical leadership and ultimately cause positive change in an organization; and retired U.S. Army General Stanley McChrystal's observations from his leadership of the operations and intelligence (O&I) briefing of a task force in Iraq. Significantly, all of these models take

inspiration from timeless classical virtues that prove essential for command—for example, Thomas Aquinas's views on justice, temperance, prudence, and fortitude.

IBM data scientists have summarized the new big data challenges in four categories—namely, the volume, variety, veracity, and velocity of how information is produced, consumed, and spread, limiting our ability to check its reliability. As a result, different leadership approaches, emotional intelligence (EI) competencies, and critical values will be required at different stages in the intelligence cycle. Three phases are included in such a cycle, each of which entails a specific big data challenge. This monograph proposes solutions to each of these challenges on the basis of the three leadership models mentioned earlier.

The first challenge refers to data overload in volume and variety, primarily affecting the planning and directing phase of the intelligence cycle. Here the military commander is advised to assume the role of a coach, empowering subordinates by training them to act with the command's perspective. McChrystal's "thinking out loud" approach during daily O&I briefings provides an example. The commander would share his or her thought process with the entire command. In so doing, the latter may access the commander's way of thinking and suggest alternative ways of approaching a situation. The EI competencies required at this stage are developing others, empathy, and self-awareness. While it has proven to be quite time-consuming, ultimately, the coaching approach consolidates an atmosphere of honesty and trustworthiness, thus reinforcing the respect and responsiveness subordinates develop toward their leaders.

The second challenge concerns the risk of disinformation in the assessment. At this stage, the military commander should stimulate a team mentality as the team assesses and questions intelligence analysis. Under these circumstances, by asking questions, the commander can leverage the expertise in the room and create a democratic environment in which subordinates are given the opportunity to challenge analyses and identify possible disinformation. Among key EI competencies, the democratic leadership style requires transparency to facilitate open discussion and build trust. Here, the commander must demonstrate fairness in building team collaboration in order to avoid turf wars, which would only compartmentalize information and increase the possibility of disinformation. Hence, the commander must display self-confidence and inspirational leadership by showing that all issues raised during the assessment phase are meant to improve team efforts and not discredit the intelligence function as a whole. At the same time, the commander must show humility by admitting that team efforts can more successfully navigate the disinformation environment. Ultimately, he must encourage team members to promote change and act for the greater good.

The third challenge relates to the unprecedented public scrutiny of command decision, resulting from the nonstop flow of real-time information from the battlefield to citizens through mass media. Nevertheless, especially in the presence of the uncertainty of the big data environment, commanders cannot delegate ultimate authority and must demonstrate visionary leadership. The latter requires the same EI competencies as democratic leadership—namely, inspirational leadership, self-confidence, change catalysis, and

transparency. These underpin McChrystal's description of the heroic leader, one who is self-confident in one's capacity to lead despite the complexities of the modern era. Such capacity entails having the moral courage and willpower to take ownership of one's decisions in the face of uncertainty as well as confidence that the work devoted toward cultivating and empowering the team will provide the best service to the country.

INTRODUCTION

Military commanders have long faced the challenge and responsibility of command decision in the face of uncertainty. The modern "fog of war," however, can now be made even denser by "big data" challenges. The sheer volume and variety of information available clutter the decision-making space to a historically unprecedented degree. The veracity of the vast amount of information available is questionable, further complicating command decision. Finally, the velocity at which information travels compresses decision-making space while leaving those decisions open to public scrutiny. These multidimensional, big data challenges increase the risk of decision paralysis in the face of uncertainty.

Discussions of big data challenges often lead to the pursuit of technological solutions that will assist the commander in managing the deluge of information. Technological solutions alone, however, are inadequate to equip the commander with the insight necessary to navigate today's complexities. While big data challenges are creating a new dynamic in the decision-making space, the military commander must not lose sight of the enduring values that underpin sound decisions in the face of uncertainty. The ethics and character of the military commander have become even more essential in the information age.

This monograph examines leadership and the military commander's responsibilities in the new information environment. To do so, it focuses primarily on the intelligence process as the clearest example of pressure on decision-making caused by information overload. The relationship between the military commander and intelligence has arguably felt the greatest impact of big

data and its challenges. The intelligence community (IC) is under immense pressure to find the "needle in the haystack," to identify and exclude disinformation, and to deliver the intelligence to construct an informed decision promptly. The military commander, in turn, directs this process, consumes the output, and must determine the point at which there is enough information to make a decision—a difficult task indeed in the big data environment.

The monograph uses three studies of leadership models as prisms through which to examine and assess the new demands on leadership in the information age. These are:

- Retired U.S. Army General Stanley McChrystal's observations from his leadership of the operations and intelligence (O&I) briefing of a task force in Iraq;
- John Knights' model of "Transpersonal Leadership," identifying the values essential to ethical leadership that must be supported by appropriate behavior to effect positive change in an organization; and,
- Daniel Goleman's study of leadership styles and emotional intelligence (EI) competencies.

A common theme that emerges from these studies is that timeless classical virtues, such as justice, temperance, prudence, and fortitude, remain essential for command. How to apply these virtues to modern day challenges, however, is often far from clear. This monograph will identify the behaviors military commanders must cultivate to fulfill their roles and responsibilities successfully as tested in the various steps of the intelligence cycle. This monograph will then draw from these behaviors to identify the values that, as described by

Knights, must be brought to a higher consciousness for ethical leadership in the uncertainty of the information environment.

COMMAND DECISION: ETHICAL LEADERSHIP IN THE INFORMATION ENVIRONMENT

BIG DATA'S IMPACT ON THE DECISION-MAKING ENVIRONMENT

> Making decisions is of the essence in leadership.[1]
>
> —General of the Army
> Dwight D. Eisenhower, 1963

> War is the realm of uncertainty; three quarters of the factors on which action in war is based are wrapped in a fog of greater or lesser uncertainty.[2]
>
> —Carl von Clausewitz, 1832

These two familiar quotations illustrate a classic challenge of leadership in war: that of making critically important decisions based upon insufficient and potentially unreliable information. However, while some of the challenge itself is timeless, the nature of the "fog" that contributes to the uncertainty has developed beyond recognition since not only the era of Clausewitz but also of Eisenhower.

In *Masters of War: Classical Strategic Thought*, Michael Handel attributes Clausewitz's noted skepticism of the utility of intelligence in combating this uncertainty to the reality of the pre-industrial age, in which the lack of real-time communications meant information would often expire before it could have an actionable impact at operational and tactical levels.[3] In the modern age, however, technology to both gather and speedily deliver immense volumes of information has improved, beyond all recognition, the capacity of intelligence to shape and maintain the commander's immediate situational awareness. As Handel notes, "It is the role of intelligence and the ability to obtain

reliable information in real time that has changed the most since the classical works on strategy and war were written."[4]

Despite these advances in real-time communication technology, uncertainty is a constant that continues to plague command decision, only in a different form. While a shortage of actionable information largely characterized the challenges of the past, commanders now face a decision-making environment glutted with unnecessary, non-prioritized information. The popular term for the ever-expanding volume of data that surrounds us and provides information on everything and everybody is "big data."[5] IBM data scientists have categorized the challenges and opportunities of big data in four distinct dimensions: volume, variety, veracity, and velocity.[6] The following paragraphs will explore these dimensions and review how they present specific challenges in the military decision-making environment.

BIG DATA CHALLENGE 1: DATA OVERLOAD

> Things really are speeding up. The amount of stored information grows four times faster than the world economy, while the processing power of computers grows nine times faster. Little wonder that people complain of information overload.[7]

In *Big Data: A Revolution That Will Transform How We Live, Work, and Think*, authors Viktor Mayer-Schönberger and Kenneth Cukier add that Google processes thousands of times more data per day than the entire collection of U.S. Library of Congress printed material.[8] Given that their study was published in 2013, the continued exponential growth of

data availability by the time of this writing will have added further orders of magnitude to the problem. In short, the information environment is exploding, rapidly producing volumes of data of all different varieties in all domains, including those that are specifically of interest to the warfighter.[9]

Efforts are ongoing to develop new technologies to harness big data's analytic potential.[10] While technology has succeeded in collecting unprecedented volumes of data, it falls far short in providing solutions to process all of the data collected. In *Intelligence: From Secrets to Policy*, Mark M. Lowenthal describes the IC big data dilemma as the "Vacuum Cleaner Problem," where technical systems pull in a great deal of "chaff" as well as "wheat," but budget and resource restrictions currently limit the ability to sift through the mountain of data to produce actionable intelligence.[11] As a result:

> A large imbalance exists between the amount of images or signals that that are collected and that amount that are processed and exploited (P&E). . . . According to DoD [the Department of Defense], for example, the National Security Agency (NSA) records 650 million events daily (apart from the metadata program), which eventually culminates in 10,000 reports. Although methodologies are in place to ensure that the most important intelligence is processed and exploited, an important image or message could be overlooked.[12]

This imbalance is likely to continue in the near term, and data overload will remain a continuing challenge for the IC and, through it, the military commander.

As both government and civilian organizations tackle the technological difficulties of managing the P&E of big data, military commanders must meet the

realities of today's decision-making environment. Of primary concern is that data overload can introduce greater uncertainty into the decision-making process, risking decision paralysis. While at times it is appropriate to table a decision for additional analysis, it is the commander's ultimate responsibility to make the best, most timely decision with the facts available.[13] The vast wealth of data now available to the IC, however, increases the temptation to delay a decision due to the concern that we can "always know more."

Decision-makers, for example, are well aware of the common criticism of the IC's "failure to connect the dots" in the events leading up to 9/11.[14] The premise of this argument asserts that the IC had access to the data—the "dots"—and that lack of collaboration across agencies was the primary failure in identifying the indications and warnings of impending terrorist attack. In the era of big data, the "dots" are ever more plentiful, but decision-makers lack the crucial technological support to ensure that they are connected in a meaningful manner to protect against future potential threats to national security.

BIG DATA CHALLENGE 2: DISINFORMATION

As discussed above, current data collection systems pull in a great deal of unwanted, useless chaff as well as actionable data. To make the decision-making environment even more difficult, the military commander must also consider the real threat of deliberate disinformation. Disinformation is by no means a new challenge to command decision, reflective once more of Clausewitz's skepticism of intelligence; he asserts, "Many intelligence reports in war are contradictory; even more are false, and most are uncertain."[15] In the

information age, however, the challenge of disinformation is becoming ever more significant.

A recent but mature example of disinformation in the decision-making environment is the Russian information campaign relating to eastern Ukraine. A 2015 North Atlantic Treaty Organization (NATO) Strategic Communications Centre of Excellence report on Russia's Information Campaign against Ukraine stated that deliberate falsification was consistently adopted as a Russian tactic, suggesting that Russia saw utility in the method:

> Whilst reporting on Ukraine events, journalists of the Russian state controlled media have methodically manipulated video and photo materials in order to produce material visually supporting the prevailing narrative. This includes the use of photographs from the Syria, Kosovo and Chechnya wars, as if they had been taken in East Ukraine, and has proven particularly effective on social networks.[16]

Russia's disinformation strategy capitalized on the characteristics of big data to its favor. If the media environment is flooded with false reports, these are inevitably picked up and repeated by reputable news outlets unaware, or in some cases even aware, of the information's origins.[17] Consequently, the false reports may achieve their objective of crossover from public opinion space into decision-making space, and thereby influence the choices made by the adversary—in this case, the United States.

These challenges of disinformation introduced into big data thus have serious implications for the decision-maker. In the case of Russia and Ukraine, Russian narratives succeeded in the early stages of conflict, and:

> the fact that the EU [European Union] continued to find itself unable to refer publicly to the presence of Russian troops in Ukraine for almost a year denoted a broader inability to challenge the Russian version of events—without which a meaningful response was impossible.[18]

The Russian information campaign's ability to inhibit a concerted response is an interesting example of the challenges a commander may face in making decisions in a big data disinformation environment. In such an environment, disinformation may be directed not only at the commander and his intelligence support but also at his political leadership and advisers, his home community, and the civilian population among whom his command is fighting.

BIG DATA CHALLENGE 3: INCREASED PUBLIC SCRUTINY

This last point touches on the third key challenge of big data—namely, that the information environment has dramatically increased the public scrutiny a commander faces in making a decision. Clausewitz described the relationship between decision-makers and the people in his paradoxical trinity:

> War is more than a true chameleon that slightly adapts its characteristics to the given case. As a total phenomenon its dominant tendencies always make war a paradoxical trinity—composed of primordial violence, hatred, and enmity, which are to be regarded as a blind natural force; of the play of chance and probability within which the creative spirit is free to roam; and of its element of subordination, as an instrument of policy, which makes it subject to reason alone. The first of these aspects primarily concerns the people; the second the commander and his army; the third the government.[19]

Public scrutiny, therefore, carries both moral and political considerations that the military commander must take into account. The information age, however, has once more altered this dynamic. The flow of real-time information from the battlefield to citizens through mass media has greatly increased public scrutiny of military command decision.[20] This phenomenon was first a significant factor during U.S. involvement in Vietnam, where near real-time reporting bolstered anti-war sentiment among some sectors of the U.S. home population and thereby influenced the duration and outcome of the U.S. commitment. Since that time, rapid data streams have still further condensed the interactions of Clausewitz's trinity, placing greater strain on the balance between forces. Colonel John Mark Mattox notes:

> the complex interrelationship which Clausewitz describes has, in fact, assumed heightened significance in the Information Age—'heightened,' because the military and the government must now take more seriously public sentiments about war—and especially about the moral issues of war—than they previously had to do.[21]

The modern military commander must learn to navigate the public scrutiny of the information age. However, his responsibility to make the best decision under any given circumstances remains the same, regardless of who is watching.

These passages have served to demonstrate how big data has altered the density and consistency of the fog of war in the modern information age. The natural instinct is to look to technological solutions to address the challenges that technology presents, arguing that the right amount of computing power will reduce the burden on the human element.[22] Technology, however,

is inadequate to answer all of big data's challenges. A commander must also apply specific characteristics of leadership, sometimes in an innovative manner, to guide decisions through the uncertainty of the big data environment. Examining the military commander's role and responsibility in the intelligence process provides a means of identifying ethical behaviors and values that will assist leaders in avoiding decision paralysis resulting from big data challenges.

Leadership Models

The modern decision-making environment is historically unique. At no other time has the military commander needed to navigate such a wealth of information—and disinformation—to come to a decision. Moreover, the pace at which information travels to the public places greater scrutiny on these decisions. The novelty of big data challenges often leads to calls for innovative, groundbreaking technological solutions to help the commander manage the complexity of the information environment. Such calls, while valid, must not overlook the need for ethical leadership.

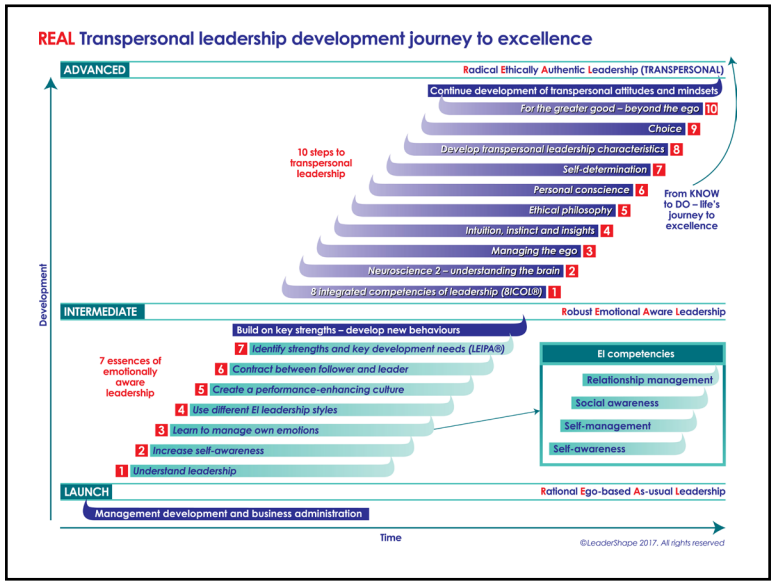
A discussion of ethical leadership for the information age requires reliance on timeless values, ones that withstand the exploding information environment. Chris Inglis, former Deputy Director of the NSA and a retired U.S. Air Force Brigadier General, notes that in dynamic, challenging, and fast-moving times like the present, the danger is to conclude that exceptional circumstances justify stretching or, indeed, departing from the values and principles that define us. As put by U.S. diplomat George Kennan, writing in 1946 on the looming existential challenge of Soviet subversion,

"the greatest danger that can befall us in coping with this problem . . . is that we shall allow ourselves to become like those with whom we are coping."[23] On the contrary, Inglis reminds commanders that values endure and should constitute the bedrock of ethical leadership.[24]

A traditional values- or virtues-based approach to leadership identifies the virtues that make one "excellent in character."[25] Thomas Aquinas, one of the leading classical authorities on virtue theory, identifies temperance, justice, prudence, and fortitude as the four cardinal virtues. These virtues are cardinal because all other values fall under these four categories:

> In this way, they are called principal, being general, as it were, in comparison with all the virtues. Thus, for instance, any virtue that causes good in reason's act of consideration may be called prudence; every virtue that causes the good of right and due in operations, called justice; every virtue that curbs and represses the passions, called temperance; and every virtue that strengthens the mind against any passions whatever, called fortitude.[26]

Nevertheless, while these cardinal virtues encompass many other qualities that may be relevant to leadership in the information environment at any given time, they are problematic as a practical framework for ethical leadership in the sense that they provide very unfocused descriptions of what "excellent character" should look like. John Knights' "transpersonal leadership" model, by contrast, identifies the specific values most relevant to the military commander's responsibilities in the face of big data challenges. This model, illustrated in figure 1, describes an evolutionary, multi-step process, the aim of which is to become a "transpersonal leader," meaning one that operates while fully conscious of ethical values.



Source: LeaderShape.

Figure 1. "Transpersonal Leadership" Development[27]

A further key element of this model is acquiring and applying the behaviors necessary for putting the values identified to good use by applying a full understanding of how those values influence or affect subordinates in order to enhance leadership.[28] The distinction between ethical leadership and underpinning ethical behaviors is outlined in the following quotes.

> ***Ethical Leadership*** **as the process of influencing people to act through principles and values and beliefs that embrace what we have defined as ethical behaviour** [emphasis and italics in original]**.**[29]

> *Ethical Behaviour*: Acting in a way that is consistent with one's own principles and values which are characterized by honesty, fairness and equity in all interpersonal activities, be they personal or professional. And by respecting the dignity, diversity and rights of individuals and groups of people [italics in original].[30]

The immediate relevance of this leadership model to commanders' interaction with the intelligence process and subsequent decision-making comes in the initial steps shown in figure 1—specifically, the identification of the EI leadership styles and behaviors necessary for dealing with big data's challenges. This identification, Knights believes, is the skill, facility, or learned behavior that enables military commanders or leaders in other occupations to examine the different relationships for which they are responsible and then to identify what leadership style is most appropriate for that relationship.[31]

Consequently, these leadership capabilities inform the behaviors that a leader must develop. Table 1 reflects a compilation of research that outlines six basic leadership styles and their associated behaviors, or EI competencies. The list is derived primarily from the work of Daniel Goleman, a U.S. psychologist best known for raising awareness on the importance of EI in leadership, and refined by Knights and other authors.[32]

Leadership Style	"Style in a Phrase"	EI Competencies
Commanding	*"Do what I tell you."*	Achievement, initiative, influence
Visionary	*"Come with me."*	Inspirational leadership, self-confidence, change catalyst, transparency
Affiliative	*"People come first."*	Empathy, conflict management, building bonds
Democratic	*"What do you think?"*	Self-confidence, transparency, inspirational leadership, change catalyst
Pacesetting	*"Do as I do now."*	Achievement, initiative
Coaching	*"What would you do?"*	Developing others, empathy, self-awareness

Table 1. Goleman's Six Leadership Styles at a Glance[33]

These leadership styles provide a framework for addressing the phases of the intelligence process in which big data challenges have the greatest impact. Analysis of the military commander's role in each phase can determine the optimal leadership style and EI competencies necessary for planning and directing intelligence. The analysis also leads to consideration of the values and character assets that must be maintained and observed by the commander in order to support and enable each leadership style.

Ethical Leadership: An Intelligence Cycle Case Study

The military commander's relationship with intelligence provides a suitable case study for examining big data challenges due to the information revolution's complete transformation of how a commander directs, receives, and acts on intelligence. This monograph adopts the U.S. Army's definition of the intelligence process, which is:

> a continuous process that directly supports the operations process through understanding the commander's information requirements, analyzing information from all sources, and conducting operations to develop the situation. Intelligence is also a function that facilitates situational understanding and supports decision-making.[34]

As shown in figure 2, the intelligence process consists of the following steps: plan and direct, collect, produce, disseminate, analyze, and assess. This figure also identifies the phases in which the three big data challenges previously identified are assessed to have the greatest impact. The following paragraphs will explore how the military commander can provide ethical leadership in each of these phases.

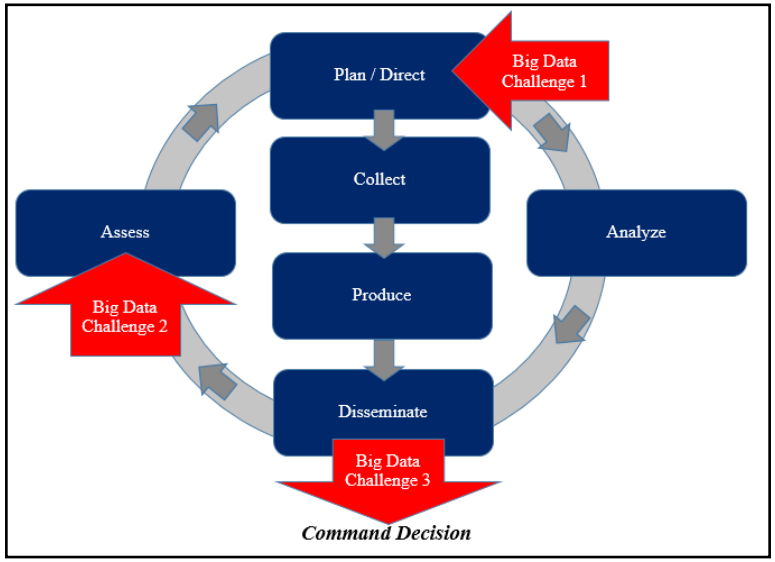


Figure 2. Big Data Challenges Impact in the U.S. Army Intelligence Process[35]

CHALLENGE 1: DATA OVERLOAD IN PLANNING AND DIRECTING

Data overload—in volume and variety—has its greatest impact in the very first phase of the intelligence process. The plan and direct phase is critical in developing the strategy for tackling the "Vacuum Cleaner" collection problem previously mentioned. According to Army Doctrine Publication (ADP) 2-0, the:

> plan and direct step includes activities that identify key information requirements for the commander, develop the means for satisfying those requirements, and posture the unit for transition to the next operation.[36]

Within this process, ADP 2-0 asserts, the commander's responsibility is to "provide guidance" and to state "clear, concise commander's critical information requirements (CCIRs)."[37] CCIRs "define those policy issues or areas to which intelligence is expected to make a contribution, as well as decisions about which of these issues has priority over the others. It may also mean specifying the collection of certain types of intelligence."[38] The commander's responsibility to set priorities is paramount in the information environment, as there are many priorities competing for limited resources available to collect and process data.

Having identified the commander's responsibility in planning and directing intelligence, the question for this monograph is what leadership approach best facilitates guiding and extracting maximum value from the intelligence process. General McChrystal offers an answer to this question in his leadership study, *Team of Teams: New Rules for Engagement in a Complex World*.

The traditional image of military command is one of a rigid hierarchy. McChrystal describes this commander as the "heroic leader," the grand chessmaster with the capability to direct every move. At the speed of this technological era, however, the chessmaster can no longer control all of the moving pieces.[39] McChrystal writes:

> One solution to information overload is to increase a leader's access to information, fitting him with two smartphones, multiple computer screens and weekend updates. But the leader's access to information is not the problem. We can work harder, but how much can we actually take in? Attention studies have shown that most people can thoughtfully consider only one thing at a time, and that multitasking dramatically degrades our ability to accomplish tasks requiring cognitive concentrations. Given these limitations, the idea that a "heroic leader"

> enabled with an uber-network of connectivity can simultaneously control a thousand marionettes on as many stages is unrealistic.[40]

Instead, McChrystal proposes that today's leader must be more like a "gardener." As the Task Force Commander in Iraq in 2004, McChrystal observed that he needed to nurture his command to grow into a "shared consciousness" that empowered autonomy of action throughout the chain of command and was unified under one vision.[41]

Recommended Leadership Style

McChrystal's gardening philosophy of leadership most closely identifies with the Goleman "coaching" style. Coaches focus on developing others and building "capability in individuals that are consistent with [an] organisation's goals by helping them solve issues and challenges through listening and asking open questions."[42] The process requires continual dialogue and, similarly, McChrystal developed a routine called "thinking out loud" during the daily O&I briefing:

> I adopted a practice I called "thinking out loud," in which I would summarize what I'd heard, describe how I processed the information, outline my first thoughts on what we should consider doing about it. It allowed the entire command to follow (and correct where appropriate) my logic trail, and to understand how I was thinking. After I did that, in a pointed effort to reinforce empowered execution, I would often ask the subordinate to consider what action might be appropriate and tell me what he or she planned to do.[43]

According to Goleman, however, this coaching style is the most difficult to employ because it is time-consuming.[44] Indeed, McChrystal admits that the

nurturing and gardening process requires self-discipline and, at times, is exhausting.[45] The outcome, however, is well worth the required time and discipline because it empowers the larger team to tackle the challenges of the modern environment with the same vision.

The coaching leadership style is critical to the plan and direct phase of the intelligence process. While commanders must continually communicate CCIRs to the staff and IC, information and events move so rapidly that the commander must also invest time in helping the team share his or her thought process. This shared vision allows the team, at all levels, to navigate the massive volume of information with a unified purpose. This delegation and empowerment, guided by a clear set of CCIRs, will provide the critical direction necessary for the intelligence process.

Essential EI Competencies

As shown in table 1, the primary EI competencies underlying the coaching style are identified as developing others, empathy, and self-awareness. Knights defines the social competence of developing others as a relational skill of "bolstering others' abilities through feedback and guidance."[46] McChrystal's "thinking out loud" process embodies this concept. Moreover, McChrystal demonstrated empathy with those who were responsible for processing and communicating the intelligence gleaned from big data. Empathy is "sensing others' emotions, understanding their perspective, and taking active interest in their concerns."[47] According to Knights, most leaders would benefit from greater empathy in their interactions. Echoing this sentiment, McChrystal expressed his desire to

serve as an "empathetic crafter of culture" and lived this mission out during the daily O&I process.[48]

> As they briefed me I tried to display rapt attention. At the conclusion, I'd ask a question . . . I wanted to show that I had listened and that their work mattered . . . For a young member of the command, even if the brief had been terrible, I would compliment the report. Others would later offer them advice on how to improve—but it didn't need to come from me in front of thousands of people. When we did it right, the analyst left the O&I more confident about, committed to, and personally invested in our effort. 'Thank you' became my most important phrase, interest and enthusiasm my most powerful behaviors.[49]

Finally, self-awareness requires the ability to read "one's own emotions and recognising their impact; using 'gut-sense' to guide decisions."[50] McChrystal, for example, noted that he needed to make a conscious effort to control his emotions so that they would not be interpreted incorrectly over the video teleconference. Sarcasm or disinterest in this forum could have a serious, negative effect on the organization as a whole.[51]

Critical Values

Part of the shared consciousness that McChrystal described also requires a shared consciousness of values and consideration of what sort of character the commander should or must cultivate for leadership in the information environment. This is an important question, as a commander's ethical values must undergird the emotional behaviors that the previous passages have identified as necessary for command of the planning and directing phase of the intelligence process. When asked to comment on the values that a military commander needs in order to make decisions

in the face of uncertainty, Knights named truth and honesty, as well as trustworthiness, as essential.[52] This echoes and confirms the conclusions of earlier studies of the evolving nature of generalship compiled at the beginning of the information era, noting or advising an evolution to so-called "post-heroic" leadership.[53]

According to Goleman, the coaching process is most successful when employees want to be coached.[54] The commander's virtues will play an important role in this factor. McChrystal reminds leaders that honesty incurs respect.[55] If subordinates have respect for their leaders—and are confident in their truth and honesty—they will be more receptive to their guidance and direction. Honesty will also play an important role in the commander's emotional self-reflection, examining whether there are any personal poor emotional behaviors that might detract from the commander's ability to develop a shared consciousness. Separately, subordinates will also be more receptive to the coach whose integrity is trustworthy. In planning and directing the intelligence process, for example, Inglis comments that the commander must understand the limits and boundaries that law places on intelligence collection.[56] Assured of the commander's truthfulness, honesty, trustworthiness, and integrity, the commander's staff and the IC will be all the more willing to support the CCIRs in the ultimate pursuit of the shared vision.

CHALLENGE 2: DISINFORMATION IN ASSESSMENT

The commander's responsibility in the face of the disinformation environment is most evident in the assessment phase of the intelligence process. According to ADP 2-0:

> the assessment allows commanders, staffs, and intelligence leaders to ensure intelligence synchronization . . . Continuous assessment of the effects of each element on the others, especially the overall effect of threat actions on friendly operations, is essential to situational understanding.[57]

As the staff and IC take the commander's direction for intelligence collection and analyze this collection, the commander must participate in the assessment of this information.

McChrystal suggests that commanders participate by asking questions. He notes that briefings often provide incomplete accounts of the situation and that a thoughtful question can expose this gap:

> Early in 2005 my intelligence officer, then Colonel (later Lieutenant General) Mike Flynn, taught me a great technique. We were visiting a unit that boasted of having more than 250 intelligence sources (Iraqi civilians recruited to pass information to U.S. forces). I was deeply impressed. Mike then asked a simple question: "Can you describe your very best source? I'll assume that all the others are less valuable." The unit admitted that the best was new and unproven, and in an instant, it was clear that their source network had little real substance.[58]

As demonstrated in the account of the Russian information campaign, disinformation in today's modern information environment poses a real threat. Commanders, therefore, have the responsibility to question the veracity of intelligence analysis and thereby serve as a strategic sounding board for the team as a whole in the iterative assessment process. The definition of ethical leadership in this difficult task, however, will depend on how the commander chooses to lead and which emotional competencies are employed.

Recommended Leadership Style

Identifying disinformation in the information environment is truly a team task. The commander, as a general rule, is not the expert in the room and therefore must rely on trusted and capable analysts and advisers. For this task, the democratic style of leadership is most fitting. Discussion of a democratic style of leadership at first perhaps seems counterintuitive in the traditional discourse of the military chain of command. In the assessment process, however, the commander must leverage the expertise in the room. Goleman describes the democratic style as one that builds trust and commitment through getting people's ideas and buy-in. Goleman theorized, "By letting workers themselves have a say in decisions that affect their goals and how they do their work, the democratic leader drives up flexibility and responsibility."[59]

A democratic style of leadership multiplies the commander's ability to ask the right questions. With a diverse panel of trusted advisers—to include intelligence analysts—the commander has a better chance not only of identifying possible disinformation but also the best responses if needed. The commander must foster a safe, welcoming, and professional environment where both junior and senior staff members can raise concerns regarding the veracity of the information.

Essential EI Competencies

A commander's role in providing feedback and questioning intelligence analysis, however, must be combined with EI behaviors to be successful. More specifically, the commander and his staff must cultivate a team mentality as they assess and question

intelligence analysis. This process must not be perceived as combative or demeaning, as such behavior would very rapidly degrade the trust that they have worked so hard to build.

Research indicates that the primary EI competencies that comprise the democratic leadership style are self-confidence, transparency, inspirational leadership, and change catalysis. To lead in a democratic environment, the commander must first have "a sound sense of one's self-worth and capabilities."[60] This self-confidence is required to navigate the inherent vulnerability of transparency. To facilitate a frank discussion and build trust, the commander must also be transparent with the team concerning gaps in personal knowledge or lack of understanding. Having displayed this transparency, the commander, in turn, can communicate to the intelligence team that he expects mutual transparency as to the community's confidence in the validity of the information.

Most importantly, however, the commander should emphasize that any questions or concerns raised during the assessment phase are only part of the iterative process to make the team better, and not a direct criticism meant to discourage or discredit the intelligence function. Advisers should follow suit with the mentality that combating disinformation in the environment will truly be a joint effort of many teams toward the single vision of timely, accurate intelligence to the warfighter. This is inspirational leadership, asking team members to act beyond the ego for the greater good.[61] This inspirational leadership, however, may require a catalyst to produce a change in the command's culture. To foster a healthy, democratic environment of ideas and buy-in, the commander must lead the organization away from the "us versus

them" mentality that at times occurs between O&I, as well as other parts of the staff. The commander should discourage "finger pointing" from any side and create an environment in which ideas and concerns can be expressed freely from all ranks.

Critical Values

Which values are critical for the commander if his team building and democratic leadership are going to be a success? A democratic approach to military leadership requires a degree of humility on the part of the commander, with the recognition that it is impossible for a single leader to be equipped to navigate the information environment alone—let alone the disinformation environment. McChrystal agrees to the need for this virtue in command, writing, "Although I recognized its necessity, the mental transition from heroic leader to *humble* gardener was not a comfortable one [italics added]."[62]

Additionally, the commander must demonstrate fairness in building team collaboration. The perception of favoring one team over another could prove detrimental to the collective team, risking devolution into turf wars for influence. Turf wars only compartmentalize information, further risking the possibility for disinformation to make its way undetected into the factors informing command decision—which is, after all, its primary objective. Instead, the commander must communicate equally an appreciation for the intelligence function as well as the operators who act on this intelligence. Additionally, while this monograph focuses primarily on the commander's roles and responsibility in the intelligence process, fairness requires that equal scrutiny be applied to all other aspects of the decision-making cycle.

CHALLENGE 3: PUBLIC SCRUTINY OF COMMAND DECISION

Finally, we return once more to the primary responsibility of the commander—decision in the face of uncertainty. At the end of the intelligence process, the commander generally must make a decision and determine an appropriate course of action. Big data and the technological revolution, as already noted, have greatly increased public scrutiny as, at times, command decision can be judged instantaneously. While the commander may receive inputs from intelligence and advisers, the decision is the responsibility of command alone. In other areas of the intelligence process, the commander must empower subordinates by coaching them to act with the command's perspective as well as fostering a democratic environment to promote accurate assessments in the face of disinformation. At the end of the day, however, the commander cannot delegate authority and is ultimately accountable to public scrutiny of the outcome.

Recommended Leadership Style

The visionary leadership style will serve the commander well in the decision-making process. Visionary leaders provide a clear direction for their followers. They say, "Come with me," assuring the team that they are taking the lead and that they have a clear vision with defined standards.[63] Additionally, Goleman observes that visionary leadership has the most positive effect on workplace climate, and is most effective when an organization needs a new course. While this monograph recommends other leadership styles for the internal steps of the intelligence process,

the leadership of the process as a whole—as well as responsibility for the outcome of the process—requires a visionary style.

Essential EI Competencies

It is important to note that the EI competencies for visionary leadership are the same as those identified for democratic leadership: inspirational leadership, self-confidence, change catalysis, and transparency. This is to be expected if the democratic leadership style is the key supporting style to visionary leadership.[64] The EI competencies, however, manifest themselves differently in the commander's role of making decisions in the face of public scrutiny. It is in this phase of the intelligence process that the commander most closely resembles McChrystal's description of the heroic leader, one who is self-confident and sure of one's capacity to lead. In this phase, the commander must adopt a more strategic vision for inspirational leadership. The vision now is not only to provide accurate intelligence to a single operation but, rather, to make the right decision for an entire campaign—one that will be judged with scrutiny. The expectation for complete transparency with the public now or in the future may well reinforce the imperative to incorporate ethical considerations into command decision.

Finally, visionary leaders must promote change.[65] At the crucial command decision phase, the commander takes ownership of the transformation that will need to take place in the commander's modern role in the intelligence process. The visionary leader is needed to ensure that the coaching and democratic styles are having their desired effects against big

data's challenges. As McChrystal asserts, "we have to begin leading differently."[66]

Critical Values

When asked to advise military commanders on making decisions in the face of greater public scrutiny, Inglis reminds commanders to hold themselves accountable for the long term. He believes that commanders should not have a practiced ear for the near-term outcome of events but, instead, consider how their actions and values will be judged in hindsight.[67] With this in mind, the commander must cultivate the timeless character traits and self-determination values of courage and will.[68]

In his concluding remarks, McChrystal supports the need for moral courage for the modern commander:

> As the world becomes more complex, the importance of leaders will only increase. Even quantum leaps in artificial intelligence are unlikely to provide the personal will, moral courage, and compassion that good leaders offer.[69]

The military commander must demonstrate courage in the face of uncertainty and increased public scrutiny. Military commanders hold a grave responsibility to navigate the complexities of the modern era; they must also have the courage and willpower to make the final decision. The commander must have confidence that the work devoted toward cultivating and empowering the team—and the personal, conscious values that undergird the team's relationships—will be the best effort for both his Service and his country as a whole in meeting big data's challenges.

CONCLUSION

The qualities required for successful leadership at a command level are developing rapidly under pressure from omnipresent and overwhelming information inputs. However, these same pressures require different leadership approaches and styles at different stages of responding to them. The common factor is that ethical leadership is essential to command decision in the big data environment. While technological solutions for managing data overload and disinformation will remain relevant, a purely technological approach is inadequate for equipping the military commander for decision-making in the face of uncertainty. The commander must instead invest in and intentionally develop a virtuous character in order to succeed in the various and diverse leadership roles he must play in the intelligence process.

This monograph first introduced the discussion of virtues with Aquinas' cardinal virtues of temperance, justice, prudence, and fortitude. These virtues are all-encompassing and provide a framework within which specific leadership approaches to different parts of the intelligence process can be refined. Synthesis and application of Goleman's leadership styles, Knights' "transpersonal leadership," and McChrystal's observations of application can build on earlier studies of the developing nature of leadership to provide specific pointers for achieving the best possible leadership outcomes from a command in the information age.

On this basis, this monograph has proposed a more concrete application of these cardinal values found in the EI qualities that are required for a tailored leadership to meet different challenges of the

information environment. Temperance manifests in the humility the commander must exhibit in his role in the intelligence process—the ability to curb the passions of pride and ego. Justice resonates in the fairness and integrity that a commander must exhibit in cultivating the democratic environment for new ideas and analytic rigor. Prudence is required if the commander is to establish honesty and trustworthiness, the essential building blocks of a team that can tackle big data's challenges. Finally, the commander must have courage in taking responsibility for the final decision in the face of public scrutiny.

However, values on their own will not transform an organization if they are not accompanied by the appropriate corresponding behaviors. If a leader cannot successfully connect with subordinates on an empathetic level, then the leader's values will not translate to organizational values that empower subordinates with the unified direction that is essential in addressing the information era's key challenges.

It is important to remember that ethical leadership requires commanders to adopt the behaviors and leadership styles that are most appropriate for the relationship at hand. This monograph examined the military commander's leadership roles within the intelligence process, as big data has arguably had the greatest impact on this dynamic. In the planning and directing phase, the military commander must adopt the role of a coach, empowering autonomy that is guided by a shared vision. In the assessment phase, the commander is best served by a democratic approach, which fosters an atmosphere in which subordinates can challenge analyses to identify possible disinformation. Finally, command decision requires visionary leadership. Leaders can never delegate the responsibility for

making decisions in the face of uncertainty and uncertainty will always remain a factor in command decision. Commanders must be confident in their teams, processes, and enduring values to meet the challenges of the big data environment—and they must earn this confidence for themselves in return.

While empathy was introduced briefly as critical to the coaching leadership style, an additional note is warranted. In an interview conducted for this monograph, Knights argued firmly that most people serving in the military would benefit from displaying greater empathy. Empathy is arguably the foundation of ethical behavior and, consequently, of ethical leadership, as it helps the military commander understand the perspectives of others and adjust behaviors accordingly.[70] The ability to listen and observe situations from other perspectives is a key skill in adopting the "gardening" approach identified by McChrystal as a practical implementation of the leadership styles proposed by Knights and Goleman. As such, when considering self-development, it would serve commanders well to pay special attention to the development of this EI competency. See table 2 for a summary of the leadership styles, EI competencies, and values of each intelligence phase.

Intelligence Phase	Recommended Leadership Style	Necessary EI Competencies	Critical Values
Planning and Direction	Coaching	Developing others, empathy, self-awareness	Truth and honesty, trustworthiness, integrity
Assessment	Democratic	Self-confidence, transparency, inspirational leadership, change catalyst	Humility, fairness
Decision	Visionary	Inspirational leadership, self-confidence, change catalyst, transparency	Courage, drive

Table 2. Summary of Key Takeaways

WAY AHEAD

This monograph has identified a range of competencies and qualities that are beneficial to or essential for successful decision-making in the era of information overload. However, these are not qualities that commanders can be expected to acquire by osmosis once they reach a certain grade, and neither can the qualities be inculcated by staff courses. A key feature of the values-based behaviors described, especially those based on empathy for subordinates, is that it is hard for the individual who wishes to develop these behaviors to assess them since their effects are felt almost exclusively by subordinates.

John Knights' recommendation for addressing this challenge is the development of a confidential process of 360-degree assessment throughout a military career to assist future leaders in raising their consciousness

of shortcomings through greater awareness of their behaviors and, in particular, how subordinates would change these behaviors, given the opportunity.[71]

Knights' own specification for how a process like this might be introduced is ambitious, and may not be compatible with established norms in the U.S. Army:

> It is critical that the assessment measures behaviours not skills, that it promotes honesty and therefore is confidential to the individual (it does not go in the Human Resources file!) and that the inputs (apart from the line manager) are anonymous. . . . candidates should be encouraged to share the findings and in particular they must be willing to discuss with their raters the one or two key development areas they have chosen to focus on to get their input on how to improve and then regularly check on how they are doing.[72]

There can be little doubt that the introduction of an effective and candid system of 360-degree assessment would be highly effective in reducing instances of damaging and toxic leadership that go unchecked under current reporting arrangements.[73]

These assessment processes would be most effective if incorporated into standard military professional development programs throughout an officer's career. A junior officer, for example, could take the initial assessments early in his or her career to gain an initial baseline of both leadership behaviors and values. The officer should then be equipped with exercises to hone new leadership behaviors and raise values to a higher level of consciousness; exercises such as this scenario-based approach would serve officers well in helping them prepare for the leadership styles and values most relevant to today's challenges at a senior level. Finally, a senior mentor assigned to each officer would be instrumental in monitoring progress and could

serve as a third party to solicit 360-degree feedback as the officer progresses in his or her career. This should be an iterative process incorporated into professional military development programs to ensure officers are growing toward effective and multidimensional leadership as they become more senior in rank.

The "multidimensional" element of leadership arises because of the need for military commanders to master a wide range of EI competencies and virtues. It can be argued that truly skilled leaders hold competencies in all six leadership styles, and apply practiced judgment to determine which styles are most appropriate for their roles and responsibilities at any given moment. A leader, for example, cannot always be a humble coach or a manager of democratic discourse.

This monograph has focused on the commander's relationship with the intelligence cycle as the clearest example of new demands placed on command decision-making in the information era. However, the response proposed—developing a range of leadership styles appropriate to specific situations—applies across all areas where the commander wishes to render his command more effective by developing and empowering a team. In all cases, this will require ethical leadership consisting of values and appropriate behaviors to leverage a stronger, more cooperative, more responsive, and more interactive team, which will prove foundational for the team's success. Moreover, confidence in the team's capabilities and mandate in the face of contemporary challenges will strengthen the commander's courage to accept responsibility for the final decision.

Leadership in the modern age is no easy task. Leaders face a new range of challenges in addition to the eternal responsibilities of command. Ethical

leadership, however, will help ensure that the commander's decisions withstand the test of time because they are based on enduring values and behaviors and can contribute to building a team that is empowered to transcend the complexities of the modern age.

SPECIFIC POLICY RECOMMENDATION:

The U.S. Army should incorporate a 360-degree feedback process into its Professional Military Education (PME) program in the following manner.

Recommendation 1

Newly commissioned officers should take a 360-degree feedback assessment to establish a baseline awareness of strengths and weaknesses in behaviors and values.

Recommendation 2

Upon arrival to a new post, every officer should be assigned a professional mentor (who is at least one grade above). This mentor should not be a member of the same unit.

- This senior mentor will be responsible for facilitating 360-degree feedback for the officer at the midpoint of the assignment. This will serve as an informal climate survey tailored to the leadership style of the officer in question.
- This senior mentor will be responsible for discussing the results of the feedback with the officer, identifying areas for improvement in leadership styles, EI competencies, and critical values.

Recommendation 3

Members should keep and track the results of their 360-degree feedback throughout their careers.

Recommendation 4

Discussion of the 360-degree process should be incorporated into official PME training. Scenarios should challenge students to identify appropriate leadership styles; EI capabilities; and, most importantly, the values which underlie the decisions that they might face.

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